

# Chapter 5

## The Teaching Function of the Academic Profession

Ester Ava Höhle and Ulrich Teichler

### 5.1 Introduction

Teaching and research are the key tasks of the academic profession. The medieval universities in Europe, widely viewed as the predecessors of the modern universities, used to serve teaching primarily or exclusively. With the birth of the neo-humanistic university and the expansion of higher education, the role of the university changed and increasingly comprised both teaching and research. The close nexus between teaching and research is said to result from Wilhelm von Humboldt's concept of the University in Berlin formulated in the early nineteenth century whereby the highest quality in teaching shall be nurtured by the symbiosis with the most innovative research. This concept influenced most top higher education institutions up to the present, even though it was never viewed as being easily realised (Schaeper 1997), and the balance of these two core functions of the modern university remained a challenge both for the institutions and the individual scholars.

For various reasons, however, experts claim that the history of the modern university was primarily shaped by the teaching function of higher education. In talking about the expansion of higher education after WWII, we primarily consider the worldwide growth in the number of students from more than 10 million to over 100 million in recent years. The terminology of international organisations shifted from university education to higher education and eventually to tertiary education, thereby taking into consideration that research did not spread as widely in its link to teaching as teaching spread. Moreover, concern was widespread that the quality of teach-

---

E.A. Höhle (✉) • U. Teichler  
International Centre for Higher Education Research (INCHER),  
University of Kassel, Germany  
e-mail: hoehle@incher.uni-kassel.de; teichler@incher.uni-kassel.de

ing would remain deplorable if academics who put stronger emphasis on research were not pushed to take teaching more seriously, if they were not systematically trained for their teaching functions and if curricula and other study provisions were not highly organised. The concepts of teaching were under continuous pressure to strike a balance between a research-influenced reflection of academic concepts and laying the foundation for professional practice. Moreover, higher education institutions in most countries are viewed as having more or less the monopoly for systematic teaching and related degree-granting, while substantial proportions of research are undertaken in other institutions – independent research institutions, state institutions linked to practical functions and research and development in industry. Last but not least, the importance of academic teaching was emphasised as the training ground for young researchers and therefore as the basis of the quality of research (Arimoto 2010; see also various contributions in Locke and Teichler 2007).

Hence, the EUROAC survey had to address the relationship between these core functions of higher education. This chapter, which primarily addresses teaching, discusses the balance between teaching and research in two respects: the academics' preferences for teaching and research and the work time allotted per week to the various functions. In turning to teaching, special attention will be given to the time spent on teaching during the periods of the year when classes are in session. In addition, we will examine the conditions for teaching with respect to regulatory frame, the organisational conditions and the resources provided. Moreover, the available data allow us to examine the extent to which the academics are involved in various teaching activities and their attitudes to the character of teaching and learning in higher education. Finally, a multivariate analysis will be presented which examines the factors that influence the allocation of work time to teaching.

Like other chapters of this volume, the analysis focuses on the extent to which we note common thrusts across countries or a substantial variety across Europe concerning teaching in higher education. In this framework, attention is also paid to the commonalities or differences in the views and activities of senior and junior academics. Last but not least, any analysis of the teaching function of higher education is interested in the questions of similarity or differences in the role of teaching in other higher education institutions with a prime emphasis on teaching and in universities which emphasise both teaching and research (see also Jacob and Teichler 2011).

## 5.2 Weekly Work Hours

Academics in most countries are relatively free to arrange the time and location of their work. They could be expected to work as much as other persons, that is, somewhat less than 40 h in many European countries, if they are employed full time. As will be discussed below, most academics must comply to rules, set at national, institutional or departmental level, or even individual contracts, as regards the teaching load and the number of “contact hours” in classrooms. However, it is mostly up

to their own discretion whether they spend 1, 2, even 3 or more hours per teaching hour on teaching-related activities such as preparation, assessment and guidance. To have an overview of how much time academics spend for what activities, they were asked to estimate the average number of hours for teaching, research, service, administration and other academic activities both for the periods when classes are in session and when classes are not in session. In the questionnaire, only these major functions were addressed without further specification. Therefore, it is not possible to establish how much of the teaching time is allocated directly to teaching or to teaching-related activities such as curriculum development, preparation of classes, assessment and guidance.

As academics are often very devoted to their work and as time is a flexible resource for enhancing their academic work, one can expect that they work more hours than usually required. Moreover, self-estimates of work time might be inflated when schedules are flexible. According to the international survey of the academic profession undertaken in the 1990s (Altbach 1996), university professors of the four participating European countries reported a weekly work schedule of 51 h (52 h for full-time employment), junior staff at universities 45 h (50 h) and academics at other higher education institutions 40 h (44 h).

The respondents were asked in the questionnaire to state the weekly working hours separately for the period when classes are in session and for the period when classes are not in session. This distinction was made because a single question to academics as regards the work time is likely to elicit responses that only reflect the period when classes are in session. We estimate the annual working time of academics by assuming, first, that the period when classes are in session covers 60% of the annual work time and the period when classes are not in session 40% (see Teichler 2010a). In analysing the overall working time, we refer to full-time employed academics only because they tend to be viewed as the prototypical academics at higher education institutions who are in charge of all the functions, whereas part-timers might have a restricted role (e.g. little responsibility for administration, no balance between teaching and research) (see Enders and de Weert 2004).

According to estimates on the basis of their self-reports, we estimate, as presented in Table 5.1, that full-time university professors of the 12 European countries work 47 h per week, that is, about one-fifth more than the typical work schedule of full-time employed persons. The figures vary substantially by country: 52 h are reported each by university professors in Germany and Switzerland and 50 h in Ireland. In most other countries, university professors report 45 and 49 h, while the lowest number of weekly hours is stated by university professors in Norway (39 h) and Portugal (41 h).

Junior staff at universities employed full-time works 42 h on average. The average figures vary less by country than in the case of university professors. Those from Ireland report 47 h. In almost all the other countries, they report between 41 and 45 h. There is a single exception of junior staff in Norway reporting 28 h, but this includes doctoral candidates who are expected to work less, even though it is not officially a part-time job.

**Table 5.1** Annual weekly work hours spent on various academic functions (only full-time academics)

	2010						2007/2008					
	AT	CH	HR <sup>a</sup>	IE	PL	NL	DE	FI	IT	NO	PT	UK
<i>Seniors at universities</i>												
Teaching	11	12	15	12	15	14	14	15	14	13	13	15
Research	19	21	18	19	17	19	20	17	21	15	16	17
Service	5	5	3	3	4	3	7	3	4	2	2	2
Administration	9	9	7	11	5	9	7	8	5	7	6	11
Other activities	4	5	4	5	3	3	5	4	2	3	3	4
Total hours	48	52	47	50	43	48	52	47	46	39	41	48
<i>Juniors at universities</i>												
Teaching	9	5	14	14	15	15	9	11	14	5	16	11
Research	21	28	18	18	18	20	21	23	21	19	18	19
Service	5	4	2	2	3	2	7	2	4	1	1	1
Administration	6	4	5	9	4	4	3	3	3	2	4	10
Other activities	3	3	3	4	3	3	2	2	2	2	2	4
Total hours	44	45	42	47	43	44	42	41	44	28	41	45
<i>Seniors at other HEIs</i>												
Teaching		14		15	16	18	21	14		12	14	
Research		13		12	14	12	11	8		13	14	
Service		5		2	4	2	3	2		3	2	
Administration		11		11	5	3	5	11		4	6	
Other activities		5		4	4	3	2	2		2	3	
Total hours		48		44	42	38	42	38		34	38	
<i>Juniors at other HEIs</i>												
Teaching		14		20	13	22	9	20		4	17	
Research		14		10	15	4	8	6		17	14	
Service		3		2	5	2	4	2		1	1	
Administration		7		6	4	4	6	5		3	5	
Other activities		4		3	3	4	4	1		2	2	
Total hours		42		40	40	37	30	34		29	39	

Question B1: Considering all your professional work, how many hours do you spend in a typical week on each of the following activities?

