HELMUT GUGGENBERGER, MARIA KEPLINGER
AND MARTIN UNGER

MOVING TO THE BOLOGNA STRUCTURE: FACING CHALLENGES IN THE AUSTRIAN HIGHER EDUCATION SYSTEM

THE STUDY STRUCTURE IN AUSTRIA[1]

The higher education system in Austria[2] consists of universities (22 public, of which 6 are general and specialised in specific disciplinary areas, and 12 are private), 20 universities of applied sciences (UAS, *Fachhochschulen/FH*) and (since 2007) 14 university colleges (and additionally three private courses) of teacher education (*Pädagogische Hochschulen*) providing ISCED 5A education as well as other institutions offering ISCED 5B tertiary education programmes.[3] The objectives of the universities are (among others) to offer scientific or artistic education in preparation for a profession. UAS, in contrast, provide vocationally-oriented education at tertiary level. Hence, UAS also offer specialised programmes for working students and often include compulsory work placements in the study programmes. The UAS sector was set up in 1994 and is still developing today. It started with a focus on courses in economics and engineering, but has widened its scope since then to programmes in art, tourism, social work and health care. The number of available study places is expanding every year, as is the number of students.

Access to university studies is generally open. Only in a few fields (medicine, dentistry, veterinary medicine, psychology, art and music) are study places limited and admission tests required. For some studies, applicants must demonstrate their artistic talents, practical skills, or physical aptitude in addition to the matriculation examination. Students are selected through entrance examinations for UAS programmes.

---

[1] Author of this chapter is Maria Keplinger

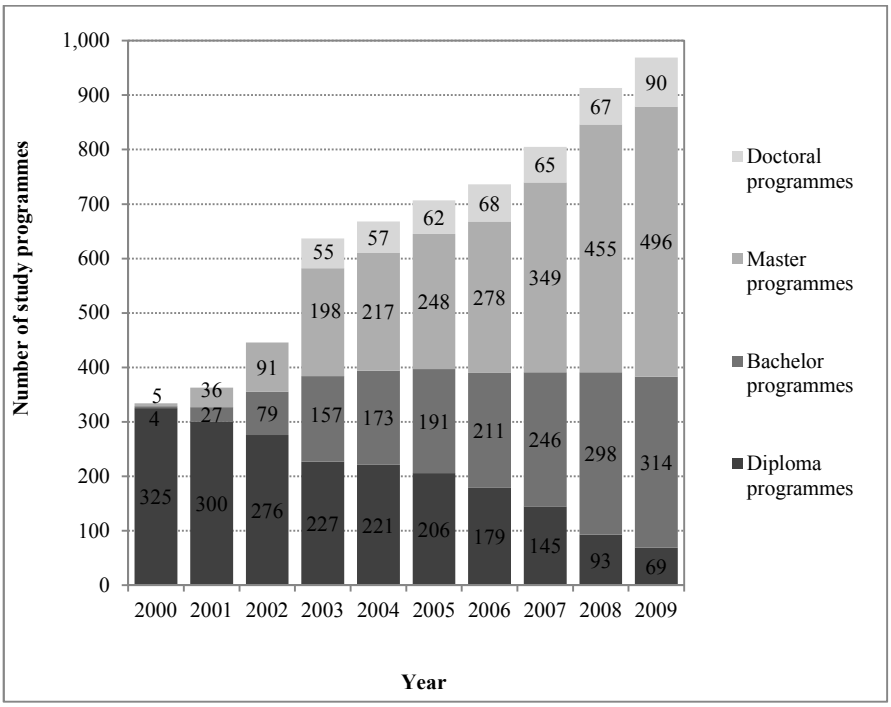
[2] See Eurydice country report in the Eurybase databank, retrieved August 13, 2010 from www.eurydice.org/portal/page/portal/Eurydice/DB_Eurybase_Home and www.bmwf.gv.at

[3] Master craftsmen/ foreman courses, technical and vocational education colleges, post-secondary colleges for medical services, and university courses.

H. Schomburg and U. Teichler (eds.), Employability and Mobility of Bachelor Graduates in Europe, 43–67.

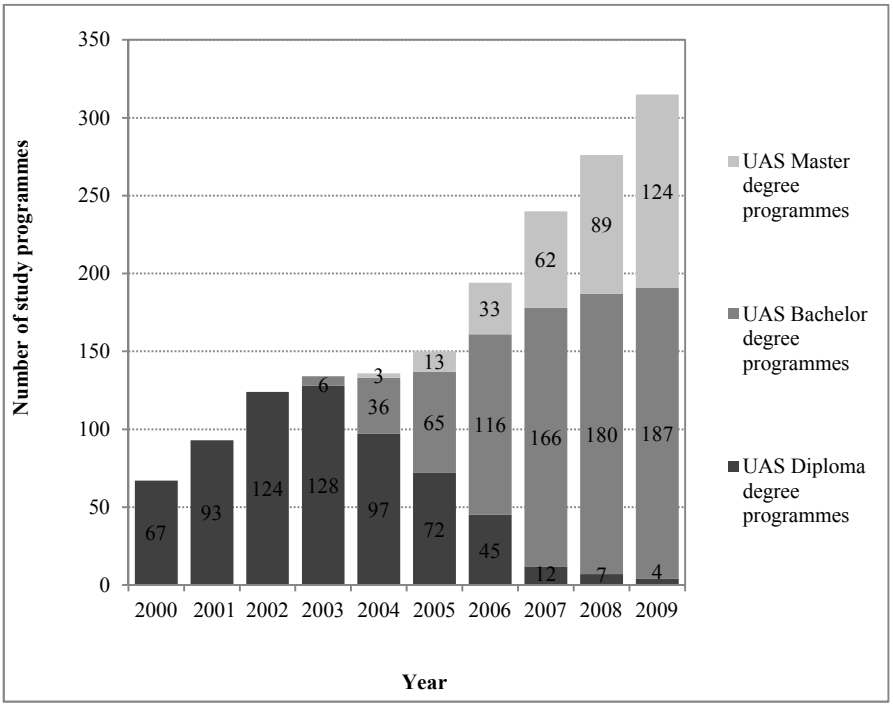
In the 1990s, the Austrian higher education system was characterised by a two-type structure, i.e. universities and UAS. Bachelor and Master programmes were introduced at public universities in 1999 and at UAS in 2002 through the University Act 2002 (*Universitätsgesetz 2002,* Bundesministerium für Wissenschaft und Forschung [bmwf], 2009a). Figures 1 and 2 illustrate the development of study programmes at universities and UAS following the three-tier Bologna structure as from 2000.

Figure 1. Development of Study Programmes at Public Universities in Austria, Winter Term 2000 to 2009 (absolute numbers)



Source: bmwf (Federal Ministry of Science and Research)

Figure 2. Development of Study Programmes at Universities of Applied Sciences in Austria, Winter Term 2000 to 2009 (absolute numbers)



Source: Fachhochschulrat (*Council of Universities of Applied Sciences*)

As of winter term 2009, 84 per cent of all study programmes at universities followed the Bachelor/Master structure. Many universities have already completed their course-conversion but medicine is still excluded. Teacher training for upper secondary education was changed with the 2009 amendment to the University Act 2002, which provides for the option of a 4-year Bachelor for certain fields.

At the UAS, 98 per cent follow the Bachelor/Master two-cycle structure and almost all private universities follow it. University colleges of teacher education have fully converted to Bachelor programmes (66 study programmes in winter term 2009) in a major reorganisation which became effective in September 2007.

