

Healthcare industry BW

Bachelor's and master's under scrutiny – has the new study system stood the test?

More practical relevance, shorter courses and courses that are compatible across Europe – when the decision to implement the bachelor's and master's system was made in Germany in 1999, there were high expectations and hopes for the positive changes to come. The question is, have these expectations been met? The time is now ripe for universities and companies to review the progress that has been made in achieving the goals of the Bologna Declaration.



Studying for a bachelor's and master's degree – for a while now this has been the standard qualification for students studying for the Biomedical Engineering master's degree and other courses offered by the Albstadt-Sigmaringen University of Applied Sciences.

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Bachelor's and master's degrees have become part of everyday higher education: thirteen years after the signing of the Bologna Declaration in 1999, up to 85 percent of all degree courses had switched to the new degree formats by the winter semester 2011/2012 (1). By switching to a three-year bachelor's degree format followed by a two-year master's course, the advocates of the new system envisaged the creation of a uniform and compatible course system across Europe. In Germany, industry representatives expected course duration to decrease and courses to become more practical.

However, it has now become clear that only some, but not all of the expectations have been met. The shift to bachelor's and master's degree courses not only envisaged the adaptation of course content to the new system, the plan was also to focus to a greater extent on soft skills and scientific work techniques in order to better prepare students for the job market.

Example: Albstadt-Sigmaringen University of Applied Sciences

Professor Dr. Markus Lehmann, Vice Rector of the Albstadt-Sigmaringen University of Applied Sciences, was involved in adapting the old format to the new system on courses such as pharmaceutical technology. Lehmann confirms that there is now a greater level of acquisition of professional skills in bachelor's and master's courses. "The new format encourages students to work more independently," said Lehmann. In contrast to the previous diploma format, contact hours and training sessions have been reduced and to make up for this, students have to spend more time preparing and post-processing the courses. A practical semester which used to be an obligatory part of the diploma courses has also remained an obligatory part of the new course system. "The practical semester effectively prepares our graduates for the job market," said Lehmann pointing out

that the new study formats offer students broader career options.

Lehmann also emphasizes that the compatibility of university degrees has made it easier for students to change university and it has become easier to respond to the needs of theory- and practice-oriented students. "The bachelor's degree is a first academic degree that enables practice-oriented students to enter the job market; those who want to undertake further scientific training are able to do so in the master's courses."



Margit Jetter, head of Career Services at Konstanz University, advises students on a broad range of topics, including how to find internships and jobs.

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Most bachelor's graduates go on to do a master's degree

The Bologna Process anticipated that the introduction of bachelor's degrees in the EU member states would reduce course duration and enable students to get their professional career off to a faster start. However, Margit Jetter, head of Career Services at the University of Konstanz, has rarely come across a bachelor's graduate who wanted to start a professional career right after graduation. "The number of students seeking advice has been steadily increasing over the last few years. Many mathematics and science students have come to us for advice," said Jetter pointing out that there are many different reasons why students contact her. "Bachelor's degree students mostly contact us for help in planning practical internships; master's and diploma students usually contact us for advice on professional careers."

A survey prepared by the University of Konstanz on the bachelor's graduates of the winter semester 2008/2009 confirms what Jetter says: around four-fifths of all bachelor's graduates intended to go on to do a master's course, giving as their main reason that they did not believe that a bachelor's degree offered good job prospects (2).

Career entrance with a bachelor's degree – better than expected

Are companies not interested in bachelor's graduates at all? Two company surveys from 2009 and 2010 paint a much more positive picture than the students (3).

Bachelor's graduates are not put on a par with their fellow students that have a master's or diploma degree; they are mainly employed in administration and given very few independent project tasks. Moreover, the starting salaries of bachelor's graduates are lower than those of master's and diploma graduates. However, the differences become less noticeable after several years of professional experience, and a large number of companies also believe bachelor's graduates capable of taking on responsibilities as project, area and department managers.

Employment: less responsibility, difference in starting salary

Companies place greater emphasis on personal characteristics than on degrees. They rate the graduates' identification with the company's goals, their motivation to achieve and ability to communicate as the most important recruitment criteria. Dr. Sarah Ulmschneider-Renner, head of Talent Resourcing at BASF SE, believes that bachelor's graduates have a realistic chance of finding a job with the large chemical company. "Over the last few years, we have hired diploma, bachelor's and master's graduates, especially in the economics and engineering areas," said Ulmschneider-Renner. She also expressed her satisfaction with the graduates and said that she did not see big differences between diploma and master's graduates. However, she believes that a master's or diploma degree is not enough for jobs in research and development and recommends students interested in such jobs to do a doctorate.

International mobility: scientists and engineers are lagging behind the rest



Bachelor's, master's and diploma graduates work for Trenzyme and other companies.
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Bachelor's and master's degrees have been introduced at many higher education institutions across Europe. The implementation of the Bologna Process anticipated study systems across the EU becoming compatible in order to enhance and facilitate student and teacher mobility and enable them to spend at least one semester abroad. However, no significant increase in the mobility rate of students has been observed. Surveys on the mobility rate of students that followed the old study formats showed that it has remained constant over the last 12 years or so: around thirty percent of all students in the 9th to 14th semester indicated that they had spent some time abroad. The implementation of the new study formats has led to a slight decrease in the mobility rate to 25 percent.

There are big differences between bachelor's degree and master's degree students: in contrast to 35 percent of master's students, only 17 percent of all bachelor's students indicated that they had spent some time abroad. The survey also revealed mobility differences between study courses: in 2011 around 30 percent of language, cultural science and sports students spent some time abroad, whilst this was the case for only 17 percent of mathematicians, scientists and engineers (4). Students come up against a broad range of different obstacles. Using the University of Konstanz as an example, Margit Jetter explained that many students decide against a semester abroad due to financial problems, the fear of exceeding the normal length of study and due to organizational obstacles. However, there are also exceptions to the general trend: around 40 percent of Konstanz graduates have spent some time abroad; higher than the German average of 25 percent.

Conclusion: Tackling problems, overcoming imaginary problems

Although the majority of academic courses have shifted to bachelor's and master's formats, not all the goals associated with this shift have been achieved. One goal that has not been achieved is the low percentage of students who spend a semester abroad. Improvements are still possible and a semester abroad could still become a compulsory part of the study course plan or by perhaps offering better advice and better options for funding. At the same time it is also necessary to do away with the prejudices and misleading information relating to the new study courses. Companies themselves could be more active by clearly communicating to the outside world that they have integrated the new degree formats and welcome bachelor's and master's graduates.

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