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Education in Europe 2012









# Key Data on Education in Europe 2012

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#### **FOREWORD**





The challenges faced by the European Union today are numerous, interrelated and complex. The social consequences of the global financial and economic crisis are being felt in all Member States. In this context, education and training systems must adjust their priorities to ensure that all European citizens are equipped with the knowledge, skills and competences needed to meet the challenges and demands of both the workplace and modern life.

In 2010, Member States and the European Commission agreed to include education and training as a key element in 'Europe 2020', the EU's strategy for smart, sustainable and inclusive growth over the coming decade. This is in turn underpinned by the Strategic Framework for Education and Training ('ET 2020') and its four long-term objectives. This Strategic Framework constitutes the foundation for European cooperation in the field of education and training, and thus makes a significant contribution towards achieving the wider 'Europe 2020' goals. The availability of effective, harmonised indicators is essential to monitor progress towards these goals.

Key Data on Education in Europe makes a valuable contribution to the debate on education policy at both European and national level and helps to monitor progress on the strategic framework. Based on data collected through the Eurydice network, Eurostat and the PISA international survey, the report provides standardised and readily comparable quantitative and qualitative indicators which offer a wide-ranging overview of the organisation and functioning of European education systems. It examines in particular areas of special importance for European cooperation – such as participation in compulsory education, tertiary education attainment and transition to the labour market, investment in education and quality assurance – and thus provides an insight into the ways in which countries are responding to common challenges in education.

As Europe is embarking on its 2020 strategy of reviving the European economy and creating smart, sustainable, inclusive growth we must also take stock of the progress made so far. In addition to up-to-date, reliable information, this eighth edition of *Key Data on Education in Europe* presents trend-data

in education and training since 2000 – the beginning of the Lisbon Strategy for promoting growth in Europe. Such a review offers an opportunity to analyse the trends in a big range of educational topics, policies and approaches over the past decade and to assess the challenges lying ahead.

We hope that this body of data and information will serve as a valuable source for decision makers in the field of education, helping them in reviewing and reforming their educational policies and institutions so as to ensure access to high quality education and training for all citizens and to strengthen the foundations for long-term socio-economic growth and stability.

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#### INTRODUCTION

The Eurydice Network is producing the *Key Data on Education* report for more than 15 years. Initially, only a general report with indicators on education was published and, at present, in addition, three thematic *Key Data* reports are also disseminated (Foreign Languages, Innovation and ICT and Higher Education). Moreover, starting from 2012/13, two new thematic *Key Data* reports on Early Childhood Education and on Teachers and School Heads will be developed.

The general *Key Data on Education* report, published jointly with Eurostat, is a unique publication and a flagship product for the Eurydice Network as it combines statistical data and qualitative information to describe the organisation and functioning of education systems in Europe.

The present edition of *Key Data on Education* has redefined structure and reduced overall number of indicators. However, the statistical and contextual indicators have longer data time series presenting the developments in the European education systems in the last decade. In this way, the report constitutes a useful complementary tool to accompany the publication of the Joint report on Education and Training 2020. This comprehensive outline, covering all levels of education and including the main trends in European education, would provide a context for the main themes discussed in the Joint report.

#### **Structure and Content of the Report**

The structure and indicators for this eighth edition have been selected in accordance with their relevance to the European Strategic Framework for Education and Training ('ET 2020') and EU's strategy for smart, sustainable and inclusive growth over the coming decade (EU 2020). The final list of indicators was subject of consultation within the Eurydice Network and Eurostat. The report presents information for pre-primary education (ISCED 0), primary (ISCED 1), general lower and upper secondary education (ISCED 2-3) and higher education (ISCED5-6). The public education institutions are the main target of most of the indicators (except for Belgium, Ireland and the Netherlands, where information on grant-aided private schools is also integrated as they account for a considerable part of school enrolments in these countries). In some indicators, information on public and also private (both grant-aided and independent) institutions is provided for all countries.

The report is organised into seven subject-based chapters entitled *Context*, *Structures*, *Participation*, *Resources*, *Teachers and Management Staff*, *Educational Processes* and *Qualification Levels and Transition to Employment*. The summary at the beginning of the report familiarises readers with the main findings and briefly reviews the most evident emergent trends.

In each chapter, the information is presented in ascending order of educational level, progression from the most general to the most specific information, and from local administrative level up to national level.

This general volume of *Key Data on Education in Europe* 2012 has been enhanced through the inclusion of several time series provided by Eurostat. Time series are especially helpful in identifying developments affecting aspects of education systems in Europe and in analysing their present situation with respect to the recent past. These time series are concerned in particular with participation rates at different educational levels (Chapter C), with qualification levels among the general population, and with the number of women graduates in tertiary education and the number of graduates in science and technology (Chapter G). Furthermore, many of the Eurydice indicators present also the evolution in the education structures and organisation (Chapters B and F) in the last decade.

The complementary nature of qualitative and quantitative information has also been enhanced by input from the contextual questionnaires of the PISA 2009 international survey carried out by the Organisation for Economic Cooperation and Development (OECD). These indicators provide an interesting supplement to the material from Eurydice, as they offer a picture of what occurs in practice in schools and classrooms. It has been possible to view these data in relation to information on official recommendations and requirements in areas such as school autonomy (Chapter B), pupils' instruction time or ways in which they are grouped together (Chapter F). The same indicators also complement the statistical information gathered by Eurostat, by focusing on areas that have not been covered, or offering insight into variations between schools within a country in contrast to the data from Eurostat on schools as a whole.

#### Coverage

This Key Data on Education in Europe report covers 33 European countries (37 education systems), namely all those involved in the Eurydice Network under the Lifelong Learning Programme (2007-2013).

As regards Eurostat and OECD-PISA data, only results from countries taking part in the Lifelong Learning Programme (2007-2013) are provided. In the case of countries that do not contribute to certain Eurostat data collection exercises, the data are indicated as 'not available'. By contrast, those which did not take part in the PISA survey are indicated with a cross on the histograms prepared from these data sources.

Given the regionally based educational structure of some countries, break down data by administrative region (particularly in the case of Belgium and the United Kingdom) wherever possible is presented.

#### **Sources**

Three major sources of information have thus been used for the report, namely information supplied by the Eurydice Network, the European statistical system coordinated by Eurostat and, finally, certain data taken from the international survey PISA 2009.

#### **Eurydice information gathering**

The Eurydice indicators supply information derived primarily from legislation, national regulation or other official documents concerned with education. This information is gathered by National Units in the Eurydice Network (generally situated in the education ministries), on the basis of common definitions. It is then analysed and compared by the Eurydice Unit at the Education, Audiovisual and Culture Executive Agency of the European Commission and verified by the National Units. Where the matter examined is of the responsibility of local authorities or individual institutions and therefore is not governed by central-level regulation, this is clearly stated in the Figure.

On the whole, this information is generally of a qualitative nature and presents a general picture of education in Europe, or a number of models or typical patterns relating to its structure or functioning. A few indicators offer quantitative information (such as the retirement age or working time of teachers, salaries, teaching time, etc.).

Indicators cover different levels of education as defined by national education systems. In general, information from Eurydice relates solely to public schools. Most Figures also cover the grant-aided private ('government-dependent') institutions in three countries (Belgium, Ireland and the Netherlands) where the majority of pupils attend schools in that sector. Where Figures cover the grant-aided private ('government-dependent') schools in all countries, this is explicitly stated in the title.

#### Statistical data collection by Eurostat and the European Statistical System (ESS)

The various Eurostat data collection exercises performed by the European Statistical System (ESS) and used in this report are described briefly in the table below. More detailed explanatory material is contained in the 'Glossary and Statistical Tools' section. Insofar as these data collections – including statistical processing and procedures for the checking, approval and publication of the information concerned – are based on different timetables, their reference years also differ. This should be borne in mind when reading and analysing the data. All the information provided by these data collections was obtained from the Eurostat database in July 2011 and the reference years are 2009/10 and 2008 for the funding data.

These different data collection systems provide statistical information on populations and their composition (Chapter A), pupil participation rates and those newly enrolled in education systems (Chapter C), educational expenditure (Chapter D), teaching and management staff (chapter E) and graduates and employment, unemployment and the educational levels reached by the population of the European Union (Chapter F).

All these Eurostat statistical data are available at:

http://epp.eurostat.ec.europa.eu/portal/page/portal/education/data/database

#### THE UOE DATABASE

The joint UOE (UNESCO/OECD/EUROSTAT) questionnaires are used by the three organisations to collect internationally comparable data on key aspects of education systems on an annual basis using administrative sources.

#### THE DEMOGRAPHICS STATISTICS DATABASE

National demographic data is collected from responses to an annual questionnaire sent to the national statistical institutes. The annual national population estimates are based either on the most recent census or on data obtained from the population register.

#### THE LABOUR FORCE SURVEY (LFS)

This survey has been carried out annually since 1983. It is the principal source of statistics on employment and unemployment in the European Union. The survey is directed at individuals and households. The questions mainly cover the characteristics of employment and job seeking.

#### THE NATIONAL ACCOUNTS DATABASE

The European System of National and Regional Accounts is an internationally comparable accounting framework for systematic and detailed description of a 'total economy' (i.e. a region, a country or a group of countries), its components and its relationships with other 'total economies'.

#### The PISA 2009 international database

PISA (Programme for International Student Assessment) is an international survey conducted under the auspices of the OECD to measure the performance levels of pupils aged 15 in reading literacy, mathematical literacy and scientific literacy. The survey is based on representative samples of 15-year-old pupils, who may either be in lower secondary or upper secondary education, depending on the structure of the system. Besides measuring performance, PISA 2009 international survey includes questionnaires to identify variables in the school and family context which may shed light on their findings. Questionnaires were sent to school heads and pupils for the PISA survey. The indicators contained in the present publication have been prepared using replies from these contextual questionnaires. All indicators cover both public schools and private schools, whether grant-aided or otherwise. Further details on statistical aspects are provided in the 'Glossary and Statistical Tools' section.

#### **Partnerships and Methodology**

Questionnaires were prepared by the Eurydice Unit within the Education, Audiovisual and Culture Executive Agency (EACEA) working jointly with National Units in the Network. In statistical terms, the Eurydice Unit within EACEA also exploited the findings of the context-oriented questionnaires in the PISA 2009 survey.

Eurostat (Unit F4 'Education, Science and Culture') has undertaken the preparation and production of statistical indicators.

All analytical content based on the statistical and descriptive data in the report was drafted by the Eurydice Unit within EACEA. Finally, the Eurydice Network in collaboration with Eurostat undertook the checking of the content of entire report.

The Eurydice Unit within EACEA is responsible for the final publication and layout of the report. It is also responsible for all work entailed in preparing maps, diagrams and other graphic material. Finally, the summary entitled 'Main Issues' at the beginning of the report is the sole responsibility of the Eurydice Unit within EACEA.

All those who have contributed in any way to this collective undertaking are listed at the end of the report.

#### **Conventions and Presentation of Content**

Besides its significance for policy-makers, the present report has been devised to provide a very wide audience with information on education systems in Europe.

In order for it to be easier to consult and readily accessible to everyone, the report contains numerous figures, including histograms, maps and diagrams supplemented with comments on the essential points arising from the description and comparison of education systems.

Values associated with each quantitative indicator are presented in a table below the diagram concerned. Each figure is accompanied by an explanatory note and country specific notes directly underneath it. The explanatory note contains all details concerning terminology and conceptual aspects, which are needed for a proper understanding of the indicator and the figure. The country specific notes provide information that should be taken into account on important aspects of the situation in particular countries.

In the figures and tables, countries appear in the protocol order established by the Publications Office of the European Union. This means that they are cited in alphabetical order in their original language and not that of the particular version of *Key Data* concerned.

Country name codes, statistical codes and the abbreviations and acronyms used are set out at the beginning of the report. The glossary of terms and statistical tools employed are included at the end of the report.

A list of all figures in the report is also included at the end of the publication indicating the source and the covered educational levels (ISCED 0, ISCED 1-3 and ISCED 5-6).

#### **Electronic Version**

An electronic version of *Key Data on Education in Europe 2012* is also freely available on the Eurydice website (http://eacea.ec.europa.eu/education/eurydice/key\_data\_en.php).

#### MAIN FINDINGS

The present edition of *Key Data on Education* analyses the developments in European education systems over the last decade. The various chapters in this publication cover many of the priority areas for European cooperation in education and training (ET 2020) as well as the broader European strategy for smart, sustainable and inclusive growth over the coming decade (EU 2020).

This *Key Data* report shows that structural and organisational reforms to education systems have been implemented with a view to **reducing early school-leaving rates** and, in some cases, to ensure that **all students obtain a certificate of basic education**. The most significant reform in this area is the **extension of compulsory schooling** in some countries. A further organisational trend that emerges from the study is an overall **high level of autonomy for schools and local level authorities** to manage financial and human resources – a similar trend is also evident in the management of academic staff in higher education.

The **development of quality assurance systems** is an important lever for achieving the strategic objective of improved educational quality and efficiency, consequently, the **quality of education is increasingly being evaluated** across Europe. The focus of this evaluation may be the education system as a whole, or it may be individual schools or teachers. Moreover, European countries have adopted varied and contrasting policies related to **school accountability** based on student performance.

In the majority of countries, **investment in education** has remained largely unchanged during the last decade up until 2008 just before the economic downturn. In response to the crisis, some governments have taken specific steps to ensure that existing funding levels have not been changed in order to **guarantee the continued functioning of the system** and to safeguard the reforms implemented over the last decade.

The professional development of teachers and school heads is a key factor in ensuring successful outcomes for students. This report shows that many countries intended to **improve the education** and training of teachers and to provide them with the necessary support for their teaching. However, it is also clear that efforts must be increased to attract more suitably qualified people to the profession and to combat the teacher shortages that may face many European countries in the future.

Finally, the proportion of young people aged 20-24 and 30-34 who have completed tertiary education has continued to increase; for the latter group, the proportion has been expanding steadily since 2000. However, young people's entry into the labour market is a concern in many countries since it has been detrimentally affected by the economic crisis. The results show that a growing number of young people appear to be overqualified for the type of employment they find. This suggests the need for more efficient forecasting of the short- and long-term needs of the labour market with a view to providing reliable educational and careers guidance to students so that improvements can be made in matching young people's educational qualifications with actual employment opportunities.

In the next paragraphs, the main findings of the report are grouped in six major areas:

## EDUCATION STRUCTURES AND ORGANISATION: TREND TOWARDS LONGER PARTICIPATION IN EDUCATION

- A general trend towards longer compulsory schooling to guarantee the acquisition of core
  competences has been observed in almost all education systems since 1980. In ten countries, the
  start of compulsory education has been brought forward by one year (or even two in the case of
  Latvia). At the other end of the scale, thirteen countries extended the duration of full-time
  compulsory education by one or two years, and by three years in Portugal following recent reforms
  (see Figure B2).
- Children start formal education at an increasingly early age. Over the period 2000 to 2009, on average in the EU-27, the participation rates of 3-year-old, 4-year-old and 5-year-old children in pre-primary or primary education increased by 15.3, 7 and 6.3 percentage points respectively, reaching around 77 %, 90 % and 94 % in 2009. The participation of 3-year olds in pre-primary education was almost comprehensive in Belgium, Denmark, Spain, France and Iceland in 2009, reaching more than 95 % (see Figure C2).
- An even distribution of students exists between general education and vocational programmes at upper secondary level. At the EU-27 level, between 2000 and 2009, the proportion of students in general education as a percentage of all students in upper secondary education increased by 5.5 percentage points, reaching 50.4 % in 2009. This can be partly explained by the requirements for a general education certificate rather than a vocational certificate for continuing university studies. Male participation in vocational education was higher in almost all European countries (see Figure C5).
- Most 15-year-olds in Europe attend schools with large numbers of students. In comparison with 2003, in half of all the countries examined, the mean school size increased by 50 to 100 students. However a decrease of more than 70 students per school can be seen in Belgium (German-speaking Community), Austria and Poland. As a general tendency, between 2003 and 2009 student numbers in the group of very large schools fell slightly (see Figure B6).
- In 2009, across Europe, the student/teacher ratio in primary education was 14:1, and 12:1 in secondary education. Since 2000, the ratio has declined in two thirds of countries by an average of two pupils per teacher in primary education and by one pupil in secondary education. In the same period, the regulations on the upper limits of class sizes were not modified significantly (see Figures F8, F9 and F10).
- In 2009, almost 90 % of 17-year-old Europeans were still in education, and post-compulsory participation rates in education have improved or remained stable during the last ten years. Bulgaria, Malta and Romania, the three countries with the lowest participation rates one and two years after the end of compulsory schooling in 2000, were among the countries with the most significant improvement during the last decade. However, in 2009, one year after the end of compulsory education the participation rate in those countries was still less than 80 % (see Figures C6 and C7).

 During the period 2000-2009, on average in the EU-27, the tertiary education population increased by around 22 % (2.7 % annual growth rate), reaching almost 19.5 million individuals in 2009. In the European Union, on average, 124 women were enrolled in tertiary education for every 100 men. Since 2000, the number of women students increased by almost 10 % with a constant annual rate (see Figures C9 and C11).

#### HIGH LEVELS OF AUTONOMY FOR SCHOOLS AND HIGHER EDUCATION INSTITUTIONS

- Despite a general trend for increasing school autonomy in Europe, there are still significant differences between countries. Whilst around a third of countries grant a high degree of autonomy to schools for managing financial and human resources, in a small group of countries – Germany, Greece, France (primary education), Cyprus, Luxembourg (primary education), Malta and Turkey – schools have very limited or no freedom in this area (see Figure B13).
- Autonomy is more likely to be given to schools in some areas than in others. Schools generally
  have more autonomy for managing their operational expenditure than capital expenditure, and
  decisions about the management of teaching staff are usually taken at school level while those
  relating to the post of school head are very often under the control of a higher level education
  authority (see Figure B13).
- The school admissions process is becoming more flexible. While students in public schools are
  generally allocated to a specific school, in an increasing number of countries parents may request
  an alternative school either at the start of the admissions process or when a proposed school has
  reached its maximum enrolment capacity (see Figure B5).
- The compulsory core curriculum is defined at central level in all countries either in terms of it basic content or as goals to be achieved. However, schools have much more freedom in everyday education activities, such as the choice of teaching methods and textbooks, the grouping of pupils for learning activities and the setting of internal assessment (see Figure B13). Within schools, teachers are more often involved in decisions on teaching methods, setting internal assessment criteria and the choice of textbooks than on decisions about pupil grouping (see Figure B14).
- There is a growing autonomy for schools to decide how to distribute annual taught time between subjects. In many countries, the official recommendations on taught time envisage a shorter learning period at the beginning of primary education (generally for the first two years), then the number of hours steadily increases through the period of compulsory education, with a significant increase in the later stages of secondary education (see Figures F1, F2 and F3).
- Increased institutional autonomy can also be seen in higher education for the management of
  academic staff. Nevertheless, central authorities in the great majority of countries are still
  responsible for defining the categories of staff and their related qualifications as well as basic
  salary levels. In a dozen countries or regions, these elements are defined jointly between central
  and institutional levels. Institutions themselves are almost completely responsible for the evaluation
  and promotion of academic staff (see Figure E18).
- Central or regional authorities share powers with Higher education institutions in setting student numbers in tertiary education and in many counties institutions organise their own student selection procedures (see Figures E19 and E20).

## QUALITY ASSURANCE SYSTEMS IN PLACE OR UNDER DEVELOPMENT IN ALL COUNTRIES

- Both school and teacher evaluation have been given more importance over recent years. In the
  vast majority of countries, schools are evaluated externally, generally by an inspectorate, and
  internally by school staff and sometimes other members of the school community. Individual
  teacher evaluation has been introduced or strengthened recently in several countries (Belgium
  [Flemish Community], Portugal, Slovenia and Liechtenstein), sometimes in the framework of a
  general performance evaluation system for all public bodies (see Figure B7).
- The majority of countries use students' results in external tests together with findings from school
  evaluation procedures in order to monitor the performance of their education systems (see
  Figure B12). More than half of European countries administer national tests to pupils that aim
  primarily to monitor the school and education system performance (see Figure F16).
- The routine publication of school results in national tests is not the norm in Europe although this
  does occur in a minority of countries, and several others allow schools to decide this matter for
  themselves. In Belgium (French Community), Spain and Slovenia, official documents prohibit the
  ranking of schools on the basis of their national test results (see Figure B9).

# GREATER EFFORT NEEDED TO ATTRACT MORE PEOPLE TO THE TEACHING PROFESSION

- With the Bologna reforms in higher education, the minimum qualification and length of training for teachers has changed. Most countries now require a Bachelor's degree as the minimum entry qualification for becoming a pre-primary teacher or its equivalent. For prospective primary teachers, the minimum qualification has increased so that in nine countries a Master's level degree is required and this usually takes five years to complete (see Figure E2).
- Support measures for new teachers have become more widespread. While in 2002/03 only
  14 countries offered formal assistance under central regulations or recommendations, in 2010/11,
  21 countries reported that central guidance on support measures for new teachers existed. These
  measures include, in particular, regular discussions of progress and problems and assistance with
  the planning of lessons and student assessment. In several countries schools have fully autonomy
  to decide which types of support they will provide (see Figure E4).
- According to the latest PISA results, many students in Europe are being taught in schools where teaching is hindered by a lack of qualified teachers in the core subjects (language of instruction, mathematics and science). In Germany, the Netherlands and Turkey, the percentages are high not only for the core subjects but also for other school subjects (see Figure E3).
- In many European countries, the majority of teachers currently employed are in the highest age groups (40-49 and older than 50). In Germany, Italy and Sweden, nearly half of all teachers in primary education are older than 50; at secondary level, this age group is the most strongly represented in almost all countries (see Figures E10 and E11). This situation could exacerbate teacher shortages and more qualified teachers are therefore needed.

- Although the official retirement age and/or the minimum retirement age with full pension entitlement
  has increased since 2001/02 in around a third of all European countries, the majority of teachers
  retire from the profession as soon as they become eligible. However, in Denmark, Germany, Italy,
  Cyprus, Poland, Finland, Sweden and Norway; in the Czech Republic, Estonia, Latvia, and
  Slovenia, more than 5 % of teachers continue to work even beyond the official retirement age (see
  Figure E12).
- At higher education level, there has been a significant fall in the proportion of graduates in the field of education and training. Some countries are particularly affected, Portugal (-6.7 %), Iceland (-6 %), Hungary (-5.2 %) and Belgium (-4.5 %). Such decreases are likely to pose further challenges for the future supply of qualified teachers (Figure G3).
- In all European countries, teachers' absolute salaries increased over the last decade but these
  increases were not always sufficient to maintain teachers' purchasing power. In some cases, salary
  increases over the last ten years were higher than 40 %. However, the absolute increase in
  salaries does not always represent a real increase if the cost of living is rising faster (see
  Figures E13 and E14)
- Even though the overall number of working hours has not changed over recent years, the average number of hours that teachers have to be actively engaged in teaching increased from between 18 and 20 hours a week in 2006/07 to between 19 and 23 hours a week in 2010/11 (see Figure E8).
- Continuing Professional Development has gained importance over recent years. While in 2002/03 it
  was optional for teachers to participate in CPD activities in around half of European countries, it is
  now considered a professional duty in 26 countries or regions. In Spain, France, Lithuania,
  Romania and Slovenia, participation in CPD is a prerequisite for career advancement and salary
  increases (see Figure E7).

## FINANCING EDUCATION : THE MAJOR CHALLENGE IN TIMES OF ECONOMIC CRISIS

- The European Union continued to spend around 5 % of its GDP on education until 2008. Furthermore, although total public expenditure on education as a percentage of GDP remained stable between 2001 and 2008 at the EU-27 level, the expenditure per student increased (see Figures D1 and D2).
- Expenditure per pupil increases also with the level of education. In the EU, the average annual cost
  per secondary school pupil (ISCED 2 to 4) is higher (PPS EUR 6 129) than that of primary school
  pupils (ISCED 1, PPS EUR 5 316). The average cost per student in tertiary education in the EU
  was almost twice as high as for primary pupils (PPS EUR 9 424).
- Private funding of education remains marginal. Given that the majority of students attend public schools (see Figure B4), the proportion of private funding in most countries is determined to a large extent by the policies for the funding of education-oriented pre-primary schooling (see Figure D6) and tertiary education (see Figure D11) i.e. whether fees are payable by pupils and students and, if they are, the level of those fees.

- Non-compulsory pre-primary education is increasingly provided free of charge. This clearly
  facilitates access to pre-primary education for all children and especially for those who belong to
  low income families. In addition, countries also often adjust the fees paid for non-compulsory preprimary education according to family income and other criteria. All these measures may explain
  the increasing participation in education at this level (see Figures D6 and D7).
- On average, countries of the European Union allocate 6.4 % of their total public expenditure to direct public-sector support for pupils and students in all education levels. In addition, family allowances and tax relief are widely used methods of supporting families with school-age children (see Figures D9 and D10).
- Over the last decade an increasing number of countries introduced different types of fees to be
  paid by tertiary education students. At the same time, the provision of targeted financial support to
  particular students mitigated the effects of universal schemes for charging administrative and/or
  tuition fees. Grants and loans for students at tertiary level are a major strand of public expenditure
  on education and account for more than 16.7 % (see Figures D11 and D 12).

## HIGHLY EDUCATED PEOPLE HAVE BETTER EMPLOYMENT OPPORTUNITIES BUT MANY TERTIARY GRADUATES ARE NOW OVERQUALIFIED FOR THEIR POSTS

- Seventy-nine per cent of young people in Europe aged 20-24 successfully completed upper secondary education (ISCED3) in 2010, confirming the upward trend shown across Europe since 2000 (see Figure G1). The EU average percentage of persons with a tertiary qualification has increased for all age groups since 2000 (see Figure G2).
- In spite of the overall increase in the number of tertiary graduates, a growing proportion appears to be overqualified for the type of employment they find. More than one in five tertiary graduates are over-qualified for their job, and this proportion has increased since 2000 (see Figure G7).
- In addition, imbalances in student participation in the various academic disciplines at tertiary level
  continue to register and, in some cases, deepen. Since 2000, the most noteworthy variation in the
  distribution of tertiary graduates across the disciplines is the reduction from around 12 % to 9 % in
  the proportion of graduates in science, mathematics and computing. Since 2006, a significant fall in
  the proportion of graduates in the field of education has also been registered (see Figure G3).
- Tertiary education graduates integrate into the job market two times more quickly than people with at most lower secondary education. At European Union level, the average duration of the transition to the first significant job was only 5 months for people with tertiary qualifications, close to 7.4 months for the upper secondary level and up to 9.8 months for people with lower education levels (see Figure G6).
- Finally yet significantly, a gender gap in the employment rates of higher education graduates to the
  disadvantage of women still persists, although it has narrowed since 2000. Although women
  outnumber men in almost all academic fields, they still remain, on average, more likely to be
  unemployed than men (see Figure G8).

## CODES, ABBREVIATIONS AND ACRONYMS

## **Country codes**

EU/EU-27	European Union	PL	Poland
BE	Belgium	PT	Portugal
BE fr	Belgium – French Community	RO	Romania
BE de	Belgium – German-speaking Community	SI	Slovenia
BE nl	Belgium – Flemish Community	SK	Slovakia
BG	Bulgaria	FI	Finland
CZ	Czech Republic	SE	Sweden
DK	Denmark	UK	The United Kingdom
DE	Germany	UK-ENG	England
EE	Estonia	UK-WLS	Wales
IE	Ireland	UK-NIR	Northern Ireland
EL	Greece	UK-SCT	Scotland
ES	Spain		
FR	France	EFTA	European Free Trade
IT	Italy	countries	Association
CY	Cyprus	IS	Iceland
LV	Latvia	LI	Liechtenstein
LT	Lithuania	NO	Norway
LU	Luxembourg	СН	Switzerland
HU	Hungary		
MT	Malta	Candidate countries	
NL	The Netherlands	HR	Croatia
AT	Austria	TR	Turkey

#### **Statistical codes**

: Data not available	(-)	Not applicable	
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## **Abbreviations and acronyms**

International conventions		
ESS	European Statistical System	
EU-27	The EU-27 average includes only data for the 27 Member States of the European Union after 1 January 2007	
Eurostat	Statistical Office of the European Communities	
GDP	Gross Domestic Product	
ICT	Information and Communication Technology	
ISCED	International Standard Classification of Education	
PISA	Programme for International Student Assessment (OECD)	
PPP	Purchasing Power Parity	
PPS	Purchasing Power Standard	



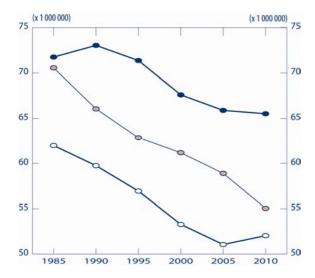
## THE 10-19 AGE GROUP IS THE MOST AFFECTED BY THE CONTINUING DECLINE IN THE NUMBER OF YOUNG PEOPLE IN THE EU

The demographic trend of the population aged under 30 reflects the fall in the birth rate recorded in most countries of the European Union (EU-27). Over the last 25 years, the total number of young people aged under 30 in the EU-27 decreased by 15.5 %, from 204.3 million in 1985 to 172.6 million in 2010.

All the age groups analysed here show an overall decline during this period. The most significant decrease being in the 10-19 age group (22 %), followed by the 0-9 age group (16 %), while the 20-29 age group has the lowest rate of decline (8.7 %).

The size of the EU-27 population in the 20-29 age group increased slightly between 1985 and 1990. This increase was followed by a long period of decline which has continued until 2010. The 10-19 age group decreased continually during the whole reference period. After a decline from 1985 to 2005, the 0-9 age group showed a slight increase of 1.9 % during the last five years of the reference period.

#### Figure A1: Population variation in the 0-9, 10-19 and 20-29 age groups in the EU-27 (1985-2010)



	0-9 age group	10-19 age group	20-29 age group
	-O-	<b>-</b>	•
1985	61 981 774	70 560 146	71 747 526
1990	59 755 140	66 069 001	73 035 161
1995	56 945 603	62 870 813	71 366 222
2000	53 277 500	61 186 120	67 608 395
2005	51 056 067	58 902 949	65 903 421
2010	52 038 210	55 045 826	65 533 037

Source: Eurostat, Population statistics (data extracted July 2011).

#### **Explanatory note**

The population is that of 1st January in the reference year. The population is based on population registers or data from the most recent census adjusted by the components of population change produced since the last census.

This overall trend conceals contrasting situations in individual countries (for more details, please see Eurostat data base). For the 0-9 age group, in the EU-27, there was a slight increase of 0.4 % per year during the 2005-2010 period. In 15 European countries, the growth rates were higher than the EU-27 average, amongst these Ireland and Spain had the most significant increases: 2.9 % and 2.8 % per year respectively. In all other European countries, except Finland, in the same age group and time period, the population has decreased. In Germany, Lithuania, Malta, and Croatia, these decreases exceeded 1.3 % per year.