<sup>a</sup>Croatia: data for all respondents (including part-time staff not reported separately)

Senior academics at other higher education institutions of the countries surveyed who are employed full-time work on average 41 h per week. Only full-time senior academics at Swiss “Fachhochschulen” (universities of applied sciences) report substantially longer work time than usual schedules, that is, 48 h on average. Finally, junior staff at other institutions who are employed full-time spends 38 h on average on their job – the mean not exceeding 42 h in any country.

### 5.3 Distribution of Time on Various Academic Functions

While Table 5.1 shows the number of hours spent by academics on the academic core functions, Table 5.2 presents the proportion of time spent. University professors employed full time in the 12 European countries spend 14 h per week on their teaching activities during the whole year; this corresponds to 30% of their overall work time. As no detailed information was collected on the teaching load, we can only estimate on the basis of general information about teaching loads in the respective countries that university professors in the various countries spend on average between 2 and 3 h on teaching-related activities per teaching hour.

**Table 5.2** Percentage of annual weekly work time spent on various academic functions (only full-time academics)

	2010						2007/2008					
	AT	CH	HR <sup>a</sup>	IE	PL	NL	DE	FI	IT	NO	PT	UK
<i>Seniors at universities</i>												
Teaching	23	23	32	24	36	30	28	33	31	33	34	31
Research	40	41	39	38	38	40	38	37	45	37	38	35
Service	11	9	6	6	8	5	11	5	8	5	6	4
Administration	18	17	14	22	11	18	14	17	11	18	15	22
Other activities	8	9	9	10	7	7	9	7	5	7	8	8
Total percentage	100	100	100	100	100	100	100	100	100	100	100	100
<i>Juniors at universities</i>												
Teaching	20	12	34	31	37	35	21	27	32	16	41	25
Research	47	63	43	39	40	45	51	56	48	69	42	43
Service	11	9	4	4	7	3	16	5	8	2	3	2
Administration	14	9	12	19	9	9	7	8	7	8	9	22
Other activities	7	7	7	8	7	7	5	5	5	6	5	8
Total percentage	100	100	100	100	100	100	100	100	100	100	100	100
<i>Seniors at other HEIs</i>												
Teaching		28		35	41	49	52	41		33	38	
Research		27		26	31	29	24	20		39	33	
Service		10		5	8	7	7	5		8	4	
Administration		25		25	12	8	12	27		13	16	
Other activities		10		9	9	6	5	6		7	9	
Total percentage		100		100	100	100	100	100		100	100	
<i>Juniors at other HEIs</i>												
Teaching		32		53	36	61	28	60		19	45	
Research		33		22	36	10	24	17		53	35	
Service		8		4	11	6	16	7		6	2	
Administration		17		14	9	11	20	12		11	11	
Other activities		10		7	8	11	12	4		11	6	
Total percentage		100		100	100	100	100	100		100	100	

Question B1: as in Table 5.1

<sup>a</sup>Croatia: data for all respondents (including part-time staff not reported separately)

Clearly, more time is devoted to research than to teaching: 18 h and 38% of their work time. University professors on average spend more time on teaching than on research when classes are in session, but the time spent on research when classes are not in session clearly outweighs this. Finally, they spend almost as much time during the year on other activities: 4 h and 7% on service, 8 h and 17% on administration and 4 h and 8% on other – unspecified – tasks.

The amount of time spent on teaching activities ranges from 23% in Austria and Switzerland to 36% in Poland, while the time spent on research varies between 35% in the United Kingdom and 45% in Italy. In all the European countries that were surveyed, university professors spend more time on research than on teaching during the year. The ratio of time spent on research to time spent on teaching ranges from 1.7 in Switzerland and Austria to 1.2 in Portugal, Finland, Norway and the United Kingdom and only 1.1 in Poland. The amount of time spent on services is exceptionally high in Austria and Germany (11% each), while it is around 5% in about half the countries. Time spent on administration ranges from 11% in Italy and Poland to 22% in Ireland and the United Kingdom.

Junior staff spends 12 h a week on teaching activities on average during the year; this corresponds to 28%, that is slightly less than the respective amount in the case of university professors. They spend 20 h on average on research, that is 49% of their work time. This is higher than in the case of university professors. In contrast, juniors at universities spend less time on services, administration and other functions.

Juniors at universities show greater variety in their functions by country, ranging in teaching activities from 12% in Switzerland to 41% in Portugal and in research from about 40% in Ireland and Poland to 69% in Norway. In Ireland, Portugal and the Netherlands, juniors at universities spend much more time on teaching activities than seniors at universities. In Norway and Switzerland, in contrast, they spend only about half the time on teaching activities as the seniors. In Switzerland, Germany and Finland, junior staff also spends more time on research than professors at universities. The amount of time junior academics spend on service, administration and other academic activities is less than university professors.

One could have expected that the number of hours spent on teaching activities by professors at other higher education institutions was substantially higher than the hours spent by university professors. However, the average of 16 h is only 2 h more than in the case of university professors. As the teaching load seems to differ more strongly, we conclude that professors at other institutions spend less time on teaching-related activities (preparation, assessment, guidance, etc.) per teaching hour. The difference by country in the proportion of time spent on teaching is more substantial, that is, 40% versus 30%; this reflects a lower number of working hours on the part of the professors at other higher education institutions. As regards research, we note an average of 12 h and 27%. On the one hand, professors at other higher education institutions in Portugal, the Netherlands and Germany spend more than twice as much time on teaching than on research. On the other, time spent on research is about equal to time spent on teaching in Austria and even higher in Italy.

Juniors at other higher education institutions teach almost as much (15 h) as seniors in their institutions. In Finland, Ireland and the Netherlands juniors at these institutions teach considerably more than seniors; the opposite is true in Germany, Norway and the United Kingdom. In the latter countries, junior staff at other institutions more frequently has other responsibilities, for example, research, services and administration.

## 5.4 Teaching Time When Classes Are in Session

In the previous section, information was provided on how (full-time) academics distributed their time according to academic functions. It is interesting to know how much time for teaching is actually available in those periods of the year when teaching actually takes place. Therefore, the subsequent information refers to the work time of all academics (including part-timers) when classes are in session.

As Table 5.3 shows, university professors in European countries spend on average 18 h on teaching and related activities when classes are in session. The country means vary only moderately from 16 to 20 h, with the exception of Austria where university professors report only 14 h a week.

Junior staff at universities report on average 15 h on teaching when classes are in session. In 7 of the 12 countries, they seem to be as much involved in teaching as seniors, but in five countries, they clearly have more limited teaching activities: notably Norway and Switzerland but also Germany, Austria and Finland.

Senior academics at other higher education institutions spend more time on teaching and teaching-related activities (20 h on average) than senior academics at universities. One could have expected an even more substantial difference; however,

**Table 5.3** Time spent on teaching activities when classes are in session (weekly hours and percentage of all academic work, all respondents)

	2010						2007/2008					
	AT	CH	HR	IE	PL	NL	DE	FI	IT	NO	PT	UK
<i>Weekly hours</i>												
Seniors at university	14	16	19	16	19	17	19	20	18	18	17	18
Juniors at university	11	7	18	18	19	20	10	12	18	7	20	15
Seniors at other HEIs		17		20	19	18	27	20		16	18	
Juniors at other HEIs		15		26	19	23	11	26		6	21	
<i>Percentage of total</i>												
Seniors at university	29	30	40	32	43	41	35	42	40	42	44	40
Juniors at university	29	19	44	41	45	49	27	28	42	26	52	36
Seniors at other HEIs		38		41	47	48	63	49		42	44	
Juniors at other HEIs		40		62	46	69	40	66		25	57	

Question B1: as in Table 5.1

the difference is only substantial in the case in Germany, where university professors spend 19 h a week on teaching and professors of other higher education institutions (Fachhochschulen) 27 h when classes are in session.

Junior academics at other higher education institutions spend on average slightly less time on teaching when classes are in session than senior academics: 18 h a week on average of all the European countries surveyed. However, we note more striking differences here than in the other categories: on the one hand, junior staff at Finnish AMK and Irish other third-level institutions spend more time on teaching (26 h each when classes are in session) than their seniors (20 h each). On the other, the teaching function of junior staff at these institutions is limited in Norway (8 h), Germany (12 h) and the United Kingdom (12 h).

