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Field of Study and Students' Workload in Higher Education

Ireland and Austria in Comparative Perspective

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Abstract

There is a growing recognition of the importance of 'field of study' in social research. However, few of the existing studies explore the extent to which different fields of study facilitate or constrain opportunities to engage in employment and students' perceptions of their work load in higher education. This article aims to explore the workload of higher education students across different fields of study in comparative perspective. Contrasting Ireland and Austria enables us to explore the way in which the institutional context influences student workload. Analyses of the survey data were conducted to explore the extent to which field of study influenced time spent at formal classes, on personal study and in term-time employment. Regression models were used to estimate the effect of field of study, controlling for a number of factors, including higher education institution, personal characteristics and other potential constraints on student time. Finally, we analyse the effect of student workload on overall satisfaction levels.

Key words: comparative • field of study • higher education • student workload

1. INTRODUCTION

There is now a growing literature detailing the changing nature of the higher education landscape. Much of this literature focuses on the rapid worldwide expansion of higher education enrollments (Schofer and Meyer, 2005). Instead of catering for a relatively small elite group, most national systems are now moving towards 'mass' higher education (Vincent-Lancrin, 2004). This tendency has resulted from a diversification of the profile of students deciding to undertake

study at tertiary level (Field, 2000) in terms of their previous educational experiences and credentials as well as their social background and life situations (Bienfeld and Almqvist, 2004; Toman et al., 2005). These trends mean that the majority of higher education students now combine their studies with term-time work and family commitments, resulting in an increased workload.

Students' workload may also depend on their chosen field of study. There is a growing recognition of the importance of 'field of study' in social research which has resulted in an increasing number of studies focusing on the topic. Research on field of study has focused on two main areas. First, a number of studies have addressed social class and gender differences in entry to different educational courses within higher education (see, for example, Davies and Guppy, 1997; Peng and Jaffe, 1979). Second, several researchers has explored the post-graduation 'returns' to different fields of study in terms of access to employment and pay rates (see, for example, Finnie and Frenette, 2003; van de Werfhorst, 2004). However, much of the research on field of study has neglected the way in which the course chosen may shape student experiences and the workload involved. In particular, the extent to which different fields of study facilitate or constrain opportunities to engage in employment has largely been neglected in social research. This topic is of particular interest as the extent of students' workload may have an effect on their retention in higher education, educational performance and their feeling of well-being.

Several studies explore the effects of paid employment on secondary school students, especially in terms of drop-out and academic achievement (see McCoy and Smyth, 2004; Mortimer and Finch, 1986; Mortimer et al., 1996; Staff and Mortimer, 2005; Van der Velden and Wolbers, 2004; Wolbers, 2006). British studies have indicated that heavy workload while in college can have an adverse effect on educational outcomes as students find it hard to balance work and study demands and consequently miss lectures and achieve lower grades (Curtis and Shani, 2002; Metcalf, 2001). However, relatively little is known about the workload of higher education students in terms of both study and employment, and how these different elements are interrelated. In order to gain a more comprehensive understanding of the topic, this article aims to explore the workload of higher education students across different fields of study in comparative perspective. It draws on cross-national data, initially collected for the Eurostudent Study (HIS, 2005), in the Republic of Ireland and Austria. Ireland and Austria provide a useful comparison, both being small open economies with an increasing student population in the higher education sector. There are also some important differences between the countries, stemming mainly from the national education and labour market systems. Contrasting the Irish and Austrian cases enables us to explore the way in which the institutional context influences student workload. While in Austria students are likely to experience greater flexibility in organizing their studies as well as combining study and term-time work, in Ireland higher education courses are organized in a more structured

way, placing greater emphasis on course participation and attendance. Another difference derives from the full-time and part-time status of students in higher education in the two countries. While one-fifth of Irish students are enrolled on a part-time basis (Darmody et al., 2005), in Austria there is no official status of 'part-time student'. For this reason, the analysis presented in this article focuses only on full-time students' workload in both countries. The study defines 'workload' as 'time dedicated to the attendance of courses, to personal study and to paid employment'. For the purpose of this study, 'field of study' in higher education is defined on the basis of the main disciplines or subject areas being pursued.