In the EU-27, the 10-19 population decreased by 1.3 % per year between 2005 and 2010. The most significant decline, over 4 % per year was recorded in Bulgaria, Estonia, Latvia and Romania. Nevertheless, some western European countries reported a slight increase in their 10-19 age groups.

The EU-27 average for the 20-29 age group was the most stable during the 2005-2010 period, with a decrease of only 0.1 %. In countries such as Greece, Spain, Hungary and Portugal, this population group declined at a rate of over 2 % per year. In contrast, Cyprus, Luxembourg, the United Kingdom and Iceland reported an increase of more than 2 % per year.

#### OVER A THIRD OF THE EUROPEAN POPULATION IS UNDER 30

At EU level, the population aged under 30 represented 34.4 % of the total population in 2010. This was a reduction of 0.9 % compared with 2007 (Eurydice, 2009a). For the same period, the average proportion of the largest age group (young people between 20 and 29 year old) shows a decline from 13.3 % to 13.1 %. In 2010, the 10-19 age group constituted 11 % of the total population, which is 0.6 % less than in 2007. Only the proportion of those aged 0-9 was slightly higher in 2010 (10.4 %) than in 2007 (10.3 %).

In 2010, in general, the variation between European countries in the proportion of young people under the age of 30 was not significant. Few countries differed significantly from the EU average. At 52.2 %, Turkey was the country with the largest percentage of young people under the age of 30 relative to its total population. However, the proportion in 2010 was 3.1 % lower than that of 2007. In Ireland, Cyprus and Iceland, the proportion of young people also exceeded 40 %. At the other end of the scale, Italy had the lowest proportion of young people aged under 30 in 2010 (29.9 %), followed by Germany (30.9 %) and Greece (31.9 %).

Besides Turkey, Slovakia also had a clear reduction in the proportion of young people between 2007 and 2010 (2.2 %), followed by Poland and Romania (1.8 %), while in Sweden this ratio increased by 0.3 %.

The highest proportions of the youngest age group (0-9 years old) in 2010 were recorded in Turkey, Ireland and Iceland, where they constituted more than 14 % of the total population. In contrast, in Germany, the percentage was the smallest, reaching only 8.6 %.

In the same year, the highest proportions of young people in the 10-19 age group were found in Cyprus, Iceland, Norway and Turkey, where the percentage was greater than 13 % of the total population. In countries such as Bulgaria, Greece, Spain, Italy and Slovenia, this age group represented less than 10 % of the total population.

The proportion of young people aged between 20 and 29 years was highest in Cyprus, Poland, Slovakia and Turkey with more than 16 % of the total population, while in Denmark and Italy, this group corresponded to less than 12 % of the total population.



#### ■ Figure A2: Proportion of the population in the 0-9, 10-19 and 20-29 age groups, 2010



Source: Eurostat, Population statistics (data extracted July 2011).

#### **Explanatory note**

The population is based on estimates made on the 1st January of the reference year.

#### **Country specific note**

**Cyprus**: The data relates to territories under government control.

## COMPULSORY SCHOOL AGE POPULATION SHOWS RECOVERY FOLLOWING A CONSIDERABLE DROP IN NUMBERS BETWEEN 2000 AND 2010

The effective management of human and material resources in education systems are dependent on demographic projections that provide a reliable estimate of the number of young people in the 5-14 age group who will make up the future pupil intake in primary (ISCED 1) and lower secondary education (ISCED 2). The population forecasts for the 5-9 and 10-14 age groups are especially helpful given that education for these groups is compulsory in European countries (see Figure B2).

For the 5-9 age group, the projections made on the basic trend variation of the population show an increase of around 4.3 % in the EU-27 by 2015 after a decline of 7.9 % in the period 2000-2010. This



tendency is expected to continue until 2020 when the population aged between 5 and 9 years will be 5.2 % higher than in 2010, but still below the 2000 values. Between 2010 and 2020, a significant number of European countries expect a relatively high growth in this age group with rates above 11 %. For the same period and age group, a decrease is anticipated in Denmark, Germany, the Netherlands, Austria, and in Portugal where the most significant decline is expected (12.5 %). The figures for this group will remain stable in Italy, Hungary and Romania.

#### +30BG CZ DE EL ES FR IT CY LV LT LU HU MT NL AT PL PT RO SI SK FI SE UK LI NO CH HR DK IS EU +25+25+20+20 +15 +15+10+10+5 +5 0 0 -5 -5 -10 -10 -15 -15 -20 -20 -25 -25 -30 -30 -35 -35 2000 - 2010 2010 - 2015 2010 - 2020 -40 -40 -45 -45 EL ES FR IT CY LV LT LU HU MT NL AT PL PT RO SI SK FI SE UK IS LI NO CH HR TR DE -50 -50 DE HU FU BF BG **C.7** DK FF IF FL FS FR IT CY ١V ΙT IU2000-2010 -7.9 -4.0-22.5-22.0-3.5-14.2-20.316.1 -6.9 17.6 5.6 32 -22.8 -31.2-38.049 -19.2 2010-2015 4.3 8.6 8.7 21.8 0.6 -5.9 16.9 15.4 10.5 9.2 1.5 3.3 8.8 13.2 6.4 1.9 2.0 2010-2020 5.2 13.3 9.9 24.2 -3.3 -8.1 19.8 20.3 11.5 6.3 3.0 1.0 23.2 7.6 17.9 7.6 -0.2MT NL ΑT PL РТ RO SI SK FI SE UK IS LI NO СН HR TR 2000-2010 -23.8 0.2 -14.9 -29.4 2.8 -16.4 -12.2 -29.0 -12.6 -17.1 -10.7 -6.2 -6.1 -3.4 -10.8 2010-2015 2.0 15.9 -7.1 -17 8.9 -5.7 24 8.3 5.6 12.8 12.2 54 5.5 4.8 9.1 2010-2020 3.8 -7.8 -2.4 16.2 -12.5 -0.3 24.3 16.5 10.0 19.6 18.3 7.6 12.5 12.5

Figure A3: Recent population changes and projections for the 5-9 age group, 2000 to 2020

Source: Eurostat, Population statistics (data extracted July 2011).

#### **Explanatory note (Figures A3 and A4)**

The data for 2000 and 2010 are from the Eurostat data collection on population statistics. The data for 2015 and 2020 are Eurostat population projections based on the main assumption that socio-economic differences between Member States of the European Union and countries of European Free Trade Association will fade out in the very long run; the values of the major demographic indicators are thus set to converge across countries. Estimates are made using the latest available figures for the population as at the 1st of January. In general, the key assumptions are made with respect to mortality, fertility, life expectancy and migration by sex and age, and specific ageing techniques are applied to the population pyramid from year to year. The presented data are purely projections; they only portray a demographic future, which could occur if certain conditions, as expressed by the assumptions on the major demographic indicators, still hold.

For a coherent explanation of the higher growth rates in future projections, it is important to consider the changes that have occurred in this age group over the last 10 years. During this period, many of the central and eastern European countries experienced a marked decline in their 5-9 populations with reductions of over 20 % in Bulgaria, the Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Malta, Poland and Slovakia. In many of these countries, the projected population for 2020 will correct the decline of the previous decade, and even in the Czech Republic and Cyprus there will be more young people in this age group than in 2000. A similar tendency, but with less extreme fluctuations, can also be observed in Finland, Sweden and the United Kingdom where the size of the 5-9 age group fell between 2000 and 2010 but is likely to recover to its 2000 level by 2020; in the United Kingdom, it is expected to surpass this level by more than 5 %. In Ireland and Spain, the number of young people between 5 and 9 years increased substantially (more than 16 %) between 2000 and 2010 and this



tendency will continue until 2020 with an even higher annual growth in Ireland but relatively stable figures in Spain.

When comparing the projections for 2015 and 2020 in Italy, Latvia, Hungary and Romania, a reduction in the 5-9 population is expected after a period of growth between 2010-2015.

In the long term, the estimate for the EU-27 shows that in 2020 the number of pupils at ISCED level 1 will be slightly lower than it was in 2000 (-3 %). This trend is the most pronounced in Germany, Latvia, Lithuania and Malta where between 2000 and 2020 a decline exceeding 20 % is forecasted, and, to a lesser extent, in Hungary, Austria, Poland, Romania and Slovakia where the number of pupils is expected to decrease by more than 15 %.

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Figure A4: Recent population changes and projections for the 10-14 age group, 2000 to 2020

Source: Eurostat, Population statistics (data extracted July 2011).

#### **Explanatory note**

See Figure A3.

The Eurostat projections also identify an increase of around 3 % in the numbers of young people in the 10-14 age group across the EU-27 by 2020 but the figure will still be around 10 % less than in 2000.

During the period 2010-2020, Germany, Lithuania and Malta are expecting the most significant decline in the population of young people aged 10-14 with rates above 12 %, followed by Austria (8.8 %), Liechtenstein (6 %), Netherlands and Poland (around 5 %).

At the other extreme, in countries such as the Czech Republic, Estonia, Spain and Ireland, an increase of more than 20 % is anticipated while in Bulgaria, Greece, Latvia, Slovenia and Sweden the increase will be over 10 %. In all these countries, this increase in the youth population is coming after a decade which has experienced a strong decline with the lowest falls in Latvia (-49 %) and Bulgaria (-39 %).



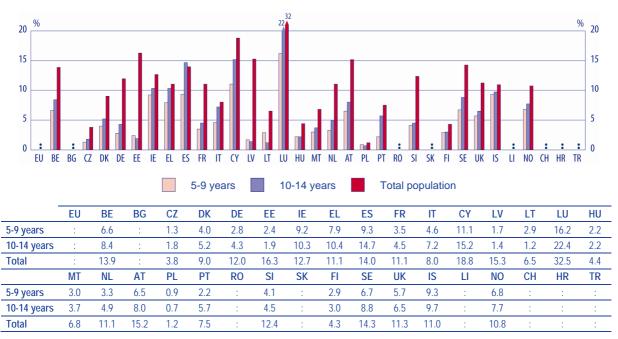
Between 2000 and 2020, the population in the 10-14 age group will increase by more than 10 % in Denmark, Ireland, Spain, Luxembourg and Norway. However, the growth in Denmark, Luxembourg and Norway occurred mainly in the period 2000-2010; in Spain and Ireland, it will be the consequence of the earlier significant growth in the 5-9 population during the previous decade.

## THE PROPORTION OF YOUNG PEOPLE AGED 5-9 AND 10-14 BORN ABROAD IS LOWER THAN THE PROPORTION OF THOSE BORN ABROAD IN THE TOTAL POPULATION

In 2010, in the majority of European countries, the proportion of the population born abroad was somewhere between 10 % and 20 %. Luxembourg registered the highest proportion of around 32 %, followed by Estonia, Cyprus, Latvia and Austria, where the percentage varies between 15 % and 19 %. However, in one third of the EU countries, the ratio did not exceed 10 %. Poland was the country with the least number of people born abroad with a percentage of 1.2 %.

In the same year, in almost all states for which data are available, the proportion of young people aged 5-9 who were born abroad was below 10 % of the total population of the same age. The lowest percentages were in the Czech Republic, Latvia and Poland, where they did not exceed 2 %. The exceptions were Cyprus and Luxembourg with a proportion of around 11 % and 16 % respectively.

#### Figure A5: Percentage of population born abroad in the 5-9 and 10-14 age groups and among the total population, 2010



Source: Eurostat, Population statistics (data extracted July 2011).

#### **Explanatory note**

The data sources are administrative records or national surveys. For some datasets statistical estimation methods are applied, mostly based on census, migration and vital statistics data. 'Country of birth' is the country of residence (in its current borders, if the information is available) of the mother at the time of the birth or, by default, the country (in its current borders, if the information is available) in which the birth took place. The proportion of those born abroad in the total population is calculated by dividing the total population of those born abroad by the total population on 1 January and multiplying the result by 100.

The proportion of those aged under 15 born abroad is obtained by dividing the population of those born abroad in the 0-9 and 10–14 age groups by the total population in the 0–9 and 10–14 age groups and multiplying the result by 100.



In general, slightly higher proportions of young people born abroad were found in the 10-14 age group than in the 5-9 group. In Ireland and Greece, the numbers registered were slightly over 10 %, while in Spain and Cyprus the figure was around 15 % rising to approximately 22 % in Luxembourg.

In almost all countries, the proportion of young people aged 5-9 and 10-14 who were born abroad is smaller than that of those born abroad in the total population. This may be a consequence of a recent decrease in migration flows. The highest difference is found in Latvia and Estonia where the numbers born abroad in the 5-9 and 10-14 age groups were between six and eleven times smaller than the figures for those born abroad in the total population. The only exception was Spain where the proportion of young people in the 10-14 age group born abroad was slightly higher at 0.7 percentage points in comparison with the total population.

## IN MANY COUNTRIES THE EXPECTED DURATION OF EDUCATION HAS INCREASED SLIGHTLY IN RECENT YEARS

One of the conditions for creating a well-educated population is an extended duration of education. The expected duration of education is an estimate of the number of years a typical five-year-old child can expect to be enrolled in the education system during his or her lifetime, if current enrolment patterns remain unchanged. The expected duration of education may be used to predict future enrolment patterns in accordance with current models, and is a means of cross-country comparison of participation rates in education (Eurydice 2009a, p. 106)

Although the EU-27 average duration of education (17.2 years) did not change between 2005 and 2009, in the majority of European countries, the expected duration of education increased slightly. This increase was around two years in Portugal and Turkey and over one year in Cyprus and Romania. The most significant decrease in the expected duration of education (almost four years) occurred in the United Kingdom, but this decrease is partly due to a methodological change in the data reported after 2006 only including courses equal to or longer than a semester for upper secondary and post secondary education (ISCED levels 3 and 4).

In 2009, the expected duration of education was highest in Belgium, Finland, Sweden and Iceland with students spending around 20 years in education. In contrast, in Luxembourg and Turkey, the expected duration of education was the shortest at around 14 years, however many of the Luxembourg students continue their studies abroad and are not registered in the present figure.

These data should be interpreted with reference to the duration of compulsory education (see Figure B2), the tendency of people to remain in education (see Figure C6), the extent to which pupils or students re-take particular years of school or study, the proportion of part-time enrolments and the provision of some types of adult education programmes.



#### Figure A6: Expected duration of education for 5-year-olds (ISCED 0 to 6), 2000 - 2009



Source: Eurostat, UOE (data extracted July 2011).

#### Explanatory note

The expected duration of education is an estimate of the number of years a typical 5-year-old child can expect to be enrolled in the education system during his or her lifetime if current enrolment patterns remain unchanged. Adding the single-year enrolment rates for all ages gives us an estimate of the expected number of years of education over a lifetime. This type of estimate will be accurate if current patterns of enrolment remain unchanged. Estimates are based on head-count data, meaning that there is no distinction between part-time and full-time studies.

The net enrolment rates are calculated by dividing the number of students of a particular age or age group (corresponding to ISCED 0 to 6) by the number of persons of the same age or in the same age group in the population. For students whose age is 'unknown', the net enrolment rate has been estimated by dividing these students by the total population aged 5-64 and multiplying by 60 (years).

#### **Country specific notes**

**Belgium**: Data for 2005 is missing. The presented data is from 2006. Data exclude independent private institutions and the data for the German-speaking Community.

Germany: Advanced tertiary education research programmes (ISCED level 6) are excluded.

Greece: Data are from 2008.

**Cyprus, Malta** and **Liechtenstein**: Tertiary students studying abroad are not included.

**Luxembourg**: Most students in tertiary education study abroad and are not included. Many people enrolled at other ISCED levels also study abroad and are thus included in population data but not in enrolment data. In the case of ISCED level 5, data by age are lacking.

**United Kingdom**: Break in time series following methodological change from 2006 – only students participating in courses equal to or longer than a semester are included at ISCED levels 3 and 4.

#### ORGANISATION

#### **SECTION I - STRUCTURES**

#### COMMON CORE EDUCATION UNTIL THE END OF LOWER SECONDARY SCHOOLING

Three different organisational models for compulsory education can be distinguished across Europe. These can be defined as single structure education (primary and lower secondary education combined); primary education (ISCED 1) followed by a period of integrated secondary education (ISCED 2) corresponding to a 'common core' of provision; and primary education followed by differentiated secondary education delivered through distinct educational pathways.

In ten countries, compulsory general education is provided in single-structure schools with no transition necessary between primary and lower secondary levels. In these cases, the end of single-structure education coincides with the end of compulsory education, except in Bulgaria and Slovakia where compulsory education ends one year later.

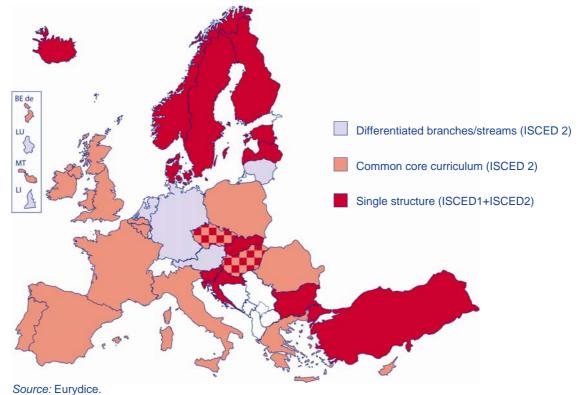
In almost half of all European countries, after primary education all students follow the same common core curriculum during lower secondary education, i.e. up to 15 or 16 years of age. In eight of these countries or regions, the end of lower secondary education coincides with the end of full-time compulsory education. The core curriculum continues up to 16 years of age in Malta, Poland and in the United Kingdom. However, in Belgium, lower secondary education finishes at age 14 but full-time education remains compulsory until the age of 15.

In the Czech Republic, Hungary and Slovakia, compulsory education is organised in a single structure up to the age of 14 or 15, but from the age of 10 or 11 pupils in these countries can, at certain stages in their school career, enrol in separate establishments providing both lower and upper secondary education.

In other countries, however, either at the beginning or some time during lower secondary education, parents must choose (or schools decide) an educational pathway or a specific type of schooling for students. This takes place from the age of 10 in most of the *Länder* in Germany and in Austria, at age 11 in Liechtenstein, and at age 12 in Luxembourg and the Netherlands.

Even though students in Germany attend different schools, they follow entirely compatible curricula for the first two years so that the selection of specific branch of study can be deferred. In the Netherlands, students follow a common core curriculum, usually for the first two years of the secondary education in VMBO pathway and for three years in HAVO and VWO streams. The common core curriculum specifies the minimum skills that should be acquired by all students, although the level of study may vary depending on the type of school concerned. The three types of lower secondary school in Liechtenstein offer the same basic common curriculum but in the *Realschule* or *Gymnasium*, the curriculum includes additional elements.

#### Figure B1: Main models of primary and lower secondary education in Europe (ISCED1-2), 2010/11



#### **Explanatory note**

This figure summarises the information in *Structures of European education systems* published each year by Eurydice but excludes special education programmes for adults. The latest version of the brochure can be found at: http://eacea.ec.europa.eu/education/eurydice/documents/tools/108\_structure\_education\_systems\_EN.pdf

#### Country specific notes

**Bulgaria**: The first year of *Profilirana Gimnazia* and *Professionalna Gimnazia/Technikum* programmes starts in parallel with the last year of the main single structure education programme.

**Czech Republic, Spain** and **Slovakia**: Specialised music and arts studies running in parallel to lower secondary education programmes are not included in the figure

**Latvia**: Pupils who are 15 years old and who do not hold a certificate of basic (integrated primary and lower-secondary) education may follow this type of education via the vocational basic education programme in *Profesionālās izglītības iestāde* up to the age of 18

## A GENERAL TREND TOWARDS MORE YEARS OF FULL-TIME COMPULSORY SCHOOLING

Across Europe, compulsory full-time education lasts for a minimum of 8 years, however, in the vast majority of countries, its duration is between nine and ten years. In several countries, it lasts even longer: 11 years in Latvia, Luxembourg, Malta and the United Kingdom (England, Wales and Scotland), 12 years in Portugal and the United Kingdom (Northern Ireland), and 13 years in Hungary and the Netherlands.

Compulsory education starts in most countries at primary level (usually for 5 to 6-year-olds). In Bulgaria, Greece, Cyprus, Latvia, Luxembourg, Hungary and Poland, compulsory education is extended to pre-primary level and children (aged four/five or six) are obliged to take part in pre-primary education programmes designed, primarily, to introduce very young children to a school-type environment. In the Netherlands, Malta and the United Kingdom, compulsory education also starts at the age of four or five, but children are integrated directly into primary education programmes (for more information on participation rates by age, see Figure C2).

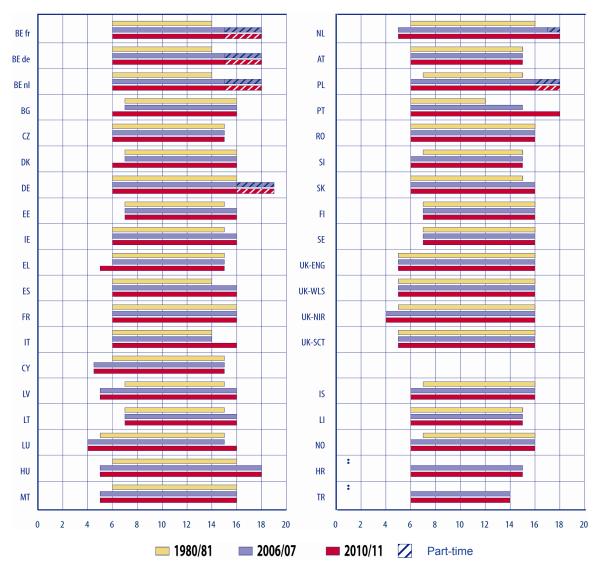


Figure B2: Duration of the compulsory education in Europe 1980/81-2010/11

Source: Eurydice.

#### **Country specific notes**

**Belgium**: Compulsory full-time education ends at the age of 16 for students who have not completed the first stage of secondary education.

**Netherlands**: Depending on the school attended, lower secondary education ends at the age of 15 (VWO, HAVO) or 16 (MAVO, VBO and VMBO). Compulsory education finishes at the end of the school year when students turn the age of 18 or when they have achieved a basic qualification (VWO, HAVO or MBO-2 certificate), which can be at the age of 17. **Liechtenstein**: One year of pre-primary education is compulsory for children with different language background.

The end of compulsory full-time education often coincides with the transition from lower to upper secondary education or with the end of single structure schooling (see Figure B1). However, in some countries (Belgium, Bulgaria, France, Italy (¹), Ireland, the Netherlands, Austria, Slovakia, the United Kingdom (England, Wales and Northern Ireland) and Liechtenstein (for the *Gymnasium*)), the transition between lower and upper secondary education takes place one or two years before the end of full-time compulsory schooling. In Hungary, the Netherlands and Portugal, compulsory schooling covers the whole of the upper secondary level. In Belgium, Germany and Poland, the complete upper secondary level is also covered by compulsory schooling. After the age of 15 or 16, young people are obliged to undertake at least part-time training for two or three years.

<sup>(1)</sup> Text updated: 19 April 2012.

A general trend towards longer compulsory schooling to guarantee the acquisition of core competences has been observed in almost all education systems since 1980. The various reforms that have been undertaken include the extension of compulsory schooling with the aim of reducing early school-leaving rates and, in a few cases, to ensure that all students obtain a certificate of basic education. In ten countries, the start of compulsory education has been brought forward by one year (or even two in the case of Latvia). At the other end of the scale, thirteen countries extended the duration of full-time compulsory education by one or two years, and by three years in Portugal after recent reforms. The concept of part-time compulsory education has also been expanded. In Belgium, Germany and Poland, compulsory education is now three or four years longer compared with the 1980s. In the Netherlands, the compulsory part-time education that existed in the last decade has now been transformed into full-time education that concludes at the end of the school year in which students turn the age of 18, or when they have achieved a basic qualification. More information on participation rates in pre-primary, primary education and secondary information can be seen in Figures C2 and C3.

## SEPARATE PROVISION FOR DIFFERENT AGE GROUPS IS THE MOST COMMON FORM OF EARLY CHILHOOD EDUCATION AND CARE

In all European countries, there is some form of publicly subsidised and accredited early childhood education and care (ECEC) for children below compulsory school age. Two main organisational models for ECEC services are apparent in Europe: single phase and dual phase. However, some countries have a combination of both models.

Under the first model, provision for young children is provided in unitary settings, organised in a single phase for all children below primary school age. Each setting has only one management team for children of all age groups, and the staff responsible for children's education generally have the same qualifications and salary scales, regardless of the age of the children they look after.

Slovenia, Iceland and Norway have adopted the single phase model to deliver all ECEC services up to primary level. In the other Nordic countries and in Greece, Cyprus, Latvia and Lithuania, in addition to unitary settings preparatory programmes for primary education also exist (usually lasting one year for children aged 5 or 6 years) which are different from the provision for younger children. These preparatory programmes may be delivered in the same settings as for younger children, in separate settings, or in primary schools.

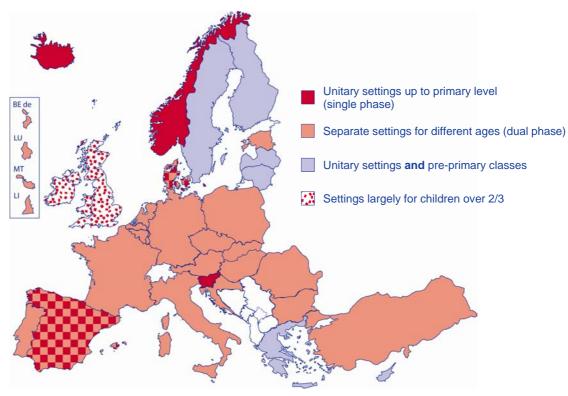
In Denmark and Spain, unitary settings (providing for all children aged up to the age of six) exist alongside dual-phase settings which cater for children up to the age of three (Spain) or from three to six years. In Denmark, a recent reform requires local authorities to offer guaranteed day-care to all children from the age of 26 weeks up to school age. In Spain, pre-primary education (educación infantil) constitutes the first level of the Spanish education system, beginning from the first months of a baby's life, until the age of six, when schooling becomes compulsory. There are schools for only 0-3 years old children (the first cycle of pre-primary education), that then attend schools where both the second cycle of pre-primary and the primary education are provided. Most of the provision is either public or grant-aided and the Autonomous Communities have a duty to ensure that families have access to the provision of their choice.

Most European countries, however, follow the second, dual-phase model, where publicly funded and accredited early childhood education and care is split according to the age of children. The body responsible for formulating policies and implementing provision also usually differs between stages. Children between the ages of three and six are usually integrated into structures forming part of the

national education system (ISCED 0). In both Belgium and France, children from the age of two- and-a-half (in France, sometimes from age two) join the mainstream school system. In Luxembourg, where compulsory schooling starts at age four, local authorities have had a statutory duty to provide pre-primary education for 3-year-olds since September 2009.

Regardless of the ECEC model adopted, in many countries provision for younger children (up to age three) is subject to local variation. Often local authorities are entirely responsible for deciding how to organise subsidised services. This is the case in Greece, Italy, Austria, Liechtenstein and in almost all central and eastern European countries. More details about access and fees paid in ECEC can be seen in Figure D6 and the financial support measures for parents can be seen in Figure D7.

#### Figure B3: Main models of accredited and/or subsidised Early Childhood Education and Care provision, 2010/11



Source: Eurydice.

#### **Explanatory note**

All recognised and accredited institution-based care and education in the public and subsidised private sectors are included even if they are not widely used. However, home-based child-minding is not included. 'Unitary settings' usually accommodate children between 0/1 years and 5/6 years and are structured in a single phase for all children of pre-primary age. Separate settings involve distinct provision for different age groups, which varies between countries but usually covers 0/1 to 2/3 years and 3/4 years up to 5/6 years. 'Pre-primary' classes involve one year's provision in primary schools prior to entry into ISCED level 1.

For detailed information on organisational structures, by country and by age, see Figure 3.1 in the report 'Early Childhood Education and Care in Europe: Tackling Social and Cultural Inequalities, Eurydice (2009).

#### **Country specific notes**

**Greece**: Unitary settings stands for *Vrefonipiaki Stathmi* and pre-primary classes stands for *Nipiagogeia*.

Austria: Other types of organisation can be established if there are specific needs at local level.

**United Kingdom (ENG/WLS/NIR)**: Fully funded (free) places are available for all children over the age of three and to some disadvantaged children over the age of two. In Northern Ireland, places may also be available to other 2-year-olds. Free places are provided within a range of public, private and voluntary settings including: settings catering solely for ISCED 0; primary schools (catering for ISCED 0 and ISCED 1); and settings also catering for younger children (unitary settings). Although there is no general entitlement to early childhood education and care for children under the age of three, parents can choose to pay for childcare for younger children in, for example, a privately-run day nursery, and become eligible for a part-time funded place within the same setting when the child reaches the age of three.



**Croatia**: In addition to the dual-phase model of pre-primary education, which is attended by over 60 % of the pre-school population, preparatory programmes for primary education also exist for children who do not attend regular pre-primary programmes. These programmes last one year (before children start their primary education), and they are organized in both pre-primary settings as well as in primary schools.

## THE VAST MAJORITY OF EUROPEAN STUDENTS ARE ENROLLED IN PUBLIC SCHOOLS

In almost all countries across Europe, the great majority of students (82 %) attend public institutions but in Ireland, Latvia, Lithuania, Romania and Croatia more than 98 % of all students are enrolled in public settings.

On average, 14 % of students from primary to upper secondary education receive their education in private settings (both grant-aided (government-dependent) and independent). The highest percentage of students in private establishments is observed in Belgium (French and Flemish Communities) where 47.2 % and 62.7 % of students attend private grant-aided (government-dependent) institutions. Attendance at private grant-aided (government-dependent) institutions is also widespread in Spain, France, Malta (between 21 and 26 %) and the United Kingdom (15.8 %).

Independent private educational institutions that receive less than 50 % of their funding from the public sector accounts, on average, for only 2.9 % of enrolments. However, as reliable data on the distribution of students between grant-aided (government-dependent) and independent private institutions is not available for all countries, these figures may be underestimated. Portugal has the highest percentage of students in independent private institutions (13.4 %), followed by Cyprus (12.5 %), Luxembourg (8.3 %), Malta (7 %), and Greece (6.1 %).

Between 2000 and 2009 in Central and Eastern European countries, the percentage of students in private institutions increased by around one and two times but it must be taken into account that the baseline figure was very low. However, the greatest increase of students in private settings was recorded in Sweden (where the figure almost tripled) and Iceland (where it doubled). Since 2006, the proportion of students in private settings has remained almost constant, with only a slight increase of 1.1 percentage points at European level. This increase was largely due to the continuing raise in the students number in the private sector in Cyprus, Hungary, Portugal, Sweden and Iceland.