Table 5.4 illustrates how involvement in teaching differs when classes are in session. Forty-one percent of the university professors on average of the 12 countries report that they spend between three-tenths and half of their working time on teaching activities. Thirty-one percent spend between one-tenth and three-tenths. Only very few spend a marginal proportion on teaching (6%). In contrast, 22% spend more than half of their time on teaching activities when classes are in session, among them few in Austria (6%), Ireland (10%) and Switzerland (11%).

Involvement in teaching, as already mentioned above, is more dispersed among junior staff at universities. On the one hand, three times as many junior staff (19% on average of the 12 European countries) spend only up to one-tenth of their time on teaching activities when classes are in session. These proportions are highest in Switzerland (44%), Finland (43%) and Norway (35%). On the other, fewer juniors at university spend more than half the time on teaching activities (26%) than their seniors. This proportion is highest in Portugal (48%) and the Netherlands (42%). Also, junior academics at universities in Poland and Croatia are more strongly involved in teaching activities than senior academics.

At other higher education institutions, about twice as many senior academics (41%) spend more than half their time on teaching activities when classes are in session as university professors. This is most pronounced at German Fachhochschulen (39%) where the teaching load is especially high. The previous overview on number of working hours by full-time staff has shown a smaller difference between university professors and senior academics from other higher education institutions; we must bear in mind, in this context, that the share of work devoted to teaching is especially high among those employed part-time – which is more often the case among senior staff from other institutions than among senior academics at universities.

As one might anticipate from the previous information about the overall allocation of work time for various functions, the time allotted to teaching activities by junior staff at other higher education institutions varies substantially by country. The share of those spending more than half their time on teaching activities is highest among junior academics at Finnish AMK (74%), Dutch HBO and Irish other third-level institutions (73% each).

Women at universities spend more time on teaching when classes are in session than men. As Table 5.5 shows, the difference by gender is 4% for university professors and also 4% for junior staff at universities, while at other institutions no difference can be observed on average in the countries surveyed. More teaching on the part of



**Table 5.4** Percentage of working hours spent on teaching and teaching-related activities when classes are in session

	2010						2007/2008					
	AT	CH	HR	IE	PL	NL	DE	FI	IT	NO	PT	UK
<i>Seniors at universities</i>												
Below 10%	10	11	1	5	2	7	9	5	2	6	1	8
11–30%	46	42	19	45	27	26	35	22	32	20	25	30
31–50%	38	36	62	40	40	40	40	44	43	42	45	34
51–70%	5	9	16	9	24	16	12	18	17	26	20	16
71–100%	1	2	2	1	8	11	3	10	7	7	8	13
Average	29	30	40	32	43	41	35	42	40	42	44	40
<i>Juniors at universities</i>												
Below 10%	23	44	3	8	2	7	28	43	3	35	4	27
11–30%	38	32	19	22	22	18	36	20	25	29	8	18
31–50%	24	17	48	44	42	33	22	12	44	16	39	24
51–70%	8	4	20	19	24	24	7	11	19	12	30	15
71–100%	7	2	10	7	11	18	7	14	9	8	18	15
Average	29	19	44	41	45	49	27	28	42	26	52	36
<i>Seniors at other HEIs</i>												
Below 10%		15		13	2	7	0	9		8	11	
11–30%		23		29	19	23	6	16		31	16	
31–50%		37		13	40	31	25	29		31	42	
51–70%		15		27	25	17	30	27		19	18	
71–100%		11		18	14	22	39	20		12	13	
Average		38		41	47	48	63	49		42	44	
<i>Juniors at other HEIs</i>												
Below 10%		22		3	6	2	24	7		35	1	
11–30%		20		6	20	8	24	5		25	5	
31–50%		24		18	38	16	24	15		25	40	
51–70%		16		33	19	20	9	22		15	30	
71–100%		19		40	16	53	21	52		0	25	
Average		40		62	46	69	40	66		25	57	

Question B1: as in Table 5.1

women is most pronounced among university professors in Finland, where they spend 11% more time than men on teaching and among university junior staff in the United Kingdom where women spend 10% more time than men when classes are in session. There are exceptions though: among university professors in Austria and Croatia, men spend slightly more time on teaching than women; Switzerland is the exception in the case of junior staff at universities.

The overall higher amount of time spent on teaching when classes are in session by women can be explained by disciplinary composition. Across the European countries examined, the amount of time devoted to teaching activities when classes are in session does not vary strikingly by discipline; however, academics at universities in humanities and social sciences spend on average about 4% more time on teaching activities when classes are in session than academics in science and engineering. In contrast, the amount of time spent on teaching by academics in humanities and

**Table 5.5** Percentage of working hours spent on teaching and teaching-related activities when classes are in session, by gender

	AT		CH		HR		IE		PL		NL			
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female		
Seniors at univers.	29	28	29	35	40	39	32	33	41	45	42	43		
Juniors at univers.	30	30	19	18	42	46	36	44	44	47	49	50		
Seniors at oth. HEIs	40	40	40	32			37	49	43	50	49	43		
Juniors at oth. HEIs	40	40	40	40			64	60	38	52	69	69		
	DE		FI		IT		NO		PT		UK		Total	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Seniors at univers.	34	38	39	50	39	46	42	44	42	49	39	42	37	41
Juniors at univers.	26	30	27	31	41	44	26	26	47	54	32	42	35	39
Seniors at oth. HEIs	62	63	51	44			41	47	43	42			47	46
Juniors at oth. HEIs	43	46	62	70			38	18	57	58			50	50

Question B1: as in Table 5.1

social sciences at other higher education institutions hardly differs on average from that of their colleagues in science and engineering.

Altogether, the average time spent on teaching when classes are in session does not vary strongly by country within the individual disciplines. For example, it ranges in the groups of humanities and social sciences in the case of university professors across all European countries between 41 and 45% (except for law where teaching activities represent only 34%) and in science and engineering between 34 and 40%.

## 5.5 Preferences for Teaching and Research

Since time distribution is greatly determined by the academics themselves, it is interesting to examine the preferences academics harbour regarding teaching and research. It is also worth examining whether these preferences are linked to their allocation of working time.

In the survey of the 12 European countries, the same question regarding preferences was posed as in 1992 in the Carnegie Survey. This earlier survey showed that most academics appreciated a link between teaching and research, but those at universities mostly leaned more strongly towards research, while those at other higher education institutions leaned more strongly towards teaching. Moreover, the previous survey showed that those who preferred research and those who leaned more strongly towards research reported higher weekly working hours, that is, beyond those customary for ordinary employees in other occupational areas, than those who leaned towards teaching or who preferred teaching (Altbach 1996).

Among the university professors of the 12 European countries surveyed recently, almost three-quarters (73%), as Table 5.6 shows, report that they lean towards research or have a preference for research. The respective average quota is almost identical for junior staff at universities (71%). As the teaching function plays a considerably stronger role at other higher education institutions, one could have expected that a very small proportion of academics at those institutions had a preference for research. Thus, it is surprising to note that more than 40% of academics at other higher education institutions report that they have a clear preference for or lean towards research.

There are noteworthy differences by country in this respect:

- A clear preference for teaching and a leaning towards teaching are only frequent among university professors in Poland (47%), Portugal (39%) and Croatia (35%), while in various other countries only about 20% state a similar attitude.
- Among junior staff at universities, high proportions hold true for Portugal (47%), Croatia (42%) and Ireland (40%).
- Also, among academics at other higher education institutions, preferences for teaching differ substantially by country, with the highest proportion among senior academics in Germany (77%) and Ireland (71%) and among junior academic staff in Finland (85%), the Netherlands (83%) and Ireland (81%).