Almost all new entrant students at the UAS and three quarters of those at the universities chose Bachelor study programmes in winter term 2009. At public universities, the number of students in the traditional single-cycle programmes is still relatively high (50 per cent of students are enrolled in diploma programmes). As the consequence of the gradual conversion of study programmes, a minority is awarded degrees according to the new two-cycle system.

In the recent *Studierenden-Sozialerhebung 2009* (student social survey, Unger et al., 2010), an online survey among all students at higher education institutions with

a special focus on their social situation and study conditions, 75 per cent of Bachelor students in Austria responded that they intended to enter a Master programme, and one third intended to study in the Master programme while concurrently entering the job market. Only 8 per cent wanted to engage exclusively in employment upon the award of the Bachelor degree. When asked about their study motives, 69 per cent of students in Master programmes stated that they regarded the Bachelor degree as not sufficient, although only 22 per cent said their Bachelor degree had failed to help them find an adequate job.

In order improve the recognition of the Bachelor degree in terms of its employability on the labour market and its value as academic study by the students and graduates themselves, awareness measures have been launched (for example in cooperation with the Austrian Chamber of Commerce).[4] Current discussions like the *"Dialog Hochschulpartnerschaft"* (i.e. five working groups consisting of stakeholders in higher education)[5] have also focused on the employability of Bachelor graduates. The aim of these working groups is to find a common understanding or definition of "employability" of Bachelors. The conclusion was that, in the context of higher education, it not only aims at employability in the short run, but at the acquisition of competences which enable sustainable personal and professional development, because this is the only way that graduates will be able to handle future challenges on the labour market. Job-descriptions and possibilities for professional developments should be included in the curricula in order to raise the acceptance of this "new" degree.

GRADUATE SURVEYS USED FOR THE ANALYSIS[6]

Arbeitssituation von Universitäts- und FachhochschulabsolventInnen

The recent survey "*Arbeitssituation von Universitäts- und FachhochschulabsolventInnen (ARUFA)*" (in English: The working situation of graduates from universities and UAS) is the most comprehensive graduate survey ever undertaken in Austria. Graduates from Austrian public universities and from UAS were surveyed from December 2009 to February 2010. The survey addressed the five graduation cohorts from the academic year 2003/04 to the academic year 2007/08. It was designed as a total population survey undertaken through internet with the help on an online questionnaire. The study, which was commissioned by the Austrian Federal Ministry of Education, was undertaken by the International Centre for Higher Education Research of the University of Kassel (Germany) (INCHER-Kassel) – under the direction of Harald Schomburg – in cooperation with the Department of Soci-

[4] Booklet "Bachelor welcome!" (Wirtschaftskammer Österreich & Bundesministerium für Wissenschaft und Forschung, 2010)

[5] A series of discussion events held during the first half of 2010 in 5 working groups with stakeholders representing the university and UAS area (Retrieved August 13, 2010 from http://www.bmwf.gv.at/startseite/dialog_hochschulpartnerschaft_ergebnisse/)

[6] Authors of this chapter are Helmut Guggenberger and Martin Unger

ology (IfS) at the Alpen-Adria University of Klagenfurt and was coordinated by Helmut Guggenberger. The graduates from all 21 universities (as defined according to the University Act 2002) were contacted using the Universities' Data Network run in Vienna by the *Bundesrechenzentrum* (*BRZ*; federal computing centre of Austria). Graduates from the UAS were contacted in most cases by the Department of Sociology at Klagenfurt, which was provided with graduate address details by the individual organisations in charge of the UAS; in total, 15 UAS took part.

The ARUFA study yielded 25,669 responses with a response rate of 25 per cent. This can be viewed as highly satisfactory given the typical problems of online surveys and the declining willingness to participate in surveys, and as representative. In order to ensure a better similarity to the other country reports, the following analysis is based only on the graduates of the academic years 2006/07 and 2007/08 who responded; thus responses which had been provided between about 1½ and 2½ years after graduation are treated. Of the approximately 9,600 respondents included in the analysis, 17 per cent are Bachelor graduates from universities and 6 per cent from universities of applied science. Graduates from traditional study programmes prevail: 62 per cent from universities and 15 per cent from UAS. Master graduates are not included because their number is marginal among the respondents as a consequence of the gradual conversion of the study programmes to the Bachelor-Master structure.

Studierenden-Sozialerhebung 2009

The *"Studierenden-Sozialerhebung 2009"* is an online survey covering all students at public higher education institutions in Austria. All students at those institutions were invited in May/June 2009 via e-mail to participate, and more than 42,000 (out of approx. 265,000) did so. The *Sozialerhebung* covers a wide range of topics. In 2009, questions were added asking students in Master programmes about their experiences on the labour market as Bachelor graduates. The subsequent analysis will only comprise those Bachelor graduates who are named here "consecutive Master students".

SOCIO-BIOGRAPHIC BACKGROUND AND COURSE OF STUDY[7]

58 per cent of the recent graduates participating in the ARUFA study are female. As can be seen in table 1, women comprise more than 60 per cent of those who studied at universities, but less than half of those who studied at UAS.

More than one third of the graduates have parents (father and/or mother) with higher education. Among the graduates of traditional programmes, this share was by far higher amongst university graduates (41 per cent) than of those from UAS (23 per cent). The respective difference is clearly smaller among Bachelor graduates (37 per cent as compared to 29 per cent).

[7] Author of this chapter is Helmut Guggenberger

91 per cent are Austrian citizens. 7 per cent had not acquired their *higher education entrance qualification* in Austria (more than one third in Italy, almost one third in Germany and about one sixth in East European countries). The share of foreign graduates and of those having been educated abroad prior to study is about twice as many at universities as at UAS (see table 1).

Table 1: Socio-biographical Background and Course of Study of 2007 and 2008 Graduates from Higher Education Institutions in Austria (per cent)

	Bachelor graduates			Trad. graduates			Total		
	Univ.	UAS	All	Univ.	UAS	All	Univ.	UAS	All
Female graduates	57	44	54	63	47	60	61	46	58
A-typical entry qualification	52	69	57	43	66	48	45	67	50
Father and/or mother with an HE degree	37	29	35	41	23	37	40	25	37
Foreign graduates	12	5	10	10	5	9	10	5	9
Entry qualification abroad	9	3	8	7	3	7	8	3	7
Vocational training before HE	37	52	41	30	53	34	31	52	36
Total years of study in HE									
arithmetic mean	4.1	2.9	3.7	6.8	4.0	6.3	6.2	3.6	5.7
median	3.6	2.8	3.3	6.2	3.9	5.7	5.8	3.8	5.1
Age at time of graduation									
arithmetic mean	25.5	26.1	25.7	28.0	27.4	27.9	27.5	27.0	27.4
median	24.0	24.0	24.0	26.0	25.0	26.0	26.0	25.0	26.0
N	1,624	625	2,249	5,959	1,415	7,374	7,697	2,063	9,851

Source: INCHER-Kassel, Austrian Graduate Survey 2010 (ARUFA)

More than half had taken a "traditional" route to higher education, i.e. first attending a general secondary school (AHS), and almost one third had gone to a secondary vocational school (BHS) (30 per cent); only 4 per cent had followed a "non-traditional" access path (higher education entrance examination or similar). One third had completed their *vocational education* prior to study (e.g. apprenticeship or secondary vocational school), and seven out of ten had gained previous professional experience (full-time or part-time work; during or after secondary education, in any case before enrolment in higher education); hence, both vocational training and professional experience were more common among those from UAS than among those from universities.