The analysis in this article attempts to answer the following questions:

1) How does lecture time and time spent on independent learning differ by field of study in Ireland and Austria?
2) What is the rate of student employment in these countries? Does it vary across different fields of study?
3) Does the extent of personal study time vary when students engage in term-time work?
4) What individual characteristics have an impact on study and work-related activities in the two countries?
5) How satisfied are higher education students in Ireland and Austria with their overall workload?

The article will start by exploring the topics of 'student workload' and 'field of study' in terms of existing international research. It will then provide a brief overview of the Irish and Austrian higher education systems. Thereafter we describe the methodology and data used in the study and present the main findings. The article provides an important step in improving our understanding of the workload of higher education students and identifying those areas of study where students face particular difficulties related to work overload due to the demands of the course and term-time work. In addition, it enhances our knowledge about the potential impact of field of study on the link between education and paid work. The issues put forward in this article are of interest internationally as the combination of term-time work and study has become almost a norm among higher education students in a number of countries. This combination affects students' workload and has implications for their quality of life.

2. PREVIOUS STUDIES ON STUDENTS' WORKLOAD IN HIGHER EDUCATION

Studies focusing on students' workload in higher education find that defining and assessing the extent of student workload is not easy (Chambers, 1992, 1994; Lockwood, 1999). In previous studies, the concept has included course difficulty, pace, amount of work, and hours spent outside of class as rated by students and by teachers (Marsh, 2001). Elsewhere, students' workload has been defined as

'the timetabled class contact hours plus the time required to understand the course content and compete assignments' (Chambers, 1992: 295). However, the author cautions that, while the former is relatively easy to identify, the latter is found to vary considerably from student to student. In the same vein, Lockwood (1999) highlights the difficulties involved in estimating student workload and identifies a number of factors that have an impact on the workload, including 'a variety of motives, expectations, interests, skills, abilities and previous experience' (p. 282). Kember (2004) suggests that student workload can be measured by the number of contact hours for classes plus the time spent on independent study. Interestingly, he argues that student perceptions of workload are more important than measures of time spent in class and studying independently. Marton and Wenestram (1978) observe that what is needed is a balance between challenge and manageability with regard to students' workload. In his study, Lockwood (1999) observes that students were prepared to spend about 40 hours per week on study-related activities. In Canada, Franke (2003) notes that higher education students spend a total 8.4 hours per day on paid work, unpaid work and studies, resulting in busier days than if they spent their time on college work alone; and that a busier schedule in college or university results in increased stress levels.

Student workload may also differ by the chosen type of educational specialization (field of study). Van der Velden and Wolbers (2004) mention that within a specific level, courses of study differ widely in the provision of field-related resources. The authors observe differences in the content of courses of study (*what* is being taught), differences in the teaching environment of colleges (*how* things are taught) and differences in selection into courses of study (*who* is being taught), showing how these areas are interlinked. This study differs from earlier research by defining workload as time spent on study and work-related activities. The authors argue that this definition better reflects the diversity of roles students now play.

On the basis of existing research, it is hypothesized in this article that students' workload is influenced by a set of individual and institutional characteristics, including field of study. It is also hypothesized that those higher education students who combine study with long hours of term-time employment are more likely to be dissatisfied with their workload.

3. DESCRIPTION OF THE IRISH AND AUSTRIAN HIGHER EDUCATION SYSTEMS

3.1. Higher Education in Ireland

In the Republic of Ireland, higher education is provided in universities, institutes of technology, colleges of education or in private institutions. At present, there are seven universities in the Republic that offer a full range of courses, leading to undergraduate and postgraduate qualifications. Undergraduate degree programmes last three, four or five years, depending on the field of study.

A number of independent private higher education institutions offer mainly business and IT-related courses.

