Session: FE3-2

ACADEMIC GLOBALIZATION ON A SMALL SCALE

- PUBLIC-PRIVATE PARTNERSHIP IN CIVIL ENGINEERING EDUCATION –

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Abstract

The European Bologna Process has been causing the most comprehensive change in the German Higher Education System since the reforms by Wilhelm von Humboldt 200 years ago. The starting point for this development was the Bologna Treaty in 1999, by which 29 European countries committed themselves to create a common European Higher Education Area [1]. One of the aims of the Bologna Process is Academic Globalization [2].
The Leipzig University of Applied Sciences (HTWK) in Germany offers a transnational extra-occupational Civil Engineering degree program in the form of a public-private partnership with an education provider in Austria. The following article explains the structure of this Civil Engineering program and gives reasons for its overwhelming success.

The first part of the paper gives an overview about the development and the aims of the European Bologna Process. It explains by which means Academic Globalization can be created.

The second part of the paper is concerning with the transnational extra-occupational Civil Engineering degree program. It describes the public-private partnership between the HTWK Leipzig and the education provider in Austria. Furthermore the paper gives information about entrance requirements to this special course of study, the program of study, the distance learning system, fees and the accreditation process, which is nearly completed.

The focus is on the accreditation of students' professional qualifications and practical experiences. The result is a reduced period of study from the regular study time of 8 semesters to actual 4 semesters.

1. Bologna Process

The Bologna Process was the beginning of a big change within the Higher Education Systems of most European countries. Starting point for this development was the Bologna Declaration of 1999, whose objectives were permeability, higher transparency and acceptance of university degrees across Europe. In a word: Academic Globalization. This policy expressly desires more foreign students at German universities.

Experiments have been under way since the 1990s to make Germany more attractive to foreign students. This has been driven by the desire to get a larger share of the academic cake, which the major countries of academic mobility, namely the United States and Great Britain, divide up among themselves. It is not only the desire to intellectually and financially benefit from international economic resources or the concern about the future of the German Higher Education system. What's at issue here is nothing less than the survival of German universities. Declining numbers of German first-year students in future make German universities dependent upon foreign students because universities had to sign agreements with the ministries of the federal states (these are e.g. the University Pact 2010 and 2020 for Saxony [3]) that mandate that jobs at universities will be cut if the number of students decreases.

Along with a variety of more or less suitable ideas for rescuing the Higher Education System of a country that stands for traditionally humanistic education, the buzzword of internationalization has come to the fore.

2. The transnational extra-occupational degree program in Civil Engineering

In order to attract foreign students from the neighboring country Austria the Faculty of Civil Engineering and Architecture at the HTWK Leipzig offers a transnational extra-occupational degree program in Civil Engineering together with an Austrian education provider. The intention is to award the German academic degree "Diplom-Ingenieur" to Austrian students. An agreement regulates the conditions for the cooperation.

The entrance requirements for the study program are a degree from an Austrian "Höhere Technische Lehranstalt (HTL)" [4]. This is a kind of higher technical college or a vocational college for Civil Engineering (classes 8 to 12). The HTLs offer 5-year-courses including "Reife- und Diplomprüfung" (A - level exam) in Civil Engineering. Graduates achieve a high level of vocational training in Civil Engineering, comparable with graduates of post-secondary education courses in other member states of the European Union and can assume similar responsibilities and undertake corresponding tasks. This HTL degree qualifies students to study at a university in Austria or all over the world. Additionally, students must show evidence of one year work experience in Civil Engineering in order to get admitted to our program. Enrolment takes place every year in October and March. At the moment approximately 300 students are studying in the "Diplom" degree program at the HTWK Leipzig. Nearly 53 percent of them are older than 31 years, 18 percent are older than 41 years.

The curriculum includes all necessary courses such as engineering mathematics, computer sciences/CAD, mechanics of materials and strength of materials, statics, reinforced concrete, design of steel structures, water engineering, surveying, construction management, building economy, a "Diplom" thesis and so on. The program offers 3 specializations: revaluation, structural engineering and project management. An advantage for the HTWK Leipzig are the Austrian students' German language skills. So it is not necessary to implement a foreign language degree program or foreign language training in the curriculum.