**Table 5.6** Preferences for teaching or research (percentage)

	2010						2007/2008					
	AT	CH	HR	IE	PL	NL	DE	FI	IT	NO	PT	UK
<i>Seniors at universities</i>												
Primarily in teaching	1	1	2	3	13	5	5	2	2	2	3	8
Both, leaning towards teaching	17	20	33	19	34	17	20	19	22	18	36	23
Both, leaning towards research	58	59	62	65	45	55	63	61	67	60	48	48
Primarily in research	24	20	3	13	8	23	12	18	10	20	14	22
<i>Juniors at universities</i>												
Primarily in teaching	5	3	4	7	3	5	7	8	3	2	6	9
Both, leaning towards teaching	21	17	38	33	29	17	22	12	22	14	41	24
Both, leaning towards research	42	47	50	51	54	49	38	39	60	44	47	37
Primarily in research	33	32	8	8	14	30	33	42	15	40	6	30
<i>Seniors at other HEIs</i>												
Primarily in teaching		15		20	14	16	42	15		3	11	
Both, leaning towards teaching		37		51	47	33	35	49		22	43	
Both, leaning towards research		33		18	35	40	22	26		58	37	
Primarily in research		15		11	4	11	1	10		17	9	
<i>Juniors at other HEIs</i>												
Primarily in teaching		18		36	12	47	46	49		5	13	
Both, leaning towards teaching		28		45	34	36	17	36		8	44	
Both, leaning towards research		33		15	43	15	19	11		51	37	
Primarily in research		21		3	10	2	18	4		37	7	

Question B2: Regarding your own preferences, do your interests lie *primarily* in teaching or in research?

We must be cautious, however, in inferring major consequences of these orientations as regards a broad range of activities. An in-depth analysis of these findings has shown, for example, that 71% of the teaching-oriented university professors in Germany were involved in curriculum development, as compared to 59% of their research-oriented colleagues. The respective figure for university professors in the United Kingdom was 87% as compared to 73% (Teichler 2010b). There is an impact, but not a dramatic one.

In most countries, however, the actual share of working time spent on teaching activities when classes are in session complies with preferences. That means that those with teaching preferences teach considerably more than those with research preferences ( $r = -426^{**}$ ). This holds true notably for Finland: Finnish university professors with a preference for teaching spend 66% of their time on teaching, while those with a preference for research spend only 32% of their time on teaching (for Finnish juniors at universities we note a wider gap: 72% versus 12%). Altogether, juniors at universities are those where preferences and time spent are most closely linked. This could be due to the fact that some of the junior staff at universities are exclusively or almost exclusively in charge of research, while others have a higher teaching load than university professors.

However, this is not the case consistently in all countries. At Italian and Swiss universities, as well as at other higher education institutions in the Netherlands and

Norway, no link is visible between time use and preferences. Similar results can be found in other cases.

## 5.6 Institutional Settings for Teaching

Academics are exceptional in the degree of regulation of their work tasks. They are often only clearly assigned the task of teaching a certain number of classes and are otherwise expected to serve teaching, research and related functions and activities.

In response to a corresponding question, about five-sixth of the academics surveyed stated that their institution set quantitative targets or expected a certain number of teaching hours from the academics. As the question might be misunderstood as referring to specific targets set for the respondents, we can assume that teaching loads are set for an even higher number of academics. But even if there are no general rules, one can assume that more or less all individual academics are informally expected or are formally required to teach a certain number of hours.

Other regulations and institutional expectations are addressed in Table 5.7. The academics were questioned on four issues:

- Whether funding of departments is based on the number of students and/or graduates
- Whether the quality of teaching is considered in personnel decisions
- Whether targets or regulatory expectations are set for the individual academic with regard to classroom hours, number of students in class, number of graduate students to be supervised, percentage of students passing exams and time for student consultation (in Table 5.7, the percentage of respondents is presented naming at least three of the targets as applicable)
- Whether they are encouraged to improve their instructional skills in response to teaching evaluation

Funds made available to the departments in institutions reflect *quantitative* targets, that is, the number of students and/or the number of graduates. It should be borne in mind, though, that no question was asked in the questionnaire concerning the extent to which funding varied according to student and graduate figures.

Austria is the only country where only a minority of academics at universities states that funding at departments is influenced by such quantitative targets (this question was not asked in Croatia and in Switzerland). In most countries, the student numbers play a major role in comparison to graduate numbers. Finnish universities are an exception here, where graduate figures seem to play a more important role than student numbers. In the Netherlands, Norway and at Finnish, other higher education institutions graduate numbers are almost as often named by respondents as student numbers.

Less than a quarter of the academics at universities believe that personnel decisions as regards academics (i.e. recruitment and promotion) are strongly based on the presumed *teaching quality* of the respective persons. Only the academics at

**Table 5.7** Perceived institutional regulations and expectations as regards teaching (percentage\*)

	2010						2007/2008					
	AT	CH	HR	IE	PL	NL	DE	FI	IT	NO	PT	UK
<i>Seniors at universities</i>												
a. Funding / students	27			61	52	67	50	33	55	53	57	76
b. Funding / graduates	16			33	9	58	33	74	23	57	23	30
c. Teaching quality	21			20	23	37	28	32	13	24	17	35
d. Workload target	17	2		14	79	42	26	17	21	40	31	45
e. Teaching improvement	30	49	26	55	10	49	37	16	59	42	40	52
Regulations (mean a–d)	21			34	41	51	34	39	28	43	32	46
<i>Juniors at universities</i>												
a. Funding / students	31			62	49	64	42	39	52	49	47	68
b. Funding / graduates	20			37	9	60	21	71	23	55	27	32
c. Teaching quality	20			15	20	28	21	21	10	26	15	28
d. Workload target	17	6		19	72	37	18	17	15	32	36	52
e. Teaching improvement	33	47	24	60	12	49	31	11	62	58	36	56
Regulations (mean a–d)	21			35	38	47	26	37	25	40	31	45
<i>Seniors at other HEIs</i>												
a. Funding / students				63	40	81	65	77		45	37	
b. Funding / graduates				18	8	75	41	71		45	11	
c. Teaching quality				21	32	53	51	54		39	15	
d. Workload target		4		28	77	42	40	31		27	58	
e. Teaching improvement		50		40	16	50	48	20		58	30	
Regulations (mean a–d)				33	39	63	49	58		39	30	
<i>Juniors at other HEIs</i>												
a. Funding / students				53	44	83	66	69		55	34	
b. Funding / graduates				16	11	65	39	61		47	17	
c. Teaching quality				17	22	34	57	34		28	19	
d. Workload target		3		27	67	47	18	37		31	40	
e. Teaching improvement		53		49	17	52	39	14		53	32	
Regulations (mean a–d)				29	36	57	45	50		40	27	

Question C4: Please indicate your views on the following...

Question E6: To what extent does your institution emphasise...

Question C3: Does your institution set quantitative load targets or regulatory expectations for individual faculty for... number of hours in the classroom

\*Responses 1 and 2 on a scale from 1 = strongly agree to 5 = strongly disagree

a. Funding of departments substantially based on numbers of students

b. Funding of departments substantially based on numbers of graduates

c. Considering teaching quality when making personnel decisions

d. three or more responses to “Number of hours in the classroom”; “Number of students in your classes; “Number of graduate students for supervision”; “Percentage of students passing exams”; Time for student consultation”

e. Encouraged to improve instructional skills in response to teaching evaluations

universities in the Netherlands and the United Kingdom often state that the teaching quality is taken into consideration, while this is least often reported by academics at Italian universities.

At other higher education institutions, where teaching is clearly the core function, the picture is somewhat different. In most countries, more respondents from these institutions than from universities state that teaching quality is often considered when making personnel decisions. This is stated by more than half the professors at these institutions in Finland, the Netherlands and Germany, as well as by more than half the junior staff in Germany. Conversely, the teaching quality seems to be hardly taken into consideration at other higher education institutions in Portugal.

As already stated, the academics were asked if their institution set regulations or certain targets as regards *workload-related targets*, that is, the teaching performance of the individual person: in terms of classroom hours (teaching load), number of students in class, number of graduate students to be supervised, percentage of students passing exams and time for student consultation. The academics were asked in the questionnaire to respond affirmatively, if at least three of such targets were in place. Such individualised workload-related targets are by far most widespread in Poland and to a certain extent in the United Kingdom. In contrast, they hardly seem to play any role in Switzerland. There are differences in this respect both according to type of higher education institutions and between senior and junior academics in the individual countries, but altogether we do not observe any clear dividing lines according to institutional types and staff category in this respect.

In Table 5.7, an average score is presented in the bottom lines for the four institutional regulations and expectations. This score of institutional *Regulations* altogether varies to a lesser extent by country than the individual lines above. A similar number of such mechanisms are used in about half a dozen countries, led by the Netherlands and the United Kingdom, while they play a lesser role in Austria and Italy (no information is available on Switzerland and Croatia). At other higher education institutions, such pressures seem to play a stronger role across countries and notably in the Netherlands and Finland.

