PRESS RELEASE

Digital Transformation: Are Students Learning the Right Skills?

Survey by consulting company msg shows: IT experts have different priorities than universities when it comes to core technology skills / Gaps detected, especially in professional skills / General consensus about social skills

Munich, November 9, 2016. Among the current focal points of computer science studies are software development, programming languages and databases. What IT professionals want from the next generation, however, are skills in fields such as IT security and IT architectures. That is what the results of two comparative surveys performed by IT consulting company msg has shown. The study included 500 IT students and 700 IT professionals. IT professionals were also asked which skills they thought would be relevant five years from now: IT architectures and IT security in particular would be even more important than today the panel revealed. msg also asked the two groups just how important they felt social skills, such as communication skills and creativity, are. In this case, the two groups tended to share the same priorities.

“We know that our universities provide a very good education,” explained Dr. Stephan Frohnhoff, member of the Board of Directors at msg. “What we wanted to examine, however, was how well the demands of the business world and students’ actual skills aligned. Our study revealed a potential skills gap, especially in regard to professional skills. As an employer, we feel partially responsible for closing this gap and turning students and graduates into highly qualified employees who are able to meet the challenges of digital transformation.”

Professional skills: digital transformation is changing what companies need

According to msg’s survey, IT professionals listed project management (43%), IT security (36%) and IT architectures (35%) among the topics companies are particularly interested in today. Students, on the other hand, reported software development (62%), programming languages

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(55%), databases (47%) and project management (45%) as the topics being given the most attention in their studies.

Skills for Digital Transformation	Important to Companies, According to Survey Participants (%)	Focal Point of Studies, According to Students Surveyed (%)
Project Management	43%	45%
IT Security	36%	32%
IT Architectures	35%	36%
Databases	28%	47%
Software Development	25%	62%
Requirements Specification	21%	10%
Applications	21%	6%
Programming Languages	17%	55%
Business Intelligence	12%	17%
Web Services	12%	8%
Portal Technologies	9%	3%

When asked which professional skills will be most important in five years, IT professionals again named IT architectures and IT security, as well as project management. “Programming languages and databases are part of the fundamentals of the field, which is why universities and schools place such an emphasis on them and rightly so,” Dr. Frohnhoff pointed out. “Yet topics such as IT security and IT architectures are becoming increasingly important in light of digital transformation and it may be a good idea for education to start focusing on those topics as well. Nor should we ignore the significance of data-related topics such as business intelligence, since digitalization is turning the focus to data and how it can be used.”

Social skills: universities and schools are doing a good job of preparing students for future jobs

The study also investigated the value being placed on social skills. In this case, there seemed to be a general consensus: professionals consider a strong sense of responsibility, ability to work in a team, good communication skills and analytical skills to be particularly important. Students, on the other hand, named a willingness to learn, ability to work in a team, analytical skills and endurance as the skills being promoted in their studies. “The results show that universities and schools are doing a good job of developing students’ social skills, preparing them for professional life. A lot of progress has been made in recent years in this regard and we notice this with our

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younger colleagues who are coming straight from universities and schools," Dr. Frohnhoff acknowledged.

The survey also looked at how important creativity is to the IT sector. According to msg's survey, neither IT professionals nor students consider that skill to be particularly important: 22 percent of IT professionals consider creativity to be a key qualification, while 28 percent of students said it was a value considered important in their studies. To that Dr. Frohnhoff replied, "This assessment really surprised us, especially in light of digital transformation. Creativity is crucial to success: new ideas are the basis for innovative solutions that allow companies to react quickly and flexibly to digitalization, thereby securing a competitive advantage. It seems this fact has not taken root in either universities and schools or in companies."

About the Survey

Around 500 students at the RWTH in Aachen, the University of Augsburg, the University of Magdeburg, the University of Bayreuth and the Technical University (TU) of Darmstadt were surveyed. University and school selection was based on the rankings published by the CHE (center for higher education) in the subject of computer science for academic year 2016/2017. 700 IT professionals from different levels were interviewed throughout Germany for the comparison of skills to the requirements in companies. The survey included questions such as which professional and social skills universities and schools emphasize and which of those skills IT professionals consider important in their current position.

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msg holds seventh place in the ranking of IT consulting and system integration companies in Germany.

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