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CASE STUDY

ETH Zurich: high level continuing education for economy and society

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Context: University Continuing Education in Switzerland

Switzerland has a dual education system with a well-developed vocational training sector and a relatively low number of university students. Apprentices may continue their careers in a higher professional school or a university of applied sciences, and graduates with a maturity certificate may attend a (research) university. Transfer mechanisms have been established between these paths.

All higher education types provide continuing education for their specific target groups. In this differentiated system, universities may concentrate fully on their core competences: the research-based continuing education for

Universities of (Research) Higher Prof. **Applied Sciences** Universities Schools Continuing Continuing Education Education Education Professional experience Master Master (90-120 ECTS) Bachelor Bachelor Certificate Diploma (180 ECTS) (180 FCTS) Professional Maturity Maturity **Apprenticeship** Certificate Certificate

people who already possess an academic degree. Non-traditional or professional students are better served by other providers.

Switzerland has developed a standardised system of university continuing education (UCE) as part of the Bologna Reforms. It defines four types:

- Master of Advanced Studies/Master of Business Administration (MAS/MBA) ≥ 60 ECTS credits
- Diploma of Advanced Studies (DAS) ≥ 30 ECTS credits
- Certificate of Advanced Studies (CAS) ≥ 10 ECTS credits
- Professional Training Courses (1-10 days, ≤ 3 credits).

Most MAS programmes take between one year full-time and two years part-time and demand the writing of a Masters thesis. Admission requirements are a first Masters degree and professional experience or an equivalent background. DAS and CAS programmes have similar requirements, but a Bachelor's degree may suffice in some fields. Professional Training Courses last between one and several days. They cover the latest research findings as well as application-oriented knowledge and are designed for qualified persons working in the corresponding fields.

ETH Zurich

ETH Zurich is one of the leading international universities for technology and the natural sciences and regularly appears at the top of international rankings. 21 Nobel Laureates have studied, taught or conducted research here. Founded in 1855, ETH Zurich today has some 500 professors and 18,000 students from over 100 different countries, 3800 of whom are doctoral students.

ETH Zurich is known for its excellent education, ground-breaking fundamental research and for putting its new findings into practice. Transferring its knowledge to the private sector and society at large is one of ETH Zurich's primary concerns. It does this very successfully, as borne out by the 80 new patent applications per year and some 260 spin-off companies that emerged from the institution between 1996 and 2012.

ETH Zurich's Education Strategy

In the area of teaching ETH Zurich focuses on (1) the education of motivated and talented young people; (2) the promotion of young academics; and (3) the continuing education of highly educated experts and leaders. ETH Zurich makes a clear distinction between pre-experience Bologna-type studies and post-experience UCE.

ETH Zurich teaches the fundamental principles required to tackle current and future issues and trains its graduates to think independently. Having highly motivated students and lecturers is an essential requirement if ETH Zurich is to fulfil its mandate in terms of education, research and knowledge transfer. Attracting and retaining these people is one of the institution's primary objectives.

Continuing Education at ETH Zurich

ETH Zurich has been a leading provider of UCE for many years. In accordance with federal law, continuing education is a core task and has a prominent place in the mission statement. UCE is understood as an effective and efficient way to transfer new knowledge to society and industry.

ETH Zurich offers 16 MAS/MBA, 6 DAS, 9 CAS and some 150 professional training courses in the areas of architecture, mathematics, engineering, the natural sciences and economics, or at the interfaces of these fields with law, management and the social sciences. Its target groups are highly qualified specialists and executives with academic backgrounds who work in industry, the service sector, administration and academia. About 1000 participants are enrolled in MAS, DAS and CAS programmes and another 4000 in the shorter courses. Fifty per cent of all MAS participants are international students; DAS, CAS and training courses mostly serve the region. ETH Zurich also offers customised programmes for firms and organisations, and e-learning courses.

Issues

As a case study, ETH Zurich may contribute to a general critique of the ULLL concept and to some aspects of internationalisation and of the role ICT may play in the globalisation process.

- 1. The ULLL discussion in Europe in general has often had a normative (moralistic?) and somewhat simplistic touch. It has not sufficiently considered the particularities of national education systems, the different needs in different disciplines and the broad range of strategic choices. If these conditions are taken seriously it becomes clear that ULLL as understood in the EUA Charter is just one of several options how higher education institutions may react on the challenges of global knowledge society. Confronted with scarce resources and international competition many universities are more likely to choose a more focussed rather than a more open strategy. In particular in countries with dual education systems it makes little sense if (research) universities try to compete with better placed institutions in the qualification of professionals without a university degree.
- 2. At ETH Zurich globalisation is daily life: two thirds of the professors and doctorate students are recruited abroad. ETH Zurich maintains international research networks, close relations with the private sector, an outpost in Singapore and several joint degrees with selected partners.
- 3. E-learning may be applied in higher education as an independent business model (distance universities), as a more or less elaborated by-product of on-site teaching (MOOCs, streamed lectures) or as blended learning. ETH Zurich participates in the MOOC initiative, but it concentrates its efforts on so-called TORQUEs (tiny open-with restrictions courses focused on quality and effectiveness) that may be used as an enrichment of research-oriented face-to face education. At the moment, ETH Zurich finds this strategy more appropriate to sharpen its profile as an international research university than to invest into digital mass production, where a concentration process may be expected in the future.

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