#### **Explanatory note (Figure B4)**

An institution is classified as public if it is controlled directly by public authorities. Private institutions are either grant-aided (government-dependent) or independent, depending on their core funding. They are grant-aided (government-dependent) if they receive more than 50 % of their financing from public authorities. Independent private institutions receive less than 50 % of their finance from the public sector.

#### **Country specific notes**

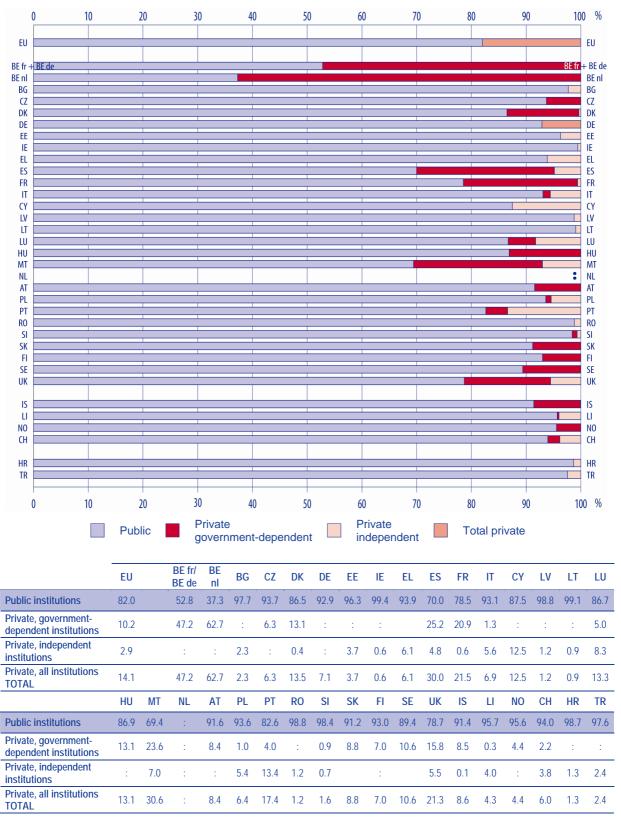
EU: Average is calculated from countries with available data.

Belgium (BE fr, BE nl): Data exclude independent private institutions.

Greece: Data from 2008.

**United Kingdom**: Although public sector schools cater for the great majority of children up to the age of 16, the data also reflect adult ISCED 3 provision that is mainly provided in further education colleges, i.e. government-dependent private institutions. The data is also affected by a change in the reporting methodology designed to align more closely with international guidelines on reporting.

Figure B4: Distribution of students attending public, private grant-aided (government dependent)
 and private independent primary and general (lower and upper) secondary schools (ISCED 1-3), 2009



Source: Eurostat, UOE (data extracted July 2011).



## STUDENTS IN THE PUBLIC SECTOR ARE MAINLY ALLOCATED TO A SPECIFIC SCHOOL BUT PARENTS MAY REQUEST AN ALTERNATIVE

In the public and, in many cases, in the private grant-aided (government-dependent) schools, education authorities allocate students to particular schools in different ways. However, parents may sometimes state their preferred school for their child or request an alternative to the initial allocation. When a school reaches its maximum enrolment capacity, public authorities often channel students towards other schools using different criteria.

Parents as well as education authorities in the majority of European countries may be in a position to influence decisions relating to the allocation of students to public and government-dependent private schools, although to a varying extent. In one third of all countries, students are usually allocated to a school within their district, but parents may choose an alternative. Where this choice is allowed, schools may not refuse admittance or give these children priority over those residing in their district.

In Romania and Estonia, all pupils are guaranteed a place in a local school at primary level but parents may choose an alternative school if it has vacant places. At upper secondary level in both countries, students/parents may choose a school and be admitted if specific conditions are met. Some general conditions for the admission of students to upper secondary school are set at central level and more detailed terms and conditions, including student assessment are established at central level, by the school owner (or authorised by the latter) or by the school head.

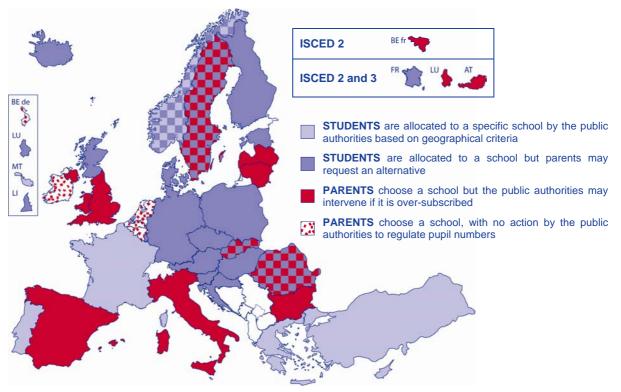
A particular situation exists in Iceland where, at upper secondary level, each school is responsible for the admission of students in accordance with its agreement with the ministry. Upper secondary schools may set specific admission requirements for entry to individual branches of study. Nevertheless, since 2010 schools have been obliged to admit at least 40 % of students who have a legal residence within the school district.

In another third of countries, parents choose a school but the public authorities may intervene if the school's enrolment capacity is overstretched, applying different admission criteria for limiting the number of students, for example the drawing of lots, proximity to the parents' place of work, and siblings attending the school.

In Sweden, a pupil should be placed in the school chosen by the parents. If this conflicts with another student's legitimate requests for placement at the same school, the municipality must place the student in another school, normally the one nearest the pupil's domicile. Both municipal (public) and grant-aided independent schools are obliged to accept pupils subject to availability. Grant-aided independent schools, like municipal schools, must be open to all pupils, and if there are more applicants to the school than there are places, only objective admissions criteria for selection are allowed, e.g. queuing time or sibling preference.

In the United Kingdom (England, Wales and Northern Ireland), parents have the right to express a preference for a particular school. Schools must publish their admissions criteria and, provided these criteria are met, schools must comply with parental preference and admit children up to the published admissions number which is based on the physical capacity of the school. If there are more applicants than places available, places are allocated according to the school's published over-subscription criteria. Applicants who do not gain a place are considered by their next preferred school.

#### Figure B5: Degree of parental/pupil freedom in choice of school for compulsory education in the public sector, 2010/11



Source: Eurydice.

#### **Country specific note**

**Belgium (BE nI)**: In a new recent legislation (decree on registration right) apart from 'intervention if enrolment capacity is overstretched', public authorities provide a set of admission criteria and rules (e.g. priority for brothers and sisters, the need to maintain the right balance of privileged and underprivileged students, specific rules to be followed where capacity is a real problem, etc.).

In Belgium, Ireland, the Netherlands and Luxembourg (at lower secondary level), parents traditionally have the right to choose a school for their child with no interference from public authorities, however, in some of these countries, special arrangements have recently been introduced. In Ireland, public authorities do not select for or de-select students from particular schools, but they do seek to ensure that individual schools' enrolment policies are in line with educational and equality legislation. In the Netherlands, parental choice still exists but where places are in great demand schools may operate a lottery system, which means that parents do not always get their first choice of school. Moreover, the municipalities (or *boroughs*) sometimes allocate students to schools by postcode (in Amsterdam, for instance, this gave rise to the formation by parents of a foundation for free school choice). Parents have the right to contest such decisions in court. The Association of Dutch Municipalities brought the question of free school choice to the fore, as municipalities are often obliged to provide transport for students, which may be expensive.

In Belgium (French Community), after legislation in 2010, new rules now govern the admission to lower secondary education. The new Decree aims to enable schools that are over-subscribed to allocate the places they have available as objectively and transparently as possible and to transfer any outstanding requests for places to the *Commission Interréseaux des Inscriptions* (CIRI) for allocation to another school. This new transparent registration process is intended to control the over-demand for places in some schools and ensure that all families have equal access to all institutions and equal treatment in the registration process.

Conversely, in other countries (Greece, France, Cyprus, Luxembourg (primary level), Malta, Portugal and Turkey) parents normally have no say in deciding which school their child attends (except in the event of a special dispensation). However, in allocating places, public authorities may take into account factors such as parents' place of residence or work, or whether a pupil's siblings have previously attended the school. In France, however, at lower secondary level, from the 2008/09 school year, this general rule was modified to allow parents the opportunity to request an alternative school. This option for parents was provided within the framework of the reform known as the assouplissement de la carte scolaire; its objective was to promote equal opportunities and social diversity in schools. The parental request is only granted if there are sufficient places in the requested school; priority is given to disabled students and those receiving study grants.

In Luxembourg at primary level, students must normally attend a school within their own municipality. If parents want to request a school in another municipality, a specific request must be addressed to the host municipality and, if accepted, the home municipality must pay all the related expenses.

# MOST 15-YEAR-OLDS IN EUROPE ATTEND SCHOOLS WITH LARGE NUMBERS OF STUDENTS

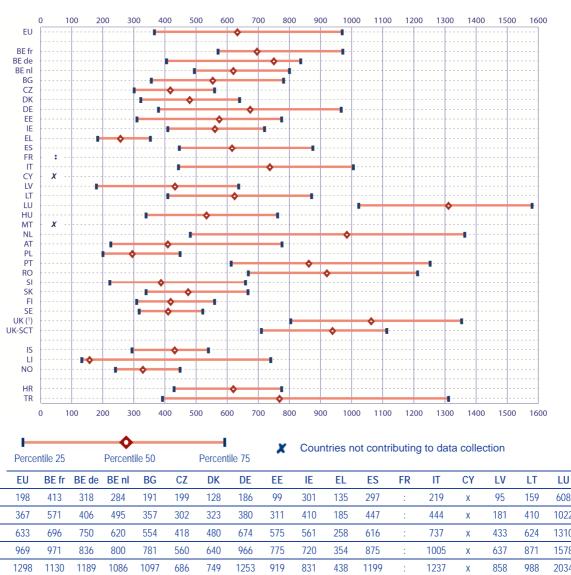
In 2009, according to the PISA international survey, most 15-year-olds in Europe attended a school which catered for between 400 and 1 000 students. Although, at least, half of these students are in schools with fewer than 650 enrolments. In nine countries or regions, attendance at large schools is prevalent, with the majority of students attending schools with more than the European mean of 633 students per school. The highest mean values are recorded in Luxembourg (1 310 students), The Netherlands (984 students), Romania (920) and the United Kingdom (England 1 062 students and Scotland 938 students). At the other end of the spectrum, in Greece, Poland and Liechtenstein, the majority of students attended a school with fewer than 200-300 students.

Apart from the differences between the mean size of schools, it is also important to stress the importance of the distribution by size of schools within individual countries. Significant differences in the size of the schools can be observed in Germany, Italy, Latvia, the Netherlands, Austria, Portugal, Slovakia and Turkey. In these countries, some 15-year-old students are in schools with a total enrolment of 100 whilst others attend schools with over 1 000 students. This substantial difference in student numbers is largely due to geographical particularities and to differences between urban and rural areas. Urban and rural differences are the main explanation for the greatest difference in school size in Europe which occurs in Turkey. Here, there are 1 000 students more in the largest schools (75th percentile) than in the smallest (25th percentile). See Figure B6.

Conversely, the lowest differences in student numbers between schools are recorded in the Czech republic, Greece, Poland, Finland, Sweden, Iceland and Norway where school size varies by no more than 250 students between the 25th and 75th percentiles. In most of these countries, the mean values are some of the lowest across Europe.

In comparison with PISA 2003 (see Key Data on Education 2005, Figure B11), in half of the countries studied, the mean size of schools increased by 50 to 100 students, while a decrease of more than 70 students per school can be seen in Belgium (German-speaking Community), Austria, Poland. A greater decline was recorded in Latvia where the mean school size fell by 30 % (205 students). As a general tendency, between 2003 and 2009 student numbers in the larger schools in Europe fell slightly.

#### Figure B6: Distribution of 15-year-old students (in terms of median and percentiles) by size of school attended, 2009



(p)	EU	BE fr	BE de	BE nl	BG	CZ	DK	DE	EE	IE	EL	ES	FR	IT	CY	LV	LT	LU
p10	198	413	318	284	191	199	128	186	99	301	135	297	:	219	Х	95	159	608
p25	367	571	406	495	357	302	323	380	311	410	185	447	:	444	Х	181	410	1022
p50	633	696	750	620	554	418	480	674	575	561	258	616	:	737	Х	433	624	1310
p75	969	971	836	800	781	560	640	966	775	720	354	875	:	1005	Х	637	871	1578
p90	1298	1130	1189	1086	1097	686	749	1253	919	831	438	1199	:	1237	Х	858	988	2034
	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK (1)	UK-SCT	IS	LI	NO	HR	TR
p10	217	Х	278	100	140	412	410	143	205	220	188	618	483	128	110	167	329	250
p25	340	Х	482	227	202	613	668	224	340	310	318	804	710	295	134	242	430	393
p50	534	Х	984	410	296	862	920	388	475	419	411	1062	938	432	159	330	620	768
p75	762	Х	1362	776	449	1251	1211	659	667	560	522	1352	1112	540	740	449	775	1310
p90	1005	Х	1633	1154	573	1578	1390	872	821	660	643	1551	1361	663	740	543	999	1786

(p) = percentile UK (¹) = UK-ENG/WLS/NIR

Source: OECD, PISA 2009 database.



#### **Explanatory note**

School heads were asked to indicate the total school enrolment (number of students) in February 2009.

The sampling procedure involved selecting schools and then students aged 15. It sought to offer each student the same probability of being selected irrespective of the size of the school he or she attended. For this purpose, schools were weighted in such a way that the probability that they would be selected was inversely proportional to their size. This explains why the Figure does not directly show the distribution of schools by size, but the distribution of students by size of the school they attended. The sampling procedure adopted by the survey leads to an over-representation of large schools. Values derived from simply sampling schools themselves would have been slightly lower.

For further information on the PISA international survey and the definition of percentile, see the Glossary and Statistical Tools section

In the interests of clarity, the figure only shows values corresponding to the 25th, 50th and 75th percentiles in the distribution. Values for the 10th and 90th percentiles are given in the table under the Figure.

#### Country specific notes

**EU**: Average is calculated from the countries with available data.

**France**: The country took part in PISA 2009 but didn't administer the school questionnaire. In France, 15 year-old students are distributed between two different types of school and therefore an analysis at school level might be not consistent.

#### ORGANISATION

#### SECTION II - QUALITY ASSURANCE

#### **EVALUATION OF BOTH SCHOOLS AND TEACHERS IS GROWING IN IMPORTANCE**

Evaluating the quality of education involves a systematic process of critically analysing the performance of teachers, schools or local authorities, leading to judgments about the standard of education provided and/or recommendations for improving quality. The evaluation process may also be extended to the whole education system (see Figure B12).

The vast majority of countries implement a process of school evaluation, which may be internal and/or external, and in many cases arrangements are also made for the appraisal of individual teachers. In most countries, schools are subject to external evaluation, which is generally carried out by an inspectorate, while internal evaluation is performed by school staff and sometimes other members of the school community. Internal evaluation is mandatory or strongly recommended everywhere except in Belgium (French Community) and Ireland (until 2012). In Estonia, internal evaluation was made compulsory in 2006. In Italy and Croatia, only internal school evaluation takes place.

The external evaluation of schools covers a broad range of school activities, including teaching and learning and/or all aspects of school management. Where schools are evaluated externally, a department of the central or top-level education authority is usually the responsible body. In Belgium (Flemish Community), Latvia, the Netherlands, Romania and the United Kingdom (England, Wales and Scotland), the organisation in charge of external school evaluation operates independently of the top-level education authority. In Estonia, France, Austria, Poland and Romania, the bodies responsible for the external evaluation of schools are responsible to regional or provincial level authorities.

Schools are also evaluated by their respective local authority or 'education provider' in the Czech Republic, Estonia, Lithuania, Poland, Sweden, the United Kingdom and Iceland (primary and lower secondary levels). In the United Kingdom, the local authority's main role in the process is monitoring schools performing below the expected standards. In Hungary, the responsibility for school external evaluation mainly lies with the local 'education providers' who operate within a framework established by the national education authority. In Denmark (primary and lower secondary levels) and Norway as well, the external evaluation of schools is mainly or only carried out by municipalities (see below). In Denmark, Romania, Sweden, the United Kingdom and Norway, local authorities are themselves evaluated by the central government.

In the 21 countries or regions where individual teacher appraisal is carried out in addition to school evaluation, it is usually the school head and/or other senior members of staff with management functions who are responsible. In Liechtenstein, teachers are also regularly evaluated by the inspectorate while in France and Turkey, the inspectorate alone is responsible. In Portugal, teachers are evaluated by a commission within the framework of the public administration performance evaluation system introduced in 2007. The systematic evaluation of teachers by the school head was introduced in Belgium (Flemish Community) between 2007 and 2009, and it has recently been strengthened in Slovenia (from 2009) by increasing the frequency of reporting by school heads and in Liechtenstein (from 2008) by standardising the evaluation criteria.

Teachers are not individually appraised as a matter of course in 12 of the countries or regions where external school evaluation takes place. However, in several of these countries, teachers may be evaluated in specific circumstances. In Estonia, Ireland and Spain, teachers are evaluated when applying for promotion or at the beginning of their career. In Ireland, the inspectorate also evaluates teachers at the request of the school management board.

In Greece, Cyprus and Luxembourg, schools are not the focus of the evaluation process. External evaluation by the inspectorate or school advisers is concerned mainly with teachers. Although some external evaluation of schools exists in all these countries, it is fairly limited in scope as it is related to accounts, health, safety, archives, etc. The internal evaluation of schools is also limited in these countries. Greece and Luxembourg are currently carrying out pilot-projects for internal school evaluation within the framework of plans for improving the quality of education over several years. The French and German-speaking Communities of Belgium have recently broadened the focus of their evaluation systems (from 2006/07 and 2008/09 respectively) which were previously mainly focused on individual teachers. Starting from 2006, a similar evolution can be observed in France (ISCED 1).

In the Nordic countries, teachers are not evaluated individually, or, in the case of Denmark, not subject to external individual evaluation. Internal evaluation (self-evaluation) occurs everywhere to a varying degree but is not always mandatory. Except in Iceland, school evaluation systems are centred mainly on local authorities, which are responsible for evaluating their own educational provision and are themselves evaluated by central education authorities or agencies. However, while in Finland local authorities have full autonomy for organising the evaluation of their own education provision, in Denmark, Sweden and Norway a different approach has been introduced in recent years. Indeed, in these three countries, local authorities have a duty to evaluate each school individually. For instance, in Denmark since 2006, municipalities have been obliged to produce annual quality reports which include the external evaluation results for all primary and lower secondary schools under their jurisdiction. Besides, the Danish Evaluation Institute (EVA) is responsible for evaluating all Ministry of Children and Education schools. For this purpose, it evaluates samples of schools, and individual judgements may be made about the schools selected. In Sweden, schools are also evaluated by the national school inspectorate, in addition to their evaluation by local authorities.

# Mainly school evaluation Mainly individual teacher evaluation School and individual teacher evaluation Local authority evaluation

Figure B7: Elements of the education system subject to evaluation (ISCED 1-3), 2010/11

Source: Eurydice.

#### **Explanatory note**

**School evaluation** focuses on the activities carried out by school staff without seeking to assign responsibility to individual staff members. Evaluation of this kind seeks to monitor or improve school performance and student results, and findings are presented in an overall report that does not include individual teacher appraisal information. If the work of the school head is appraised as part of a general evaluation covering all school activities (including those for which the school head is not directly responsible) and findings are used with a view to improving the quality of the school concerned, this is regarded as school evaluation. On the other hand, an evaluation by the school board/council of limited and specific aspects of the work of the head, such as the management of human or financial resources, is not considered here as school evaluation.

**Individual teacher evaluation** involves forming a judgement about the work of teachers and delivering personal verbal or written feedback in order to guide them and help them to improve their teaching. This evaluation may occur during the process of school evaluation (in which case it generally results in verbal feedback), or may be carried out separately (possibly leading to a formal appraisal of the teacher).

**Local authority evaluation** may be performed by the central (or top-level) education authorities, the inspectorate, or a national education agency. It examines the work of local authorities with respect to their administration of schools within the geographical area under their jurisdiction.

#### Country specific note

**Greece**: A pilot-project on school self-evaluation based on 3-year action plans with educational goals was introduced in June 2010 and will end in 2012.

**Luxembourg**: Full implementation of internal school evaluation based on four-year plans for improving teaching quality is planned for 2013.

**Romania**: The evaluation of local authorities, introduced in 2007, is conducted when a full school inspection takes place. **Finland**: Education providers (mostly municipalities) are responsible for evaluating the effectiveness of their provision and have full autonomy for organising it.

## ALMOST HALF OF EUROPEAN COUNTRIES USE CENTRALLY STANDARDISED CRITERIA IN EXTERNAL SCHOOL EVALUATION

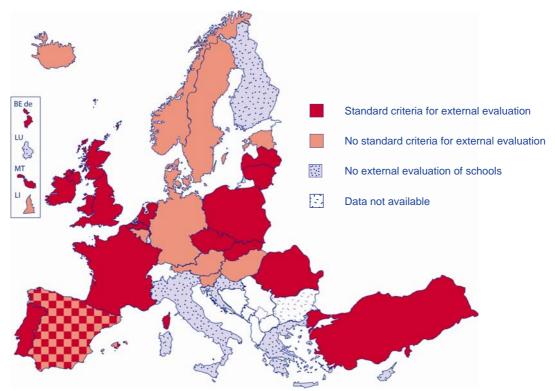
In European countries, procedures used in external school evaluation are more or less standardised. In 2010/11, schools were evaluated by representatives from the central-level authority (or those directly accountable to this level of administration) on the basis of standard criteria in 14 European countries. This process of standardisation, which for the most part began in the 1990s (Eurydice, 2004), continued into the new millennium in some countries. Thus, in Ireland standard criteria have been in use since 2004/05, in Belgium (German-speaking Community) since 2008, and in Malta since 2010.

Evaluation criteria are based on two components, namely the parameter (or measurable aspect of an area to be evaluated), and the required standard (benchmark, norm, regulation or level of proficiency) against which the parameter is evaluated. They provide the (quantitative and/or qualitative) basis on which judgements are formed. However, the standard criteria used to evaluate schools in the different aspects of their work may vary in their form and in the degree of freedom they allow external evaluators to make their judgements. Furthermore, the use of standard criteria does not imply that all schools are always evaluated according to the same framework. Standard criteria may, for example, be applied during a first phase of evaluation; however, for those schools identified as being at risk, a second phase may follow which is specifically adapted to the particular circumstances of the school concerned. This is the case, for instance, in the Netherlands.

Not all countries have drawn up specific lists of standard criteria for school evaluation. Therefore, to determine their evaluation criteria, central-level evaluators draw on national legislation and educational aims, or centrally established lists of areas to be covered. Some approaches to external school evaluation focus only on specific matters such as compliance with regulations or the school development plan. However, when a country broadens the range of school activities to be externally evaluated, it tends to produce specific lists of standardised criteria. In most cases, these lists cover a wide range of school activities including the quality of teaching and learning, student learning outcomes, various areas of school management as well as compliance with regulations.

In several countries, schools are evaluated by local or regional level evaluators (see Figure B7) who, in most cases, are not obliged to use standard criteria established by central level authorities. In general, local or regional evaluators refer to the content of national legislation and the educational aims of their local authority in order to determine their evaluation criteria. However, school evaluation conducted at local or regional level may be standardised to some extent by central authorities. For example, since 2006 municipalities in Denmark have been obliged to focus on a set of centrally defined indicators while in Poland regional evaluators have had to use a single list of standardised criteria since 2009. Furthermore, in Hungary, although there are no standard criteria, there is a standardised procedure to follow in cases where schools do not reach a defined minimum threshold in national pupil assessment.

#### Figure B8: Use of standard criteria for the external evaluation of schools providing primary and general (lower and upper) secondary education (ISCED 1-3), 2010/11



Source: Eurydice

#### **Country specific notes**

**Czech Republic**, **Lithuania**, **Slovakia** and **United Kingdom (ENG/WLS, SCT)**: The references to external evaluation apply to evaluation conducted at central level.

**Germany**: Inspectors base their evaluation criteria on educational legislation and guidelines from the Ministry of Education of the *Land*.

**Spain**: School evaluation is the responsibility of the Autonomous Communities. Some of them, including Andalusia, Asturias (pilot), Balearic Islands, Cantabria, Castile-La Mancha, Catalonia or La Rioja, have set a standard list of criteria. **Finland**: See the note in Figure B7.

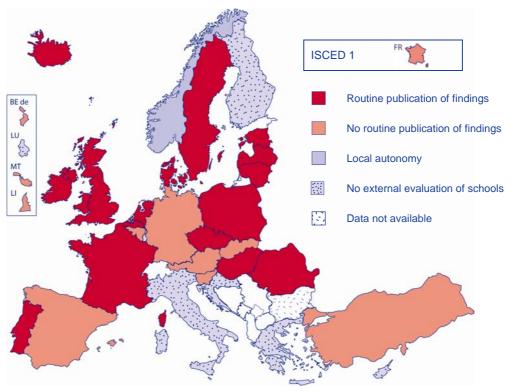
# MORE AND MORE EUROPEAN COUNTRIES ROUTINELY PUBLISH THE RESULTS OF EXTERNAL SCHOOL EVALUATION

Almost all countries implement some form of external school evaluation (see Figure B7) and the routine publication of their findings, as recorded in evaluation reports, has become increasingly widespread in Europe. Although the practice was established in the United Kingdom (England) in the 1980s, it took off in the rest of Europe at the end of the 1990s and has gained momentum throughout the first decade of the new millennium, spreading to Belgium (Flemish Community), Denmark, Ireland, Hungary, and Romania, as well as very recently to Latvia, Lithuania and Poland.

In 16 countries or regions, the findings from external school evaluation carried out by evaluators directly accountable to central authorities (in most cases inspectors) are published as a matter of course on the website of the body responsible for external evaluation or on that of the ministry of education. In Denmark (since 2006), Hungary, Sweden and Iceland, the results of evaluation conducted at local level are (also) published on a regular basis on the Internet. In Poland, regional level evaluators have had to publish findings since 2009.

Where the findings from external school evaluation are not routinely published, education authorities may, nevertheless, arrange for the information to be made available to parents or the general public. For instance, in Belgium (German-speaking Community), parents and students have the right to request their school's external evaluation report; in Malta, parents are informed about the main strengths and areas that need improvement in schools at primary and lower secondary levels.

## Figure B9: Publication of findings from the external evaluation of primary and general (lower and upper) secondary schools (ISCED 1-3), 2010/11



Source: Eurydice.

#### **Explanatory note**

For a definition of what is meant by the 'evaluation of schools', see the explanatory note in Figure B7.

**Publication of findings from the external evaluation of individual schools** is defined as the publication of some or all of the outcomes of the evaluation; comparisons with other schools may also emerge. A report which aggregates the results of individual school evaluations and provides overall information is not considered to fall within this definition. The results may be published in different forms (e.g. written reports distributed to parents of students at a school, as well as to other persons on request, and/or reports placed on the Internet).

**Routine publication** of the results means that publication takes place as a matter of course following each evaluation and is provided for in official regulations. Publication is **not routine** if it occurs only under certain circumstances, or on an ad hoc basis or, yet again, if results may only be consulted on request.

#### **Country specific notes**

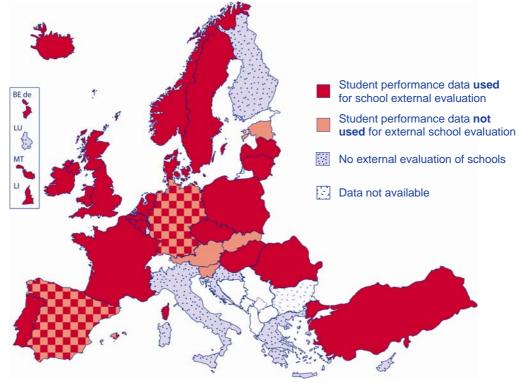
**Czech Republic, Estonia, Slovakia** and **United Kingdom (ENG/WLS, SCT)**: The Figure relates solely to external evaluation carried out at central level. There are no central regulations on publishing the findings of evaluations carried out by local authorities. The situation may vary.

Finland: See the note in Figure B7.

# EXTERNAL SCHOOL EVALUATION OFTEN FOCUSES ON STUDENT PERFORMANCE DATA BUT RARELY IN RELATION TO CENTRALLY DEFINED BENCHMARKS

School evaluation may focus on a number of areas, including the quality of educational or administrative processes adopted by schools within the framework of school autonomy; compliance with standards or regulations; outcomes of the teaching and learning process. In the vast majority of countries where the external evaluation of schools is practised, evaluators take student performance data into account in order to form their judgement on school quality. This is not the case in Estonia, Austria, Slovenia and Slovakia, where external evaluation largely addresses school processes and/or compliance with regulations. However, in Austria, in the new school inspection framework that will be implemented from 2012/13, outcomes of school activities are considered.

 Figure B10: Use of student performance data in the external evaluation of primary and general (lower and upper) secondary schools (ISCED 1-3), 2010/11



Source: Eurydice.

#### **Country specific notes**

Czech Republic: The Figure relates solely to external evaluation of schools carried out at by the national School Inspectorate.

Germany: School inspectors use student performance data in 5 of the 16 Länder.

Spain: Use of student performance data by inspectors varies across the Autonomous Communities; it is practised, for

instance, in Andalusia, Asturias (pilot), Balearic Islands, Cantabria or Catalonia.

**Finland**: See the note in Figure B7.

The most common performance data taken into consideration in the evaluation process are students' results in centrally set examinations and nationally standardised assessments. Other possible output indicators include: student results in teacher assessment; data on student progression through school; student results in international surveys; as well as, although less frequently, outcomes in the job market and student or parent satisfaction.

When student performance information is taken into account in external school evaluation, inspectors or other external evaluators are usually free to interpret the data without reference to centrally defined benchmarks. In Hungary, Portugal and the United Kingdom (England), however, there are defined attainment thresholds for student results which trigger various forms of interventions in schools. In Hungary, a school underperforming over several years in national assessments must prepare an action plan for development. In Portugal, schools with weak performance in areas such as pupil results in standardised tests or pupil transition rates are required to define a timetable for implementing a set of corrective measures including extra support for underperforming children. In the United Kingdom (England), minimum standards are set for the percentage of pupils attaining a particular threshold level or progress measure in standardised tests and examinations. Schools that fall below these standards are eligible for additional support and monitoring and, if they fail to improve, may be subject to formal interventions.