The *period of study leading to the first degree* lasted on average 5.7 years for graduates from the academic years 2006/07 and 2007/08. In the cases of Bachelor graduates from UAS, the average period of study (2.9 years) was not longer than the required period of study, while university Bachelor graduates studied on aver-

age 4.1 years. The graduates from traditional study programmes not only studied longer (4.0 years and 6.8 years of study), but also prolonged their study beyond the required length of study more often.

For about two-thirds, study had been the *main activity* (this proportion was slightly higher among Bachelors). More than eight out of ten had taken part in a *study-related work placement*: about half completed a *compulsory internship* (almost half in the case of Bachelors).

The average age at the time of the graduation was 25.5 years among university Bachelor graduates and 26.1 per cent among graduates from universities of applied science. The average among graduates from traditional programmes was 28.0 and 27.4 years respectively, as is seen in table 1. One must bear in mind that student at UAS are older on average when they enrol for the first time, since a higher proportion is active in vocational training and gainful employment than among university students.

As regards their life situation, three quarters of the respondents in the Austrian ARUFA study reported a partnership at the time of the survey (partner 53 per cent, married 21 per cent and registered partnership 1 per cent). 19 per cent had one child or more living with them. Daytime childcare is most frequently provided by the partner (61 per cent), followed by parents or relatives (34 per cent), kindergarten/crèche or similar (35 per cent), and less often (24 per cent) by the respondents themselves.

INTERNATIONAL MOBILITY[8]

Like in other countries, international student mobility is perceived as a challenge posed by the Bologna Process, and there is a declared target that 50 per cent of students in Austria should acquire overseas experience by 2020 (see Bundesminsterium für Wissenschaft und Forschung [bmwf], 2008a, pp. 290f.; Bundesminsterium für Wissenschaft und Forschung [bmwf], 2008b, p. 6; Bundesminsterium für Wissenschaft und Forschung [bmwf], 2009b, pp. 54-59; Bundesminsterium für Wissenschaft und Forschung [bmwf], 2010, p. 26). There are arguments that student mobility may even drop in the new two-cycle structure of study programmes (see e.g. Kellermann, Boni & Meyer-Renschhausen, 2009; Heissenberger, Mark, Schramm, Sniesko & Süss, 2010). What do the data of the Austrian study reveal in this regard?

Study abroad

According to the *Sozialerhebung 2009,* 13 per cent of all Bachelor students in Austria already have study-related experiences in a foreign country; most studied for at least a semester abroad, did an internship or attended a language class. Among Master students, this ratio is 35 per cent. Nearly every fifth Master student

[8] Authors of this chapter are Helmut Guggenberger and Martin Unger

studied at least partially in a foreign country, namely during the Bachelor or the Master programme. 13 per cent did an internship, 6 per cent participated in a summer school, 6 per cent followed a language course and 5 per cent did research. One must bear in mind that the *Sozialerhebung* comprises students of various years of study (from beginners to students close to graduation); therefore the data do not show what proportion of students will be mobile up to graduation. Yet, they allow one to infer that temporary mobility is more likely to happen during the Master programme than during the Bachelor programmes.

Table 2. International Mobility during the Course of Study and after Graduation of 2007 and 2008 Graduates from Higher Education Institutions in Austria (per cent)

	Bachelor graduates			Trad. graduates			Total		
	Univ.	UAS	All	Univ.	UAS	All	Univ.	UAS	All
a. During the course of study									
Study abroad and/or short study-related activities abroad	24	33	27	37	40	37	34	38	35
... Temporary study abroad	16	22	18	24	24	24	22	23	22
... Short study related activities abroad	14	19	15	23	26	23	21	24	22
b. After graduation									
Study and/or practical training abroad after graduation	25	17	23	13	7	12	15	9	14
Employment abroad after graduation	12	12	12	20	22	20	18	19	18
... At present employed abroad	9	9	9	11	8	11	11	8	11

Source: INCHER-Kassel, Austrian Graduate Survey 2010 (ARUFA)

According to the ARUFA survey, more than one fifth of the graduates from Austrian universities had spent a study period abroad: 16 per cent of the university Bachelor graduates, 22 per cent of the Bachelor graduates from UAS and about 22 per cent from traditional programmes at both types of higher education institutions (see table 2). It does not come as a surprise to note that somewhat more university graduates from traditional programmes have studied abroad than university Bachelor graduates. This does not mean, however, that the new Bologna two-cycle structure has led to a decline in student mobility, because most Bachelor graduates continue to Master study and may be mobile in the second cycle. Thus, the actual frequency of study abroad up to graduation in the new two-cycle system will only be known when sufficient information is available on graduates from the Master programmes. It is exceptional in Austria, though, that students from other type of higher education study abroad in larger numbers than university students. Howev-

er, the Bachelor graduates from UAS have spent on average a shorter period abroad (7 months as compared to 8 months).

Students who do not study abroad often give as a reason for not studying their concern that study abroad may prolong the overall study period. Other concerns are, according to the student surveys above, separation from family/friends, costs incurred to keep their accommodation in Austria and costs related to the sojourn abroad. Students having studied abroad most frequently see the costs of the sojourn abroad as the major barrier.

Employment abroad after graduation

12 per cent of the university Bachelor graduates and of those from universities of applied science were employed abroad after graduation for some period. These rates were somewhat lower than among the graduates from traditional single-cycle programmes, as table 2 shows. At the time of the survey, the proportion of those employed abroad was slightly higher at universities than at universities of applied sciences: 11 per cent as compared to 8 per cent among graduates from traditional programmes.

The choice of host country can be an indication of the purpose of mobility. For instance, some of student mobility between Germany and Austria is linked to the delicate issue of "numerus clausus refugees"; mobility from and to some countries may be interpreted as "brain drain" or "brain gain". Most of the mobile graduates from Austria are employed in Germany and Italy (together about 60 per cent of the professionally mobile graduates).

Other questions posed in the questionnaire show that graduates consider international competences and foreign language proficiency as not ranking highly among the employers' recruitment criteria. But about 40 per cent believe that their company or other employing institutions is active in an international sphere.

EMPLOYMENT AND FURTHER STUDY OF BACHELOR GRADUATES[9]

Whereabouts after graduation

More than two-thirds (68 per cent) of Bachelor graduates of the academic year 2007/08 from universities in Austria stated, when asked about their whereabouts one-and-a-half year after graduation, that they continued their studies. This share was lower amongst graduates from UAS: yet, a majority of them (54 per cent) also opted for further study, as table 3 shows. About four out of five Bachelor graduates who continue their studies were enrolled in Master programmes.