Access to higher education is subject to grade attainment in the nationally standardized examination at the end of upper secondary level, the Leaving Certificate Examination, and some specific institutional and/or course requirements. In particular, it is based on a supply and demand points system. A *numerus clausus* principle used by the Irish universities warrants that entry to a given higher education course is granted to the highest-performing students who have applied for that programme. In addition, in recent years alternative routes have been created through further education and through access routes for disadvantaged groups (HIS, 2006). Admission rates to higher education in Ireland have increased over the last decades from an estimated 20 percent of the school-leaving cohort in 1980 to 55 percent in 2004 (O'Connell et al., 2006). The expansion of higher education is considered by some commentators as one of the main factors that has contributed towards unprecedented economic growth in the country (Fitzgerald, 2000). In recent years, there has also been some increase in the numbers of part-time and mature age students (Lynch, 1999).

3.2. Higher Education in Austria

In Austria, higher education is provided in 16 public and nine private universities, six public universities of the Arts, 19 universities of applied sciences ('Fachhochschulen') and several post-secondary colleges for teacher training, the medical services and social work. While the universities provide courses at ISCED level 5A, the training at the colleges is at ISCED level 5B. Other post-secondary courses as well as schools for master craftsmen, foremen and construction trades are also part of the tertiary sector (ISCED 5B) but are not regarded as 'higher education'. Private universities are quite new to the higher education landscape and cater for approximately 3500 students. In 2002, universities and Fachhochschulen offered only diploma courses of at least four years, doctoral programmes (two years) and a few short courses mainly for postgraduates. Since then, the transformation into a three-cycle system (Bachelors, Masters, PhD) has begun. In 2002, public universities in Austria had to follow a strictly open access policy for national students (a situation that changed in 2005 for some areas of study). Tuition fees were introduced in 2001 and national students have to pay now €360 per semester. However, Fachhochschulen in three provinces do not charge these fees and more than 20 percent of all students get the fees refunded for social reasons. Officially, all students study full-time, as no part-time status formally exists. However, many students work during term time and are de facto part-time students. Admission rates to universities and Fachhochschulen nearly doubled during the last 20 years. Nearly 30 percent of the age cohort entered higher education in 2002. However, this is still a quite low rate in international comparison due to a very well developed and established sector of vocational training outside of the higher education sector.

3.3. Background Information

Previous research has highlighted a variation in students' experiences across different types of higher education institutions (see Reay et al., 2005). For the purposes of the study, the article distinguishes between 'traditional' universities and 'other' higher education institutions (see Table 1). In Ireland, 'traditional' universities include seven National Universities of Ireland (attended by 52% of the students in the sample), whereas 'other' higher education institutes include institutes of technology and teacher training colleges. In Austria, the sample included scientific universities and universities of applied arts ('traditional' universities, attended by 91% of students) and universities of applied sciences ('other higher education institutions'). As can be seen, traditional universities assume a more dominant role in the Austrian context.

For the purposes of the study, the samples in Ireland and Austria exclude PhD students, while including ISCED levels 5A and 5B in Ireland and ISCED level 5A in Austria reflecting systemic differences within these countries. The average age of students participating in the study is 22 in Ireland and 26 in Austria. Average (full-time) study duration in Ireland is 3.4 years and in Austria 6.3 years. In addition, in Austria the majority of students in the sample are pursuing national diploma courses (98%), while in Ireland, the majority are studying for a primary degree (67%). In line with previous research (see Reay et al., 2005), Irish and Austrian students from lower socio-economic categories are more likely to choose 'other' higher education institutions rather than a 'traditional' university.

In order to provide comparable data, fields of study are divided into ISCED categories as indicated in Table 2. In Ireland, the highest number of full-time students across both types of institutions are studying social Sciences/Business/Law. However, there were some institutional differences with regard to other areas of study: in 'traditional' universities, a significant proportion of students are on Humanities and Arts courses while in 'other' higher education institutions the second most common area of study is Engineering/Manufacturing/Construction. As in Ireland, the majority of Austrian students in 'traditional' universities are studying social Sciences/Business/Law. Students attending 'other' higher education institutions are more likely to choose Engineering/Manufacturing/Construction.