#### A MINORITY OF EUROPEAN COUNTRIES PUBLISH SCHOOL RESULTS IN NATIONAL TESTS

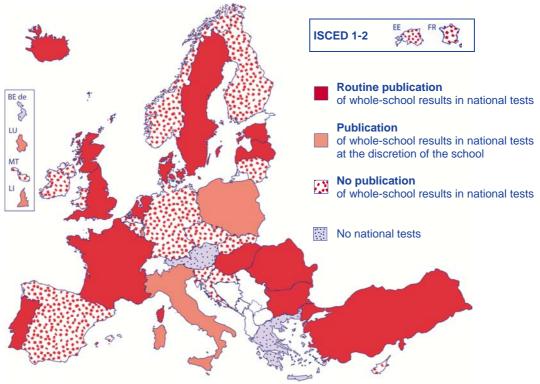
Publishing the aggregated student results obtained by schools in national tests is seen as a way to strengthen school accountability and may be linked to increased competition between schools. (For more information on the types of national tests used in each country, see Figure F18). European countries have adopted varied and contrasting policies in this area, from routine systematic publication to the official prohibition of school ranking on the basis of national test results.

In a third of countries central governments arrange for the national test results for schools to be made public. In Hungary, Romania and the United Kingdom, schools are also required to include their aggregated national tests results within documents distributed to all parents or to publish the information on their website.

Central education authorities may publish individual schools' results in several ways. They may be published as raw data, as in the case of Sweden, or with weighted indicators based on the characteristics of the student population or the value added by schools, as in Iceland. They may even combine both types of information, as in the United Kingdom (England). In most countries where schools' national tests results are published, all national tests carried out throughout primary and secondary education are included whether they are significant for student progression or not. In Denmark, Estonia and France, however, only the results of the final examinations held at the end of ISCED 2 (Denmark) or 3 are published, not the results of other tests administered in primary and secondary education.

In Italy, Luxembourg, Poland and Liechtenstein, schools generally have autonomy in the publication of school results in national tests. In 17 education systems, schools' national test results are not published. On the contrary, in Belgium (French Community), Spain and Slovenia, official documents prohibit the ranking of schools on the basis of their results in national tests. In Spain, however, the Autonomous Communities may decide to make test results public.

## • Figure B11: Publication of individual primary and general (lower and upper) secondary schools results in national tests (ISCED 1-3), 2010/11



Source: Eurydice.

#### **Explanatory note**

For all information on the types of national tests existing in each country, see Figure F18.

#### **Country specific note**

**Portugal**: for the national examinations, the Ministry publishes individual students' results, by school, on the Internet. While students' anonymity is preserved, this practice does enable the press to aggregate and publish school level data.

# A VARIETY OF INFORMATION SOURCES ARE USED IN MONITORING EDUCATION SYSTEMS

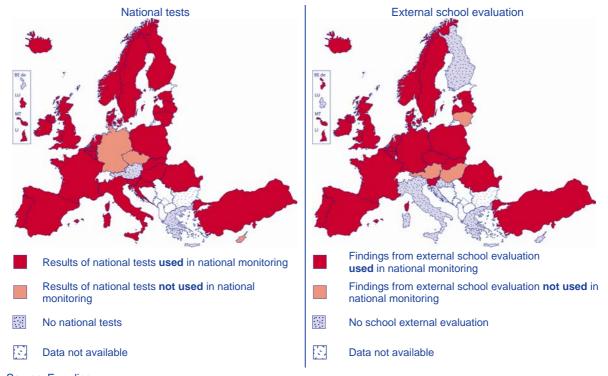
The national monitoring of educations systems implies a process of collecting and analysing information in order to check system performance in relation to goals and standards and enable any necessary changes to be made. The range of data used may include for instance the results of school self-evaluation; external examinations or other national assessments; specially prepared performance indicators; or outcomes of international evaluations (including PIRLS, TIMSS, PISA, etc.). Some countries rely on the evidence of experts or a special authority such as a council set up to monitor reform

A majority of countries implement some form of monitoring of their education system, and many have established special bodies to carry out this task. Two major tools for monitoring the development of education systems are analysed here: student results in national tests (see Figure F18), and the

#### SECTION II - QUALITY ASSURANCE

findings from school evaluations (see Figure B7). A majority of countries use both sources of data; the only country not currently using either is Austria (this is expected to change in 2012/13).

• Figure B12: National monitoring of education systems – use made of the results from the external evaluation of students and schools, (ISCED 1-3), 2010/11



Source: Eurydice.

#### Explanatory note

**Results of national tests used in national monitoring** refers to the use of national-level data on the average results obtained by all students (or a representative sample of students) from a given age group in a national assessment. Besides national monitoring, the results of this assessment may also be used to award a certificate or a grade at the end of a school year to students, stream them into the next level of education, monitor school performance or identify individual students' learning needs. For full information on the type of national tests carried out in each country, see Figure F18.

**Findings from external school evaluation used in national monitoring** refers to the use of national-level data which aggregates information about individual schools. For a definition of 'school evaluation', see the explanatory note to Figure B7.

Tests undertaken for the purpose of international surveys are not considered here.

#### **Country specific notes**

**Czech Republic**: Students took a nationally standardised upper secondary school leaving examination in the 2010/11 school year for the first time. Other national tests are planned to be implemented at ISCED levels 1 and 2 in 2014. It is expected that the results of national tests will be used in national monitoring.

**Denmark**: National tests carried out throughout compulsory education to identify individual pupils' learning needs are not used in national monitoring; only the final examinations at the end of lower secondary education are used.

Austria: From 2012/13, national tests will be fully implemented and their results will be then used for monitoring the education system.

National monitoring based on standardised student assessment is widespread in Europe today. In most of the countries where standardised student assessment is in use (excepting the Czech Republic for the time being, Germany and Cyprus) the results are aggregated to give an overall picture of how well the national or central education system is performing. Most countries use all the existing national tests results available to inform this process; this is not the case though in Denmark.



In over half of the countries examined, the results of external examinations designed primarily for student assessment and certification purposes are also used to investigate the state of the education system. In general, the examinations used are those held at the end of either compulsory or upper secondary education. Of course, the way certified assessment in secondary education is organised, including the school years in which it takes place, vary from one country to the next (see Figures F13-F16).

The vast majority of European countries (see Figure F18) carry out national tests with the primary purpose of evaluating the education system and school performance (i.e. not for making decisions on individual student progression). These tests make it possible to measure, at different times, how proficient students are in the skills and/or knowledge according to nationally prescribed assessment scales. They are usually held at primary and lower secondary levels but less often at upper secondary level. In Belgium (French Community), France, Hungary, Sweden, Portugal, the United Kingdom (England and Northern Ireland) and Norway, the results from national tests which primarily aim at identifying individual learning needs are (also) used to evaluate the state of the education system.

The findings from the external school evaluation process are frequently used to monitor the education system as a whole in those countries where this type of evaluation is carried out regularly (see Figure B7). The exceptions are Lithuania; Hungary and Austria. For national monitoring purposes, evaluators directly accountable to the central level authority generally prepare an overall report. In Liechtenstein, a national report is not produced but the central education authorities draw their conclusions by looking at the evaluation reports for individual schools. Where evaluators are directly accountable to local or regional authorities, the arrangements vary between countries as to how the central education authorities use school evaluation findings. In Poland for instance, regional education authorities prepare reports on the state of education in their respective regions. In Denmark, the central education authorities use the reports on the quality of schools drawn up by the municipalities. In Sweden, the findings of evaluations carried out by the municipalities were processed by a specialist national education agency and were then subsequently used by the central education authorities.

#### ORGANISATION

#### SECTION III - LEVELS AND PROCESSES OF DECISION-MAKING

#### SCHOOL AUTONOMY IS WIDESPREAD ACROSS EUROPE

Although school autonomy now seems widespread in Europe, this has been the result of a gradual process of implementation which began in the 1980s in a few pioneering countries and then expanded massively during the 1990s. In the vast majority of cases, these reforms were introduced as part of a top-down decision-making process (for more details, see Eurydice 2007b and 2008).

Several broad areas of school activity are considered in this analysis of school autonomy, including those concerned purely with the governance and management of schools i.e. school funding and the management of human resources, as well as the area of teaching and learning which, amongst others, covers the important matters of curriculum, assessment and teaching methods.

Overall, there are marked differences across Europe in both the underlying rationale for school autonomy and the timescale over which the process of autonomy has been implemented (Eurydice, 2007b). It is not surprising therefore, that in 2011 the areas in which schools have autonomy also differ considerably.

The detailed analysis of the information on the autonomy granted to schools for **managing financial** and human resources reveals that some countries allow more autonomy than others and, similarly, autonomy is more likely to be given to schools in some areas of activity rather than in others.

Eleven countries grant a large degree of autonomy in both these areas (Belgium, the Czech Republic, the Baltic countries, Ireland, Italy (especially financial management), Slovenia, Slovakia, Sweden (except for private funds) and the United Kingdom (England, Wales and Northern Ireland)). The situation is similar in Hungary and Poland, but in these countries, many decisions are subject to the approval of a higher authority, or are taken within established guidelines.

In Denmark, the Netherlands and Finland, the situation is more variable as it left to the responsible authorities to choose whether or not to delegate powers to schools in all areas of management (the Netherlands) or in some areas only (Denmark and Finland).

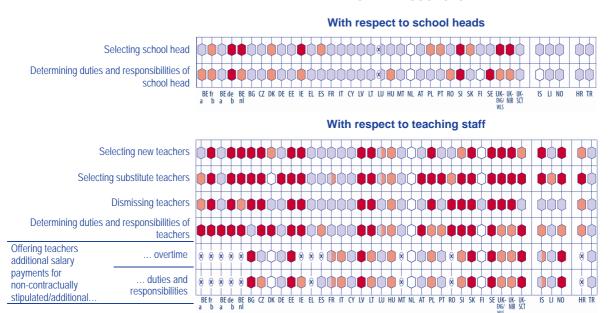
In contrast, in a minority of countries, very little autonomy is granted to schools in the area of financial and human resources. This occurs mainly in Germany, Greece (although legislation passed in 2010 has conferred full autonomy on schools for operating expenditure), France (ISCED 1), Luxembourg (ISCED 1) and Malta. In Cyprus and Turkey, schools have no autonomy in these areas.

The management of human resources reveals contrasting features. Decisions pertaining to the post of the school head are very often under the control of the education authority whilst decisions about the management of teaching staff are usually taken at school level (i.e. selecting new staff, substituting for absent teachers, and defining teachers' duties and responsibilities). In Romania, schools have more autonomy for the selection of teachers from 2011/12. Schools are granted full autonomy for selecting school heads in Belgium (Flemish and, for grant-aided schools, German-speaking communities), Ireland, Slovenia and the United Kingdom (England, Wales and Northern Ireland). When schools have a lot of autonomy in teaching staff matters, they are also usually the formal employer (see Figure B15).



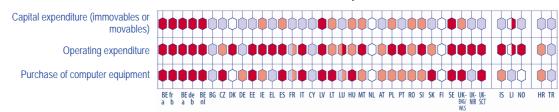
Figure B13: Levels of school autonomy for managing resources and aspects of teaching and learning in primary and general (lower and upper) secondary education (ISCED 1-3), 2010/11

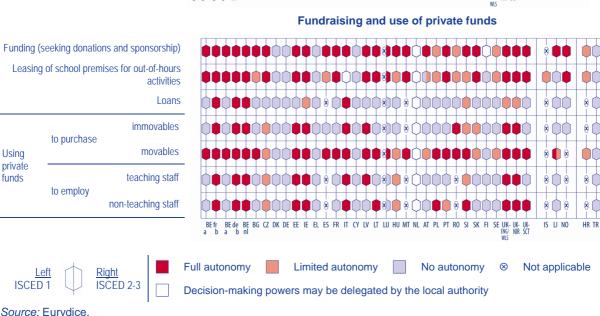
#### **HUMAN RESOURCES**



#### **FINANCIAL RESOURCES**

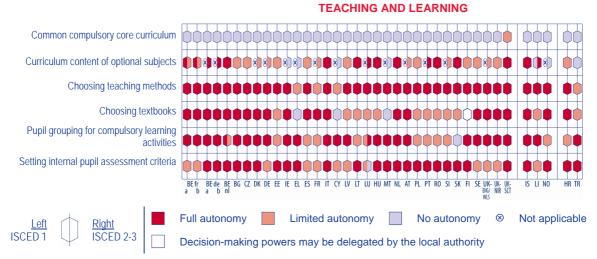
#### Use of public funds





Source: Eurydice.

#### SECTION III - LEVELS AND PROCESSES OF DECISION-MAKING



Source: Eurydice.

#### **Explanatory note**

This indicator shows the degree of school autonomy with respect to local, regional and central educational authorities. For more information on the distribution of responsibilities for decision-making within schools, see Figure B14.

'No autonomy' means that decisions are taken only by the education authority, although the school may be consulted at a particular stage of the process. 'Full autonomy' means that the school alone takes decisions, within the limits set by national/local legislation or regulations. Guidelines can nevertheless be provided by the education authority but they do not restrict school autonomy.

'Limited autonomy' comprises four different situations:

- > schools take decisions together with the education authority or submit proposals for approval;
- schools take decisions based on a set of options predetermined by the education authority;
- schools have some autonomy in the area concerned but, as far as the remainder of decisions are concerned, must refer to the education authority or is not autonomous;
- > schools are autonomous in principle but are strongly encouraged to follow official recommendations.

More information on the situations where schools have a limited autonomy is provided in the annexes.

'Decision-making powers may be delegated by the local authority' means that local authorities are responsible for decision-making and have discretionary powers, in law, to delegate decision-making to school level.

'Not applicable' means that the element under consideration does not exist in the given education system, and therefore no decisions are made by schools or education authorities at any level.

#### **Country specific notes**

**Belgium (BE fr):** Grant-aided schools have less autonomy in selecting schools heads since a 2007 decree on the school head function has defined the modalities for selecting and appointing schools heads more specifically.

**Belgium (BE fr, BE de)**: (a) Refers to schools for which the Community is directly responsible and a minister is the responsible authority; and (b) refers to schools in the public and private grant-aided sector. In the grant-aided sector, the responsible authority is deemed the school-based management body.

Belgium (BE de): Schools can make decisions up to a certain level of capital expenditure; above this level, the ministry makes decisions.

**Bulgaria**: Schools have autonomy for some operating expenditure.

**Czech Republic**: Schools have had less autonomy in relation to human resources since 2007 when legislation made it compulsory for schools to remunerate non-contractually stipulated duties and responsibilities according to a salary framework established at central level.

**Spain**: Schools are free to make their own decisions regarding the acquisition of computer equipment, but Autonomous Communities usually design the whole network facilities and provide the most important part of the equipment.

**France**: Only schools which have technology classes or a modified general/vocational strand (SEGPA) may receive funds from private enterprises.

Cyprus: At ISCED level 1, there is either delegation or no autonomy for the choice of textbooks.

Luxembourg: At ISCED 1, the post of school head does not exist.

Malta: For schools at ISCED level 3 (Junior College), the situation is different from information shown in the figure regarding the following areas: human resources (except selection of teaching vacancies and offering additional salary payments): limited autonomy; use of public funds: full autonomy. When leasing school premises for sports activities schools have limited autonomy. At ISCED level 3, students have to purchase their own books from a list of recommended textbooks and the various syllabi of examinations taking place at the end of this level form the minimum core curriculum. Employment conditions of schools falling under the remit of the education Directorate are set centrally, however school heads can assign particular duties to teachers such as assignment of classes and Form teacher duties.

**Netherlands**: Every school has its competent authority (bevoegd gezag), which may delegate decision-making powers to the school management or the school head.



Austria: Allgemein bildende höhere Schule may decide on the leasing of premises for community use, within established education guidelines.

**Portugal**: Schools may select staff only when posts are still vacant after the allocation of jobs at national level. Schools may begin the procedures for disciplining and dismissing staff, but the final decision is made at a higher level.

Romania: Since the new law on unitary salaries came into force 2010, schools do not have any freedom to award additional salary payments to teachers. From 2011/12, schools will have full autonomy regarding the selection for teaching vacancies.

Slovenia: Upper secondary schools have full autonomy in the use of private funds to employ teaching staff.

**Slovakia**: Some aspects relating to the roles, duties and disciplinary measures for teaching staff may be governed by established guidelines. Schools can decide on some capital expenditure with the approval of the higher authority.

**Sweden**: Some aspects of disciplinary measures may be governed by established guidelines. For the use of public funds, local authorities must follow national guidelines, which require at least some delegation of decision-making powers to schools. The extent to which single schools can decide on questions concerning seeking donations, leasing of school premises and use of funds to acquire movables varies between municipalities with the degree of delegation.

**United Kingdom (ENG/WLS/NIR)**: Schools do not have autonomy for the leasing of premises for community use where the building has been provided through a public-private partnership. In Wales, schools have no autonomy for capital expenditure or acquisitions.

**United Kingdom (SCT)**: The local education authority is ultimately responsible for disciplinary measures. In some cases, schools can widen the scope of a post, which would lead to additional salary payments.

**Iceland**: Only schools at ISCED level 3 have limited autonomy regarding additional salary payments for non-contractually stipulated overtime and duties/responsibilities.

Norway: Regarding private funds, schools may only receive donations.

Autonomy for managing financial resources from the public purse is much more common with respect to operating expenses and the acquisition of computer equipment than for capital expenditure. However, recent plans for national support for computer equipment in schools have reduced school autonomy in this area in Ireland.

In a majority of countries, schools have full autonomy to raise private funds through donations, sponsorship or leasing of school premises. In contrast, school autonomy is much more limited with respect to the power to take out loans. Only Belgium (grant-aided schools), Italy and the Netherlands (if the power is delegated) have full autonomy in this area. Schools are generally allowed to use their private funds for the acquisition of movables rather than for immovables, or to employ staff.

An analysis of the responsibilities for deciding on matters relating to **teaching and learning** reveals that while many education systems are driven by interrelated goals established at central, regional or local level, a great deal of flexibility is often granted to educational organisations and institutions in determining how these goals are to be achieved.

Schools have least autonomy in those areas that directly reflect the principal goals of the education system. Most countries seek to ensure that all pupils have access to good quality education, therefore, almost everywhere, central authorities define a content-based or goal-oriented core curriculum that all teachers should follow. In the United Kingdom (Scotland), however, central curriculum objectives are expressed in terms of typical pupil development at different stages of education and are therefore not prescriptive. In contrast to procedures governing the compulsory curriculum, schools generally have greater freedom when it comes to determining the curricula of optional subjects. However, this does not apply in a couple of countries including Norway, where within the framework of the 2006 knowledge promotion programme schools do not have any more autonomy for determining the curriculum content of optional subjects than for compulsory subjects.

Greater autonomy is usually granted to schools and teachers with respect to everyday educational activities. Most countries leave schools free to decide what teaching methods to use although mechanisms for monitoring teaching are often in place, for example, via inspections. In Greece, France, Cyprus and Turkey, the central authorities have set guidelines for schools on teaching methods. In almost all countries, schools also choose their own textbooks; the exceptions are Greece, Cyprus and Malta. All countries except Slovakia (since 2008) grant at least some freedom to schools



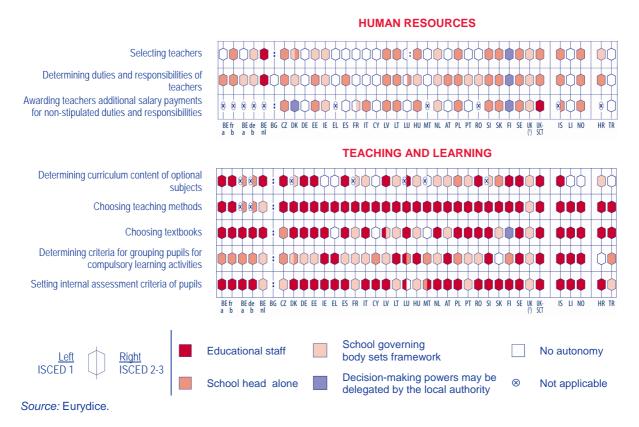
in determining the basis on which pupils should be grouped for teaching and learning. In Latvia, the regulations for grouping pupils were abolished in 2009. Teachers also have a good deal of autonomy in another important area of their work, namely in the setting of student assessment criteria. Greece adopted this practice only very recently (in 2010).

#### AT SCHOOL LEVEL,

#### THE GOVERNING BODY IS RARELY INVOLVED IN THE CHOICE OF TEACHING METHOD

In all countries, schools have decision-making powers in the area of teaching and learning and, in a majority of countries, in particular aspects of managing human resources as well (see Figure B13). The individuals making decisions within schools vary depending on the type of activity concerned. In almost all countries, outside their role as members of the school governing body, teaching staff do not make decisions on human resource issues but they are generally involved to varying degrees in decisions on teaching and learning. In countries where human resource functions such as selecting new teachers, defining teachers' duties and responsibilities for granting additional salary payments are carried out at school level, the school head alone is most often responsible. However, in around ten countries, the school governing body also has a role in staff management. In Estonia, Hungary, the United Kingdom (Scotland) and Croatia, the school head may have sole responsibility, or the school governing body may also be involved depending on the particular issue in question. Finally, in Belgium (Flemish Community) and the United Kingdom (Scotland), teachers play a role in defining their working conditions.

## • Figure B14: School decision-makers in primary and general (lower and upper) secondary education (ISCED1-3), 2010/11





#### **Explanatory note**

The figure describes the decision-makers within the school regardless of whether the school has full or limited autonomy in the given area (for more information on the extent of school autonomy, see Figure B13).

'Educational staff' means either teachers (individually and/or collectively) are the sole decision-makers, or the school head may also contribute to the process. The school governing body does not participate.

'School head alone' means that the school head is the only decision-maker on the given issue.

'School governing body sets framework' means that the school governing body establishes the framework in which decisions are made, although teachers and/or school head might also contribute to the decision-making process.

#### **Country specific notes**

**Belgium (BE nI)**: The decision makers vary from school to school in matters relating to the choice of teaching methods and textbooks, grouping pupils for compulsory learning activities and setting internal student assessment criteria.

**Denmark**: The school board is the decision-maker within primary and lower secondary schools for selecting teachers and determining criteria for grouping pupils for compulsory learning activities.

**Netherlands**: The information corresponds to common practice but there are no national regulations or recommendations regarding decision-makers inside school.

Malta: There is no defined rule regarding the setting of internal assessment criteria for ISCED 1 and ISCED 2. It can be carried out by the school head, by the teachers on an individual basis or collectively.

**Iceland**: Information on decision-makers regarding additional salary payments for non-contractually stipulated overtime and responsibilities only applies to schools at ISCED level 3.

Turkey: School heads may decide to delegate the grouping of pupils for compulsory activities to the school governing body.

The areas of teaching and learning in which teachers are most often involved in decision-making, either by themselves or together with the school head are, in order of frequency: teaching methods, setting internal assessment criteria and choice of textbooks. In contrast, in a majority of countries, either the school head alone makes decisions or the school governing body also participates in matters concerning the curriculum content of optional subjects and the grouping pupils for compulsory learning activities. Several countries differ from these general patterns in the sense that the decision-making arrangements are the same for all areas of teaching and learning. Indeed, in Ireland, Greece, Sweden, the United Kingdom (Scotland), Iceland, Liechtenstein and Norway, in all the areas of teaching and learning in which schools have some autonomy, decisions are made either by teachers themselves or by teachers together with the school head. In the United Kingdom (England, Wales and Northern Ireland), the school governing body also participates in all of these areas of decision-making.

## TEACHERS ARE EMPLOYED BY LOCAL AUTHORITIES OR SCHOOLS THEMSELVES AS OFTEN AS BY CENTRAL GOVERNEMENT

The administrative level responsible for employing teachers usually corresponds closely to their employment status (see Figure E5). Except in Ireland, the Netherlands and Poland, teachers who are career civil servants are employed by central or regional authorities where these correspond to the top-level authority for education (e.g. the governments of the Autonomous Communities in Spain). This is the case in approximately a third of European countries. Central governments may also be the employer of teachers with civil servant status (Slovenia, Liechtenstein and Turkey) or contractual status (Italy). When the employer is the school or local authority, in the vast majority of cases, teachers have a contractual status. In the Nordic countries as well as in Hungary, the Netherlands and the United Kingdom (Scotland), the employer of teachers working in public schools is the local authority. Schools are responsible for employing teachers in Bulgaria, the Czech Republic, the Baltic countries, Ireland, Poland, Romania, Slovakia and Croatia. Finally, the responsibility for employing teachers varies depending on the category of school (Belgium, Sweden and the United Kingdom (England, Wales and Northern Ireland)).

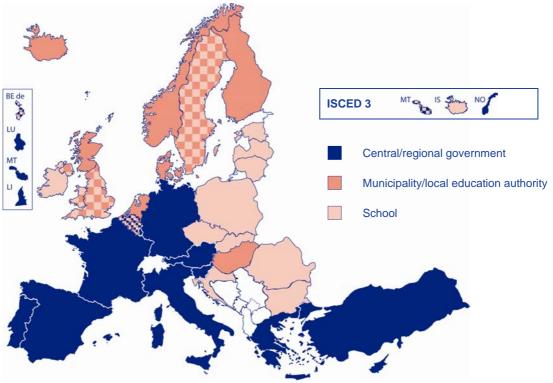
In most cases, the level of education in which a teacher works has no bearing on the employing authority. Only in a limited number of countries does this differ, as in Malta, Iceland and Norway where

#### SECTION III - LEVELS AND PROCESSES OF DECISION-MAKING

the employer for teachers in upper secondary education differs from that of primary and lower secondary education. In Malta (in some cases) and Iceland, the employer is the school, while in Norway the authority responsible for employing upper secondary teachers is the County Education Committee.

The employer is taken to mean the authority that has responsibility for appointing teachers. However, even where the employer is not at school level, schools in the Netherlands, Slovenia, Finland, Sweden and the United Kingdom (England, Wales and Northern Ireland) may nonetheless have full autonomy to recruit teachers (see Figure B13). This means that they are free to select their teachers themselves, although a higher authority has formal responsibility for appointments. Moreover, municipal authorities in Liechtenstein may make recommendations to the government when teaching staff are appointed, even though they are not the formal employer.

## ■ Figure B15: Administrative levels responsible for employing teachers at primary and general (lower and upper) secondary education (ISCED 1-3), 2010/11



#### Source: Eurydice.

#### **Explanatory note**

The term 'employing authority' refers to the authority with direct responsibility for appointing teachers, specifying their working conditions (in collaboration with other partners, if appropriate) and ensuring that these conditions are met. This includes ensuring the payment of teachers' salaries, although funds for this purpose may not necessarily derive directly from the authority's budget. This should be distinguished from the responsibility for managing resources within the school itself, which lies (to a greater or lesser extent) with the school head or the school management board.

Responsibilities for engaging and remunerating substitute teachers are out of the scope of the figure.

The central government is the top-level authority for education in most countries. In three cases, however, most education decision-making occurs at a regional level of government, namely that of the governments of the language Communities in Belgium, the *Länder* in Germany and the governments of the Autonomous Communities in Spain.



#### **Country specific notes**

**Belgium**: Teachers working in public sector schools may be employed either by their respective Communities (which is the top level of educational administration) or by the municipalities or provinces. Teachers working in the grant-aided private sector are employed by the competent authority.

**Germany**: With respect to the minority of teachers who are not career civil servants, the contracting party may be either the *Land* or the municipality.

**Ireland**: For vocational schools, local vocational education committees retain many of the responsibilities for employment, including appointment and other personnel issues.

**Malta**: At general upper secondary level, the central authority is responsible for employing the teachers in schools that fall under the Directorates of Education. Staff at Junior College are employed through the University of Malta.

**Netherlands**: Teachers are employed by the competent authority (the *bevoegd gezag*), which is the municipal executive for public education and administrative body governed by private law for private grant-aided education.

**Austria**: Teachers working at primary level and in the *Hauptschulen* are employed by the *Länder*. Teachers working in the *allgemein bildende höhere Schulen* are employed by the *Bund* (central government).

**United Kingdom (ENG/WLS/NIR)**: The employer varies according to the school's legal category. In England and Wales, a teacher's contract of employment is with either the local authority or the school governing body. In Northern Ireland, it is with Education and Library Board, Council for Catholic Maintained Schools or the school board of governors.

#### EXPENDITURE ON TEACHING STAFF TENDS TO BE DETERMINED CENTRALLY; FOR OTHER EXPENDITURE LOCAL AUTHORITIES ARE ALSO INVOLVED

Central and/or local governments make decisions regarding overall public expenditure for schools and they also often specify the amount to be spent on particular types of resources. In some countries, however, schools receive a general budget and decisions relating to spending on specific types of resources are made at school level. The amount of general funding, or funding for a particular resource is established either as a lump sum to be shared out optimally among schools, or is distributed by means of a formula. When applied to each school, the formula is intended to provide the total level of funding a school needs.

From the evidence available, it is clear that there is a tendency for decisions relating to the financing of **teaching staff** to be taken by central governments or by the regional body with full responsibility for education, while decisions relating to the financing of operational resources (in the broad sense) tend to be shared with local authorities.

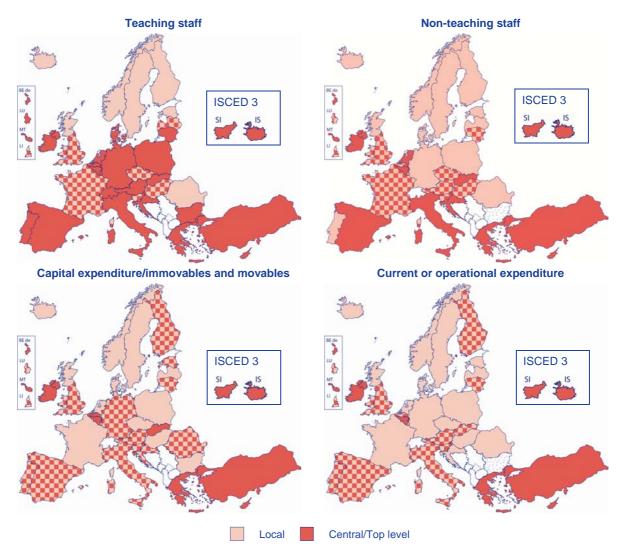
In some countries, decisions on the overall public expenditure for **teaching staff**, or overall public expenditure on schools (where schools can make their own decisions about spending on specific items), are shared between the central/top-level authority for education and the local level. This occurs in the Czech Republic, France, Latvia, Hungary, Slovenia, the United Kingdom (England and Wales) and Liechtenstein. The local level has sole responsibility in Estonia, Romania, Finland, Sweden, the United Kingdom (Scotland), Iceland and Norway.

Decisions on matters relating to **non-teaching staff** remain centralised in 13 countries or regions. As far as the overall amount of **operational expenditure** is concerned, central authorities decide alone in only Belgium (French and German-speaking Communities), Ireland, Malta, the United Kingdom (Northern Ireland) and Turkey.

In the majority of countries, the responsibilities for determining the overall amount of public expenditure on **fixed capital assets** (immovables) as well as **movables** are divided between local and central level authorities or, less often, taken solely by the local level. Only in Belgium, Ireland, Cyprus, Malta, Slovakia, the United Kingdom (Northern Ireland) and Turkey, is the central/top-level authority for education the only authority with responsibility for decision-making on investing in immovables and movables. Some countries have very individual practices. For example, in the Netherlands, the amount a municipality receives from the central government for buildings is based on pre-determined criteria. However, municipalities can use this amount at their discretion and merge it with other budgets. As a result, they effectively determine the overall amount allocated to capital expenditure, whereas the government determines the overall amount for other resources.