[9] Authors of this chapter are Helmut Guggenberger and Martin Unger

Table 3. Whereabouts of 2008 Graduates from Higher Education Institutions in Austria (per cent)

	Bachelor graduates			Trad. graduates			Total		
	Univ.	UAS	All	Univ.	UAS	All	Univ.	UAS	All
Employed (only)	26	42	31	62	83	66	54	69	57
Professional training	1	1	1	5	2	4	4	2	3
Study and employment	28	23	26	14	7	13	17	12	16
Study (only)	40	31	37	10	3	9	17	13	16
Search for job (without employment)	2	1	2	3	3	3	3	2	3
Family, children, etc.	1	1	1	2	1	2	2	1	2
Other	1	2	1	4	1	3	3	1	3
Total	100	100	100	100	100	100	100	100	100
Count	790	359	1,149	2,678	669	3,347	3,522	1,035	4,590

Source: INCHER-Kassel, Austrian Graduate Survey 2010 (ARUFA)

However, many of those who continued their studies did this in conjunction with employment: 28 per cent and 23 per cent respectively. A further one per cent was in professional training for public service – an arrangement which can also be viewed as combining employment and further learning.

26 per cent of Bachelor graduates from universities solely opted for employment. As one might expect, this proportion was higher among graduates from UAS (42 per cent). As about a quarter of the Bachelor graduates continues study whilst being employed, the overall proportion of employed Bachelor graduates (i.e. including those studying concurrently) was 55 per cent among university Bachelor graduates and 66 per cent among graduates from UAS. As one does not know whether the option of both study and employment will lead to an advanced degree or if it is just a temporary arrangement which delays the decision for either direction, a genuine rate of transition from Bachelor study to employment can only be established a few years later.

Very few Bachelor graduates reported that they neither studied nor were employed one and a half years after graduation (4 per cent each). Among them, only 2 per cent of the Bachelor graduates from universities and 1 per cent of those from UAS were unemployed.

In this context, the reported *motives for studying* are rather interesting. The following aspects were of particular significance for the decision about the choice of course of study leading to the first degree: “Personal development; professional interest in the course content; inclination/talent”, as well as “Working on an interesting topic” – in other words, aspects relating to character or to the degree courses themselves. Professional aspects were quoted somewhat less frequently: “Having a wide range of career opportunities”, “A particular career aspiration, “Good opportunities on the labour market”, as well as the “Opportunity to achieve a secure

professional position". In contrast, "Recommendations by parents/relatives" as well as the desire to "maintain the student status" hardly played any role.

As regards *professionally oriented motives*, almost two-thirds of the Bachelor graduates reported that they wanted to specialise in a particular area of expertise. About half each quoted "Particular professional aspiration", "Good labour market opportunities" and "Secure professional position". The latter two motives were more frequently voiced by Bachelor graduates from UAS than by those from universities.

It is interesting in this context to note that graduates report in retrospect a high degree of *satisfaction* with their study: about three-quarters of Bachelor graduates from UAS and about two-thirds of Bachelor graduates from universities stated that they were "very satisfied" or "satisfied" with their study programme overall (see table 4). And about seven out of ten stated that they would choose the same programme again. In sum, the widespread simplistic argument often put forward in the public discourse on the Bologna study reform is not supported by the results of this survey: The arguments that Bachelor graduates opt for continued study because of lack of "employability".

Table 4. Satisfaction with the Course of Study of 2008 Graduates from Higher Education Institutions in Austria (per cent)

	Bachelor graduates			Trad. graduates			Total		
	Univ.	UAS	All	Univ.	UAS	All	Univ.	UAS	All
1 Very satisfied	19	25	21	19	29	21	19	28	21
2	47	50	48	48	51	49	48	51	48
3	23	20	22	24	15	22	24	17	22
4	10	5	8	7	4	7	8	4	7
5 Very dissatisfied	2	0	1	2	1	2	2	1	2
Total	100	100	100	100	100	100	100	100	100
N	830	373	1,203	2,778	686	3,464	3,665	1,066	4,767
Combined values									
Satisfaction (1 and 2)	66	75	69	67	80	70	67	79	69
3	23	20	22	24	15	22	24	17	22
Dissatisfaction (4 and 5)	11	5	9	9	5	8	9	5	8
Arithmetic mean	2.3	2.0	2.2	2.2	2.0	2.2	2.3	2.0	2.2

Question D8: How satisfied are you with your studies in general?

Source: INCHER-Kassel, Austrian Graduate Survey 2010 (ARUFA)

In the *Studierenden-Sozialerhebung 2009*, Master students were asked about their *reasons for the continuation of study after the award of the Bachelor degree*. More than half of the "consecutive" Master students stated that they never planned to enter the labour market after finishing their Bachelor studies. Notably, a large pro-

portion of Master students in the Natural Sciences stated this, and in various disciplines more women than men reported that they never planned to embark on employment after the award of the Bachelor degree.

Among Master students at UAS the answer pattern is quite different.

UAS offer two different types of programmes: On the one hand full-time programmes and on the other programmes for working students where lectures are given in the evenings, at weekends and during holidays. Both types of programmes provide 60 ECTS per year, hence programmes for working students are not part-time by nature, because they comprise the same amount of lectures per year as full-time programmes. Nevertheless, both types of programmes attract very different types of students, as seen for example in the fact that students in programmes for working students are on average six years older (namely around 30 years) than their colleagues in full-time programmes.

Even though, we see a higher transition rate from Bachelor to Master studies among graduates from programmes for working students than among those from full-time programmes, far more graduates from programmes for working students looked for a job: half the graduates in Business Administration and 40 per cent of the Engineers compared to 7 per cent of graduates in Business Administration and 27 per cent of Engineers from full-time programmes. On the other hand, only about 5 per cent of the graduates from programmes for working students stated they had never thought about looking for a job after graduation. Among Master students in full-time programmes, this ratio differs between 58 per cent in Engineering studies and 84 per cent – the highest ratio of all student groups – in Business Administration.

Hence, not surprisingly, students in programmes for working students want to continue studying alongside their work. However, we suppose their transition rate to Master programmes to be higher, because a Bachelor is of less value than their already accomplished years of vocational experience. Only a Master provides them with a comparative advantage for their future career. Hence the situation for (mainly young) graduates from full-time programmes at UAS: They have chosen an applied education programme because they wanted to enter the labour market quickly and with more practical experience than from a Scientific University. Hence, it is rational for many of them to leave the education system at least temporarily. That seems especially true in Engineering studies, where the labour market has a great demand for graduates.

Almost half of all students in consecutive Master programmes had the impression that there were no adequate jobs in their field of study available for Bachelor graduates. This is far more often stated by female Master students than by male Master students. As regards fields of study, we note that many students in natural sciences and in the humanities perceive such a lack of suitable employment opportunities. Similarly, only a quarter of the Master students see the Bachelor degree as a sufficient entry qualification for a career. Altogether, three quarters of the Master students believe that a Bachelor graduate is not regarded (and paid) as a higher education graduate in the Austrian labour market. On this point, both genders, students of all ages and in most fields of study agree to the same extent. It does not

come as a surprise to note that Bachelor graduates who had opted for employment see the employment opportunities of Bachelor graduates more favourably. But even then most of them state that Bachelor graduates are not treated in the labour market as really being graduates.

JOB SEARCH[10]

The most common routes taken during the search for employment (often multiple answers) were "Applying for advertised jobs" as well as "Direct contact to employers or clients/blind applications, unsolicited applications". "Assistance from friends, acquaintances or fellow students" as well as "Internships during the course of studies" were quoted much less often. Asked about the success of the methods employed, four out of ten said "Applying for advertised jobs", almost two out of ten stated "Direct contact to employers or clients/blind applications, unsolicited applications" and one out of ten "Assistance from friends, acquaintances or fellow students". Only one per cent reported that they found their job with the help of the employment service or company contact fairs.