Table 1 Type of higher education institutions, Ireland and Austria

Ireland		Austria	
Traditional universities	52.4%	Traditional universities	90.8%
Other HE institutions	47.6%	Other HE institutions	9.2%
Average age	22.2 years	Average age	26.0 years
Average study duration	3.4 years	Average study duration	6.3 years
Proportion of female students	54.6%	Proportion of female students	50.9%

Table 2 Fields of study, Ireland and Austria (% per type of institution), full-time students only

	Ireland		Austria	
Field of study	**Traditional universities**	**Other HE institutions**	**Traditional universities**	**Other HE institutions**
ISCED				
1 Education	5.7%	7.0%	11.7%	0.0%
2 Humanities and Arts	24.9%	10.2%	8.8%	1.8%
3 Social Sciences, Business and Law	25.7%	34.9%	37.9%	37.0%
4 Science	15.4%	8.7%	10.8%	7.6%
5 Engineering, Manufacturing, Construction	7.7%	21.5%	12.5%	44.6%
6 Agriculture	1.2%	0.3%	2.0%	0.0%
7 Health and Welfare	10.1%	2.3%	12.3%	1.4%
Other	9.4%	7.0%	4.0%	7.6%
Total	100.0%	100.0%	100.0%	100.0%

4. DATA AND METHODOLOGY

The data for this study were collected for the Eurostudent 2005 Study that aimed to provide comparable empirical data on the social and economic conditions of higher education students across a number of European countries. Core topics of the survey included income, expenditure, employment, accommodation, international mobility, time spent on various activities and personal characteristics. Comparability was achieved by implementing the same survey questionnaire in all participating countries, instructed and managed by HIS, Hochschul-Informations-System, Hanover, that collected identical core data from all countries using detailed templates. All countries conducted their own survey and had some flexibility to add additional questions to the central questionnaire. This article draws on the Irish and Austrian datasets.

4.1. Procedure and Sample

In Ireland, the survey was carried out by the Economic and Social Research Institute. The postal questionnaire was sent to 12,482 students in Irish higher education institutions. The latter were asked to select a random sample of students and to distribute the questionnaire. Questionnaires were returned by 3900 individuals, giving an overall response rate of 31 percent. Weighting was used to ensure that the responses were representative of the total student population in terms of full or part-time status, institution and gender.

The Austrian survey was conducted by Institut für Höhere Studien (IHS). In total, 10,045 students received the postal questionnaire (yielding a response rate of 35%, $n = 3303$). As in Ireland, a stratified random sample was used in the study. Weighting was performed by type of higher education institution, field of study, gender and age group. Satisfactory examination of data validity was performed in both countries.

4.2. Description of Main Variables

This study focuses, in particular, on higher education students' workload and field of study. For the purposes of the study, 'workload' is defined as time spent during term-time on study (attending classes and individual study) and employment-related activities. In the questionnaire, students were asked to indicate how many hours a week they spend on average on attending lectures/tutorials, on independent study and on paid employment. The measure of field of study uses categories designed for the Eurostudent survey and includes: Education; Humanities; Social Sciences/Business/Law; Science; Engineering/Manufacturing/Construction; Health/Welfare; and 'Other' (including Agriculture). For the reasons of comparability, analyses in this paper only draw on full-time students (i.e. students who have enrolled on official full-time courses). However, it is acknowledged that the workload of part-time students may be quite different.

4.3. Analysis

Analyses were conducted to explore the extent to which field of study influenced time spent at formal classes, on personal study and in term-time employment. Regression models were used to estimate the effect of field of study, controlling for a number of factors, including higher education institution, personal characteristics and other potential constraints on student time. Finally, we analyse the effect of student workload on overall satisfaction levels.

5. MAIN FINDINGS

5.1. Time Spent at Lectures and Tutorials

In the questionnaire, students had been asked the number of hours they spent per week at lectures and tutorials. Students in Irish universities spend longer at formal classes than those in Austria (20 hours compared with 12). However, the difference between Ireland and Austria is much less for students attending other higher education institutions, with an average of 24 hours spent at classes in Ireland compared with 26 hours in Austria (see Table 3).