#### SECTION III - LEVELS AND PROCESSES OF DECISION-MAKING

 Figure B16: Location of decision-making powers to determine the overall amount of public expenditure on specific resources for schools in primary and general (lower and upper) secondary education (ISCED 1-3), 2010/11



Source: Eurydice.

#### **Explanatory note**

Current expenditure covers goods and services bought and used during the year. Capital expenditure covers assets that last longer than a year, including construction, renovation or major repairs to buildings (immovables) as well to equipment, furniture and computers (movables). However, minor expenditure on these elements, below a certain fixed amount, is included in operational expenditure.

Specific programmes of support (such as education action zones, programmes for pupils from ethnic minorities, etc.) are not included in this Figure.

The central government is the top-level authority for education in most countries. In three cases, however, decision-making rests at a lower level, i.e. the governments of the Communities in Belgium, the *Länder* in Germany and the governments of the Autonomous Communities in Spain.

The decision-making power is deemed to be held at central level in cases where the central authority transfers funds specifically earmarked for one of the four named resource categories to the local level, and the local authority then distributes these funds to schools without making any changes to the overall amount.

Only schools in the public sector are considered. However, in the case of three countries (Belgium, Ireland and the Netherlands), grant-aided private schools are included as they enrol a substantial proportion of pupils and are regarded as equivalent to schools in the public sector.



#### **Country specific notes**

**Belgium**: Municipalities and provinces may decide whether to allocate a specific budget for operational resources and movable for schools under their jurisdiction, in addition to the grants allocated by the Communities. This is also the case for immovables in the case of the French-Community.

**Bulgaria, Estonia, Greece, Latvia, Lithuania, Romania, Slovenia** and **Iceland**: Amounts earmarked for books and/or audio-visual equipment or computers, or in some cases all teaching materials and equipment, are set at central level.

**Czech Republic**: The Ministry of Education allocates an overall amount for teaching, and other educational costs as well as for school services (in-service training of educational staff, special interest and leisure time activities of pupils, guidance, meals and accommodation and activities connected with school development) to regional authorities. Regional authorities then distribute resources to schools according to the number of pupils and their regional per capita amount.

**Germany**: The *Länder* (the top educational decision-making level) issue their plans for school development, which local-level authorities use to allocate funds for immovables.

**Spain**: In primary education, the responsibility for immovables is shared between the Autonomous Communities who construct the school buildings and the municipalities who provide the land and are responsible for the maintenance and repair of schools. At secondary level, all responsibility for expenditure on school buildings lies with the Autonomous Communities.

**France**: The *Académies* (school regional authorities) define, in cooperation with central authorities, the amount of public expenditure to be allocated to schools, including salary payments for teaching staff.

**Italy**: The local level is responsible for providing some operational resources (for example, textbooks for primary schools) out of their own budget. For capital expenditure, the local level is responsible for making school buildings available, maintaining them and purchasing various kinds of immovables, including computer equipment.

Latvia: The central level specifies the amount and the procedures for the payment of salaries, and the local level allocates subsidies from the national budget earmarked for particular types of spending and supplements this from local income.

**Lithuania**: Funds for teaching and administrative staff, social educators and librarians, textbooks and other teaching aids are allocated by central government on a per capita model. Other resource categories (other non-teaching staff, operational resources, movable and immovable goods) remain the responsibility of the municipalities.

**Luxembourg**: The local level is responsible for resources other than teaching staff in primary education while the central level is responsible for secondary education.

**Hungary**: Local governments have broad rights for the distribution of block grants, which are determined according to performance indicators introduced in 2007.

**Austria**: In primary education and in the *Hauptschulen* and *Polytechnische Schulen*, the local level is responsible for non-teaching staff resources, operational resources and capital expenditure; in the case of *Allgemein bildende höhere Schulen*, responsibility lies with the central level.

**Poland**: In determining the level of resources for teaching staff, local authorities may supplement the amount designated by central authorities from their own income.

**Portugal**: The local level is responsible for operational resources and movables, as well as capital resources for schools providing the first stage of education at ISCED level 1.

Romania: New construction, renovation, consolidation, utilisation and capital repairs are funded from the state budget and from local budgets.

**Slovenia**: For primary and lower secondary schools, in addition to the national budget, municipalities can fund additional teaching and non-teaching staff, (e.g. a second teacher in any lessons; a foreign language teacher from year one, etc.) and provide funds for some operational expenditure (school building maintenance costs). The local level provides funding for immovables with some assistance from the central level. The Ministry of Education runs a tendering process and approves local investment programmes based on the stated priority criteria.

**Finland**: In order to receive government financing for investments in immovables, the project must be approved by the Ministry of Education as part of the national financing plan and in accordance with the budget. The criteria of funding (unit costs) for operational expenditure are made by the Ministry of Education and Culture but the detailed allocation is made at local level.

**United Kingdom (ENG/WLSNIR)**: Schools receive the majority of their revenue funding as a global amount which they are responsible for allocating across these different categories of expenditure. In England and Wales, this funding is allocated by local authorities (LAs), which in turn receive the majority of their funding from central government. In Wales, LAs decide how to distribute this allocation across the services they provide. In England, since 2006, LAs have less room for manoeuvre as funding for schools passes through LAs as a ring-fenced grant. However, LAs are still free to contribute to school funding from local taxation so for this reason the local level is indicated in the figure.

**Liechtenstein**: In primary education, the local level is responsible for operational and non-teaching staff resources while responsibility for teaching staff and capital resources is shared between local and central levels. The central level has full responsibility for secondary education.

**Turkey**: Local administrations must also allocate resources for expenditure other than teaching staff, but these are minor compared to central funding.



## WIDER INSTITUTIONAL AUTONOMY FOR THE MANAGEMENT OF ACADEMIC STAFF IN HIGHER EDUCATION

Over the past ten years, higher education institutions (HEIs) in many countries have been granted greater autonomy for managing their academic staff. However, central education authorities in a great majority of countries are still responsible for defining the categories of staff and the related qualifications and any other eligibility criteria required. In a dozen countries or regions, these elements are defined jointly at central and institutional level. In Hungary and Romania an Independent agency is also involved in the process, a part from the institutions themselves and the education decision-makers.

Six countries (the Czech Republic, Estonia, Greece, Luxembourg, the Netherlands and the United Kingdom) have significant institutional autonomy in terms of recruitment. In the Czech Republic, the academic higher education institutions are autonomous in terms of setting recruitment criteria, defining the categories of staff and the distribution of staff. In the Netherlands and the United Kingdom, the entire recruitment procedure for academic staff is the responsibility of institutions as well as the procedures for the development and retention of staff, within the framework of employment law. HEIs in these two countries are also responsible for deciding on the numbers of academic staff and for determining the qualifications required and eligibility criteria for all posts.

In contrast, decisions related to the number of available positions, the way in which staff are appointed to the different departments and faculties, are the responsibility of institutions in the vast majority of countries. Central decision-makers are solely responsible for two or more of these matters in only Belgium (German-speaking Community), Cyprus, Croatia and Turkey.

The recruitment of academic staff is through public advertisements in all countries (e.g. through the national official journal, national or international press, websites, etc.). These advertisements are prepared by the institutions themselves but must comply with certain criteria defined at central level. Less than half of the countries that recruit academic staff via public advertisements also organise competitive examinations. The procedures for organising these competitive examinations are generally subject to criteria defined at central level, whereas institutions are responsible for organising the examination and appointment of candidates to vacant positions. More centralised management procedures can be observed in Italy, Cyprus, Latvia and Turkey.

In the majority of countries examined, the central education authorities are responsible for establishing the basic salary scales and, in many cases, individual salary allocations. The arrangements for staff to move from one point of the scale to the next are usually based on legislation and are set down in centrally produced official documents. However, in the countries where there are no salary scales or central regulations, collective negotiations commonly take place every two or three years to redefine the salary levels for all grades of staff.

In the countries where academic staff are civil servants or have equivalent employment status, salaries are defined at central level. In approximately half of countries examined, the HEIs set the annual gross salaries of their staff and, in some cases, there is joint decision-making between the state and institutions.

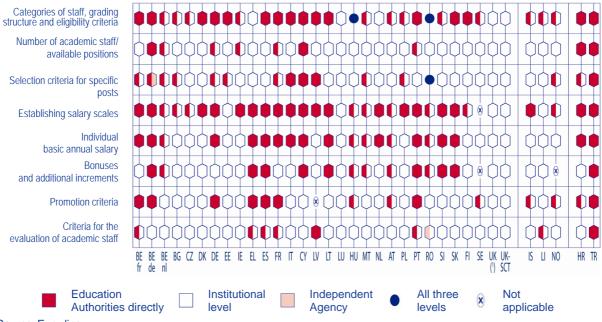
Bonuses (generally based on length of service and/or performance of academic staff) are also awarded in most countries. The available information on the stakeholders/bodies responsible for defining the criteria on which bonuses are paid reveals that they are similar to those responsible for setting salaries. Consequently, where salaries are negotiated between the state and institutions or unions, these bodies also agree the conditions related to bonuses; those that base their salary arrangements on legislation and official regulations arrange bonuses through the same process. In

Belgium (French Community), Germany, Italy, the Netherlands and Croatia, the bonuses or additional payments are set at institutional level while arrangements for basic salaries are determined at central level.

The responsibility for defining promotion criteria is delegated to the higher education institution in a majority of countries. However, in the countries where academic staff are public servants the situation is mixed, as in half of the countries examined these decisions are made at central level, while in the other half the institutions are responsible.

Individual evaluation of academic staff is, in most countries, an integral part of institutional quality assurance procedures. Central authorities often impose the obligation on institutions to carry out a quality assurance process, but the institutions themselves usually decide how to implement this. In many countries, independent national quality assurance agencies assist institutions in developing their self-evaluation procedures or they may carry out external institutional evaluations. The criteria for the performance management of academic staff are established at institutional level in most countries. However, the central level authority sometimes provides general guidance on the aspects to be included. In some countries, regular performance review is one of the main conditions for the award of performance bonuses or progression up the salary scale.

#### Figure B17: Distribution of responsibilities between stakeholders for the management of academic staff in higher education, 2010/11



Source: Eurydice.

#### **Explanatory note**

Academic staff refers both to qualified staff directly involved in the educational process (such as teaching staff and researchers with lecturing duties) and to staff who have management responsibilities for academic or other staff. Administrative staff (secretariat, accounting, financial administration, etc.) and research-only staff are therefore not included. In most countries, the main grades of management staff include, for example, director/rector/president/vice-chancellor; and deputy director/rector/vice-chancellor; dean; and head of department. For teaching staff common grades are, for example, professor, lecturer and assistant lecturer.

#### SECTION III - LEVELS AND PROCESSES OF DECISION-MAKING

#### **Country specific notes**

**Czech Republic**: Central authorities establish the basic salary scales framework only for the Tertiary Professional Schools (vyšší odborné školy – ISCED 5B). Higher education institutions (vysoké školy – ISCED 5A and 6) have the freedom to define their own pay scales in their internal regulations taking into account the national minimum wage.

Latvia: There are no promotion criteria, instead every 6 years academic staff must be re-elected. Should there be another more suitable candidate for the post, he/she may be appointed instead.

**Austria**: The Federation of Universities, an umbrella organisation comprising all universities, is empowered to negotiate collective contracts with the educational authorities.

**Romania**: The independent agency responsible for defining the grades of academic staff and for their performance review is the National Council for the Attestation of Teaching and Research Degrees.

**Sweden** and **Norway**: The salaries of academic staff in higher education are set by negotiation between the higher education institutions and labour organisations, for this reason specific bonuses or additional increments are not awarded.

**United Kingdom**: There is a central framework agreement setting UK-wide pay scales. It has been adopted by all or almost all HEIs but is not compulsory

## CENTRAL OR REGIONAL AUTHORITIES SHARE POWERS WITH HEIS IN SETTING STUDENT NUMBERS IN TERTIARY EDUCATION

Restrictions on the number of places (numerus clausus) in tertiary education programmes may be set either at central/regional level or at institutional level. In some instances access may be unrestricted. Different combinations of these three options are also in operation in some countries. Specific entry criteria may be applied to some or all fields of study or programmes.

When a **limitation procedures exist** at national or regional level the education authorities limits the places available and in many cases exercises direct control over the student selection procedure. A *numerus clausus* of this kind may apply only to the places that will be funded by the public budget or it may be extended to the overall number of places. In addition, the limitation on the number of places can be applied to all courses by tertiary education institutions or to some specific fields only (e.g. medicine and health).

In the Czech Republic, Greece (first cycle only), Spain, Cyprus, Portugal, the United Kingdom (England and Northern Ireland) and Turkey, the number of tertiary education places in all fields of university study is set at national or regional level, but in many cases consultations with the higher education institutions are conducted beforehand.

In the Czech Republic, the Ministry of Education (after negotiations with public HEIs) sets the limit on the number of students who are to be funded from the state budget. Public HEIs may admit more students but they have to fund them from their own resources, as they cannot charge students tuition fees for studying in a degree programme in the Czech language unless the length of studies exceeds the standard length by more than one year. Tertiary professional schools in the Czech Republic, providing programmes at level ISCED 5B, have fixed capacity of students which is based on the limits set by the relevant regional authority which is in charge of governance of tertiary professional education within the given region.

In Germany, if the number of applicants exceeds the places available in certain subjects, places are allocated using selection procedures established either at national/regional level, or by the relevant higher education institution. The national procedures (especially in medicine) are based on a weighted points system. Applicants are awarded 20 % for their average mark in the *Abitur* (school-leaving examination constituting the higher education entrance qualification), 20 % for the length of time they have waited between sitting the *Abitur* and applying to university, and 60 % is based on the results of the HEI's selection procedure. There is a growing number of local restrictions on admissions in some higher education institutions to courses that are not covered by the nationwide admissions procedure. In these cases, the responsibility for admissions lies solely with the higher education institution.



In Spain, the Autonomous Communities must plan the educational offer of the public universities in agreement with institutions. The proposed number of places is communicated to the University Coordination Council at national level for review, taking into account the general availability of courses and places. The outcomes are published in the Official State Gazette. The central government, after agreement with the General Conference of University Policy, may set a maximum number of students to be admitted to particular programmes. These limits affect all public and private universities.

In Cyprus, selection or limitation procedures exist at national level. The number of places made available are the result of negotiation between public tertiary education institutions (i.e. the University of Cyprus) and the relevant government authorities (i.e. the Ministry of Education and Culture, the Ministry of Finance and the Planning Bureau).

In the United Kingdom (England, Wales and Northern Ireland), there are overall controls on the numbers of full-time first cycle students. In England, the Higher Education Funding Council for England has, since 2008, been tasked with reining in growth in student numbers in the face of limited public funds. Places are also controlled in Northern Ireland. In Wales, there were no controls in place for the reference year but a ceiling has been introduced from 2011/12.

Higher education institutions themselves may decide to limit places in nine countries in accordance with clearly defined requirements, which may include their institutional capacity, or any centrally determined criteria intended to limit the number of places. Limits may be set for some or all courses. For example, in Ireland, the institution determines the number of places and the admissions requirements, while students apply for almost all full-time undergraduate courses through a Central Applications Office. In Norway, institutions are responsible for determining the number of the places they will offer; however, at certain times, such as during budgeting procedures, the Government might fund additional places.

In the Netherlands, for some courses in higher professional education, students must have specific skills, knowledge or qualities (*aanvullende eisen*, i.e. additional requirements), which are determined by the institutions. For university courses where there are more applicants than places available, places are assigned by lot. A *numerus clausus/numerus fixus* is introduced if the number of students enrolling is higher than the nationally available number of places. A limit may be set for courses (*opleidingsfixus*, maximum course number) or for institutions (*instellingsfixus*, institutional maximum numbers).

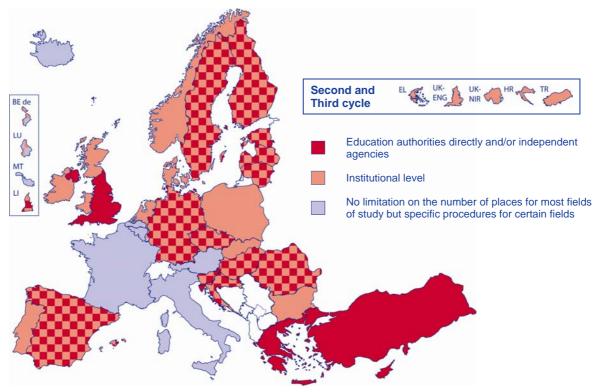
A **combination** of both procedures is also used in a growing number of countries. For example in Latvia, Lithuania, Hungary, Romania and Croatia the institutions propose the maximum number of places for each field of study and the education authorities approve the final number to be funded by the educational budget. In Sweden, the HEIs are responsible to set the number of study places on different programmes within the maximum amount each institution receives from the state.

In Liechtenstein, the government can limit the number of available study places in all fields through existing financial agreements or recipients of subsidies. Only a limited number of study places are financed in the University of Liechtenstein through the existing financial agreement as the institution receives a certain sum per student.

In Croatia, institutions themselves decide the total number of students to enrol on a particular course. They use criteria such as the number of full-time academic staff, the number and capacity of lecture halls, classrooms etc. However, the number of publicly funded places is defined at central level.

#### SECTION III - LEVELS AND PROCESSES OF DECISION-MAKING

• Figure B18: Levels of authority responsible for *determining the number of places* available in the first, second and third cycles of tertiary education, 2010/11



Source: Eurydice.

#### Country specific notes

Belgium (BE de): Unrestricted entrance for the field of nursing and limitation at institutional level for teachers' education programmes.

**Germany**: Various local restrictions on admissions to courses exist that are not included in the nationwide admissions procedure. In these cases, responsibility for the admission of applicants lies solely with the higher education institution. **Czech Republic**: Public higher education institutions may admit more students than the number decided at central level but these must be funded from institutional resources.

Poland: Places in the field of medicine are determined at central level.

**France**: The number of places in the fields of medicine, dentistry, pharmacy and midwifery) are determined annually by the ministries of higher education and health.

Latvia, Lithuania and Slovenia: Education authorities define the number of tuition free (state subsidised) places based on a proposal submitted by higher education institutions. All higher education institutions (including private ones) determine the number of places available for fee-paying students.

**Austria**: Places in universities of applied sciences (that offer first and second study cycles) are decided by the Council for Universities for Applied Sciences (*Fachhochschulrat* – FHR), an independent organisation for quality assurance at these institutions. The Austrian Federal Ministry of Science and Research only decides whether and, where appropriate, how many of these places will be supported.

**Finland**: Education authorities make a decision on the overall number of places by educational field in their education development plan. The specific number of places in faculties or subfields are decided at institutional level.

Liechtenstein: Only places on programmes in business studies and architecture are offered.

**Norway**: A national agency, 'Samordna Opptak', is responsible for access to first cycle and integrated masters programmes.

**Unrestricted or open access** to tertiary education exists when admission criteria is based solely on the certificate awarded on satisfactory completion of upper secondary education, or its equivalent. This type of access applies to all or most fields of study in just a few countries, namely Belgium, France, Italy, Malta, Austria and Iceland. In the French Community of Belgium, students have to take an entrance examination for bachelor programme in civil engineering and an admission examination for all bachelor programmes organised by arts schools. In the Flemish Community of Belgium, students have to take an entrance examination for some artistic fields and for medicine and dentistry.

In the majority of countries, the same condition of admission is applied to all fields of study. However, medicine and dentistry are sometimes subject to specific arrangements. In France and Italy, there is generally free access to tertiary studies but places in the field of medicine, dentistry, pharmacy and nursing are defined at central level by the Ministry of Education and the Ministry of Health. In Austria, the universities have unrestricted access except for the fields of medicine, dentistry, 'health' studies, veterinary medicine, and psychology where the number of places are fixed by law. In addition, for studies in the field of journalism and communication, the Federal Government may decide on the number of students admitted according to criteria included in the University Act.

## IN MANY COUNTRIES, HEIS ORGANISE THEIR OWN STUDENT SELECTION PROCEDURES

In all European countries, the minimum requirement for securing access to tertiary education is an upper secondary education certificate or its equivalent. In most countries, other admissions procedures may also apply, such as the requirement for candidates to sit an entrance examination, submit a personal record of achievement or attend an interview.

Such procedures are used to limit admissions, largely because the number of candidates exceeds the capacity of institutions (see Figure B18), but in some cases it is to ensure that candidates meet the requirements of the course (for example, in artistic, technical or medical fields of study). Labour market conditions may also underlie attempts to control the number of places available if too many or too few young people are graduating in particular subjects in relation to the number of jobs available in those sectors.

In a group of countries, the school-leaving examination constitutes the entry examination for tertiary education. For example, in Hungary, a precondition for admission to a tertiary education institution is success in the national upper secondary school-leaving examination (*érettségi vizsga*), which also serves as an entrance exam for undergraduate (Bachelor) courses. The exam may be taken at two levels (standard and advanced).

The second option used by some countries is the establishment of a national entry examination for all public universities with common criteria for evaluation. This is the case in Spain, where the university entrance examination is a necessary requirement for admission in all Bachelor degree programs. Only under special circumstances like students holding previous university titles, foreign students accomplishing the university entrance requirements in their countries of origin with which Spain has an agreement, students holding a Technician degree (from Advanced Vocational Training) in the related field of studies, can have access to university without this requirement. The university entrance examination is organised and planned jointly by universities and by the authorities in the corresponding Autonomous Community. Each university decides on the location and the date when the tests will be held, within the national deadlines fixed annually for each session as well as for student registration.

In Greece and in Cyprus, similar competitive entrance examinations are organised by the Ministry of Education and Culture to access state institutions of tertiary education.

In Bulgaria, the Czech Republic, Slovenia, Slovakia and Iceland, institutions organise their own student selection procedures with due regard to national standards limiting the number of enrolments. In the Czech Republic and Slovakia, the entrance examinations are organised directly by faculties which determine the admission requirements in such a way as to admit only the candidates with the necessary abilities and skills. The dean of faculty decides in the case of admissions appeals and the rector of higher education institutions makes the final decision on student admission in those cases.

#### SECTION III - LEVELS AND PROCESSES OF DECISION-MAKING

In the Czech Republic and Slovenia, institutions organise their own admissions procedures and particular programmes may have specific requirements. For example, students in the fields of arts, architecture and sports must successfully complete a talent or ability test, but art academies may decide that students who do not fulfil all the general admission requirements may be given a place if they are especially gifted.

In Ireland, the student selection process for most first cycle programmes is run by the Central Applications Office (CAO) on behalf of the publicly funded higher education institutions. In addition, provision is made to fill some 5 % of places in the university sector under specific initiatives for socioeconomically disadvantaged students (HEAR) and students with disabilities (DARE).

Finally, in countries, where there is normally unrestricted access to most fields of tertiary education, different examination arrangements exist for different fields of study (e.g. engineering, medicine, arts, etc.). In Belgium (French Community), for example, a specific exam is organised at institutional level for studies in engineering and arts. In France, the access to medical studies is subject to an entrance examination, while applicants for engineering, commerce or architecture programmes must pass an entry exam organised by the individual institutions. In Italy, for some fields of education, such as medicine and health studies, where the central authorities establish the number of places by ministerial decree, they also establish the procedures for and content of the entrance examination.

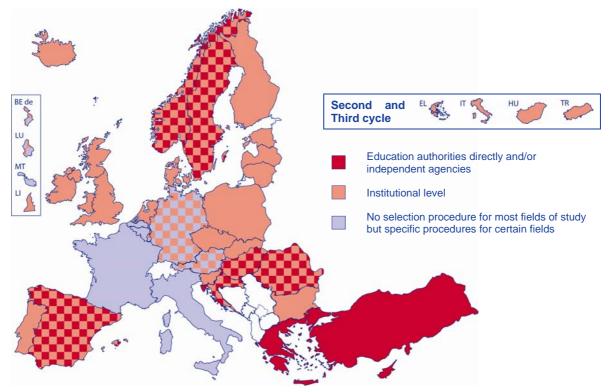
In Iceland, the Higher Education Institution Act allows higher education institutions to set specific admission requirements for students, such as requiring students to pass an entrance examination or to undergo assessment. In Iceland, there are specific provisions for entry/continuing studies in some specific fields. For example, the faculty of medicine at the University of Iceland organises a selection procedure for students of medicine and physiotherapy at the point of entry. Competitive examinations at the end of the first semester are held in the faculties of nursing and odontology. The number of students allowed to continue after a competitive examination is limited (numerus clausus). For admission to the faculty of pharmacy or science, students are required to have matriculated from a mathematics, physics, or natural sciences programme of an upper secondary school. In Iceland, the department of drama at the Academy of the Arts also holds an entrance examination.

In Norway, following registration by the university and college admissions service (Samordna opptak), the tertiary education institution that is the applicant's first choice (out of 15) handles the application on behalf of all the institutions for which the applicant has expressed a preference. The applications system is similar in Sweden.

In Croatia, a two-stage process governs the entry to the first cycle of higher education; the first stage is managed centrally by the National Centre for External Evaluation of Education (NCEEE), and the second by the higher educational institutions themselves. NCEEE administers the state *Matura* national exam at the end of upper secondary education and the results of these exams, apart from being used to monitor the overall quality of the national educational system, are used by all the higher education institutions in Croatia as a criterion for enrolment. However, a number of HE institutions also administer their own additional entrance exams, the outcomes of which are combined with the results of the state *Matura* to award places.

Institutions are usually responsible for the selection procedures for the second and third cycles of tertiary studies, setting specific examinations or establishing selection criteria. In Spain, for example, for the third cycle, each university's academic commission is responsible for selecting students as well as designing and coordinating doctorate programmes including organising any associated teaching and research activities.

#### Figure B19: Levels of authority involved in the selection procedures for the first, second and third cycles of tertiary education, 2010/11



Source: Eurydice.

#### Country specific notes

**Germany**: In general, all applicants who meet the entrance requirements are registered for the course of study of their choice. In some cases, universities and *Fachhochschulen* have special admissions procedures in order to identify a course-related aptitude.

**Ireland**: Selection of students for most first cycle programmes are run by the Central Applications Office (CAO) on behalf of the publicly funded higher education institutions.

**Italy**: In some specific and limited conditions, established by law, university institutions can limit the number of places and establish selection procedures that allow them to choose students on the basis of knowledge gained during the previous stage of education.

**Austria**: In public universities, selection procedures at institutional level are set mainly by the universities of applied sciences for the fields of medicine, dental medicine, health studies, veterinary medicine, and psychology; and in other universities for journalism and communication, music and arts as well as sports.



#### **PARTICIPATION**

## HIGHER ENROLMENT RATES IN EDUCATION DESPITE A DECLINE IN THE TOTAL NUMBER OF YOUNG PEOPLE

The EU-27 average proportion of pupils and students in formal education in the total population decreased from 22.7 % in 2000 to 21.5 % in 2009, which represents a decline of 1.2 percentage points or almost 1.9 million pupils and students. However, as the number of young people aged 0-29 as a proportion of the total population decreased by 3 percentage points over the same period this therefore represents a smaller reduction in the participation rates (see Figure A1).

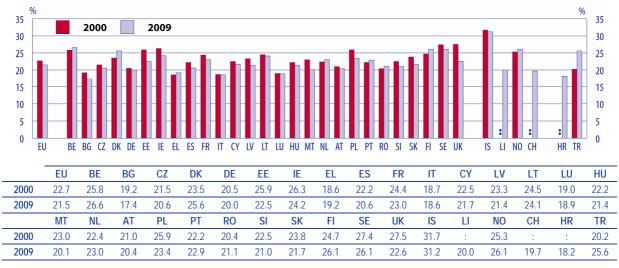
The country with the highest enrolment in formal education (around 31 %) is Iceland since the proportion of young people in the 0-29 age group in 2009 was higher here than in any other European country except Turkey.

Between 2000 and 2009, the steepest decline (almost 5 percentage points) in the proportion of pupils and students occurred in the United Kingdom, even though the decrease in the 0-29 age group was only around 0.7 percentage points for the same period. This fall can be partially explained by the fact that there is a break in time series following methodological change from 2006 (after 2006 only students participating in courses equal to or longer than a semester are included at ISCED levels 3 and 4). Estonia and Sweden were the two other countries where the relative number of pupils and students decreased more than the relative number of young people in the 0-29 group.

Turkey is the country with the highest absolute and relative increase in the proportion of pupils and students in the total population between 2000 and 2009. In this period, in the proportion of pupils and students in the total population increased with 5.4 percentage points. The main reason for this phenomenon is that formal education has become more widespread in the country.

Belgium, Denmark, Greece, the Netherlands, Portugal, Romania, Finland and Norway also recorded a relative increase in the number of pupils and students although the proportion of young people in the 0-29 age group relative to the total population fell.

#### Figure C1: Proportion of pupils and students from pre-primary to tertiary education levels (ISCED 0-6) in the total population, 2000 and 2009



Source: Eurostat, UOE (data extracted July 2011).



#### **Explanatory note**

The data collection on enrolments covers the whole education system regardless of ownership of institutions. All standard education programmes are included, as well as all adult education with subject content similar to standard education programmes or leading to qualifications, which are similar to corresponding standard programmes. All special education is included regardless of the needs of students and educational institutions. Apprenticeship programmes are included, but not entirely work-based education or training for which no formal education authority has oversight. Full-time and part-time students are included.

Each student enrolled during the school year is counted only once even if enrolled in multiple programmes.

#### Country specific notes

Greece: Data from 2008.

**United Kingdom**: Break in time series following methodological change from 2006 – only students participating in courses equal to or longer than a semester are included at ISCED levels 3 and 4.

#### CHILDREN START FORMAL EDUCATION AT AN INCREASINGLY EARLY AGE

Over the period 2000 to 2009, on average in the EU-27, the participation rate of 3-year-old, 4-year-old and 5-year-old children in pre-primary or primary education increased by 15.3, 7 and 6.3 percentage points respectively, reaching around 77 %, 90 % and 94 % in 2009. The participation rate of 6-year-old children decreased by around 1.5 percentage points and was 98.5 % in 2009.

In 2009, in the majority of European countries, most children began non-compulsory pre-primary education at the age of three. However, in Greece, the Netherlands and Liechtenstein, most children started at the age of four, and in Switzerland and Turkey at age five. Approximately one third of children in Poland and Finland entered in pre-primary education at age 6.

The participation of 3-year olds in pre-primary education was almost total in Belgium, Denmark, Spain, France and Iceland in 2009, reaching more than 95 %. The highest increases in participation for this age group (more than 20 percentage points) were registered in Denmark, Germany, Luxembourg, Romania, Slovenia, Sweden, the United Kingdom and Norway. A slight decrease of less than 3.5 percentage points was found in Ireland, Italy, Malta and the Netherlands.