"Employability", the second keyword in the Bologna Process in addition to "mobility", is seen in Austria as a very important challenge. The Ministry in charge calls it "Förderung der Beschäftigungsfähigkeit von Absolventinnen und Absolventen mit Bachelorabschluss, auch im öffentlichen Dienst" (in English: "Promoting the employability of graduates with a Bachelor's degree, including public service", see bmwf, 2009b, p. 40). Critique as regards this target is often voiced (see e.g. Liessmann, 2006; Prisching, 2008). It might be premature to assess the link between Bachelor studies and employment (see the arguments in Campbell & Brechelmacher; 2007, Schneeberger, Petanovitsch & Nowak, 2010). At present, we note that many students perceive their studies as being "complete" only upon graduation from a Master programme (see Schneeberger & Petanovitsch, 2010a), even though the Bachelor degree is supposed to be a "complete" qualification according to the Bologna rationales.

In the ARUFA survey, graduates were also asked to report the duration of the *search period* for employment. Among those who were seeking for a job, Bachelor graduates from universities reported 4.9 months of search on average, while search took less long for Bachelor graduates from UAS: 3.2 months on average (see table 5).

[10] Author of this chapter is Helmut Guggenberger

Table 5. Duration of Job Search and Time from Graduation to First Employment of 2008 Graduates from Higher Education Institutions in Austria (means)

	Bachelor graduates			Trad. graduates			Total
	Univ.	UAS	Total	Univ.	UAS	Total	
a. Job search duration							
Arithmetic mean	4.9	3.2	4.3	4.6	3.9	4.4	4.4
Median	3.0	2.0	3.0	3.0	3.0	3.0	3.0
N	154	92	246	1,119	321	1,440	1,686
b. Time from graduation to first employment							
Arithmetic mean	4.9	2.3	4.0	3.2	2.1	3.0	3.1
Median	.0	.0	.0	1.0	.5	1.0	1.0
N	322	187	509	2,035	490	2,525	3,034

Source: INCHER-Kassel, Austrian Graduate Survey (ARUFA) 2010

PROFESSIONAL SUCCESS[11]

The tasks of higher education institutions and the measurement of professional success

The Universities' Act of 2002 (§ 3) specifies the various tasks of Austrian universities, among them: "3. Scientific, artistic, artistic-pedagogical and artistic-scientific pre-professional education, qualification for professional activities that require the application of scientific knowledge and methods, as well as the development of artistic and scientific skills up to the highest level" (bmwf, 2009a, p. 16). (This is followed by "4. Training and encouragement of young scholars and artists" and "5. Further education, particularly of graduates" (ibid., p. 16-17). The Studies Act for UAS states the tasks of these institutions as follows in § 3: "1) Degree programmes offered at UAS are programmes at university level expected to provide scientifically-based vocational training. The primary goals are: 1. To ensure practical training at university level; 2. To impart the ability to solve the tasks faced by the respective professional field in accordance with current scientific knowledge and with practical requirements; 3. To promote the permeability of the educational system and the professional flexibility of graduates" (Fachhochschul-Studiengesetz, 2010).

The laws clearly expected study programmes of UAS to be more closely geared to the preparation for future occupations than those of universities. No specific reference is made to sectors, e.g. the (decreasing) public and (increasing) private sector, or to employment status, e.g. employed vs. self-employed: The latter is quite large among graduates from Austrian universities, as the CHEERS survey

[11] Author of this chapter is Helmut Guggenberger

had shown for graduates from the mid-1990s (8 per cent; see Guggenberger, Kellermann & Sagmeister, 2001, p. 6) and the REFLEX survey for those graduating around 2000 (11 per cent of university and UAS graduates; see Guggenberger, Kellermann, Sagmeister & Steingruber, 2007, p. 25).

It is not difficult to provide information about various dimensions of employment. It is not clear from the outset, though, how one can measure what to describe the vocational routes of graduates from different institutions of the tertiary sector using statistical criteria. How should one measure something called "professional success"? In the framework of this publication, the authors agreed to examine the share of graduates employed full-time and employed permanently, the income, the adequacy of level of educational attainment and position as well as the use of knowledge, and finally job satisfaction.

In the subsequent analysis, those Bachelor graduates are compared to those from traditional programmes who are solely employed. This choice was made because the employment situation of graduates who work and study can be viewed as atypical for graduates' career prospects. Often, jobs which help to fund studies are chosen deliberately, although they are not considered as matching the level of educational attainment. Moreover, it should be stated that the comparison of income according to type of study programme or higher education institution is only undertaken for full-time employed graduates.

Employment conditions

When employed for the first time, about six out of ten Bachelor graduates were employed full-time, and about the same proportion had a permanent contract. The findings presented in table 6 refer to the time when the survey was conducted, i.e. between about 1½ years after graduation. At that moment in their career, full-time employment of Bachelor graduates had progressed further: 65 per cent of university Bachelor graduates and 83 per cent of Bachelor graduates from UAS. These rates are lower than the respective rates among graduates from traditional programmes (79 per cent and 91 per cent respectively). But these findings certainly do not confirm frequent claims that graduates face a high risk of ending up in precarious employment.

This can be underscored as well with data about the rate of permanent employment at the time of the surveys. 80 per cent of university Bachelor graduates and 86 per cent of Bachelor graduates from UAS were permanently employed when this survey was conducted. The rates did not differ much from the respective rates of graduates from traditional programmes.

Table 6. Aspects of Professional Success of 2008 Graduates from Higher Education Institutions in Austria who are only Employed One and a Half Years after Graduation (per cent)

	Bachelor graduates			Trad. graduates			Total		
	Univ.	UAS	All	Univ.	UAS	All	Univ.	UAS	All
Full-time employed	65	83	73	79	91	82	78	89	81
Unlimited term contract	80	86	82	77	90	80	78	89	80
Vertical match	77	83	80	86	88	87	85	87	86
Horizontal match	48	51	49	47	54	49	48	53	49
Job satisfaction	71	73	72	73	78	74	73	77	74
N	371	248	619	3,086	938	4,024	3,505	1,202	4,744

Source: INCHER-Kassel, Austrian Graduate Survey (ARUFA) 2010

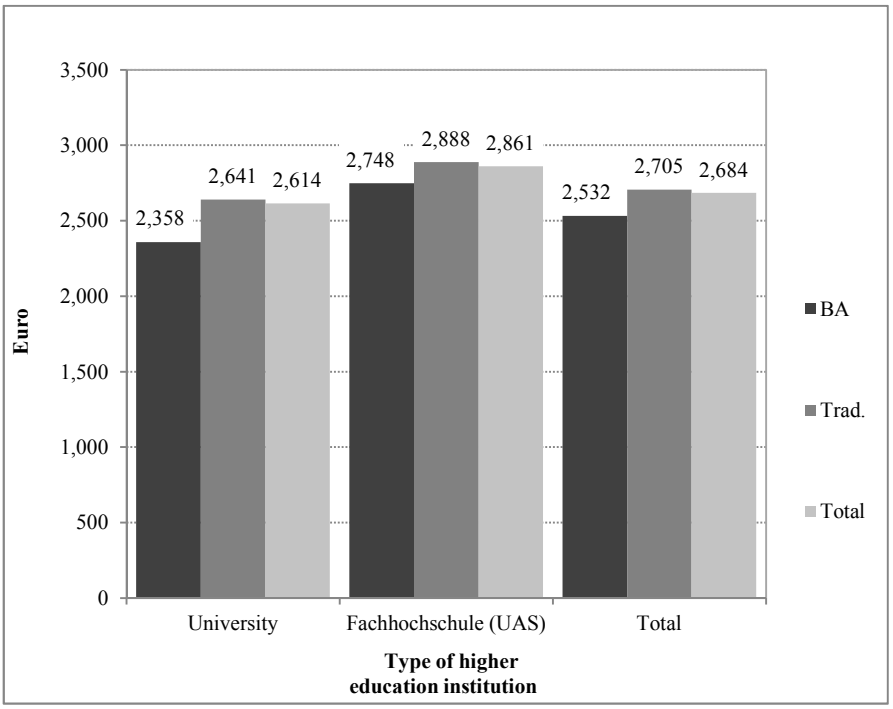
It is interesting to note that there are substantial differences by field of study as far as full-time employment is concerned: Only 46 per cent of university Bachelor graduates from the humanities and social sciences were employed full-time when the survey was conducted, as compared to 83 per cent of those from economic fields. In contrast, the proportion of those who are permanently employed varied by groups of fields of study between 77 per cent and 82 per cent.