Table 4 explores differences across fields of study in formal class contact time in Ireland and Austria. In both countries, there is significant variation across field of study in class contact hours (see Table 4). In Ireland, Health, Engineering and Science courses have the longest lecture hours while the shortest lecture hours are found among those taking Humanities/Arts programmes (the base category). In Austria, those taking Other, Science and Engineering courses have the longest hours. The effect of institution attended is very different in the two countries, with class contact hours higher in universities in Ireland and higher in other higher education institutions in Austria, all else being equal. At the time of the survey, there were no postgraduate students (at postgraduate diploma or Master's level) in the Austrian system. However, this is an important distinction in the Irish system so postgraduate status is included in the model. Postgraduate

Table 3 Workload (h/week) by type of institution, Ireland and Austria

	Ireland		Austria	
Workload	**Universities**	**Other HE**	**Universities**	**Other HE**
Attendance of courses	19.7	24.0	12.1	25.7
Personal study	12.6	10.9	25.7	15.1
Paid employment	12.9	12.6	13.3	12.2

Table 4 Regression model of influences on number of hours spent at lectures and tutorials, Ireland and Austria

	Ireland	**Austria**
Constant	12.751	23.295
Field of study:		
Education	4.755***	0.162
Engineering	7.777***	1.813*
Health	10.682***	−0.929
Other	5.024***	2.783**
Science	6.211***	1.913*
Social Science	1.483**	−0.342
(Base category: Humanities)		
University	3.603***	−11.680***
Postgraduate	−5.073***	–
Adjusted R^2	0.209	0.180

Note: ***$p < 0.001$; **$p < 0.01$; *$p < .05$.

students are found to spend fewer hours at lectures, reflecting the greater emphasis on independent study and dissertation preparation for this group.

5.2. Time Spent at Personal Study

Students were asked to estimate the amount of time they spent at personal study outside of regular class times. Austrian students spend longer on personal study than students in Ireland (see Table 3). This difference is particularly marked in the university sector, where Irish students spend an average of 13 hours per week on study while Austrian students spend 26 hours per week. These differences could reflect different approaches in how study-related activities are organized in both countries, with a greater focus on attending courses in Ireland (see above).

In Table 5, we present a series of regression models analysing the factors predicting study hours in both Ireland and Austria. Model 1 examines the effect of institutional characteristics on hours of personal study. There is significant variation across field of study in both countries. In Ireland, the longest hours are spent by those on Humanities, Health or other courses; the shortest hours are spend by those on education and Social Science/Business/Law courses. In Austria, by

far the longest hours are spent by those on health courses (who spend more than 14 hours more on study than students in humanities). In addition, students in technical fields spent significantly more time on personal study as do students in science classes. As with class contact time, the pattern across higher education institutions is different in the two systems. In Ireland, there is no significant difference in personal study hours according to the institution attended. In contrast, students at Austrian universities spend nearly two hours a week more on personal study time than others. In both countries, students in the last stages of their course spend more time on personal study; in Austria, this amounts to 2.5 hours extra while Irish students in their last year of their degree spend almost six hours per week on personal study than other students, reflecting increasing investment in effort as the final degree approaches.

In Model 2, we explore whether time spent on other activities influences the amount of time available for personal study and whether study time is constrained by personal circumstances. In both countries, students who are employed during term-time spend fewer hours on personal study. Thus, students working longer hours are spending less time on study, a factor which is likely to impact on their longer term academic performance. Furthermore, there appears to be some 'trade-off' in both countries between formal classes and independent study, with those with longer lecture hours spending fewer hours on personal study. Having children may also operate as a potential constraint on the allocation of time to other activities. In the Austrian case, student parents spend more than three hours per week less on personal study than other students, while no such difference is evident in the Irish context.

In both countries, older students tend to spend longer hours on personal study. However, cross-national differences are evident in the effect of other personal characteristics. In Ireland, a gender difference is evident, with female students spending more time on study. In Austria, a social background effect is evident with working-class students spending more time on personal study.