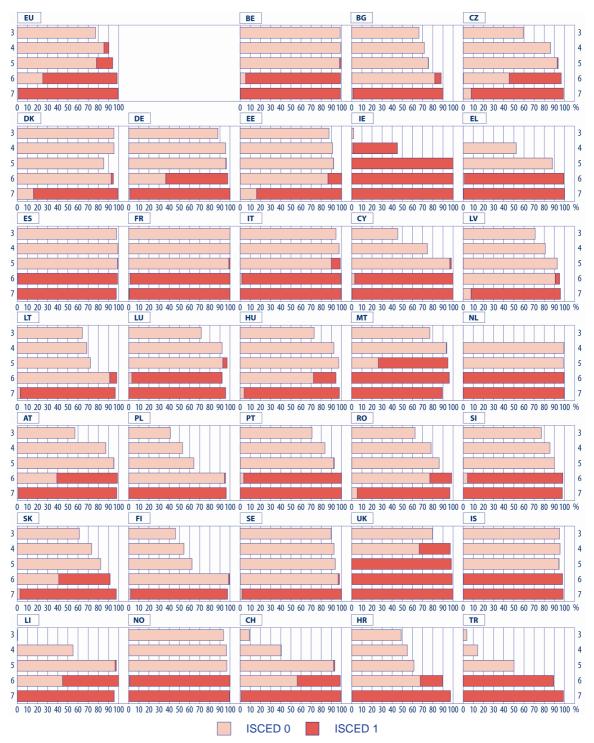
In most countries between 2000 and 2009, there was an increase in the participation rate of 4-year-olds. In Denmark, the three Baltic States, Cyprus, Poland, Portugal, Romania, Slovenia, Finland, Sweden and Norway, the percentage increase was more than 11 percentage points.

Participation rates for 5-year-olds showed a growth of more than 15 percentage points between 2000 and 2009 in Cyprus, Lithuania, Latvia, Poland, Slovenia, Sweden and Turkey. In contrast, in Denmark and Italy, the figure fell by more than 10 percentage points.

In most European countries, the starting age of compulsory primary education (ISCED 1) is six years (Eurydice, 2011b). Consequently, in the EU on average, in 2009, around 57 % of 6-year-old children transferred to ISCED 1 institutions. In Belgium, Greece, Spain, France, Cyprus, the Netherlands, Portugal, Slovenia, Iceland and Norway, the rate was much higher at over 90 %. However, in some of the countries where compulsory primary education starts at the age of six, the enrolment rate was relatively low. Thus, in Denmark, it was only around 2 %, while in Hungary, Romania and Croatia, it accounted for around 22 %. In Denmark and Hungary, this may be explained by the fact that in these countries, in addition to reaching the required entry age, pupils must also have attained the necessary level of development before being admitted to the first year of primary education. Furthermore, in Hungary parents have the right to postpone their child's admission even if he/she is deemed ready for school following an assessment. In Romania, although reaching the official school age is the sole admission criterion, parents may also request that their child's admission be postponed.



#### • Figure C2: Participation rates in pre-primary and primary education (ISCED 0 and 1) by age, 2009



Source: Eurostat, UOE (data extracted July 2011).

#### **Explanatory note**

Pre-primary education (ISCED 0) is designed to meet the educational and development needs of children of at least 3 years of age. Pre-primary education must employ staff with specialised qualifications in education. Day nurseries, playgroups and day-care centres where staff are not required to hold a qualification in education are not included. Primary education (ISCED 1) programmes are designed to give the basic education in reading, writing and mathematics along with an elementary understanding of other subjects.



This indicator gives the participation rates in ISCED 0 and 1 for single years from ages 3 to 7 and shows the enrolment pattern in education at the early ages. For some countries, enrolment rates appear to exceed 100 %. This is because they are calculated on the basis of two data sets (population and education) derived from different surveys carried out at different dates in the year. The figure has been proportionally rounded down to show 100.

Population data refer to 1st January 2009.

#### **Country specific notes**

Belgium: Data exclude independent private institutions and the data for the German-speaking Community.

**Ireland**: There is no official provision of education at ISCED 0. However, many children attend some form of education at this level but provision is private. Universal pre-school provision for children aged between 3 years and 2 months and 4 years 7 months was introduced in Ireland in January 2010.

Greece: Data from 2008.

Between 2000 and 2009, the participation rate of 6-year-old children in primary education increased by 6.3 percentage points across the EU-27. During this period, Slovenia had the most significant increase, followed by Germany, while the greatest reduction of around 15 percentage points occurred in Hungary. In a small number of countries, the starting age of compulsory primary education is seven (the three Baltic States, Poland, Finland and Sweden). In 2009, these countries therefore recorded more than 80 % of 7-year-olds entering ISCED 1.

The participation rates of 7-year-olds in most European countries surpassed 95 %. In Bulgaria, the Czech Republic, Latvia, Lithuania, Hungary, Malta and Romania, it varied from approximately 88 % to around 94 %. The lowest participation rate for this age group, at approximately 83 %, occurred in Denmark. During the period 2000-2009, the participation rate was more or less stable throughout Europe. A significant decline occurred in Malta (almost 11 percentage points) and in Bulgaria and Denmark (almost 6 percentage points), while in Turkey the rate increased by more than 6 percentage points.

In Ireland and the United Kingdom, the percentage of children enrolled in primary education at the age of four was 44 % and 31 % respectively, rising to over 98 % of 5-year-olds in both countries. In Malta, around 68 % of children began to attend ISCED 1 at age 5.

In Denmark and Estonia, more than 15 % of 7-year-old children remained in pre-primary education. Similarly, the approximate figures were 8 % in the Czech Republic and Latvia, 6 % in Romania and 4 % in Hungary. The reasons for these children remaining in pre-primary education can be different. In Estonia, for example, this can be due to not reaching the age for compulsory schooling, as there children have to start formal education if they are 7 years old on 1st October of the current year. Not having reached the appropriate level of development can be other reason, as this is a requirement for admission to the first year of primary education in the Czech Republic. In addition, in Estonia, Latvia and Romania, postponing a child's admission to primary education is possible at the request of parents (Eurydice, 2011a).

In Bulgaria and Malta, around 10 % of 7-year-old children were not enrolled in either ISCED 0 or ISCED 1. In Latvia, Luxembourg and Liechtenstein, this percentage was around 4 %.

#### ALMOST 90 % OF ALL 17-YEAR-OLD EUROPEANS ARE STILL IN EDUCATION

In 2009, almost half of 15-year-olds in the EU were enrolled in lower secondary education (ISCED 2) and approximately half were registered in upper secondary education (ISCED 3). At the EU level, participation in upper secondary education (ISCED 3) increased to almost 80 % at the age of 17. More than a half of 18-year-olds and around one quarter of 19-year-olds were still registered in upper secondary education but this participation rate subsequently falls to less than 12 % by the age of 20.



In many European countries, more than a half of young people are transferred to upper secondary education (ISCED 3) at the age of 15. In the United Kingdom, all 15-year-olds were already enrolled in ISCED 3, which is considered to start at age 14. In Belgium, Ireland, Cyprus and Slovenia, almost all young people had made the transition by age 16.

In some countries, young people do not transfer from ISCED 2 until they are older. Participation rates for 15-year-olds at ISCED 2 were above 90 % in Denmark, the three Baltic States, Spain, Malta, Poland, Finland, Sweden, Iceland and Norway. Between 10 % and 22 % of pupils were still enrolled in ISCED 2 at the age of 17 in Denmark, Germany, Spain, Lithuania, Malta, the Netherlands and Portugal. This later transfer is due to the length of lower secondary education in some countries, which lasts until the age of 16, or, in the case of Denmark, to age 17. In the Netherlands, the whole of VMBO is considered to be ISCED 2. Another factor which leads to a later transfer to ISCED 3 for some students is that in some of these countries students may be required to repeat a year if they do not meet the required attainment levels (Eurydice 2009a, p. 231).

In all European countries, with the exception of Denmark and Iceland, less than a half of young people at the age of 19 remained in ISCED 3, although in 11 countries the figure was more than one third. In Ireland, Cyprus and Croatia, the percentage was only about 3 %.

In some countries, significant numbers of 15- and 16-year olds are not enrolled in either ISCED 2 or 3, even though education is still compulsory at these ages. The upper age limit for compulsory education is 15 in Austria and Liechtenstein and 16 in Bulgaria and Luxembourg, but in these countries, between 5.5 % and 10.5 % of 15-year-old children were not enrolled in either level. For 16-year-olds, this percentage was around 15 % in Bulgaria, Luxembourg and Romania while at the furthest extreme it reached nearly 50 % in Malta. In both Malta and Romania, formal education is also compulsory until the age of 16.

Since the starting age and the duration of secondary education level in Europe differ from one country to another, the transition to higher education level does not occur at the same age in all countries.

At the EU level, around 15 % of 18-year-olds entered tertiary education in 2009. In the same year, the participation at this level exceeded 31 % at the age of 19 and 36 % at the age of 20. Around 4 % of each of age group was enrolled in post-secondary non-tertiary education (ISCED 4).

Greece and Belgium recorded that approximately 41 % and 36 % respectively of 18-year olds were enrolled in ISCED 5. Figures of over 20 % were also recorded in Ireland, Spain, France, Cyprus, the Netherlands, Portugal, the United Kingdom and Turkey. This relatively high participation rate is not surprising since, in these countries, secondary education is normally expected to be completed by the age of 18. For 19-year-olds, countries such as Greece and Slovenia registered a participation rate of slightly more than 50 %. In these two countries and in Lithuania too, more than a half of young people aged 20 were in tertiary education. In contrast, a relatively low percentage of 20-year-olds participated at this level in Denmark, Iceland and Switzerland (less than 20 %).

### Country specific notes (Figure C3)

EU: Data are Eurostat estimate

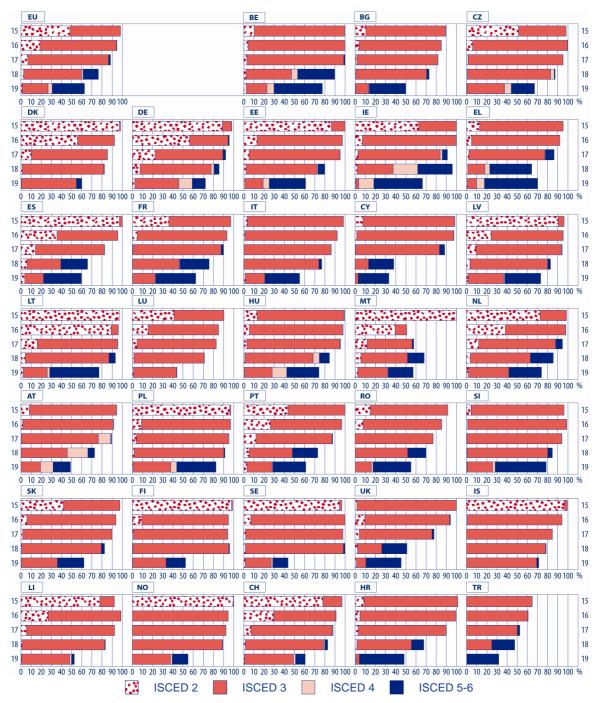
Belgium: Data exclude independent private institutions and the data for the German-speaking Community.

Greece: Data from 2008.

**Liechtenstein**: Pupils enrolled in school abroad (across the border) are not included. This makes 100 % for students in vocational schools on ISCED level 3,4 and 5 and up to 90 % of students on ISCED level 5 and 6.



### Figure C3: Participation rate of 15-19 years-old students in lower secondary education to tertiary education (ISCED 2 to 6), 2009



Source: Eurostat, UOE (data extracted July 2011).

### **Explanatory note**

The data collection on enrolments covers the whole education system regardless of ownership of individual institutions. All standard education programmes are included, as well as all adult education with subject content similar to standard education programmes or leading to qualifications, which are similar to corresponding standard programmes. All special education is included. Apprenticeship programmes are included, but not entirely work-based education or training for which no formal education authority has oversight.

Each student enrolled during the school year is counted only once even if enrolled in multiple programmes.

For some countries, enrolment rates appear to exceed 100 %. This is because they are calculated on the basis of two data sets (population and education) derived from different surveys carried out at different dates in the year. The figure has been proportionally rounded down to show 100.

Population data refer to 1st January 2009.



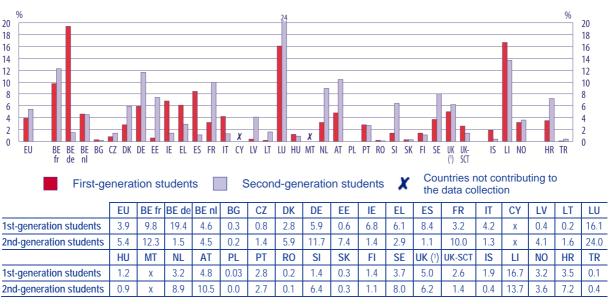
## IN MOST COUNTRIES, LESS THAN 10 % OF 15-YEAR-OLDS HAVE AN IMMIGRANT BACKGROUND

According to the PISA 2009 survey, at the EU level, the proportion of 15-year-year-old students with an immigrant background (both first- and second-generation students) was around 9 %. This overall trend, which conceals very different situations in specific countries, should be considered alongside the proportion of the total population born abroad, as well as the proportions born abroad in the 5-9 and 10-14 population groups (see Figure A5).

In most countries, less than 10 % of 15-year-olds have an immigrant background. A very low percentage of less than 1 % has been recorded in Bulgaria, Poland, Romania, Slovakia and Turkey. In contrast, Luxembourg is the country with the highest proportion at around 40 %, followed by Liechtenstein with approximately 30 %. In Belgium (the French and German-speaking Communities), Germany and Austria, the proportion of students aged 15 with an immigrant background was between 15 % and 22 % of the school population at this age.

In 2009, in the in Belgium (German-speaking Community) and in Spain, the proportion of first-generation immigrant students was, respectively, almost 13 and 8 times higher than the proportion of second-generation students. In both cases, this can be partially explained by the recent migration flows in the last decade. At the other extreme, in the three Baltic countries, the proportion of first-generation immigrant students was more than 10 times lower than the proportion of second-generation students. These proportions are consistent with those of the total population born abroad and with the 5-9 and 10-14 population groups in the corresponding countries (see Figure A5). It should also be noted that the proportion of second-generation students in Lithuania was not significant and remained at less than 2 %.

### Figure C4: Proportion of 15-year-old students with an immigrant background, 2009



Source: OECD, PISA 2009 database.

UK (1) = UK-ENG/WLS/NIR

### **Explanatory note**

The index on immigrant background used in PISA has the following categories: (1) native students (those students born in the country of assessment or those with at least one parent born in that country; students who were born abroad with at least one parent born in the country of assessment are also classified as 'native' students); (2) second-generation students (those born in the country of assessment but whose parents were born in another country); and (3) first-generation students (those born outside the country of assessment and whose parents were also born in another country). Students with missing responses for either the student or for both parents, or for all three questions have been given missing values for this variable.



## ON AVERAGE, THE DISTRIBUTION OF UPPER SECONDARY STUDENTS BETWEEN GENERAL AND VOCATIONAL PROGRAMMES IS BALANCED

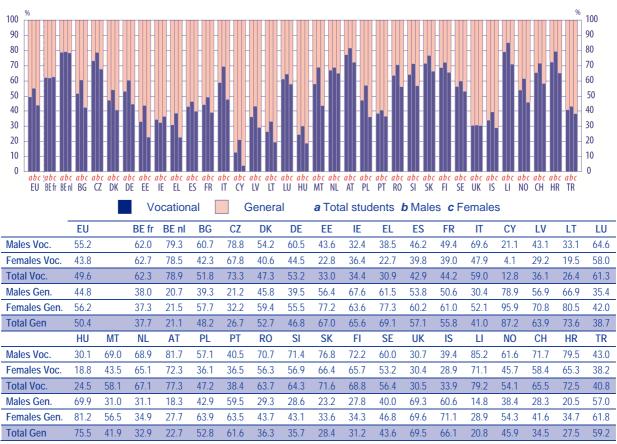
At the EU-27 level, between 2000 and 2009, the proportion of students in general education as a percentage of all students at ISCED 3 increased by 5.5 percentage points, reaching 50.4 % in 2009.

In 2009, in Cyprus, Lithuania and Hungary, the proportion of students in general upper secondary education was greater than 70 % and in Estonia, Ireland, Greece, Latvia, Portugal, the United Kingdom and Iceland, the figure varied between 60 % and 70 %. In contrast, high participation rates in vocational upper secondary education of more than 60 % were found in twelve countries.

During the period 2000-2009, the highest increase in the proportion of students in general education occurred in the United Kingdom with an increase of almost 37percentage points, followed by Poland (around 17 percentage points), France and Lithuania (around 13 percentage points) and Germany (10 percentage points). The Czech Republic, Denmark, Slovenia, Slovakia and Turkey also recorded a rise in the relative number of general education students by more than 6 percentage points.

On the other hand, in several countries, the proportion of students in vocational education as a percentage of all students at ISCED level 3 increased significantly. In Ireland, Italy, Malta and Portugal, this percentage exceeded 30 %. In Hungary and Finland, the rate was greater than 13 %. An increase of less than 10 % was found in Belgium, Estonia, Spain, Austria, Romania, Sweden and Iceland.

 Figure C5: Distribution of upper secondary (ISCED 3) students by programme type (general or vocational) overall and by sex, 2009



Source: Eurostat, UOE (data extracted July 2011).



### **Explanatory note**

This indicator shows the number of males and females enrolled in general and vocational upper secondary education as a proportion of all students in upper secondary education (ISCED 3). Pre-vocational education is included in general education (except Austria).

The data collection on enrolments covers national education systems regardless of ownership of institutions. All standard education programmes are included, as well as all adult education with subject content similar to standard education programmes or leading to qualifications which are similar to corresponding standard programmes. All special education is included. Apprenticeship programmes are included, but not entirely work-based education or training for which no formal education authority has oversight.

Vocational education covers education that prepares participants for direct entry, without further training, into specific occupations. General programmes are not designed for a specific class of occupations, and less than 25 percent of the programme content is vocational or technical. Pre-vocational programmes have at least 25 percent vocational or technical content, but are mainly designed to introduce participants to the world of work and do not lead to a relevant vocational or technical qualification.

Both full-time and part-time students are included; the table shows head-counts.

### **Country specific notes**

Greece: Data from 2008.

Austria: Students in pre-vocational and vocational programmes are presented together.

When participation rates are broken down by sex, in 2000 on average, the male enrolment rate in vocational education was higher by around six percentage points than that for women, while in 2009 this difference exceeded 11. Male participation in vocational education was higher in almost all European countries. An especially high difference of over 20 percentage points occurred in Estonia, Italy, Malta and Poland. A difference of more than 15 percentage points was recorded in Bulgaria, Germany, Greece, Cyprus and Norway. The only exceptions were Belgium and the United Kingdom, which registered a balanced distribution by sex, and Ireland where female participation in vocational education was 4 percentage points higher than male.

### PARTICIPATION DECLINES AFTER COMPLETION OF COMPULSORY EDUCATION

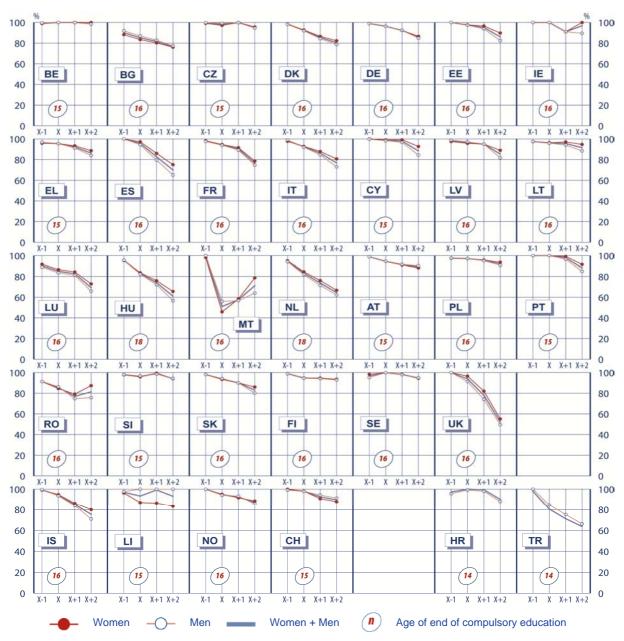
Figure C6 shows total participation rates and the rates broken down by gender at four different points in time: one year before the end of compulsory education, at the end of compulsory education and at one and two years later. Any analysis of these figures should take into account the upper age limit for compulsory education as well as the age of transition to higher education since these vary from one country to another.

In 2009, a very slight fall in participation occurred in the years following the end of compulsory education in Belgium, the Czech Republic, Ireland, Latvia, Lithuania, Poland, Slovenia, Finland, Sweden, Liechtenstein and Croatia. In these countries, participation rates still exceeded 90 % in the second year after the end of compulsory education. The higher participation rate in Belgium and Poland may be partially explained by the fact that compulsory full-time education is followed by compulsory part-time education until the age of 18. In Croatia, the reason for the high participation rate in the second year after the end of compulsory education might be the relatively low upper age limit for compulsory education (14).

In contrast, in Hungary, the Netherlands and Turkey, less than 65 % of young people were enrolled in education two years after the end of compulsory education. In the United Kingdom, this percentage was around 52 %. In the case of Hungary and the Netherlands, the relatively high upper age limit for compulsory education (18) and the fact that it coincides with the transition into tertiary education level explains the significant decline in participation after the end of compulsory education. A surprising pattern was found in Malta, where a participation rate of 51 % at the end of compulsory education increased to around 71 % in the second year after the end of compulsory education.



### Figure C6: Participation rates in education up to two years after the end of full time compulsory education: total participation and by gender, 2009



Source: Eurostat, UOE (data extracted July 2011).

### **Explanatory note**

This indicator shows the enrolment rates in education (all ISCED levels) for each country, at the end of full-time compulsory education. Both full-time and part-time students are included; the table shows head-counts.

The data collection on enrolments covers the whole education system regardless of ownership of institutions. All standard education programmes are included, as well as all adult education with subject content similar to standard education programmes or leading to qualifications which are similar to corresponding standard programmes. All special education is included. Apprenticeship programmes are included, but not entirely work-based education or training for which no formal education authority has oversight.

### **Country specific notes**

**Belgium**: Data exclude independent private institutions and the data for the German speaking Community. **Greece**: Data from 2008.

**Portugal**: Since the school year 2009/10, Portugal increased the duration of the compulsory schooling till the age of 18. **Liechtenstein**: Pupils enrolled in school abroad (across the border) are not included. This makes 100 % for students in vocational schools on ISCED level 3, 4 and 5 and up to 90 % of students on ISCED level 5 and 6.



In the second year after the end of compulsory education, in most countries, the number of young women participating in education was higher in relation to young men. This trend was particularly marked in Ireland and Malta where female participation rates were higher by almost 15 percentage points than those of young men, and in Romania where this figure exceeded 11 points.

In contrast, in Bulgaria, Austria, Slovenia, Sweden and Switzerland, male participation rates were slightly higher than those of young women; in Turkey, this difference was about five percentage points.

The difference between the sexes is even more pronounced when the data from the first and the second year after the compulsory participation are compared. In Cyprus, Latvia, Hungary, Romania, Slovakia, Iceland and Liechtenstein, the participation gap between the sexes increased by more than five percentage points in the second year compared with the first year after the end of compulsory education. In Ireland and Malta, this gap surpassed 13 percentage points.

## POST-COMPULSORY PARTICIPATION RATES IN EDUCATION IMPROVED OR STAY STABLE DURING THE LAST TEN YEARS

In the last decade, the participation rates in post-compulsory education improved or staid stable in the majority of the European countries. When comparing the participation rates in 2000 and in 2009, it can be seen that the particularly slow decline observed in 2000 in Belgium, the Czech Republic, Lithuania, Slovenia and Sweden is maintained in 2009. In addition, countries as Germany, Finland and Norway also keep their participation rate at more than 90 % one year or two years after end of the compulsory schooling. On the other hand, Estonia, Ireland, Greece, Cyprus, Latvia, Poland and Portugal (from 2009 the compulsory age was increased to 18 years) did a considerable progress and today have more than 90 % participation one year after the end of the compulsory education.

Finally, Bulgaria, Malta and Romania, the three countries with the lowest participation rate one and two years after the compulsory schooling in 2000, are among the countries with the most relevant improvement during the last decade, however one year after the compulsory education in 2009 still the participation is less than 80 %. Hungary is a particular case in this regards as in this country the end of compulsory education is at the age of 18 and the only possible transition is to tertiary education programmes.

During the last decade the participation in Spain, France, Luxembourg, the United Kingdom and Iceland remained unchanged and no major improvement can be observed. In all these countries, two years after the compulsory schooling, the participation rate drops to between 60 % and 80 % with a most important reduction in the United Kingdom where the participation is only 52 %.



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#### • Figure C7: Trends of the participation rates, following full-time compulsory education 2000-2009

Source: Eurostat, UOE (data extracted July 2011).

X-1 X X+1 X+2

X-1 X X+1 X+2

### **Explanatory note**

X X+1 X+2

This indicator shows the enrolment rates in education (all ISCED levels) for each country, at the end of full-time compulsory education. Both full-time and part-time students are included; the table shows head-counts.

X-1 X X+1 X+2

X-1 X X+1 X+2

X-1 X X+1 X+2

The data collection on enrolments covers the whole education system regardless of ownership of institutions. All standard education programmes are included, as well as all adult education with subject content similar to standard education programmes or leading to qualifications which are similar to corresponding standard programmes. All special education is included. Apprenticeship programmes are included, but not entirely work-based education or training for which no formal education authority has oversight.

### **Country specific notes**

Greece: Data from 2008.

Portugal: Since the school year 2009/10, Portugal increased the duration of the compulsory schooling till the age of 18.



# A THIRD OF ALL 20-22 YEAR OLDS ARE IN TERTIARY EDUCATION, AND WOMEN OUTNUMBER MEN IN ALMOST ALL COUNTRIES

The participation rate in tertiary education strongly depends on the age group of the population concerned and the theoretical age for obtaining a secondary education certificate that allow students to continue their education. In 2009, at the EU level, about 13 % of men and 19 % of women aged 18 were participating in tertiary education. The participation rates reached their peaks for the male and female populations at the age of 20, with about 30 % and 42 % respectively. After the age of 24, participation rates drop around 5 % per year up to only 2 % for men and 2.5 % for women aged 35-39.

National differences in terms of education systems and, in particular, the age at which young people transfer from upper secondary education to tertiary level as well as the duration of the first study degree, cause significant fluctuations in participation rates. Thus, in Belgium, Ireland, Greece, Spain, France, Portugal and the United Kingdom, more than 20 % of men and more than 30 % of women aged 18 participated in tertiary education. In Turkey, male and female rates were balanced and were around 23 %. The only country where female participation peak was reached at the age of 18 was Cyprus, with a rate of 44 %.

At the other end of the spectrum, the rate of participation in tertiary education still exceeds 10 % of the male and female population aged 28 in Austria and the Nordic countries (Denmark, Finland, Sweden, Iceland and Norway). In Ireland, Greece and the Nordic countries, more than 5 % of the population aged 30-34 still participates in tertiary education.

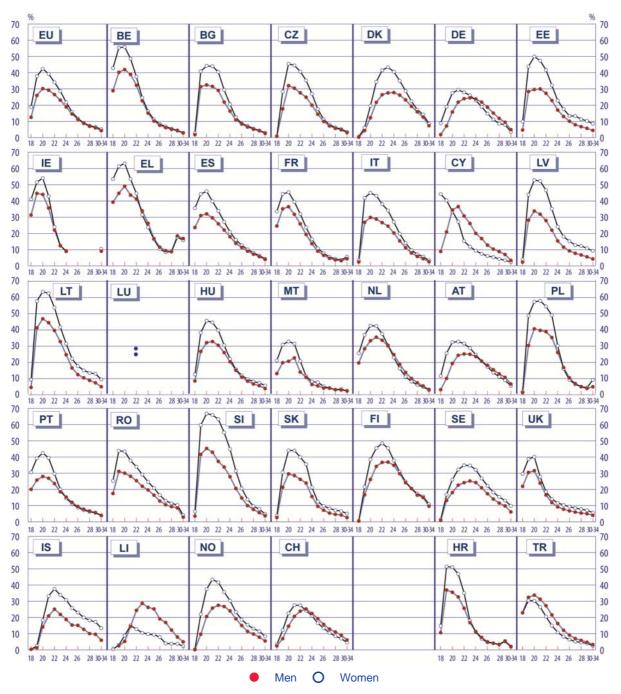
In countries such as Belgium, Ireland, France, Portugal, the United Kingdom, Croatia or Turkey, the participation rate drops off sharply after age 20 and amounts to less than 20 % of the population aged 24. More than 30 % of the whole population aged 24 in Finland and the same share of the female 24-year olds in Denmark, Slovenia, Sweden, Iceland and Norway are still enrolled in tertiary education. In comparison with other countries, in the Nordic countries, this rate remains at a relatively high level for the population aged 24 and over. Greece, France and Poland are the only countries where participation rates rise again after having reached their lowest point between aged 28 and 30.

With respect to age, changes in participation rates for men and women in tertiary education follow a similar pattern in most countries. Almost everywhere, with the exception of Germany, the Netherlands, Austria, Liechtenstein and Switzerland, the rates for young men and women reach their highest levels at the same age. In these five countries, participation among men peaks one or two years later than for women. This is partly due to the fact that men are obliged to complete their military or civil service (except in the Netherlands and Liechtenstein where neither exists).

Between 18 and 39 years old, participation rates for women are usually higher than those for men, a difference that is especially marked in the Baltic States, Poland, Slovenia and Croatia; whereas in Germany, France, the Netherlands, Austria, the United Kingdom, Switzerland and Turkey there is not much difference. Differences in participation rates between men and women decrease with age to a point where they become virtually non-existent.



### • Figure C8: Participation rates in tertiary education (ISCED 5 and 6) by age and by sex, 2009



Source: Eurostat, UOE (data extracted July 2011).

### **Explanatory note**

The number of male and female students at specific ages or in specific age groups are divided by the numbers of males and females at the corresponding age or in the corresponding age groups in the total population. All (full-time and part-time) students at ISCED levels 5 and 6 are included.

### Country specific notes

Greece: Data is from 2008.