Income

The average *gross monthly income* of full-time employed Bachelor graduates from universities was about 2,358 € about 1½ years after graduation, as compared to 2,641 € for those from traditional university programmes. Thus, Bachelor graduates from universities earn only 11 per cent less than graduates from the long university programmes.

It is worth mentioning that the average income of graduates from universities of the applied sciences is even higher than that of university graduates. This can be explained to a certain extent by the different composition according to fields of study and related occupational areas and is influenced by the fact that the former more often have already been professionally active than the latter. This notwithstanding the formers' income is impressive. Bachelor graduates from UAS have on average an even higher income (2,748 €) than those from traditional university programmes (2,614 €), and their income is only 5 per cent less than that of graduates from traditional programmes of the UAS.

Figure 3. Gross Monthly Income of 2008 Graduates from Higher Education Institutions in Austria (means)



Question F5: What is your gross monthly income? (incl. special payments and overtime)

Source: INCHER-Kassel, Austrian Graduate Survey (ARUFA) 2010

As one might expect, the average income varies substantially by groups of field of study: University Bachelor graduates from the humanities and social sciences (1,801 €) earn only about seven-tenth as much as those from engineering (2,644 €), and graduates from UAS in mathematics and natural sciences (2,126 €) have a similar income disadvantage to those from engineering (2,960 €). These differences by field among the Bachelor graduates, however, are not greater than those by field among graduates from traditional study programmes.

Links between study and employment/work

The *vertical relationships between study and employment* was addressed in the ARUFA survey with the help of the question "In your opinion, what is the most appropriate academic level for your current occupation?". In table 6, the responses "My degree level" and as well the few responses "A higher degree level" are classified as a vertical match, whereas the responses "A lower degree level" and "No degree required" are viewed as not matching (see also table 7).

As table 6 shows, six out of seven graduates surveyed consider that their occupation requires at least their level of degrees. As can be seen in table 7, among university Bachelors, the proportion of those who believed that a lower level of educational attainment would have been appropriate (34 per cent) was 3 per cent higher than among Bachelor graduates from UAS (31 per cent). This proportion was lower among graduates from traditional programmes (24 per cent and 21 per cent respectively). It is difficult to say whether such a difference can be explained as being so high that it is likely to cause decisions on the part of the university Bachelor graduates to opt for further study rather than for employment after the award of their degree.

Table 7. Link between Level of Education and Present Job Perceived by 2008 Graduates from Higher Education Institutions in Austria being solely Employed One and a Half Years after Graduation (per cent)

	Bachelor graduates			Trad. graduates			Total		
	Univ.	UAS	All	Univ.	UAS	All	Univ.	UAS	All
A higher academic degree	9	11	10	6	5	6	6	6	6
My academic degree	57	59	58	70	74	71	69	71	70
A lower academic degree	11	14	12	10	9	10	10	10	10
No academic degree necessary	23	17	20	14	12	13	15	13	14
Total	100	100	100	100	100	100	100	100	100
N	368	242	610	3,059	936	3,995	3,474	1,193	4,701

Question H3: In your opinion, which academic degree is best suited for your current job?

Source: INCHER-Kassel, Austrian Graduate Survey (ARUFA) 2010

The ratings of a vertical match are exceptionally low in two cases: 61 per cent of the university Bachelor graduates from the humanities and social sciences and 69 per cent of those from mathematics and natural sciences. In all other categories of institutional types, programme types and disciplinary groups, the respective ratio varies between about three-quarters and almost all respondents.

The *horizontal match* presented in table 6 is measured by asking the graduates about the extent to which the knowledge they had acquired in the course of study was used on the job. As can be seen in table 6 and 8, the responses vary only moderately according to type of degree and type of higher education institution. About half each of Bachelor graduates from both types of institutions stated that they used their competences to a high extent; the same holds true for graduates from traditional study programmes.

Table 8. Utilisation of Knowledge and Skills Acquired during the Course of Study in Current Job Perceived by 2008 Graduates from Higher Education Institutions in Austria who are solely Employed One and a Half Years after Graduation (per cent)

	Bachelor graduates			Trad. graduates			Total		
	Univ.	UAS	All	Univ.	UAS	All	Univ.	UAS	All
1 To a very high extent	14	17	16	15	12	14	15	14	14
2	34	33	33	33	41	35	33	40	35
3	28	34	30	33	35	34	33	34	33
4	17	13	16	16	11	15	16	11	15
5 Not at all	6	2	5	3	1	3	4	1	3
Total	100	100	100	100	100	100	100	100	100
N	373	241	614	3,063	928	3,991	3,483	1,184	4,702
Combined values									
High extent (1 and 2)	48	51	49	47	54	49	48	53	49
3	28	34	30	33	35	34	33	34	33
Low extent (4 and 5)	24	16	21	19	12	18	20	12	18
	2.7	2.5	2.6	2.6	2.5	2.6	2.6	2.5	2.6

Question H1: If you take into consideration your current work tasks altogether: To what extent do you use the knowledge and skills acquired in the course of study?

Source: INCHER-Kassel, Austrian Graduate Survey (ARUFA) 2010

It can be added that less than one-third of Bachelor graduates, but slightly more than one-third of graduates from traditional programmes considered their chosen field of study as "the only possible/by far the best" to fulfil their professional tasks (see table 9). A higher proportion, among them more Bachelor graduates than graduates from traditional programmes agreed to the statement "some other fields could prepare for the area of work as well". About a quarter of the graduates opted for one of the two remaining categories which indicate a low horizontal match: "another field would have been more useful" and "the field of study does not matter very much", among them a slightly higher proportion of Bachelor graduates than of graduates from traditional programmes.

Table 9. Link between Field of Study and Work Tasks Perceived by 2008 Graduates from Higher Education Institutions in Austria who are solely Employed One and a Half Years after Graduation (per cent)

	Bachelor graduates			Trad. graduates			Total		
	Univ.	UAS	All	Univ.	UAS	All	Univ.	UAS	All
My field of study is the only possible/by far the best field for my present work tasks	28	26	27	40	22	36	39	23	35
Some other fields could prepare for the area of work as well	41	48	44	37	57	42	38	55	42
Another field would have been more useful for my present work tasks	11	7	10	10	9	10	10	9	9
In my present work the field of study does not matter very much	20	19	20	13	12	13	14	13	14
Total	100	100	100	100	100	100	100	100	100
N	369	241	610	3,056	935	3,991	3,472	1,191	4,697

Question H2: How would you characterise the relationship between your field of study and your area of work?