5.3. Time Spent in Employment

The proportion of full-time students reporting not being engaged in term-time work is just above 38 percent in both countries. There is some similarity in the amount of time spent in term-time employment, with students in Ireland and Austria spending an average of 12 to 13 hours per week. The regression models in Table 6 explore the influence of field of study as well as institutional and personal characteristics on involvement in paid work.

In Ireland, there is little systematic variation across fields in hours of work, except for a slight tendency for those on education courses to work shorter hours. In contrast in Austria, students in health courses are found to spend significantly less hours on paid employment than others (around 4.5 hours) than other students. However, there is little systematic variation across the other fields of study in hours worked. The effect of institution attended also varies across the two

Table 5 Regression model of influences on time spent on personal study, Ireland and Austria

	Ireland		Austria	
	Model 1	**Model 2**	**Model 1**	**Model 2**
Constant	12.187	13.152	13.566	17.738
Personal study hours				
Education	−1.955*	−1.757*	−0.486	−0.021
Engineering	−1.404*	−.688	5.657***	5.232***
Health	.088	.258	14.728***	13.677***
Other	−.573	−.059	1.416	1.921
Science	−1.741*	−1.130*	2.997**	2.595*
Social Science	−1.974***	−1.371**	1.357*	1.554
University	−.578	−.127	1.801**	0.490
Postgraduate	9.224***	6.986***	2.481***	2.804***
Stage in the field of study	5.924***	5.506***		
Lecture hours		−.068**		−0.133***
Hours of employment		−.134***		−0.233***
Female		2.643**		−0.805
Working class		−.022		1.208*
Mature student		3.148***		1.615**
Have children		−.424		−3.554***
Adjusted R^2	0.112	0.147	0.134	0.207

Note: ***$p < 0.001$; **$p < 0.01$; *$p < .05$.

countries. In Ireland, university students tend to work longer hours than those attending other higher education institutions while in Austria the difference is not significant.

In Ireland, students in the last stages of their college education tend to work shorter hours than other students, all else being equal. This perhaps reflects a withdrawal from the distraction of employment in preparation for the final examination. In Austria, this group of students tend to work longer hours, an effect that seems somewhat surprising. However, it appears to be due to the profile of these students; they are more likely to have children and therefore more likely to work during term-time to support their family. When this effect is taken into account, there is no significant relationship between stage and employment hours in Austria (compare the coefficients in Models 1 and 2).

In both countries, lecture hours appear to constrain involvement in term-time employment with students with more intensive class contact hours spending less time in paid work. This effect appears stronger in Austria than Ireland. In keeping with the above analyses, Irish and Austrian students with longer study hours tend to spend less time in paid employment; this effect cannot be regarded as causal since it is more likely that employment constrains study time rather than vice versa. In the Irish context, having children is associated with shorter employment hours while the difference between student parents and others is non-significant in the Austrian context.

As might be expected, Model 3 indicates that students in both countries spend fewer hours in paid employment if they receive a financial contribution from

Table 6 Influences on working hours among higher education students, Ireland and Austria

	Ireland				Austria			
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 1**	**Model 2**	**Model 3**	**Model 4**
Constant	5.925***	8.197***	12.153***	12.491***	10.569***	23.565***	32.015***	28.315***
Education	−1.589*	−1.883*	−1.471	−1.999*	−0.350	0.485	0.586	0.677
Engineering	−.841	−.795	−.814	−1.316	−1.261	0.291	0.840	.0.031
Health	.122	.167	.037	.025	−4.591***	−0.475	−1.305	−0.272
Other	−.449	−.219	−.138	.095	0.856	1.566	1.166	1.167
Science	−.167	−.250	−.405	−1.034	−0.498	1.155	1.161	1.347
Social Science	.767	.613	.671	.392	1.257	1.568	1.319	1.605
University	1.588***	1.782***	1.400***	1.446**	−0.112	−4.784***	−2.924***	−3.219***
Postgraduate	.185	.479	.339	−.190	–	–	–	–
Stage	−1.377**	−.850*	−.599	−1.299**	4.779***	0.133	0.351	−0.309
Female		1.105	.833	.511		−1.513*	−1.015*	−1.269
Working class		.389	.474	.673		0.960*	0.836	0.639
Mature student		1.639**	.622	1.341*		9.879***	4.530***	7.162***
Have children		−3.816***	−4.208***	−3.496**		−0.396	−0.192	1.272
Lecture hours		−.054*	−.043*	−.055*		−0.459***	–0.356***	−0.365***
Study hours		−.141***	−.137***	−.123***		−0.278***	−0.224***	–0.230***
Contribution from family amount			−4.299***	−.005***			−11.674***	–0.014***
Grant amount			−2.666***	−.012***			−6.376***	−0.021***
Adjusted R^2	0.012	0.039	0.087	0.085	0.042	0.312	0.430	0.435