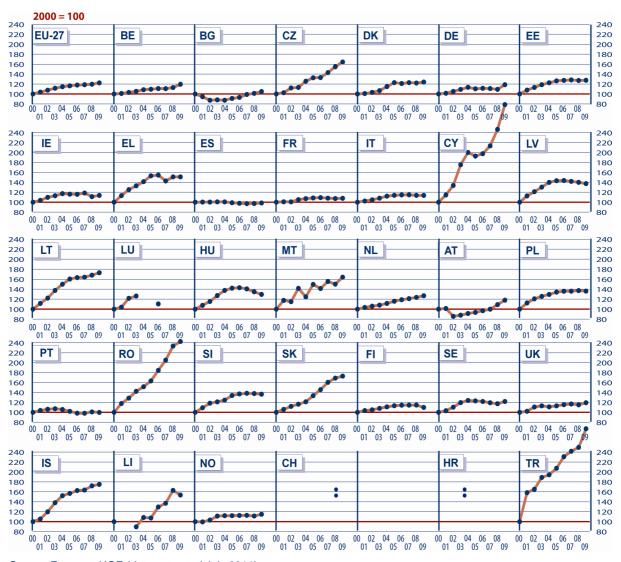
Germany, Romania and Slovenia: Data exclude ISCED 6.



## IN MOST COUNTRIES, THE NUMBER OF TERTIARY EDUCATION STUDENTS INCREASED FROM 2000 TO 2009

During the period 2000-2009, in the EU-27 on average, the student population in tertiary education increased by around 22 % (2.7 % annual growth rate), reaching almost 19.5 million individuals in 2009.

### • Figure C9: Trends in the index of student numbers in tertiary education (ISCED 5 and 6), 2000-2009



Source: Eurostat, UOE (data extracted July 2011).

### **Explanatory note**

The annual growth index is calculated by dividing the number of students for the year concerned by the number of students in 2000, and multiplying the result by 100. All (full-time and part-time) students at ISCED levels 5 and 6 are included.

2000 = 100 except in the case of Liechtenstein (2002).

### **Country specific notes**

Germany: Data excludes ISCED 6.

Greece: Data from 2008. Change in coverage from 2005

Spain: Change in coverage from 2005

Slovenia: Data for 2000-2004 exclude ISCED 6. Romania: Data for 2000-2002 exclude ISCED 6.

**Liechtenstein**: Pupils enrolled in school abroad (across the border) are not included. This makes 100 % for students in vocational schools on ISCED level 3, 4 and 5 and up to 90 % of students on ISCED level 5 and 6.



A rise in the number of students was found in all countries across Europe, with the exception of Spain and Portugal. These two countries recorded a minor decline of 1.5 % and 0.2 % respectively. The number of students increased by almost three times in Cyprus and Turkey while in the case of Romania, the figure doubled. To have a clearer picture of this indicator, it is important to view it together with the starting participation in tertiary education. Thus, in 2000, besides Greece and Finland, Spain was the country with the highest percentage of tertiary education students (ISCED 5 and 6), while the participation in Portugal surmounted the EU average by 2 percentage points. In contrast, in the same year, Cyprus and Romania registered a participation that situated between 8 and 5 percentage points below the EU-15 average respectively. Similar situation was found in Turkey in 2003, where the participation was 4.6 percentage points lower than the EU-27 average.

Between 2000 and 2009, the growth rate of student number in tertiary education (ISCED 5 and 6) was greater than that of the EU-27 average, also in the Czech Republic, Denmark, the three Baltic countries, Greece, Hungary, Malta, the Netherlands, Poland, Slovenia, Slovakia, Iceland and Liechtenstein. On the other hand, in Belgium, Germany, France, Luxembourg, Sweden and the United Kingdom, both the starting participation and the grow rate of student number were below the corresponding EU-15 and EU-27 average.

In most European countries, the highest annual grow rate occurred between 2000 and 2005. Nevertheless, in Bulgaria, Romania, Slovakia and Liechtenstein, the highest rate was found between 2005 and 2007, while in the Czech Republic, Germany, Cyprus and Austria, the biggest annual increase in the number of student happened from 2007 to 2009.

In several countries, the rise in the number of students between 2000 and 2009 was not constant. Thus, a significant decline was registered in Bulgaria (almost 9 %) and Austria (around 6 %) in the first five years of the reference period, in Greece (around 10 %) and Sweden (closed to 4 %) between 2005 and 2007 and in Ireland, Latvia and Finland (more than 4.5 %) and Hungary (around 11 %) in the last two years of the reference period.

## IN MOST COUNTRIES, THE PARTICIPATION IN FULL TIME TERTIARY EDUCATION PROGRAMME DECREASES WITH THE AGE OF STUDENTS

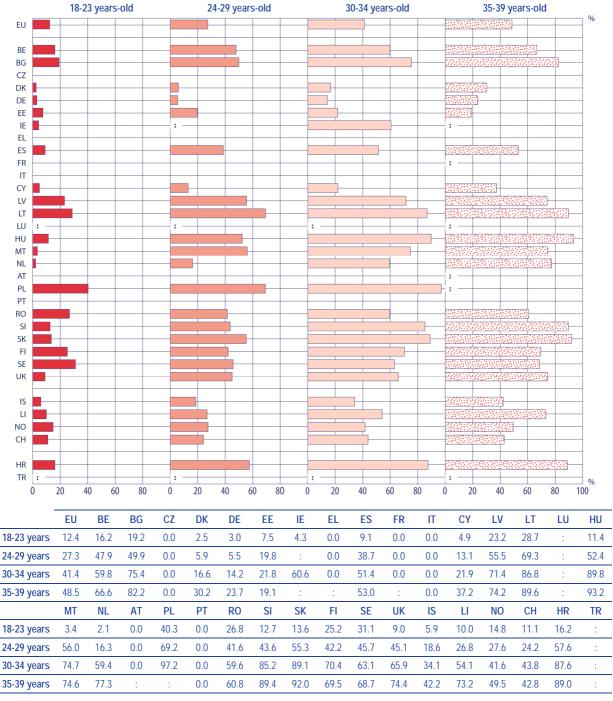
Distribution of full time students and part time students in tertiary education varies from one country to another as well as from one age group to another. In 2009, from the 18-23 age grouping Europe, almost 88 % of all students were full time students. They were nearly 73 % in the 24-29 age group, and only around 59 % and 51 % within the 30-34 and 35-39 age group respectively.

In the same year, in most European countries, the participation in full time tertiary education programme decreased with the age of students. The exceptions were found in Estonia where the participation in full time programme of the age group 35-39 was higher for 2.7 percentage points than that of the age group 30-34. In Malta, Finland and Switzerland, these differences remained at less than 1 percentage point. In addition, in countries such as the Czech Republic, Greece, France, Italy and Portugal, all students of all ages here analysed were enrolled into full time programme.

In Belgium, Spain, Latvia, Lithuania and Malta, an increase in the participation of part time students of 30 percentage points and more was found when passing from the 18-23 age group to the 24-29 age group. In Bulgaria, Hungary, Poland, Slovenia, Slovakia, the United Kingdom and Croatia, besides the transition from the 18-23 age group to the 24-29 age group, a significant increase of more than 25 percentage points was also registered when moving from the 24-29 age group to the 30-34 age group.



### Figure C10: Part time students in tertiary education by age (ISCED 5 and 6), 2009



Source: Eurostat, UOE (data extracted July 2011).

### **Explanatory note**

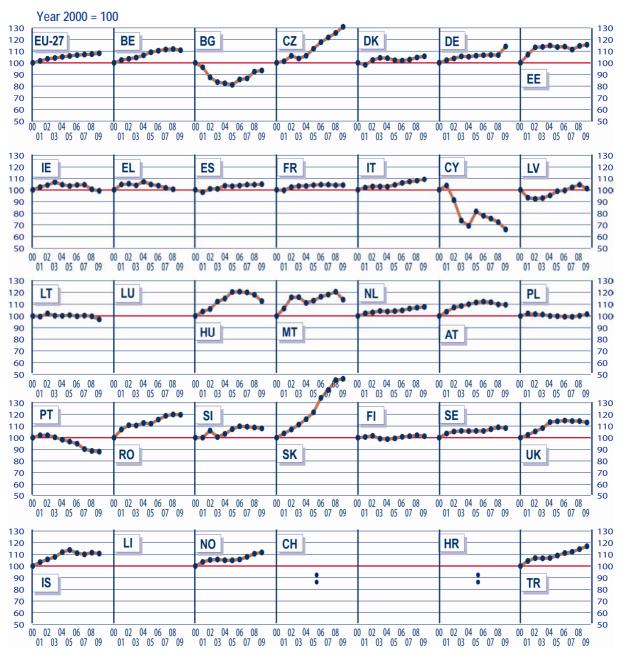
From one country to another, a lot of differences in reporting number of part time students can occur. Hence, data are not always comparable.



### GROWING NUMBER OF WOMEN IN TERTIARY EDUCATION IN MOST COUNTRIES

In 2009, in the European Union, on average, 124 women are enrolled in tertiary education for every 100 men. Since 2000, the women students increased by almost 10 % with a constant annual rate.

## • Figure C11: Trends in the index of women enrolled in tertiary education compared with men (ISCED 5 and 6), 2000-2009



Source: Eurostat, UOE (data extracted July 2011).

### **Explanatory note**

All (full time and part time) students at ISCED levels 5 and 6 are included. The ratio of the number of women for every 100 men enrolled in tertiary education has been calculated by dividing the number of female students enrolled by the corresponding number of male students and multiplying the result by 100. The year 2000 is taken as starting index of 100.



In Germany, Greece (data from 2008), the Netherlands and Switzerland, the distribution of women and men is rather balanced. In all other countries, there were more than 115 women for every 100 men enrolled in tertiary education. This highest women participation can be seen in Estonia, Latvia, Slovakia, Sweden, Iceland and Norway where more than 150 women are enrolled for every 100 men.

On the other hand, in Cyprus and Liechtenstein, the share of women among the tertiary students is relatively low, mainly due to the fact that most of the students study abroad and the offer within the country is rather limited. Finally, in Turkey, 77 women are enrolled in tertiary education for each 100 men, the lowest rate from all analysed countries. However, women participation in Turkey was one of the most active increases achieving in the period 2000-2009, a 17 % increase

In the majority of the countries, a clear tendency of more women in tertiary education can be seen since 2000. The most important increase in such participation is experienced in the Czech Republic (from 99 to 130), Romania (from 107 to 128) and Slovakia (from 101 to 153). Between 13 % and 15 % increase of women participation can be also observed in Germany, Estonia, Hungary, Malta and the United Kingdom.

A part form Cyprus, Bulgaria (-7 %) and Portugal (-12 %) are the other two countries were less women are enrolled today in tertiary education than in 2000.

The majority representation of women in tertiary education clearly has an impact on the number of women graduates for every 100 men (see Figure G4).



# THE EU-27 CONTINUE TO SPEND AROUND 5 % OF THEIR GDP ON EDUCATION

In 2008, the proportion of total public expenditure on education was more than 5 % of GDP in the many of the European countries. Denmark, Cyprus and Iceland had the highest rates at 7 % while other Nordic countries as well as Belgium and Malta stood at more than 6 %. In contrast, in Slovakia and Liechtenstein, public expenditure represented less than 4 % of GDP.

In the period 2001-2008, the overall proportion of GDP given over to education in the EU-27 remained stable at around 5 %. This stable European average hides disparities between countries, some of which experienced significant changes during the period. In Bulgaria, Cyprus and Iceland, the proportion of GDP allocated to education increased by over 20 % between 2001 and 2008 and by more than 30 % in Malta and Ireland over the same period. Significant growth – above 10 % – also occurred in the United Kingdom. Furthermore, although total public expenditure on education as a percentage of GDP remained stable at the EU-27 level, the unit cost per student increased which also suggests that investment in education per pupil or student increased (see Figure D2).

The stability in the overall figures for 2001-2008 also masks disparities between expenditure on the different levels of education. Expenditure increased by more than 5 % on pre-primary and tertiary education as a proportion of GDP over the 2001-2008 period. In contrast, expenditure on secondary education decreased slightly.

Public expenditure by level of education differs from country to country partly because it is affected by structural differences in education systems, including the duration of each level of education; the overall length of compulsory education (see Figure B2); and the rates of participation in post-compulsory education (see Figure C6 and C7). Other factors that have an impact include demographic changes, which affect each level of education in turn from pre-primary upwards as the changes work through the school/student population (see Figures A1-4). Furthermore, caution must be exercised in interpreting the data in many countries because it is not always possible to break down fully expenditure by educational level.

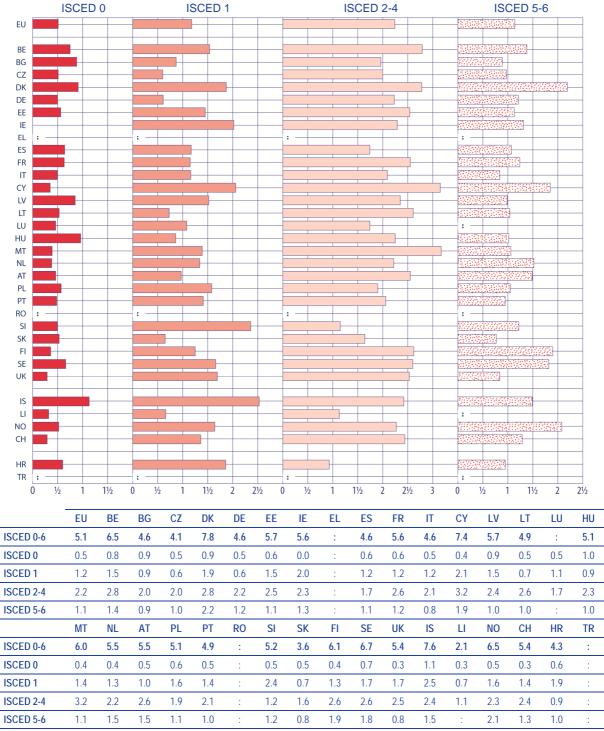
In nearly all European countries, the total public expenditure allocated to secondary education represents a greater proportion of GDP than spending on any other educational levels, but the maximum proportion in any country is 3.2 % (in Cyprus and Malta). In Spain, Poland, Slovakia, Liechtenstein and Croatia, it is below 2 % of GDP. The total public expenditure on primary education is generally less than 2 % of GDP, with the exception of Cyprus and Iceland where it peaks at 2.5 %.

At European level (EU-27), the proportion of GDP represented by expenditure on primary education and tertiary education is almost the same (1.1 % and 1.2 % respectively). However, the unit cost per pupil/student is much higher at tertiary than at primary level (see Figure D3).

The proportion of GDP given over to tertiary education varies markedly from country to country, ranging from 0.8 % to 2.2 %. Only Denmark and Norway exceed 2 %.



### Figure D1: Total public expenditure on education by education level (ISCED 0 to 6) as a percentage of GDP, 2008



Source: Eurostat, UOE and national accounts statistics (data extracted June 2011).

### Explanatory note

In general, the public sector provides funds for education by assuming direct responsibility for schools' current and capital expenditure (direct public funding of schools), or by providing support to pupils/students and their families (public-sector grants and loans), and by subsidising training activities run by the private sector or non-profit associations (transfers to households and firms). Direct public funding of educational institutions and transfers to households and firms are included in the total public expenditure on education.



### **Country specific notes**

EU: Estimated figures.

Belgium: Excludes transfers to local governments.

**Denmark**: Expenditure excludes independent private institutions. ISCED 4 expenditure is partially included in ISCED 5-6 expenditure. Research/development expenditure is not available for ISCED 5-6.

**Ireland**: There is no funding for public institutions at local government level for ISCED 1.

Ireland, Spain and Portugal: Expenditure for ancillary services is not available for ISCED 5-6.

Cyprus: Includes financial aid to students studying abroad.

Luxembourg: Expenditure for ancillary services is not available for ISCED 1 or ISCED 2-4. Expenditure is not available for ISCED 4.

Hungary: Student loans from public sources are not available for ISCED 5-6.

Malta: Public transfers to private bodies are not available for ISCED 1-6.

**Poland**: Includes childcare expenditure at pre-primary level of education.

**Portugal**: Imputed retirement expenditure is not available. Intergovernmental transfers for education are not available. Student loans from public sources are not available. Public transfers to private bodies are not available for ISCED 0. Expenditure at local government level is not available for ISCED 0-4. Public transfers to private bodies other than households are not available for ISCED 1-4. Expenditure for ancillary services is not available for ISCED 0 and ISCED 5-6.

Portugal and Norway: Expenditure for ancillary services is not available for ISCED 0.

Slovenia: ISCED 2 expenditure is reported under ISCED 1.

**Slovakia**: Excludes scholarships and other grants at ISCED 0-1. Excludes transfers to households at lower-secondary level of education at local level of government at ISCED 2-4. ISCED 5B expenditure is included in that of ISCED 3.

United Kingdom: Adjustment of GDP to the financial year running from 1st of April to 31st of March.

**Iceland**: Expenditure for ancillary services is not available. Research/development expenditure is not available for ISCED 5-6.

Liechtenstein: Student loans from public sources are not available for ISCED 2-4.

**Norway**: When considering only the Norwegian mainland GDP (excluding offshore oil and international shipping), the education expenditure as percentage of the GDP increase to 7.3.

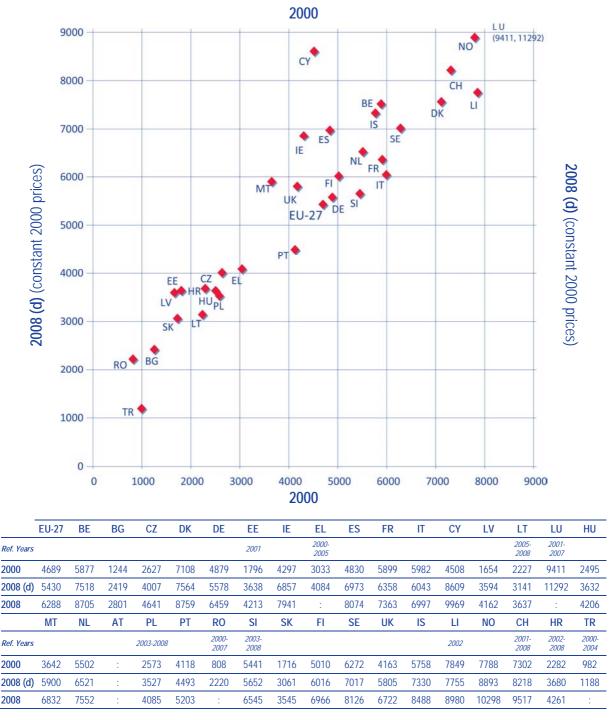
**Croatia**: Public transfers to private bodies are not available. Direct expenditure for independent private institutions from local government is not available for ISCED 1-4. ISCED 2 expenditure is reported under ISCED 1. Direct expenditure for independent private institutions is not available for ISCED 5-6.

## TOTAL ANNUAL UNIT COST PER STUDENT INCREASED IN NEARLY ALL EUROPEAN COUNTRIES BETWEEN 2000 AND 2008

In nominal terms, the unit cost of a pupil/student increased in all European countries. The total annual unit cost per student in public institutions was, on average, PPS (purchasing power standard) EUR 4 689 in the EU-27 in 2000 and was PPS EUR 6 288 in 2008 prices (PPS EUR 5 430 in 2008 at constant prices). This represents an increase between 2000 and 2008 in the total annual unit cost per student of 34 % in nominal terms. Nevertheless, when taking into account the evolution of prices over the 2000-2008 the increase in the expenditure per students was only 16 % in constant prices. In all other countries, the real unit cost per student increased: in the Czech Republic, Ireland, Malta and Slovakia, it grew by a factor of 1.5, and by a factor of 1.7 in Cyprus (between 2002 and 2008).



### Figure D2: Trends in the annual expenditure on public education institutions (ISCED 0 to 6) by pupil/student, in PPS EUR (thousands), 2000 and 2008 (constant prices)



2008(d) values of the expenditure in 2008 in constant 2000 price levels

Source: Eurostat, UOE and national accounts statistics (data extracted June 2011).

### **Explanatory note (Figures D2 and D3)**

The annual expenditure per student in public institutions measures how much is spent per pupil/student by central, regional and local administrations, households and other private bodies (businesses and non-profit organisations) on staff costs, current expenditure and capital expenditure.

The indicator has been calculated by dividing the total amount of annual expenditure by the number of full-time equivalent students. The annual expenditure figures have been converted into purchasing power standard is based on the Euro (EURO PPS) to eliminate price differences between countries. The PPS. 2008 figures are deflated to the price levels of 2000 to eliminate the effect of the inflation. For more information, see the 'Glossary and Statistical Tools' section.



### **Country specific notes**

EU-27: Estimated figures.

**Belgium**: Payments from private bodies other than households to public educational institutions are not available for ISCED 1-4 in 2008. 2000 – Expenditure excludes, the German-speaking Community and payments from private entities other than households to educational institutions are not available for ISCED 1 and ISCED 2-3 in the Flemish Community.

**Denmark**: Research/development expenditure is not available for 2005-2008. Expenditure at ISCED 4 is not available for 2000-2002.

**Estonia**: Reference years are 2001 and 2008. Payments from international agencies and other foreign sources to public educational institutions and payments from households and other private bodies to public educational institutions are not available for 2008. Private expenditure is only partially included in 2001.

**Ireland**: For 2008, payments from private bodies other than households to public educational institutions are not available, except for ISCED 5-6 and direct expenditure at local level of government is not available for ISCED 1.

Greece: Reference years are 2000 and 2005. Imputed retirement expenditure is not available for 2000.

**Spain**: Payments from private bodies other than households to public educational institutions are not available for 2008, except for ISCED 5-6. ISCED 5-6 research/development expenditure is not available.

Lithuania: ISCED 1 and ISCED 2-3 (general programmes): payments from international agencies and other foreign sources to public educational institutions and payments from private bodies to public educational institutions are not available for 2008.

**Luxembourg**: Reference years are 2001 and 2007. Expenditure for ancillary services, expenditure at ISCED 4 and ISCED 5-6, payments from international agencies and other foreign sources to public educational institutions and payments from households to public educational institutions are not available for 2007. Imputed retirement expenditure and expenditure at ISCED 5-6 are not available.

Malta: 2000 – Full-time equivalent enrolment is estimated by assuming that it corresponds to full-time enrolment and half of the part-time enrolment. From 2005 onwards, estimates relating to government expenditure on education are supplemented by administrative data from the Departmental Accounting System for Budgetary Central Government and annual accounts of government independent educational institutions.

**Netherlands**: Payments from private bodies other than households and payments from international agencies and other foreign sources to public educational institutions are not available for ISCED 1-4 in 2008.

**Poland**: Reference years are 2003 and 2008. Payments from international agencies and other foreign sources and payments from private bodies other than households to public educational institutions are not available.

**Portugal**: Imputed retirement expenditure and expenditure at local government level is not available (except for ISCED 5-6 in 2008). Payments from private bodies other than households, payments from international agencies and other foreign sources to public educational institutions are not available for 2008, except for ISCED 5-6. In 2000, the full-time equivalent enrolment is estimated by assuming that it corresponds to full-time enrolment and half of the part-time enrolment. Enrolment at ISCED 0 is not available.

**Romania**: Reference years are 2000 and 2007. The full-time equivalent enrolment for 2000 is estimated by assuming that it corresponds to full-time enrolment and half of the part-time enrolment. The 2007 data is extremely unreliable.

Slovenia: Reference years in the figure: 2003 and 2008.

**United Kingdom**: Adjustment of educational expenditure from the financial year running from 1st of April to 31st of March, to the calendar year.

**Iceland**: Research/development expenditure and expenditure for ancillary services and payments from international agencies and other foreign sources to public educational institutions are not available for 2008. Expenditure at ISCED 0 is not available for 2000.

**Liechtenstein**: Reference years are 2002. Expenditure at tertiary level of education and payments from households and other private bodies to public educational institutions are not available for 2008. Full-time equivalent enrolment is estimated by assuming that it corresponds to full-time enrolment and half of the part-time enrolment for 2002.

**Norway**: Payments from private bodies to public educational institutions are not available, except for households' expenditure at ISCED 0 in 2008.

**Switzerland**: Reference years are 2001 and 2008. Public expenditure relates to public educational institutions for 2001. Payments from households and other private bodies to public educational institutions are not available for 2008.

**Croatia**: Reference years are 2002 and 2008. Private expenditure is only partially included and full-time equivalent enrolment is estimated by assuming that it corresponds to full-time enrolment and half of the part-time enrolment in 2002. Payments from private bodies other than households to public educational institutions are not available for 2008.

### EXPENDITURE PER PUPIL INCREASES WITH THE LEVEL OF EDUCATION

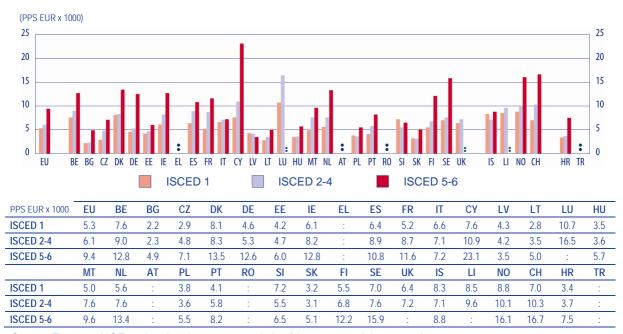
In the European Union, the average annual cost per secondary school pupil (ISCED 2 to 4) is higher (PPS EUR 6 129) than that of primary school pupils (ISCED 1, PPS EUR 5 316). The average cost per student in tertiary education in the EU was almost twice as high as for primary pupils (PPS EUR 9 424). In Germany and Cyprus, however, the difference in unit costs between primary and tertiary education is significantly higher; the cost per student in public-sector tertiary institutions is around 3 times greater than for a pupil in primary education.



However, certain countries reveal relatively slight differences between the educational levels. This is particularly so in Italy, Latvia, Slovenia and Iceland where the unit cost in tertiary education is comparable to that in primary education.

The disparities between countries tend to widen with educational level. The cost of a pupil in primary education in public sector institutions ranges from PPS EUR 2 232 in Bulgaria to PPS EUR 10 746 in Luxembourg, whereas the cost of a student in public-sector tertiary institutions ranges from PPS EUR 3 474 in Latvia to PPS EUR 23 103 in Cyprus. The figures for Denmark, Luxembourg, Slovenia, Slovakia and Croatia should be interpreted with caution because annual expenditure in public-sector institutions cannot always be broken down fully by educational level.

## • Figure D3: Annual expenditure in public institutions per pupil/student and educational level (ISCED 1, 2-4 and 5-6), in PPS EUR (thousands), 2008



Source: Eurostat, UOE and national accounts statistics (data extracted June 2011).

### **Explanatory note**

See Figure D2.

### Country specific notes (see also Figure D2)

Denmark: ISCED 2-4, ISCED 5-6 - expenditure at ISCED 4 is partially included in ISCED 2-4 and ISCED 5-6.

Ireland and Portugal: ISCED 5-6 - expenditure for ancillary services is not available.

**Italy**: ISCED 2-4 – expenditure at ISCED 4 and payments from international agencies and other foreign sources to public educational institutions are not available.

**Luxembourg**: ISCED 1 and ISCED 2-4 – expenditure for ancillary services is not available. ISCED 2-4 – expenditure at ISCED 4 is not available.

**Portugal**: ISCED 1 and ISCED 2-4 – expenditure at local level of government is not available. ISCED 2-4 and ISCED 5-6 – expenditure at ISCED 4 is partially included in ISCED 3 and ISCED 5-6.

Slovenia: ISCED 2 expenditure is included under ISCED 1.

Slovakia: ISCED 5B expenditure is included under ISCED 3.

**Sweden:** ISCED 1 and ISCED 2-4 payments from international agencies and other foreign sources to public educational institutions are not available.

**United Kingdom**: ISCED 1 and ISCED 2-4 – adjustment of educational expenditure from financial year, running from 1st of April to 31st of March, to the calendar year.

**Norway:** ISCED 5-6 – payments from international agencies and other foreign sources to public educational institutions are not available.

Croatia: ISCED 1 and ISCED 2-4 - ISCED 2 expenditure is included under ISCED 1.



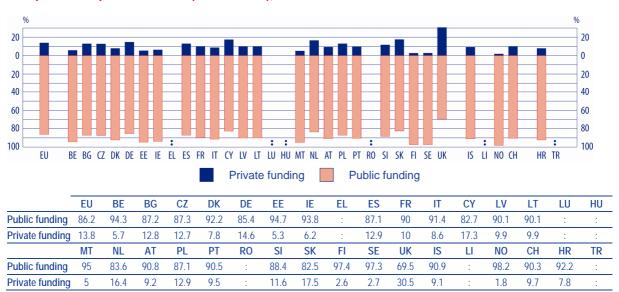
### PRIVATE FUNDING OF EDUCATION REMAINS MARGINAL

Education expenditure is financed by two distinct types of funding: public funding and private funding. Public expenditure includes all direct funding of education by the public sector (regardless of the administrative level providing the funding), whereas private expenditure includes the payment of tuition fees (and all other payments) primarily by households (i.e. students and their families), businesses and non-profit associations.

Given that compulsory education is largely provided free of charge to pupils and students, the proportion of private funding in most countries is determined to a large extent by policies for funding education-oriented pre-primary schooling (see Figure D6) and tertiary education (see Figure D11) i.e. whether fees are payable by pupils and students and, if they are, the level of those fees.

The relative proportions of public and private funding for education are also linked to the degree of autonomy institutions have for raising private funds and for determining how such funds are spent (see Figure B13). Furthermore, the amount of funding and methods of financing grant-aided private schools (see Figure D8) may also affect the balance between public and private expenditure on education.

### Figure D4: Proportions of educational expenditure from public and private sources (ISCED 0 to 6), 2008



Source: Eurostat, UOE (data extracted June 2011).

### **Explanatory note**

The indicator gives the proportion of public and private expenditure on (public and private) educational institutions. The proportion of public or private final expenditure corresponds to the percentage of direct spending on education by private and public consumers of education resources. The total public expenditure includes the direct purchasing of education resources by the public sector and transfers to educational institutions and to other private bodies. The total amount of private expenditure includes tuition fees and all other payments to educational institutions. Payments to education institutions from the 'other private bodies' category are not available in the majority of the countries.

### **Country specific notes**

EU: Estimated figures.

**Belgium**: Data exclude independent private institutions and the data for the German-speaking Community. Payments from private bodies other than households to public institutions are not available for ISCED 1-4.

**Denmark:** Excludes direct expenditure for independent private institutions. Research/development expenditure is not available.

Estonia: Payments from private bodies to public educational institutions only partially available.

**Ireland**: Expenditure on primary education at local government level of is not available.

**Ireland, Spain** and **Portugal**: Payments from private bodies other than households to educational institutions are not available, except for payments to public institutions at ISCED 5-6.

**Lithuania**: Payments from private bodies to educational institutions are not available for ISCED 1 and general programmes at ISCED 2 and 3.



**Netherlands**: Payments from private bodies other than households to public institutions are not available for ISCED 0 to 4

**Poland:** Payments from private bodies other than households to educational institutions are not available. Public funding includes childcare expenditure at pre-primary level of education.