Source: INCHER-Kassel, Austrian Graduate Survey (ARUFA) 2010

Asked to take into consideration "all aspects of their professional situation (status, position, income, scope of duties etc.) related to their current occupation" and to rate on that basis the extent to which their occupation is commensurate to their training, about 60 per cent of the respondents noted a clear link between study and work. This was stated by Bachelor graduates slightly less frequently than by graduates from traditional programmes.

Those who accepted a job that was not linked clearly to their study were asked why they opted for this job. About a quarter each of the Bachelor graduates gave the following two reasons: "This job represents an interim stage, as the respondent is still in the process of occupational orientation" and "the job allows for activities that are flexible in time". Less than one fifth each agreed to the following response categories "this job makes it possible to work in a desired location" and "the current occupation offers greater security. Only slightly more than one tenth stated that they had not yet found a suitable occupation.

In response to the question whether their professional situation corresponded to their expectation at the start of their study almost half of the graduates – both Bachelor graduates and graduates from traditional study programmes stated that their current professional situation was "much better" or "better than expected". Only one sixth of the Bachelor graduates and even slightly fewer of the graduates from traditional programmes considered their professional situation as "worse" or even "far worse than expected".

Job satisfaction

In response to the question about the extent to which they are *satisfied overall with their professional situation*, graduates from the different types of study programmes and institutional types reacted in a similar way: Around three quarters stated that they were "very satisfied" or "satisfied" (see table 4 and 10). The previous comparative studies – CHEERS and REFLEX – had already shown that the average job satisfaction of graduates from Austrian institutions of higher education was among the highest of the European countries surveyed.

Table 10. Job Satisfaction of 2008 Graduates from Institutions of Higher Education in Austria (per cent)

	Bachelor graduates			Trad. graduates			Total		
	Univ.	UAS	All	Univ.	UAS	All	Univ.	UAS	All
1 Very satisfied	30	35	32	29	28	29	29	29	29
2	42	38	40	44	50	46	44	48	45
3	18	17	17	18	14	17	18	15	17
4	8	8	8	7	5	6	7	6	6
5 Very dissatisfied	3	2	2	3	3	3	3	2	3
Total	100	100	100	100	100	100	100	100	100
N	371	248	619	3,086	938	4,024	3,505	1,202	4,744
Combined values									
Satisfied (1 and 2)	71	73	72	73	78	74	73	77	74
3	18	17	17	18	14	17	18	15	17
Dissatisfied (4 and 5)	11	10	11	9	8	9	9	8	9
Arithmetic mean	2.1	2.0	2.1	2.1	2.0	2.1	2.1	2.0	2.1

Question G5: How satisfied are you with your current job?

Source: INCHER-Kassel, Austrian Graduate Survey (ARUFA) 2010

There are some variations by field of study. Less than 70 per cent among university graduates from humanities and social sciences expressed a high degree of satisfaction- both those with a Bachelor (63 per cent) and those with a traditional degree (66 per cent). The same held true for university Bachelor graduates in mathematics and natural sciences (65 per cent) and for graduates from the UAS in engineering (69 per cent).

CONCLUSIONS

Two recent headlines can serve to illustrate aspects of the public discourse on academic degrees in Austria: "Increasingly precarious working conditions for academics" (Austria Presse Agentur, 2010); "Rising unemployment among academics despite positive trend" (derstandard.at, 2010). These and similarly striking phrases point to two reasons for public concern: There is "poor" (here: precarious) occupation or "unemployment" (i.e. no occupation) for university graduates. While the first information is based on a study conducted by the Austrian Institute for Research on Vocational Training[12] (see Schneeberger & Petanovitsch, 2010b), the second rests on the labour market statistics that are continuously produced by the AMS (Labour Market Service) – however, neither of these sources suggests such sensational headlines. The results of the project "The Working Situation of Graduates from Universities and Universities of Applied Sciences" can contribute to a factual and data-based discussion about the employability and professional relevance of graduates from higher education institutions in Austria.

In the winter semester of 2008/09 Austrian universities offered a total of 298 Bachelor, 455 Master and 93 Diploma degrees for enrolment; in 2003/04 the relation was still 157 to 198 and 227 (bmwf, 2008a, p. 137). At the time, some universities had already stopped any new enrolments to Diploma degrees (ibid., p. 136). Because the Diploma degrees can be completed within an appropriate timeframe, in addition to having the option to transfer from an initiated Diploma degree to a newly established Bachelor degree course, a certain kind of duality is expected to continue for some time, between graduates from "old", or traditional degree courses and those from "new" degree courses, which comply with the three-tiered Bologna structure.

Moreover, there will continue to be a range of combinations of studying and working: Bachelor, Master and doctoral degrees completed back-to-back; alternating phases of either exclusively studying or working; various manifestations of "students who are gainfully employed" or "gainfully employed persons who study". No doubt, the heterogeneity of forms of studying and of transitional forms will provide a number of challenges for the institutions in the tertiary educational sector – keyword "job-accompanying courses of study", but also new forms of "blended learning" and "e-learning".

In order to identify key features of the new academic degrees, as well as distinctions with the traditional degrees, selected results were presented in this paper – for the most part from the perspective of a comparison of the new Bachelor degree at universities and universites of applied science with the traditional degrees (*Magister*, *Diplom* and *Dipl.-Ing.*) of these types of higher education institution. In some instances, this comparison revealed fewer differences between types of degree than between types of instution.

Two prominent objectives of the Bologna Process, namely the encouragement of international student mobility and the promotion of employability, are the focus of this presentation.

[12] Institut für berufliche Weiterbildung (ibw)

What promotes and what impedes student mobility? Some of the newly established degrees or degree programmes include periods abroad for study or training purposes to a greater extent (see Wirtschaftskammer Österreich & Bundesministerium für Wissenschaft und Forschung, 2010, p. 4), and at the individual universities special units provide relevant support to students. The European Credit Transfer System should ensure that the mutual recognition of academic performance (comparability of *workload* or *grades*) gradually becomes less of an issue. However, experience shows that there is still room for improvement and – as our data illustrate – study-related periods abroad are still more of an exception than the rule.

What promotes and what impedes employability, at least after the first cycle (Bachelor level)? On the whole, the Austrian university graduates involved in the ARUFA study seem satisfied with their studies and the associated conditions; a few aspects (such as under-developed job-related elements in the degree, or a lack of awareness about course content) appear to justify criticism. Job satisfaction also appears to be very high – however, we are not in a position to establish a truly "objective" picture based on a survey of students or graduates (it is also possible that respondents have few expectations or a low level of requirements). As far as horizontal (usefulness of qualification) and vertical (adequacy of degree) fit are concerned, no significant problems were revealed; only to a limited extent are Bachelor graduates worse off here with regard to other criteria relating to (emerging) professional success.

Measured against the expectations aroused by the public discourse we find relatively few differences between "traditional" (*Magister*, *Dipl.-Ing.*) and "new" (Bachelor) degrees, nor do we find disadvantages for the latter – depending on the anticipatory attitude, this result may either disappoint or satisfy. We do, however, identify clear differences between the types of higher education institution – which may be largely due to the divergent tasks with which they are endowed (greater scientific or basic research orientation at the universities versus a more pronounced practice and application orientation at UAS) and which may also be ascribed to varying conditions ("open admission to higher education", in part "mass studies" or "admission", "university place management").