Note: ***$p < 0.001$; **$p < 0.01$; *$p < .05$.

their family or a grant from the state. Model 4 adds the actual amounts contributed by parents (including benefits in kind) to the model along with state grant amount. Students receiving higher levels of financial support from their parents or the state tend to work shorter hours.

It should be noted that linear regression techniques may not be the most appropriate method to use to analyse employment hours since around 40 percent of the sample in both countries do not engage in paid work. As a result, further analyses were conducted to explore the relationship between the above variables and the likelihood of working at all, with separate models estimated for hours of work (only for those working any hours). Estimates of the effects of field of study, institutional and personal characteristics on term-time working were similar using this alternative specification to those presented in Table 6. As a result, these findings are not presented separately in the article.

5.4. Satisfaction with Workload

Students were asked about their degree of satisfaction with their workload (study and work combined), with responses on a five-point scale ranging from 'very dissatisfied' to 'very satisfied'. The patterns in the two countries were very different, with much higher levels of dissatisfaction in Austria. In Austria, almost two-thirds of higher education students were dissatisfied with their workload while this was the case for only a fifth of Irish students.

In Ireland, field of study is significantly associated with workload satisfaction. Students who are on education, engineering and science courses are less satisfied with their workload (work and study combined) than other students (see Table 7). However, it should be noted that, while significant, field of study explains very

Table 7 Satisfaction with workload, Ireland and Austria

	Ireland		Austria	
	Model 1	**Model 2**	**Model 1**	**Model 2**
Constant	3.272***	3.742**	2.163***	3.112***
Education	−.309***	−.296***	−0.025	0.030
Engineering	−.197**	−.152*	−0.087	0.050
Health	−.053	.025	−0.062	−0.024
Other	.016	.049	−0.058	0.012
Science	−.117*	−.085	−0.059	−0.037
Social Sciences	−.016	−.001	0.012	0.048
Lecture hours		−.010***		−0.022***
Study hours		−.007***		−0.018***
Employment hours		−.019***		−0.027***
Have children		−.257**		−0.539***
Stage in field of study		−.102*		−0.033***
Postgraduate		.102		
Adjusted R^2	0.008	0.057	0.000	0.187

Note: ***$p < 0.001$; **$p < 0.01$; *$p < .05$.

little (less than one percent) of the variation in workload satisfaction. In Austria, field of study does not explain any variation in workload satisfaction at all.

In keeping with our hypotheses, students who spend more hours in paid employment are less satisfied with their workload. Other potential sources of increased workload, including hours spent at lectures, hours spent on personal study and having children, are associated with lower levels of satisfaction in both countries. Being in the last stages of the course also appears to act as a source of pressure, since these students are less satisfied with their workload.

When we control for these other factors, Irish students on Education courses and, to some extent, those on Engineering courses report greater dissatisfaction with their workload. It is not possible to explain this difference on the basis of available information. However, it may relate to the demands of the course in terms of pace of instruction, project work or the requirement to engage in work experience placements, for example.

In Model 2, we add other possible factors which may influence satisfaction with workload. More hours spent on personal study is associated with greater dissatisfaction with workload, although the effect size is not large. Longer hours of work are significantly related to greater dissatisfaction; an extra hour of employment is found to lead to greater pressure than time at lectures or personal study. Students in the final stage of their courses report slightly higher workload pressure. Students with children report the greatest dissatisfaction compared to all other students.