Evaluation of both of teaching and research has become customary in higher education. In response to a respective question, more than 90% of academics at universities and more than 80% at other higher education institutions stated that teaching was evaluated at their institution or department. Widespread practices are students' assessment of classes, followed by formalised self-evaluation and by assessments on the part of department heads. The fifth line of Table 5.7 shows the percentage of academics who note that teaching *evaluation plays a role at their institution in encouraging academics to improve their instructional skills*. This is observed by more than half the university-based academics in Italy, Ireland and the United Kingdom, and the respective figures are not much lower in the Netherlands, Norway and Switzerland. In contrast, such a practice is hardly observed at universities in Finland and Poland. At other higher education institutions, it is reported as widespread in the Netherlands and Finland. Previous findings from Finland suggest that the role of regulations, expectations and evaluation varies strongly between the university sectors and other higher education institutions.

## 5.7 Institutional Support for Teaching

Pressures and incentives for the improvement of teaching may be futile if the infrastructure is not congenial. Therefore, the questionnaire also addressed the quality of various elements of institutional support for teaching: training courses for the enhancement of teaching quality, the attitude of administrative staff towards teaching, support staff for teaching as well as the classroom and library infrastructure.

*Training provisions for the enhancement of the teaching quality* are available for more than half the academics at universities in Ireland, the United Kingdom and the Netherlands. In various other countries, such training provisions are quite frequent, as the first line in Table 5.8 shows. They are only exceptional at universities in Italy and Poland. At other higher education institutions, such training provisions are less frequently cited; this could be due to the fact that the size of these institutions is often smaller. The highest percentages are reported in Ireland and by far the lowest in Poland.

It is interesting to note that junior staff in some countries reports the availability of training provisions for the enhancement of teaching less frequently than senior academics. This is most strikingly the case for junior staff at universities in Finland and at other higher education institutions in Germany. One could have expected the opposite because training programmes of that kind often put an emphasis on junior academics.

The academics' views as regards *supportive attitudes of their administrators towards their teaching activities* vary to a lesser extent by country than all the other perceptions stated in this context. There is no overwhelming enthusiasm about the teaching support on the part of administrative staff in the surveyed countries. As the second line of Table 5.8 shows, the most frequent positive statements are made in this respect by academics at universities in the Netherlands, Norway, Switzerland and the United Kingdom, while they are rare for academics in Italy and notably university professors in Finland.

Supporting teaching through *specialised staff not primarily involved in teaching*, for example, guidance counsellors or persons in charge of curriculum coordination, is not necessarily a widespread and qualitatively well-established practice. Positive ratings are only made, as the third line of Table 5.8 shows, by half and more of the university professors in Switzerland, academic junior staff at universities both in Switzerland and Croatia and by junior staff at other higher education institutions in Germany. The least frequent positive statements are made by academics at universities in Italy as well as – interestingly enough in contrast to the positive statements made above by junior staff – by professors at other higher education institutions in Germany. The latter discrepancy could be explained by the fact that the number of support staff is very small in Germany, but those who have this kind of job might do their job well (some of the respondents might be support staff).

Most of the academics surveyed are convinced that the *infrastructure for teaching* they experience is relatively good, as the fifth through seventh lines of Table 5.8 show. Classrooms and technology of teaching are highly appreciated by about



**Table 5.8** Perceived institutional support (percentage)

	2010						2007/2008					
	AT	CH	HR	IE	PL	NL	DE	FI	IT	NO	PT	UK
<i>Seniors at universities</i>												
Teacher training <sup>a</sup>	42	56	20	63	9	60	34	53	3	43	30	65
Administrative support <sup>b</sup>	27	43	28	32	29	46	30	20	20	43	30	44
Teaching support staff	23	51	44	36	22	37	28	37	16	17	22	36
Classrooms	54	77	52	53	49	64	40	75	38	55	61	36
Technology for teaching	59	79	62	60	45	60	47	75	37	58	52	42
Library facilities and services	60	74	46	71	67	67	44	68	56	71	62	52
Mean of all above	45	63	42	53	37	56	37	55	28	48	43	46
<i>Juniors at universities</i>												
Teacher training <sup>a</sup>	43	47	19	66	9	57	29	37	2	33	22	56
Administrative support <sup>b</sup>	25	43	29	28	28	45	26	27	17	44	30	38
Teaching support staff	27	50	51	44	17	39	26	45	14	26	27	35
Classrooms	52	75	49	61	47	62	51	73	35	63	45	36
Technology for teaching	57	77	59	67	39	63	54	68	35	63	50	42
Library facilities and services	65	73	42	77	58	73	51	75	49	81	46	55
Mean of all above	45	61	42	57	33	57	40	54	25	52	37	44
<i>Seniors at other HEIs</i>												
Teacher training <sup>a</sup>		37		61	8	44	38	33		26	22	
Administrative support <sup>b</sup>		45		26	36	42	30	29		40	21	
Teaching support staff		37		44	21	37	13	36		19	31	
Classrooms		67		53	61	55	59	72		47	69	
Technology for teaching		79		70	53	57	58	66		58	61	
Library facilities and services		64		76	70	57	49	77		92	42	
Mean of all above		55		55	42	49	41	52		47	41	
<i>Juniors at other HEIs</i>												
Teacher training <sup>a</sup>		28		56	9	49	11	29		28	17	
Administrative support <sup>b</sup>		41		38	30	39	39	19		40	28	
Teaching support staff		40		39	14	34	63	44		20	22	
Classrooms		67		54	42	52	62	58		45	48	
Technology for teaching		78		64	34	56	54	72		60	51	
Library facilities and services		62		66	65	61	59	84		100	45	
Mean of all above		53		53	32	49	48	51		49	35	

Question C4: Please indicate your views on the following... Responses 1 and 2 added (Scale from 1=strongly agree to 5=strongly disagree)

Question B3: At this institution, how would you evaluate each of the following facilities, resources or personnel you need to support your work? Responses 1 and 2 added (Scale of answers from 1=excellent to 5=poor)

<sup>a</sup>At your institution there are adequate training courses for enhancing teaching quality;

<sup>b</sup>A supportive attitude of administrative staff towards teaching activities

three-quarters of the academics at universities in Finland and Switzerland; the respective infrastructure at other higher education institutions is slightly less frequently praised. Cautious or negative ratings are only frequent in Italy and Poland. Library facilities and services are viewed positively by 70% or more of each of the university professors in Switzerland, Ireland and Norway, junior academic staff in these countries as well as in Finland, professors at other higher education institutions in Norway, Finland, Ireland and Poland, and finally by junior academic staff at other higher education institutions in Norway and Finland.

In the final line of Table 5.8, an *aggregate of the various ratings of the support for teaching* is provided. In summarising the ratings across institutional types and staff categories we note the positive ones in Switzerland, slightly ahead of Finland, Ireland, the Netherlands and Norway. Less than half the ratings are positive in Austria, Croatia, Germany, Portugal, the United Kingdom and even fewer are positive in Poland. Least frequent positive ratings in this respect are found in Italy.

## 5.8 Attitudes Towards Teaching and Teaching-Related Activities

Despite the various regulations, sanctions and incentives and the external resource conditions, academics have enormous flexibility in handling their teaching activities, as was already demonstrated with respect to the time spent on teaching. It is generally assumed that the goals and values of the academics as regards teaching have a substantial impact in this respect. In the questionnaire, five dimensions of *approaches as regards teaching* were addressed, which could be formulated as follows:

- *Practice-oriented approach*, addressed in the questionnaire with the following formulation: “Practically oriented knowledge and skills are emphasised in your teaching”.
- *International approach*: “In your courses you emphasise international perspectives or content”.
- *Value-oriented approach*: “You incorporate discussions of values and ethics in your course content”.
- *Honesty approach*: “You inform students of the implications of cheating or plagiarism in your courses”.
- *Meritocratic approach*: “Grades in your courses strictly reflect levels of student achievement” (cf. Teichler 2010a).