The regular "Diplom" degree program in Civil Engineering at a German university of applied sciences takes 8 semesters [5]. Because of the professional qualifications students received at the HTLs and their practical experiences (at least one year work experience, see above), the first 4

semesters can be accredited by the university. The result is a reduced period of study. So rather than studying the regular study time of 8 semesters students study only 4.

The program has a faculty of 28 professors, each of which holds 1 to 5 series of lectures (one series of lectures means 12 teaching hours) in Austria per semester. At 6 weekends per semester students have one series of lectures on Friday and Saturday in Austria. The 6 places to study are situated all over the country (so e.g. in the cities of Salzburg, Innsbruck, Linz, Graz, Wiener Neustadt, Rankweil). For one week each semester the Austrian students come to the Leipzig University of Applied Sciences to do their practical work in the laboratories and to take exams. Because of the limited time of presence (the students attend only six series of lectures a semester) the HTWK Leipzig and the Austrian education provider developed a distance learning system including lecture notes with homework tasks and an online communication system [6]. The communication platform enables students to download lecture notes and to communicate with each other, the Austrian education provider or the German lecturers.

At the end of each semester, students evaluate the degree program and answer questions about the quality of the lectures, the technical equipment, the organization, the learning effect and the level of difficulty. The result of each evaluation ranked in past between good and very good.

The degree program is accredited by the German accreditation agency ASIIN e.V. [7], which initially objected to the reduced period of study which, again, is possible due to students' professional qualifications and practical experiences. So our Faculty of Civil Engineering and Architecture had to develop a comprehensible system of accreditation for students' qualifications. Comparing the curricula of the Austrian HTL-colleges and the extra-occupational study program in Civil Engineering at the HTWK Leipzig showed many possibilities for academic recognition of proficiencies and skills. So the HTWK Leipzig was the first German university at which such a system for academic recognition was accredited.

The cooperation between the HTWK Leipzig and the Austrian education provider is a public-private partnership. The Austrian education provider takes over all organizational tasks occurring in Austria. That includes the rental of the lecture rooms, technical equipment, on-the-spot mentoring of the students etc.

In Saxony/Germany, where the HTWK Leipzig is located, undergraduate degree programs are free of charge by law, which is why the Austrian partner has to charge fees for this study course in Austria in order to pay the professors for each lecture, the accommodation of the lecturers in Austria, the rental of the lecture rooms in Austria, technical equipment, on-the-spot mentoring of the students and the graduation ceremony. The education provider also pays fees to the HTWK for organizing the enrollment and giving exams.
The public-private partnership system allows the department to increase the number of foreign students and to offer a transnational extra-occupational "Diplom-Ingenieur" degree program in Civil Engineering beyond the university's regular capacity calculation. Without the financial and organizational support of the Austrian partner this kind of extra-occupational study program could not be realized.

3. Conclusion

With the transnational extra-occupational Civil Engineering degree program, the HTWK Leipzig fulfills all desires of the founding fathers of the Bologna Process. The intention of the Bologna Declaration is Academic Globalization. This policy expressly desires more foreign students at German universities. The HTWK puts Academic Globalization into practice: nearly 20 percent of the students enrolled at the Faculty of Civil Engineering and Architecture are foreign students. This is one of the highest rates of foreign students at a department of civil engineering and architecture in Germany. Moreover, the graduates are highly appreciated in the industry, on the labor market and in their own companies. Many of them are qualified for promotion in their companies or find highly paid jobs.

The conclusion is: Academic Globalization cannot work by force. It is only successful if there is a clever curriculum and ambitious professors.

References

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[3] Bundesministerium für Bildung und Forschung, „Verwaltungsvereinbarung zwischen Bund und Ländern über den Hochschulpakt 2020“, *Bundesanzeiger*, **171**, 7480-7482 (2007)
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[4] http://de.wikipedia.org/wiki/Höhere_Technische_Lehranstalt

[5] Study rule for the Diploma course Civil Engineering at the HTWK Leipzig, § 4, http://bauwesen.htwk-leipzig.de/fileadmin/ordnungen/amtliche_bekanntmachungen/studien_und_pruefungs_ordnungen/Diplom/Bauingenieurwesen/Studienordnung_BI_D.pdf

[6] http://www.ingenium.co.at/splattform/index.html

[7] ASIIN is a non-profit, registered association for the accreditation of degree programmes in engineering, the natural sciences and informatics/computer science; http://www.asiin.de/english/newdesign/index_ex5.html