6. DISCUSSION AND CONCLUSIONS

This article has explored the workload of higher education students in comparative perspective. Interest in the topic of student workload has increased in recent years, stemming from increased participation in higher education and a more diverse student population, with many now combining their studies with term-time employment. The results of this study show that in both Ireland and Austria, a significant proportion of full-time students are engaged in regular employment, in line with international trends (see Bienfeld and Almqvist, 2002).

The institutional context, including the course (field of study) pursued, appear to influence the way in which students seek to balance formal lectures, personal study and term-time employment. However, this process operates in somewhat different ways in Ireland and Austria. In particular, Irish students seem to spend more time attending courses compared to their Austrian counterparts, suggesting that a different approach to study-related activities may be employed in Irish higher education institutions. In both countries, time spent on attending lectures/tutorials also depended on the type of higher education institution students attended. In Austria, students in 'other' higher education institutions spent more time attending lectures compared to other students who attend 'traditional' universities. In Ireland, however, students attending 'traditional' universities tend to spend somewhat longer hours attending courses. Time spent attending courses

differed by field of study in both countries with students taking subjects such as Health, Engineering and Science spending longer hours in lectures/tutorials compared to other students, possibly reflecting the requirement for more class contact hours to engage in laboratory and other practical work.

In both countries, there appears to be a trade-off between class contact time and personal study. Interestingly, however, this does not result in very different amounts of time spent on personal study across different fields. The one exception is the much greater amount of time spent on study by those attending Health courses in Austria. There is also a trade-off between employment, personal study and employment. Students working longer hours were also generally more likely to spend less time on independent study, which potentially can have an adverse effect on their academic achievement. Lecture hours are found to constrain the possibility of taking up term-time employment. Students with longer lecture hours spend fewer hours in paid employment, which may increase financial pressures for students taking these courses. It is difficult to determine whether the hours involved in particular fields of study may itself act as an influence on choosing to pursue particular courses. Reimer and Pollak (2005) have noted that the typical study length is an important factor in choosing a field of study, because of the differential costs involved. Students who work may be more inclined to choose an area that is more flexible in enabling them to engage in term-time employment. However, little is known about whether this is actually the case.

The nature of the state support and family systems also influence involvement in paid employment since students work fewer hours where they have alternative sources of financial support, a pattern which has implications for policy in this arena.

Previous research has shown that students' perception of their workload may influence their retention with higher education, the quality of their learning and their general feelings of well-being (Darmody et al., 2005; Lockwood, 1999; Woodley and Parlett, 1983). Some fields of study require longer hours spent attending classes, with potential consequences for students' ability to balance their time across different activities. In both countries, students required to spend longer at formal classes Were less satisfied with their workload. In addition, hours of employment tend to add to the feeling of dissatisfaction with workload as does having children. Overall, longer hours in lectures allied with longer hours of employment seem to increase dissatisfaction levels in both countries, thus supporting the hypotheses presented at the beginning of the article. This finding highlights the importance of higher education institutions taking into account the changed student profile and giving more consideration to promoting flexible learning arrangements in order to accommodate different demands on students' time. This could potentially be done by increasing the use of distance, modular and evening courses. Even in the presence of more flexible arrangements, the system of financial support for higher education students is

important, since feeling the necessity to work excessive hours during term-time is likely to impact on student learning and achievement.

The very high levels of dissatisfaction with workload found in the Austrian context may be related, at least in part, to the absence of an official status of part-time student. Thus, students in very different family circumstances and at very different life stages may be attempting to combine a 'full-time' course with other 'full-time' work and family commitments.

This article has yielded useful insights into how students balance study and employment time within different institutional contexts. However, there are certain limitations to the analyses given the lack of information on other student activities, including, for example, involvement in social activities and unpaid domestic labour. More detailed research on time use patterns would contribute to a greater understanding of the complex balancing act undertaken by many higher education students.

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