A *practice-oriented approach* in teaching is by no means only customary at other higher education institutions; rather, as Table 5.9 shows, it is emphasised at universities almost as often as at other higher education institutions. About three-quarters or more of the professors at both types of institution point this out in Croatia, Ireland, Germany and Portugal as well as those at other higher education institutions in Austria. In contrast, practice-oriented teaching is emphasised by less than half the

**Table 5.9** Attitudes towards teaching and teaching-related activities (percentage<sup>a</sup>)

	2010						2007/2008					
	AT	CH	HR	IE	PL	NL	DE	FI	IT	NO	PT	UK
<i>Seniors at universities</i>												
Practice-oriented approach	67	53	79	75	44	40	75	31	54	49	75	69
International approach	84		77	86	31	64	79	63	62	69	90	66
Value-oriented approach	62		62	68	24	48	57	53	40	45	71	69
Honesty approach	57		62	82	63	53	53	41	32	36	78	94
Meritocratic approach	81		69	94	30	54	72	95	79	78	55	87
Mean of the items above	71		70	81	39	52	67	56	53	55	73	77
<i>Juniors at universities</i>												
Practice-oriented approach	77	58	82	80	45	42	77	48	54	51	77	67
International approach	67		59	84	29	60	50	46	60	60	82	60
Value-oriented approach	58		55	74	20	44	36	41	34	36	71	70
Honesty approach	59		63	85	65	58	41	38	28	36	88	86
Meritocratic approach	82		51	90	31	59	59	89	81	71	53	79
Mean of the items above	68		62	83	38	52	52	52	51	50	74	72
<i>Seniors at other HEIs</i>												
Practice-oriented approach		83		93	48	84	93	79		57	81	
International approach				75	22	58	60	52		61	68	
Value-oriented approach				70	33	71	54	53		39	73	
Honesty approach				85	73	67	58	60		41	72	
Meritocratic approach				85	25	42	80	98		80	47	
Mean of the items above				80	39	64	69	68		57	68	
<i>Juniors at other HEIs</i>												
Practice-oriented approach		74		90	47	90	99	80		70	82	
International approach				75	21	38	40	45		64	75	
Value-oriented approach				82	23	62	21	57		48	62	
Honesty approach				92	66	62	81	55		60	75	
Meritocratic approach				89	26	44	76	95		52	51	
Mean of the items above				86	37	59	63	66		59	69	

Question C4: Please indicate your views on the following...

<sup>a</sup>Responses 1 and 2 on a scale from 1 = strongly agree to 5 = strongly disagree

professors at both institutions in Finland, the Netherlands and Poland. It is striking to note that higher proportions of juniors emphasise practice orientation: in addition to those from the countries named above, there are also those in Switzerland, Finland, the Netherlands and the United Kingdom.

*International perspectives* are emphasised everywhere quite strongly, but they are slightly more often pointed out by respondents from Ireland and Portugal than by those from most other countries. In contrast, academics from Poland seldom report an international emphasis.

*Discussions of values* seem to happen frequently but are not on the top of the list. They are emphasised by more than two-thirds of both seniors and juniors in Ireland

and the United Kingdom and almost consistently in Portugal. On the other hand, they are seldom addressed in Poland.

An *honesty approach* in terms of warning students against cheating and plagiarism is most widespread among academics in Ireland and the United Kingdom. Also, academics in Portugal are critical about dishonest behaviour. This is least emphasised by academics in Italy.

A *meritocratic approach* in terms of grading strictly according to achievement is most strongly underscored by academics in Ireland, Finland, the United Kingdom, Austria and Italy. In contrast, by far the least emphasis is expressed by academics in Poland.

Across all these kinds of values addressed in the questionnaire, the academics in Ireland seem to have the strongest positive emphasis. In contrast, most academics in Poland seem to care the least about these approaches.

## 5.9 Diversity of Teaching Activities

Classroom lecturing is assumed to be the most frequent teaching method. Thus, it does not come as a surprise to note that about 95% of the respondents apply this method. But other methods are often viewed as highly valuable to motivate the students and enhance their competences. The project teams wanted to know how far teaching methods varied. Therefore, the questionnaire aimed to explore the frequency of other methods and addressed the following seven additional teaching and learning activities:

- *Individualised instruction* is cited according to country by an average of 66% of the university professors.
- *Learning in projects* by 46%.
- *Practice instruction or laboratory work* by 44%.
- *ICT-based learning or computer-assisted learning* by 30%.
- *Distance education* by 12%.
- *Face-to-face interaction with students outside class* by 77%.
- *Electronic communication (e-mail) with students* by 77%.

The responses to the seven additional modes of teaching are aggregated in Table 5.10. Senior academics at other higher education institutions use a broader range of teaching modes (4.0) than university professors (3.6). In both types of institutions, professors report on average a higher variety of teaching activities than junior academics (3.7 at other higher education institutions and 3.4 at universities). The greatest frequency of diverse teaching activities is reported by academics in the United Kingdom and Finland, followed by academics in Ireland, Croatia and Italy. In contrast, the variety of teaching modes is smallest in Austria and is also quite limited in Germany.

**Table 5.10** Frequency of additional teaching activities (mean of number of responses\*)

	2010						2007/2008					
	AT	CH	HR	IE	PL	NL	DE	FI	IT	NO	PT	UK
Seniors at university	2.3	3.4	4.0	3.7	3.7	3.2	2.8	4.4	3.7	4.1	3.3	4.5
Juniors at university	1.9	3.0	3.8	3.9	3.7	3.2	2.3	3.7	3.8	3.4	3.7	4.0
Seniors at other HEIs		4.0		4.1	3.7	3.7	3.2	5.1		3.7	3.5	
Juniors at other HEIs		3.6		4.1	3.6	3.5	2.6	4.9		3.2	3.6	

Question C2: During the current (or previous) academic year, have you been involved in any of the following teaching activities?

\*Average number of seven teaching activities named others than regular classroom teaching

Moreover, academics were asked whether they had been *involved in the development of course material and in curriculum/programme development*. This is confirmed by 73 and 65% of the university professors on average across countries.

## 5.10 Interrelationships Between the Academic Functions

Universities in Europe are based on the belief – often attributed to the Humboldtian ideal – that teaching and research should not merely coexist at universities but that the two activities would have a cross-fertilising effect. In the questionnaire, respondents were asked what influence research and service had on teaching and whether they considered teaching and research compatible in academic work.

The *fertilising effect of research activities on teaching* is attested by about 80% and more of university professors in all countries except Poland where only about half the professors responded affirmatively. As Table 5.11 shows, large proportions of the juniors at universities – again except Poland – and of seniors at other higher education institutes observe such a reinforcing effect. Among juniors at other higher education institutions, however, the proportion of those responding affirmatively is lower on average – notably in Ireland, Poland, Germany and Finland.

The question of whether *teaching and research are hardly compatible* can be viewed as contradicting the previous one. Thus, it does not come as a surprise to note that only about 30% of the respondents have this notion. In fact, the responses to the two questions correlate negatively (e.g.  $r = -.244^{**}$  for university professors). We also observe that the notion of non-compatibility of teaching and research correlates with the responses to the item “my job is a source of considerable personal strain”. Again, it does not come as a surprise to note that many respondents from Poland consider teaching and research as hardly compatible; Table 5.11, however, shows that this even more frequently stated by respondents from Croatia.

*Service activities* are viewed as *reinforcing teaching* by less than half the academics. Frequent statements of a positive effect of service activities vary by county: they are reported frequently by academics at universities in Ireland

**Table 5.11** Relationship between service and research activities in teaching (percentage\*)

	2010						2007/2008					
	AT	CH	HR	IE	PL	NL	DE	FI	IT	NO	PT	UK
<i>Seniors at universities</i>												
Research reinforces teaching	84	79	81	92	54	82	86	83	85	86	86	83
T & R hardly compatible	28	16	74	14	47	18	33	37	12	13	19	25
Service reinforces teaching	48	32	42	66	30	45	37	44	52	69	6	35
<i>Juniors at universities</i>												
Research reinforces teaching	77	61	68	87	46	82	60	73	78	75	75	73
T & R hardly compatible	33	19	59	18	61	25	34	35	17	14	28	25
Service reinforces teaching	50	29	35	62	28	33	31	32	45	54	7	33
<i>Seniors at other HEIs</i>												
Research reinforces teaching		75	81	51	76		74	68		86	76	
T & R hardly compatible		25	11	45	31		47	38		20	32	
Service reinforces teaching		49	72	39	74		56	47		59	6	
<i>Juniors at other HEIs</i>												
Research reinforces teaching		52	74	45	37		44	42		65	69	
T & R hardly compatible		30	27	58	26		27	45		10	36	
Service reinforces teaching		44	65	29	71		35	39		32	2	

Question B5: Teaching and research are hardly compatible with each other

Question C4: Your research activities reinforce your teaching; Your service activities reinforce your teaching

\*Responses 1 and 2 on a scale from 1 = strongly agree to 5 = strongly disagree

and Norway but seldom by academics at other higher education institutions in Croatia and Poland.