Further analyses, for example grouped by fields of study or by strongly represented single degrees or degree programmes, appear to be an obvious next step, and can very well be conducted with the data at hand. A greater level of differentiation by year of graduation would be meaningful in this context. Certainly, the different cohorts face somewhat changed conditions in the (academic) labour market; and certain aspects of gainful employment only become visible in the system of organised occupation after a certain lapse of time.

REFERENCES

Austria Presse Agentur (2010). *Immer mehr prekäre Arbeitsverhältnisse bei Akademikern* [Increasingly precarious working conditions for academics]. Retrieved March 22, 2010, from http://www.zukunft-wissen.apa.at/cms/zukunft-wissen/schule-und-bildung/meldung.html?id=ZUK_20100322_ZUK0046

Bundesministerium für Wissenschaft und Forschung (2008a). U*niversitätsbericht 2008. 2., korrigierte Auflage* [University report 2008. 2nd rev. edition]. Wien: bmw_f[a]

Bundesministerium für Wissenschaft und Forschung (2008b). *Zukunftsbotschaften des Forschungsministers: Strategische Handlungsfelder für Österreichs Frontrunner Strategie 2020* [Messages for the future by the Minister of Research: Strategic spheres of activity for Austria's Frontrunner Strategy 2020]. Retrieved August 13, 2010, from http://www.bmwf.gv.at/fileadmin/user_upload/forschung /forschungsdialog/ZUKUNFTSbotschaften_des_FORSCHUNGSministers_0808bmwf.pdf

Bundesministerium für Wissenschaft und Forschung (2009a). *Universitätsgesetz 2002. Österreichisches Hochschulrecht Heft 14* [University act 2002].Wien: bmw_f[a].

Bundesministerium für Wissenschaft und Forschung (2009b). *Bericht über den Stand der Umsetzung der Bologna Ziele in Österreich. Berichtszeitraum 2000-2008.* [Bologna Progress Report Austria, 2000-2008].Wien: bmw_fa.

Bundesministerium für Wissenschaft und Forschung (2010). *Dialog Hochschulpartnerschaft. Empfehlungen zur Zukunft des tertiären Sektors* [Dialogue 'Higher Education Partnership', recommendations for the future of the tertiary sector]. Retrieved August 13, 2010, from http://www.bmwf.gv.at/fileadmin/user_upload/Endbericht_Dialog_Hochschulpartnerschaft.pdf

Campbell, D.F.J. & Brechelmacher, A. (2007). *Bachelor Neu und der Arbeitsmarkt. Analyse der Sichtweisen von wirtschaftlichen Unternehmen und von Universitäten und Fachhochschulen. Formulierung von Empfehlungen.* Forschungsprojekt im Auftrag der WKÖ (Wirtschaftskammer Österreich) [The New Bachelor degree on the labour market]. Wien: IFF. Retrieved August 13, 2010, from http://www.uni-klu.ac.at/wiho/downloads/studie_bachelor_FINAL.pdf

derstandard.at (2010). *Arbeitslosigkeit bei Akademikern steigt trotz positiver Tendenz* [Unemployment among graduates increases]. Retrieved August 13, 2010, from http://derstandard.at/1277339011003/Arbeitslosigkeit-bei-Akademikern-steigt-trotz-positiverTendenz

Eurydice (2009). *Higher education in Europe 2009: Developments in the Bologna Process.* Brussels: Education, Audiovisual and Culture Executive Agency.

Fachhochschul-Studiengesetz (FHStG) [Fachhochschule Studies Act] (2010). Retrieved August 13, 2010, from http://www.jusline.at/FachhochschulStudiengesetz_%28FHStG%29.html

Guggenberger, H., Kellermann, P. & Sagmeister, G. (2001). *Wissenschaftliches Studium und akademische Beschäftigung. Vier Jahre nach Studienabschluss. – Ein Überblick* [Study and graduate employment four years after graduation]. Institut für Soziologie der Universität Klagenfurt. Klagenfurt.

Guggenberger, H., Kellermann, P., Sagmeister, G. & Steingruber, A. (2007). *Wandel der Erwerbsarbeit in einer wissensbasierten Gesellschaft. Neue Herausforderungen an die Hochschulbildung in Europa. Österreich-Bericht* [The flexible professional in the knowledge society. New demands on higher education in Europe. Austrian report]. Klagenfurt: IfS. Retrieved August 13, 2010, from http://www.uni-klu.ac.at/sozio/bilder/Bericht_Langfassung.pdf

Heissenberger, S., Mark, V., Schramm, S., Sniesko, P. & Süss, R.S. (Eds.) (2010). *Uni brennt. Grundsätzliches – Kritisches – Atmosphärisches* [University burning].Wien, Berlin: Turia + Kant.

Kellermann, P., Boni, M. & Meyer-Renschhausen, E. (Eds.) (2009). *Zur Kritik europäischer Hochschulpolitik. Forschung und Lehre unter Kuratel betriebswirtschaftlicher Denkmuster* [Critique on European Higher Education policy]. Wiesbaden: VS.

Liessmann, K.P. (2006). *Theorie der Unbildung. Die Irrtümer der Wissensgesellschaft* [Theory of miseducation]. Wien: Zsolnay.

Prisching, M. (2008). *Bildungsideologien. Ein zeitdiagnostischer Essay an der Schwelle zur Wissensgesellschaft* [Ideologies of education]. Wiesbaden: VS.

Schneeberger, A. & Petanowitsch, A. (2010b). *Zwischen Akademikermangel und prekärer Beschäftigung. Zur Bewährung der Hochschulexpansion am Arbeitsmarkt*. ibw Forschungsbericht Nr. 153

[Between shortage of graduates and precarious occopation: Probation of the expansion of higher education on the labour market]. Wien: ibw. Retrieved August 13, 2010, from http://www.ibw.at/de/pruefungsunterlagen/lap?page=shop.getfile&file_id=392&product_id=348

Schneeberger, A., Petanovitsch, A. & Nowak, S. (2010). *Akzeptanz des Bachelors in der Wirtschaft. Befragungsergebnisse mittlerer und großer Unternehmen*. ibw-Forschungsbericht Nr. 155 [Acceptance oft the Bachelor on the labour market. A survey among medium and large enterprises]. Wien: ibw. Retrieved August 13, 2010, from http://www.ibw.at/de/pruefungsunterlagen/lap?page=shop.getfile&file_id=403&product_id=364

Unger, M., Zaussinger, S., Angel, S., Dünser, L., Grabher, A., Hartl, J., Paulinger, G., Brandl, J., Wejwar, P. & Gottwald, R. (2010). *Studierenden-Sozialerhebung 2009* [Survey on the social and economic conditions of students]. Retrieved August, 13, 2010, from http://www.bmwf.gv.at/uploads/tx_contentbox/Studierenden_Sozialerhebung_2009.pdf

Wirtschaftskammer Österreich & Bundesministerium für Wissenschaft und Forschung (2010). *Bachelor welcome!* Retrieved August 13, 2010, from http://portal.wko.at/wk/format_detail.wk?AngID=1&StID=547824&DstID=0&titel=Brosch%C3%BCre,%22Bachelor,Welcome%22