## 5.11 Determinants of the Time Spent on Teaching Activities

As already stated, academics are relatively free to decide how much time they devote to teaching-related activities, for example, preparation, counselling and curriculum development. It may depend on contextual factors, such as regulations and expectations, support and favourable resources, or it may be influenced by their own motives. In a multiple regression analysis, we explore which factors are most powerful in influencing the time spent on teaching activities when classes are in session.

Tables 5.12 and 5.13 show that academics' preferences – whether they want to put a strong emphasis on teaching or on research – have the strongest impact on the amount of time that is spent on teaching or teaching-related activities. The academics allocate their time according to their preferences. This holds true both at universities and at other higher education institutions. This factor plays the strongest role in universities in Germany, Austria and Finland and at other higher education institutions in Germany, Finland and Switzerland. Only Italian universities and Portuguese other higher education institutions are exceptions.

**Table 5.12** Factors influencing the time spent on teaching activities by academics at universities when classes are in session (multiple regression analysis)

	2007/2008													
	2010	AT	CH	HR	IE	PL	NL	DE	FI	IT	NO	PT	UK	All
		Adj. $R^2 = .221$	Adj. $R^2 = .081^a$	Adj. $R^2 = .116^c$	Adj. $R^2 = .067$	Adj. $R^2 = .144$	Adj. $R^2 = .031$	Adj. $R^2 = .233^a$	Adj. $R^2 = .410$	Adj. $R^2 = .077$	Adj. $R^2 = .182$	Adj. $R^2 = .080$	Adj. $R^2 = .251$	Adj. $R^2 = .199$
Standardised beta														
<i>Regulations</i>														
Number of hours in the classroom				(-0.117)							(-0.083)			
Number of students in your classes					0.062					0.097			-0.164	0.032
Number of graduate students for supervision					0.061									0.035
Percentage of students passing exams									(0.094)					
Time for student consultation					-0.053			(-0.071)	-0.111					-0.082
Number of all teaching activities					(0.036)				0.187		0.167		0.223	0.136
<i>Organisational aspects</i>														
Funding based on numbers of students														
Funding based on numbers of graduates														
Teaching quality considered in personnel decisions									(-0.088)					(-0.027)
<i>Support</i>														
Training courses for teaching quality														0.042

(continued)

**Table 5.12** (continued)

	2007/2008												
	2010												
	AT	CH	HR	IE	PL	NL	DE	FI	IT	NO	PT	UK	All
	Adj.	Adj.	Adj.	Adj.	Adj.	Adj.	Adj.	Adj.	Adj.	Adj.	Adj.	Adj.	Adj.
	$R^2 = .221$	$R^2 = .081^a$	$R^2 = .116^a$	$R^2 = .067$	$R^2 = .144$	$R^2 = .233^a$	$R^2 = .410$	$R^2 = .077$	$R^2 = .182$	$R^2 = .080$	$R^2 = .251$	$R^2 = .199$	
Support of administrative staff towards teaching			-0.198		(-0.034)		0.122		(-0.073)				(-0.01)
Teaching support staff													0.032
Classrooms					(-0.06)								0.024
Technology for teaching					0.053								(0.024)
Library facilities and services	(0.094)		(0.145)				(0.081)						
<i>Humboldtian aspects</i>													
Research activities reinforce teaching									0.194		0.181	(0.122)	0.101
Service activities reinforce teaching	0.133				(0.040)		0.103						
Teaching and research are hardly compatible	(-0.101)				-0.157	-0.23			-0.12	-0.104			-0.107
Preferences	-0.444	-0.268	-0.258	-0.238	-0.301	-0.26	-0.46	-0.446	-0.157	-0.333	-0.298	-0.359	-0.363

Only significant standardised beta values are reported. Significance level 0.01 and in brackets 0.05

<sup>a</sup>No values for following variables: CH: Number of students in your class; Funding of departments substantially based on numbers of students; Funding of departments substantially based on numbers of graduates; Considering teaching quality in personnel decisions; HR: Number of hours in the classroom; Number of students in your class; Number of graduate students for supervision; Percentage of students passing exams; Time for student consultation; Funding of departments substantially based on numbers of students; Funding of departments substantially based on numbers of graduates; Considering teaching quality in personnel decisions; DE: Number of hours in the classroom



**Table 5.13** Factors influencing the time spent on teaching activities by academics at other higher education institutions when classes are in session (multiple regression analysis)

	2010				2007/2008				All Adj. $R^2 = .187$				
	AT	CH	HR	IE	PL	NL	DE	FI		IT	NO	PT	UK
Standardised beta													
<i>Regulations</i>													
Number of hours in the classroom		-0.172		-0.239									(-0.056)
Number of students in your classes													0.064
Number of graduate students for supervision					-0.126						0.222		
Percentage of students passing exams													-0.062
Time for student consultation													
Number of all teaching activities													
<i>Organisational aspects</i>													
Funding based on numbers of students											0.188		(0.059)
Funding based on numbers of graduates													-0.199
Teaching quality considered in personnel decisions													
<i>Support</i>													
Training courses for teaching quality													(-0.236)

(continued)

**Table 5.13** (continued)

	2007/2008												
	AT	CH	HR	IE	PL	NL	DE	FI	IT	NO	PT	UK	All
Support of administrative staff towards teaching		Adj. $R^2 = .362^a$		Adj. $R^2 = .139^a$	Adj. $R^2 = .199$	Adj. $R^2 = .071$	Adj. $R^2 = .255^a$	Adj. $R^2 = .211$			Adj. $R^2 = .130$		Adj. $R^2 = .187$
Teaching support staff		(0.107)											
Classrooms													
Technology for teaching													
Library facilities and services		-0.185									-0.205		
<i>Humboldtian aspects</i>											(0.109)		
Research activities reinforce teaching													
Service activities reinforce teaching													0.096
Teaching and research are hardly compatible													-0.058
Preferences		-0.47		-0.38	-0.365	-0.235	-0.581	-0.429					-0.388

Only significant standardised Beta values are reported. Significance level 0.01 and in brackets 0.05

Excluded are Norway and the United Kingdom, because the absolute number of respondents to all variables is very low

<sup>a</sup>No values for following variables: CH: Number of students in your class; Funding of departments substantially based on numbers of students; Funding of departments substantially based on numbers of graduates; Considering teaching quality in personnel decisions; DE: Number of hours in the classroom

Three other factors play an additional role at universities in some countries. Academics at universities who are involved in a broad range of teaching and learning modes and those who consider service activities as reinforcing their teaching spend substantial time on teaching. Furthermore, it is interesting to note that those who teach more than others state that teaching and research are hardly compatible.

In the case of academics at other higher education institutions, one additional variable shows a link with time spent on teaching. We observe in a number of countries (notably Poland and Portugal) that academics who note funding linked to graduate numbers at their institution spend more time on teaching activities. Otherwise, the respective links are similar for academics at both types of higher education institutions.

Altogether, the explanatory power of all the variables included in the model is below 20%, that is, somewhat limited. There are two exceptions: at Finnish universities and at other higher education institutions in Switzerland, the time spent on teaching can be explained at over 35% by the factors examined. As already noted above, these are also the cases where preference for teaching versus research plays the strongest role.

## 5.12 Conclusion

Teaching and research are viewed as the core functions of universities in Europe. While research is left by and large to the discretion of the individual academics, teaching takes place with minimum rules as regards teaching loads, teaching periods during the year, physical presence, etc. However, academics are extremely free as regards reserving time and energy for all teaching-related activities, for example, preparation, assessment, counselling and curriculum development. The EUROAC survey shows that university professors in Europe spend only about 30% of their overall working time on teaching and teaching-related activities, that is, somewhat less than for research. Even during the periods of the year when classes are in session the time spent on teaching and related activities remains below 40%, even though it exceeds the time spent on research. Less than 30% of university professors have a stronger preference for teaching. It is interesting to note that junior academics at universities differ in those respects only marginally on average across Europe.

Apart from regulations regarding teaching load, there are few aspects of regulations and few favourable aspects of the work setting that most academics at university underscore: many underscore that funding is based on the number of students. Slightly more than half reports that evaluation acts as a stimulus for the improvement of educational activities, and more than half states that appropriate courses exist at their university to enhance the quality of teaching. However, as a multivariate analysis shows, the extent to which such rules exist and favourable conditions are in place has hardly any impact on the time allotted to teaching; rather, preferences for teaching and the variety of teaching modes are important for the time reserved for teaching activities.

In various respects, the academics at other higher education institutions – information is available for eight European countries – report more similar conditions and attitudes towards teaching than one could have expected on the basis of the different institutional “missions”. For example, university professors state almost as often as senior academics at other higher education institutions that they favour practice-oriented teaching. It is surprising to note that professors at other higher education institutions spend only about 10% more time on teaching than university professors on average across Europe. As they often have a heavier teaching load, the results of the EUROAC survey suggest that professors from other institutions spend less time on teaching-related activities per teaching hour than academics at universities. It is also surprising to note that over 40% of academics at other higher education institutions lean more strongly towards research than towards teaching.

As regards the teaching activities, the EUROAC survey explored the variety of modes. In addition to the customary lectures, more than three-quarters of the teachers do not only communicate with students face-to-face outside classes but also electronically. Two-thirds cite individualised instruction of students, and almost half the academics are involved in activities which stimulate students’ learning in projects as well as practical instruction and laboratory work. Altogether, professors at other higher education institutions are involved in a slightly broader variety of teaching and learning modes than university professors and the latter in a broader variety than junior staff at both institutions.

Asked about various principles and values that guide their teaching activities, most academics respond affirmatively in every respect: they grade according to achievements and they warn against cheating, their teaching is practice-oriented and internationally oriented and they address values as well. These responses, however, are not merely indications of compliance to generally shared values. It is interesting to note that the responses to those respects vary substantially by country.

In looking at the working time, the amount of time spent on teaching, the preferences for teaching and research, as well as respective values and activities, we note the following. Academics at *universities in Austria and Switzerland* spend almost twice as much time on research as on teaching. Few have a preference for teaching, but this does not substantially differ from some additional countries. University professors in Switzerland work many hours. Austrian academics are least involved in a variety of teaching activities. With regard to teaching-related attitudes, academics from these two countries hardly differ from the European average: It worth mentioning that academics in Austria strongly emphasise a meritocratic approach and that junior staff in Switzerland is strongly practice-oriented.

Academics from universities in a relatively *large number of European countries* are similar in spending more time on research than on teaching, even though not as much as those in Austria and Switzerland. They also mostly have a preference for research. University professors in *Germany and Ireland* work many hours. They lean towards research and spend slightly more than average time on research. While German academics at universities report a limited variety of teaching activities, we note an average variety among university professors and a clearly above variety among junior staff at universities in Ireland. German academics at universities are

very practice-oriented; Irish academics underscore an international orientation as well as honesty in teaching and learning. Academics at universities in *Finland* and the *Netherlands* hardly differ from the country means in all four respects; as regards teaching-related values, university professors from both countries – in contrast to junior staff – are not strongly practice-oriented, and the academics at universities in Finland underscore meritocratic values. Similarly, responses by academics in *Italy* hardly differ from the European average. Academics at universities in *Croatia* and the *United Kingdom* are close to country means in various respects, but they excel in the variety of teaching methods. As regards values, academics at universities in Croatia are strongly practice-oriented. Academics at universities in the United Kingdom strongly underscore various teaching-related values: They put emphasis on addressing value in teaching and learning, and they emphasise honesty and meritocratic values. Finally, within this group of countries, academics at universities in *Norway* report the lowest number of working hours. Otherwise, they are close to the country means in most respects.

Academics at universities in *Poland* and *Portugal* clearly differ from those in other countries as regards teaching: they spend a relatively large amount of their time on teaching and express relatively often preference for teaching. Their working time on average is low, and professors in these two countries are not involved in a great variety of teaching activities. In addition, they share least the teaching-related values addressed in the questionnaire: notably they do not say that they emphasise international dimensions, an explicit discourse on values in teaching, and a meritocratic approach.

As already pointed out, at the European level, academics from *other higher education institutions* differ from those at universities to a lesser degree than one might have expected. However, senior academics at the former institutions more often prefer teaching in Germany and Ireland and spend a substantially higher amount of their work time on teaching in the Netherlands. Among junior staff at higher education institutions, those in Poland, Germany and Switzerland spend much time on teaching activities, while the strongest preferences for teaching are expressed by those in Finland and the Netherlands. As regards attitudes towards teaching, senior academics at Fachhochschulen in Austria clearly differ from senior academics in their country by being strongly practice-oriented.

As regards the context of teaching, we note that various *regulations and incentives* as regards teaching play a role at both universities and other institutions in the Netherlands, at universities in the United Kingdom and at other higher education institutions but also in some respects at universities in Finland. In Poland, regulations play a major role as regards the workload of academics. In contrast, regulations and incentives as regards teaching play a limited role in Austria and Italy. Institutional support for teaching is often reported in Switzerland, but not much less in Finland, Ireland, the Netherlands and Norway. It seems to be least available in Italy and in Poland.

There cannot be an undisputable conclusion as regards the homogeneity or heterogeneity of the academic profession in Europe. However, the variety across countries is certainly striking in various respects: country means of the amount of time

spent on teaching activities range from 28 to 52% in the case of senior staff at other higher education institutions, and the range is even wider in the case of junior staff at both institutions. With respect to preference for teaching, we note a country range among university professors from 18 to 45%. And to take a final example: less than one-fifth of university professors in six European countries state that teaching and research are hardly compatible. This is the case for almost half in Poland and three-quarters in Croatia. European variety in the teaching functions at higher education institutions is by no means negligible.

## References

- Altbach, P. G. (Ed.). (1996). *The international academic profession: Portraits of fourteen countries*. Princeton: Carnegie Foundation.
- Arimoto, A. (2010). Differentiation and integration of research, teaching and learning in the knowledge society: From the perspective of Japan. In Research Institute for Higher Education Hiroshima University (RIHE) (Ed.), *The changing academic profession in international and quantitative perspectives: A focus on teaching and research activities* (pp. 1–28). Hiroshima: RIHE.
- Enders, J., & de Weert, E. (Eds.). (2004). *The international attractiveness of the academic workplace in Europe*. Frankfurt a.M: Gewerkschaft Erziehung und Wissenschaft.
- Jacob, A. K., & Teichler, U. (2011). *Der Wandel des Hochschullehrerberufs im internationalen Vergleich: Ergebnisse einer Befragung in den Jahren 2007/08* [Change of the academic profession in international comparison: Results of the survey of the years 2007–08]. Bonn/Berlin: Bundesministerium für Bildung und Forschung.
- Locke, W., & Teichler, U. (Eds.). (2007). *The changing conditions for academic work and careers in select countries* (Werkstattberichte, 66). Kassel: International Centre for Higher Education Research Kassel.
- Schaeper, H. (1997). *Lehrkulturen, Lehrhabitus und die Struktur der Universität*. Weinheim: Deutscher Studien.
- Teichler, U. (2010a). Teaching and research in Germany: Narrowing the gaps between institutional types and staff categories? In Research Institute for Higher Education Hiroshima University (RIHE) (Ed.), *The changing academic profession in international and quantitative perspectives: A focus on teaching & research activities* (pp. 41–60). Hiroshima: RIHE.
- Teichler, U. (2010b). The diversifying academic profession. *European Review*, 18 (Supplement 1), 157–179.