**Portugal**: Expenditure at local level of government is not available, except for public tertiary institutions. Household expenditure on private institutions is not available, except at tertiary level. Public transfers to private bodies are not available.

Slovakia: Expenditure for independent private educational institutions is not available.

**Iceland**: Expenditure for ancillary services is not available.

**Norway**: Expenditure from households excludes ISCED 1-3. Payments from private bodies other than households to educational institutions are not available.

**Switzerland**: Excludes private expenditure except for independent private institutions at ISCED 3 pre-vocational and vocational programmes.

Croatia: Payments from private bodies to independent private institutions are not available.

Education expenditure is largely financed from public funds. Indeed, in all countries, public financing meets at least 69 % of education expenditure, taking all educational levels together. In Belgium, Estonia, Malta, Finland, Sweden and Norway, the share of the public funding is higher at around 95 %.

The share of private funding may vary significantly from one country to another but, in some countries, the proportion of private funding may be underestimated since not all data are available. It ranges from less than 5 % in Sweden, Finland and Norway to 30 % in the United Kingdom, with an EU-27 average of 13.8 %. Between 14.6 % and 17.5 % of education expenditure in Germany, Cyprus, the Netherlands and Slovakia come from private sources. Among this group of countries, Germany, Cyprus and the Netherlands show a relatively high proportion of financial aid to pupils and students (between 10 % and 14 % of total public expenditure on education) whereas the weight of financial support to pupils and students is relatively low (around 6 %) in Slovakia and the United Kingdom (see Figure D9).

At EU-27 level, public financing accounted for 88.5 % of education expenditure in 2000 but only 86.2 % in 2008, which suggests that the proportion of private funding did not grow significantly over the 2000-2008 period at EU-27 level. At national level, in addition to large differences in the proportion of private funding, contrasting trends are observed. Indeed, between 2000 and 2008, the proportion of private funding doubled in the United Kingdom, grew five-fold in Slovakia (from 3.6 % to 17.5 %) and by seven-fold in Portugal (from 1.4 % to 9.5 %). At the other extreme, it halved in Cyprus (from 35 % in 2000 to 17 % in 2008) and Malta (from 11 % in 2000 to 5 % in 2005).

## EXPENDITURE ON STAFF REPRESENTS MORE THAN 70 % OF TOTAL ANNUAL EDUCATION EXPENDITURE

Spending by public educational institutions falls into two main categories – current expenditure and capital expenditure. Current expenditure includes wages and costs relating to staff and other current expenditure, which covers the costs of maintaining buildings, purchasing educational materials and operational resources (daily costs). Capital expenditure relates to expenditure on assets that last longer than one year (it includes spending on construction, renovation and major repair of buildings, and expenditure on new or replacement equipment).

Current expenditure represents more than 84 % of total expenditure by public institutions in all countries, and within this, spending on staff overshadows all the other categories of expenditure. Factors which affect the level of spending on staff include the structure of gross annual teachers' salaries (see Figure E13), and the age structure of teaching staff at different levels of education (see Figures E11 and E12).

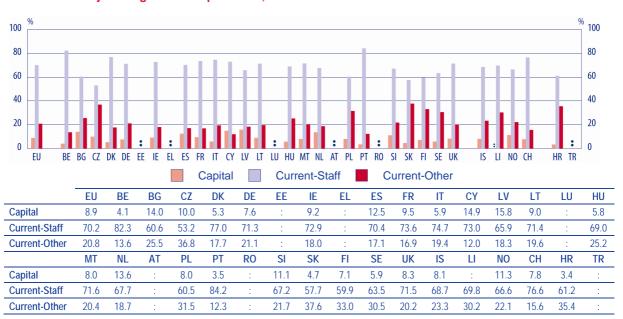


In all countries, staff costs represent an average of 70 % of annual education expenditure in the EU-27. The proportion is closer to 85 % in Belgium and Portugal while in the Czech Republic, Slovakia and Finland staff costs represent less than 60 %. In the latter group, other current expenditure represents more than one third of annual expenditure.

Significant differences exist between countries with respect to capital expenditure. Some countries, such as Belgium, Slovakia, Portugal and Croatia, allocate almost all their resources to current expenditure, thereby confining capital expenditure to less than 5 %. In 2008, capital expenditure did not exceed 16 % of total annual expenditure in public sector institutions; the highest values occurred in Bulgaria (14 %), Cyprus (14.9 %) and Latvia (15.8 %).

At EU level, the share of capital expenditure remained stable between 2000 and 2008 representing 8.3 % and 8.9 % respectively. However, some countries experienced significant changes over the period. The proportion of capital expenditure increased between 2000 and 2008 in Bulgaria (+12 percentage points), Cyprus (+7 percentage points) and Latvia (+7 percentage points). In contrast, there was a percentage decrease in Hungary (-4 percentage points), Malta (-4 percentage points) and Iceland (-5 percentage points).

### Figure D5: Distribution of total annual expenditure in public education institutions (ISCED 0 to 6) across major categories of expenditure, 2008



Source: Eurostat, UOE (data extracted June 2011).

### Explanatory note

Total expenditure in educational institutions can generally be divided between current expenditure and capital expenditure. Current expenditure can itself be broken down into two categories – staff costs and other current expenditure. The breakdown of costs varies depending on teacher salary levels and the pupil/teacher ratio, and on whether institutions own or rent the buildings they use, and whether they provide textbooks or ancillary services (meals or boarding facilities, for example) in addition to teaching.

The percentages for each category of expenditure are all calculated as percentages of total annual expenditure.

### Country specific notes

EU: Estimated figures.

**Belgium**: Data exclude independent private institutions and the data for the German speaking Community. Payments from private bodies other than households to public educational institutions are not available for ISCED 1, ISCED 2-3 and ISCED 4.

Denmark: Research/development expenditure is not available.

**Poland**: Payments from international agencies and other foreign sources and payments from private bodies other than households to public educational institutions are not available.



**Portugal**: Expenditure at local government level is available only for tertiary education. Imputed retirement expenditure is not available. Payments from international agencies and other foreign sources and payments from private bodies other than households to public educational institutions are available only at tertiary level.

**Iceland**: Expenditure for ancillary services is not available. Payments from international agencies and other foreign sources to public educational institutions are not available. Research/development expenditure is not available.

**Norway**: Payments from private bodies to public educational institutions are not available, except for household expenditure at pre-primary level.

Switzerland: Payments from households and other private bodies to public educational institutions are not available.

Croatia: Payments from private bodies other than households to public educational institutions are not available.

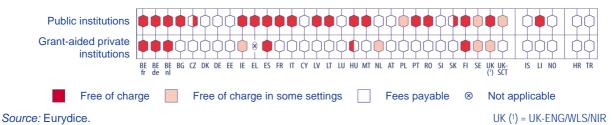
## NON-COMPULSORY PRE-PRIMARY EDUCATION IS INCREASINGLY PROVIDED FREE OF CHARGE

In half of the countries examined, education-oriented pre-primary public institutions (ISCED 0) are free of charge. This clearly facilitates access to pre-primary education for all children and especially for those who belong to low income families. In addition, countries also often adjust the fees paid for non-compulsory pre-primary education according to family income and other criteria (see Figure D7).

In several countries, participation in all (public or grant-aided private) education-oriented pre-primary institutions is free of charge. In some of these countries, however, institutions may charge for some years of pre-primary education especially those for children below a specific age (usually three years old, which is the age at which ISCED 0 is usually considered to start). For instance, in Ireland and Spain, parents pay during the first years, or the first cycle of pre-primary education, but not after. In the Czech Republic, the last year of pre-primary education is free of charge in public institutions. In Sweden, pre-schools (or pre-school classes) are free of charge for parents of four- and five-year-olds children.

In France, Italy, Latvia, Portugal and Romania public sector provision is free, whereas enrolment fees are payable in the private sector. In Ireland, Poland and the United Kingdom, free places are available on a part-time basis for all three- and four-year-olds (which corresponds to ISCED level 0) and institutions may offer additional hours on a fee-paying basis. Although public sector schools do not collect fees from parents, some contributions for ancillary services may be collected. For instance, in France and Italy, as well as in some other countries, this applies to school meals and transport.

### Figure D6: Free and fee-paying pre-primary provision offered in education-oriented pre-primary institutions (ISCED 0), 2010/11



### **Explanatory note**

Only 'education-oriented' pre-primary institutions, in which staff must hold qualifications in education are shown in the figure. Day-care centres, day nurseries and playgroups (in which staff are not required to hold a qualification in education) are not shown.

Fee-paying admission to pre-primary institutions relates to the enrolment fee requested from parents for their children to take part in its programme and not to the payment for meals or certain (specific or additional) optional extra-curricular provision.



### **Country specific notes**

**Czech Republic** and **Slovakia**: Only the last year of pre-primary education provided by public institutions is free of charge. In the Czech Republic, parents who receive social benefits or and who receive foster care benefits do not have to pay any fees

Greece: There are no granted-aided private institutions at ISCED level 0.

**Spain**: Provision is free in the second cycle of pre-primary education (3 to 6 years-olds) in the public and grant aided private schools. The first cycle of pre-primary education (0-3 years-olds) is subject to the payment of fees.

France: Almost all private schools are granted-aided and the fees are very low.

**Hungary**: Under the Act on Local Government, municipalities have a duty to provide pre-primary education. However, If a private institution takes over the task of pre-primary provision from a municipality (under an agreement between the two), the provision is free for children

Lithuania: Exemption from fees may be granted under certain circumstances but are not considered in the figure.

**Austria**: Some of the nine Austrian *Länder* have abolished fees for kindergarten children of all ages in recent years. **Poland**: Five hours per day of education and care in public institutions are free of charge.

Romania: For private institutions, the data is for the school year 2006/07.

**Sweden**: Public and private pre-schools for four- and five-year-olds are free of charge, as well as pre-school classes. **United Kingdom (ENG/WLS/NIR)**: Private and voluntary settings (grant-aided private institutions) receive government funding to provide free part-time places; they may also offer additional hours on a fee-paying basis.

**United Kingdom (SCT)**: Free places are available for all three- and four-year olds on a part-time basis. Parents may top this up with additional fee-paying hours. All five-year-olds are in compulsory full-time education, which is free to parents although fees may be charged for after school childcare. It is the decision of local authorities whether to provide funding for the care of children under three, although they are under no central obligation to do so.

**Croatia**: The financing of pre-primary education is under the jurisdiction of local authorities. Most of them require parents to contribute to the costs of educational provision at pre-primary level. Some local authorities (although only a few) cover the full cost of pre-primary programmes (when they have sufficient funds) and thus do not ask for a parental contribution.

## A VARIETY OF SUPPORT MECHANISMS ARE USED TO MAKE PRE-PRIMARY EDUCATION MORE AFFORDABLE

In addition to broader policies designed to tackle social exclusion, in all countries where fees are payable for non-compulsory pre-primary education provision (ISCED 0) some form of mechanism exists by which parental contributions can be adjusted according to means. Three main criteria are used: family income, the number of children, and family status (i.e. children living with a single parent).

In the great majority of countries, support mechanisms operate at central level and family income is the determining factor. The Czech Republic, Lithuania, Poland, Slovakia and Turkey are the only exceptions. In the Czech Republic, the school head of the institution sets the basic fees each calendar year, which is identical for all children. However, parents who receive social benefits or those who take care of a child and receive foster care benefit are exempt from fees. In Poland, family income is only considered by local authorities, which may decide to exempt a family from their contribution in case of financial difficulties. In Slovakia, kindergartens do not charge a fee for children in the year before compulsory schooling when the legal guardian receives 'material poverty allowances'. In Turkey, fees are determined in each province by the governor; all pupils in the same district pay the same fee.

Most countries combine family income with the number of children living in the household as the basis of fee reduction or exemption. In the United Kingdom, there are tax-credits for families below a certain level of income where their child attends additional hours on a fee-paying basis.

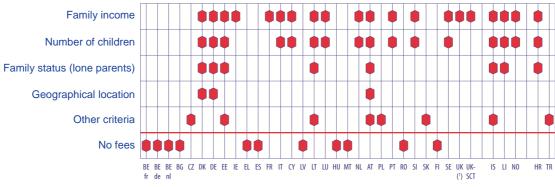
In Luxembourg, a system of 'childcare service vouchers' has been in force since 2009. This arrangement provides partial exemption from payment and reduces parental financial contributions in order to encourage families to take advantage of professional educational services. The vouchers, which are awarded regardless of parental income, entitle children to at least three free hours of childcare per week. Additional hours of childcare are available at a variable hourly fee depending on family income and the child's place in the family e.g. first or second child.

Different criteria to those used by central authorities may be applied at local level to make pre-primary education more affordable for the less well off. For instance, in Estonia, only family income is considered at central level but local governments may look at additional criteria (e.g. the number of



children or the status of the family). In Iceland, many municipalities apply additional criteria which may include parents' marital or employment status or whether they are in full- or part-time education. Denmark, Germany and Austria apply lower fees in specific geographical areas.

 Figure D7: Factors taken into account in offering reductions or exemptions of fees in public and private grant-aided education-oriented pre-primary institutions (ISCED 0), 2010/11



Source: Eurydice. UK (1) = UK-ENG/WLS/NIR

### **Explanatory note**

This figure looks at the criteria used to adjust the fees charged to parents for children's attendance at programmes offered in education-oriented pre-primary institutions in public and private grant-aided institutions.

### Country specific notes

**Ireland:** Since January 2010, a full year of pre-primary education (generally from morning to early afternoon) has been provided for all children aged between 3.3 and 4 years without fees. In cases where parents wish to access full day care for children, it is possible for them to obtain funding on a sliding scale, depending on their income and means, from a Childcare Subvention Scheme (CCSS). Where a parent is enrolled in a training course with a vocational education committee or with the national training body Fás, it is also possible for the parent to access subsidised childcare under a Childcare, Education and Training Scheme (CETS).

**Spain**: Provision is free in the second cycle of pre-primary education (3 to 6 years-olds) in the public and grant-aided private schools. The first cycle of pre-primary education (0-3 years-olds) is subject to the payment of fees. In the first cycle and also in the second cycle in private non-funded schools, children at risk are entitled to financial help regarding the 'family income' and 'the number of children' in the family.

**France**: Almost all private schools are granted-aided and the fees are very low. Private contributions for meals are adjusted according to family income.

**Italy**: Criteria for children enrolled in municipal pre-primary education.

**Austria**: Private contributions may be adjusted when brothers and sisters attend the same kindergarten institution. **United Kingdom**: Parents on low level or middle level incomes receive tax credits through the Working Tax Credit Child

Care Element paying up to 70 % of capped costs if they work at least 16 hours per week.

## SAME FUNDING METHODS USED TO ALLOCATE RESOURCES FOR TEACHING STAFF IN BOTH PUBLIC AND GRANT-AIDED PRIVATE SCHOOLS

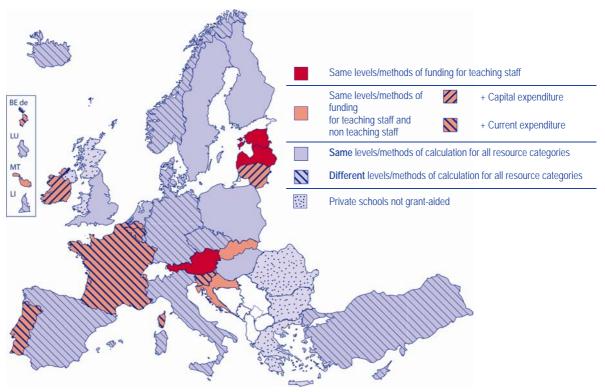
In Hungary, the Netherlands, Poland, Finland and Sweden there is no difference between the public funding provided for public schools and that allocated to grant-aided private schools. In Sweden, the the municipality shall pay to the grant-aided school for an enrolled pupil the same amount the pupil would have cost the municipality if the pupil attended a school run by the municipality. The amount is calculated in the same way as the municipality calculates the costs for its own schools, based on the budget for the coming fiscal year. The municipality must also pay a supplementary grant for pupils with such impairment that demands extraordinary supporting measures without connections to the normal teaching.

At the other end of the spectrum and in nearly half of the European countries examined, private institutions are either not grant-aided – Bulgaria, Greece, Romania and the United Kingdom (excluding academies in England) – or they are allocated public funds for all types of expenditure according to different methods of calculation or at different levels to public schools.



In other countries, the public funding of teaching staff in grant-aided private schools is allocated in the same way as in public schools (even when other types of expenditure are financed differently). In Estonia, Latvia and Austria, expenditure on teaching staff is the only type of expenditure where public authorities finance public schools in the same way as grant-aided private institutions. In Malta, Slovakia and Croatia both teaching and non-teaching staff are financed according to the same method regardless of the type of institution to which they belong. Finally, in Belgium, France (with *contrat d'association*), Portugal and Slovenia (for schools with concession), public authorities apply the same method of funding for grant-aided private institutions and public sector institutions for all types of spending except capital expenditure.

 Figure D8: Funding levels and/or funding methods applied by public authorities for grant-aided private primary and lower secondary schools compared to public schools, 2010/11



Source: Eurydice.

### **Explanatory note**

An institution is classified as **public** if it is controlled and managed: 1) Directly by a public education authority or agency or, 2) Either by a government agency directly or by a governing body (Council, Committee etc.), most of whose members are either appointed by a public authority or elected by public franchise.

An institution is classified as **private** if it is controlled and managed by a non-governmental organisation (e.g. a Church, a Trade Union or a business enterprise), or its Governing Board consists mostly of members not selected by a public agency.

A **grant-aided (government-dependent) private institution** is one that either receives 50 per cent or more of its core funding from government agencies or one whose teaching personnel are paid by a government agency – either directly or through government.

An **independent private institution** is one that receives less than 50 per cent of its core funding from government agencies and whose teaching personnel are not paid by a government agency.

### Country specific notes

**Belgium**: Grant-aided private institutions may use their funding allocation for operating costs or for the remuneration of their non-teaching staff; this also applies to schools administered by the provinces and municipalities. In contrast, Community-administered schools receive more resources for non-teaching staff.

Czech Republic: Capital expenditure is not covered by public subsidies and must be met by the founder.

**Estonia**: The central government budget finances some current expenditure such as textbooks and school-meals on the same basis as for private, state and municipal schools.



**France**: The figure presents the situation for the majority of grant-aided private institutions that have the *contrat d'association*. In private schools with the *contrat simple*, only the financing of teaching staff is similar in private and public institutions, other categories of expenditure are not funded by the central public authority.

**Slovenia**: Private schools receive 85 % of the funds paid to public schools for salaries and material costs; private schools with a concession receive 100 % of the funds paid to public schools for salaries and material costs. The figure shows private schools without a concession.

**United Kingdom (ENG)**: The grant-aided private schools represented here are academies, which may not charge fees. There are also fee-paying private schools, which, as in the rest of the UK, receive no public funding. **United Kingdom (SCT)**: Very few private grant-aided schools are subsidised by public authorities.

## GRANTS AND LOANS FOR STUDENTS AT TERTIARY LEVEL ARE A MAJOR STRAND OF PUBLIC EXPENDITURE ON EDUCATION

On average, countries of the European Union allocate 6.4 % of their total public expenditure for direct public-sector support for pupils and students. However, there are distinct differences between countries in the overall level of direct funding provided, as well as large disparities in the amounts allocated to pupils and students at different levels of education.

Bulgaria, Denmark, Cyprus and the Netherlands allocate at least twice as much as the European Union average. At the opposite end of the spectrum, almost half of Member States spend less than the EU-27 average. The figures analysed here relate only to direct public support for students which, on its own, does not fully measure the true level of support that families may receive. For instance, the tax relief and/or family allowances available from primary to upper secondary levels (see Figures D10 and D13) are not taken into account here.

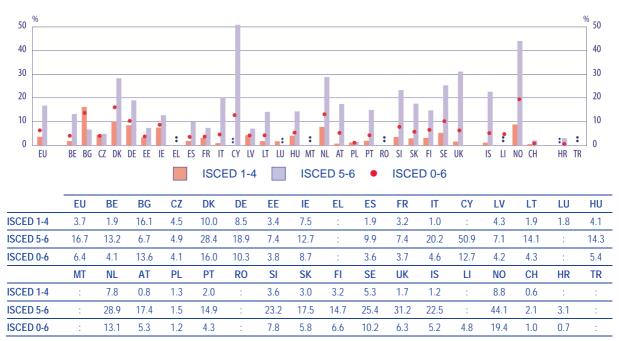
Education at primary and secondary levels is delivered free of charge in all countries whereas education at tertiary level may be subject to fees. This partly explains why, on average, countries of the European Union spend 16.7 % of their total public expenditure on tertiary education in direct public support to tertiary students whereas the direct support allocated to those in primary, secondary and post-secondary non-tertiary levels (ISCED 1-4) amounts to only 3.7 % of total public expenditure on education. This pattern is observed in all countries except Bulgaria where pupils and students at school level receive a larger proportion of support than those in tertiary education, and in the Czech Republic and Poland, where there is little difference between the proportion of direct support to school and tertiary levels (ISCED 1-4 and ISCED 5-6).

Direct support for pupils in primary and secondary education is less than 5 % in more than half of the countries examined. Bulgaria (16 %), Denmark (10 %) and Germany (8 %) record the highest percentages whereas in Italy, Austria as well as Switzerland, less than 1 % of total public expenditure on education is devoted to direct public sector support at these levels.

In many countries, students or their parents are charged registration and/or tuition fees. Additionally, if they move away from the family home, tertiary students may also have to pay for living costs (e.g. housing, etc.). Direct public support is a means by which public authorities seek to widen access to tertiary education. At this level, it accounts for more than 12 % of total public expenditure in more than half of the European countries examined. Poland as well as Switzerland and Croatia record the lowest percentages with 1.5 %, 2.1 % and 3.1 % respectively. Denmark, Cyprus, the Netherlands, Sweden, the United Kingdom and Norway devote a quarter or more of their public expenditure on tertiary education to direct financial support for students. In Cyprus, the very high level of support (50 9 %) is due to the costs of funding the large number of students who study abroad.



### Figure D9: Direct public-sector support (grants and loans) to pupils and students (ISCED 1-4), at tertiary level (ISCED 5-6) and overall (ISCED 0 to 6), as a percentage of total public expenditure on education, 2008



Source: Eurostat, UOE (data extracted June 2011).

### Explanatory note

Financial support for students corresponds to transfers funded by the public sector in the form of study grants, loans and family allowances. The indicator does not reflect all financial support provided to pupils and students since they may also receive financial support such as loans from private banks; benefit from specific welfare services (such as assistance with meals, transport, health and housing); or enjoy tax relief. Financial support for pupils/students varies from country to country according to differences in education systems.

### **Country specific notes**

EU: Estimated figures.

Bulgaria, Czech Republic and Austria: There are no publicly funded loans to pupils/student.

Denmark: Expenditure at ISCED 4 is partially included in that of ISCED 5-6.

Estonia and Hungary: Student loans from public sources are only partially available.

Spain, Ireland and Portugal: Expenditure for ancillary services is not available at ISCED 5-6.

Cyprus: Includes financial aid to students studying abroad at ISCED 0-6 and ISCED 5-6.

**Luxembourg**: Expenditure on ISCED 4 is not available. ISCED 1-4 expenditure for ancillary services and public transfers to private bodies other than households are not available.

**Portugal**: Student loans from public sources are not available. Expenditure at ISCED 4 is partially included in ISCED 5-6. ISCED 1-4 expenditure at local government level and public transfers to private bodies other than households are not available. Imputed retirement expenditure is included in the total expenditure.

**Slovakia**: Public transfers to private bodies at local level for ISCED 0, ISCED 1 and ISCED 2 are not available. Expenditure at ISCED 5B is included under ISCED 3.

Iceland: Expenditure for ancillary services is not available.

Norway: Expenditure for ancillary services is not available for ISCED 1-4.

**Croatia**: Financial aid to students for ISCED levels 0 to 4 is not available. Public transfers to private bodies other than households and scholarships and other grants are not available for ISCED 5-6:



### FAMILY ALLOWANCES AND TAX RELIEF ARE WIDELY USED METHODS OF SUPPORTING FAMILIES WITH SCHOOL-AGE CHILDREN

Family allowances exist in all European countries without exception. In general, they are awarded when children are born and paid at least until the end of compulsory education (see Figure D10 for information on support for students in tertiary education). The upper age limit may be extended where young people continue into post-compulsory education. In some countries, the age limit does not correspond to the end of a specific level of education.

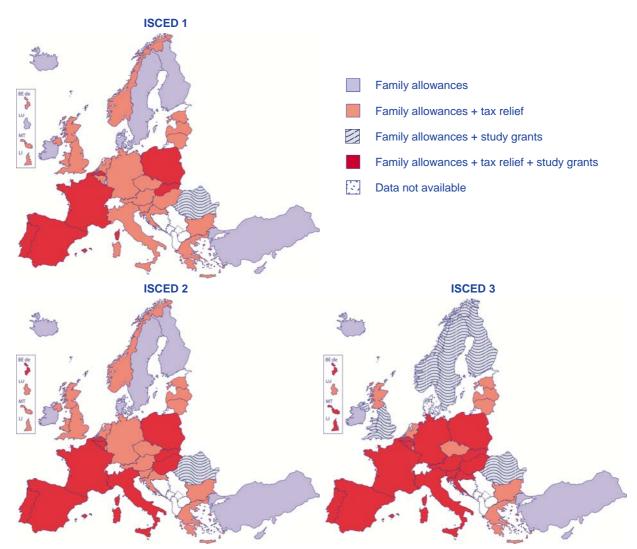
Ireland, Cyprus, Iceland and Turkey provide only family allowances for the three levels of education and Denmark, Sweden and Finland for primary and lower secondary level. All other countries combine these with other forms of financial support such as tax relief or tax credits and/or study grants. In Denmark and Norway, the age limit for family allowance is 18, which does not correspond to the end of upper secondary education (see Figure B2).

Tax relief systems are widespread in European countries and these complement family allowances in providing financial support to parents of school-age children. These systems usually apply to parents regardless of the level of education their children are in, i.e. from pre-primary to upper secondary education. Very few countries do not conform to this pattern. In Italy and Portugal, tax relief is not available to parents with children in pre-primary education while in Norway, childcare is the only form of provision eligible for tax relief. In the United Kingdom, there is a universal system of child benefit and a means-tested system of child tax credits. These are payable for children from birth, so are not linked with education in terms of starting school. For the older age group, there is a link with continued participation in education after the end of compulsory education up to age 19. In Norway, families with documentary proof of childcare expenditure may receive a yearly tax reduction.

Overall, very few countries complement family allowances with both tax relief schemes and study grants. Belgium (Flemish Community) and Spain are the only countries where study grants are available to pupils and students from pre-primary education to secondary education. Countries usually award study grants for pupils in upper secondary education but some countries extend this benefit to students in lower secondary education (Belgium (French and German-speaking Communities), Italy and Hungary) or even to pupils in primary education (France, Poland, Portugal and Slovakia). Romania is the only country that combines family allowances with study grants: the *200 Euros* and the *Money for High-Schoo*' programmes subsidise families with low incomes during school year.



### Figure D10: Types of financial support available to parents with children in primary and secondary education, 2010/11



Source: Eurydice.

### **Explanatory note**

A **study grant** is an education award or pupil/student grant to finance an educational course. The indicator does not cover support for pupils who study abroad or specific allowances for school transport, meals, schoolbooks or materials or boarding costs.

Family allowances are regular payment to the parents of children up to a certain age or in certain conditions.

### **Country specific notes**

**Spain**: The family allowances are assigned to families with low income or children with disabilities.

Malta: Study grants in upper secondary education are given to students and not parents. Families who enrol their children in private independent schools are also given tax relief. The costs incurred by parents for services of Learning Support Assistant in Independent schools are reimbursed by the government. Families receive tax reductions only for tuition fees payable at private schools.

**Poland**: In addition to social benefit support, motivation related support is available (e.g. stipends for school results, stipends for achievements in sports, etc.).

**Portugal**: School Social Support *Acção Social Escolar* aims to support children attending pre-primary school, and primary and secondary education by giving financial support and support for food and accommodation, as well as access to pedagogical resources. Students from secondary education may also apply for merit scholarships.

Romania: The 'Milk and Breadstick' programme (for pupils in grades 1-8) and the 'Fruit' programme for pupils in grades 1-8 are funded by local authorities. Free textbooks are provided to orphan pupils.

**United Kingdom**: Parents receive (universal) child benefit and (means-tested) child tax credits for children from birth to 16, or 19 for those in education (not higher education).

**United Kingdom (ENG/WLS/NIR)**: Study grants (educational maintenance allowance or EMA) are for young people over the age of compulsory education and under 19. They are means-tested and recipients must meet specified standards of behaviour, effort and attendance. EMA is being discontinued from September 2011. Instead, there will is a bursary scheme for the most vulnerable 16- to 19-year-olds.



**Norway**: Families that can document expenses for childcare for children under the age of 12 years may receive a yearly tax reduction of up to NOK 25 000 for one child and up to NOK 15 000 for each additional child. The age limit for the family allowance is 18 years. All families with children up to 18 years get these allowances. **Turkey**: A small amount of money is given to families for every child enrolled at school.

## FEW EUROPEAN COUNTRIES PROVIDE TERTIARY EDUCATION COMPLETELY FREE OF CHARGE

Public authorities contribute to expenditure on tertiary education in all European countries. The amounts allocated to higher education institutions (HEIs) often only partially cover tuition costs. In most countries, HEIs are also partly dependent for a significant share of their income on students and their families. In these countries, full-time students enrolled for a first qualification (at Bachelor level) are obliged to contribute financially to the cost of their studies.

The two main types of charges for tertiary education are administrative fees and tuition fees. Administrative fees include entrance fees that are usually paid only once when students enrol in an institution for the first time; registration fees, which are paid annually; and graduation fees to cover the organisation of examinations and the provision of administrative documents relating to the final qualification. Tuition fees are intended to contribute to the cost of teaching and are often higher than administrative fees. In some countries, special measures may apply to students who have to re-take a year, or who take longer than a certain fixed length of time to complete their studies.

In five countries – Denmark, Greece, Malta, Sweden and the United Kingdom (Scotland) – only international students (from countries not in the EU or EEA) have to pay fees to study on bachelor programmes. In the United Kingdom (Scotland), a government agency pays the officially determined registration fee for students irrespective of their financial means, provided they make a request and do not repeat their year of study.

In Bulgaria and France, all students pay annual administrative fees only whereas in Poland, students also pay graduation fees. In these three countries, students do not pay any tuition fees.

Most countries charge tuition fees and around half of these also charge some form of administrative fee. However, in over half of the countries where tuition fees apply, not all students are liable to pay them. In contrast, administrative fees are usually payable by all students.

In Bulgaria, France, and Poland, there are no tuition fees but all students must pay annual administrative fees, and in Poland, students also pay graduation fees.

In Belgium (German-speaking Community), Spain, Luxembourg, the Netherlands, Portugal, the United Kingdom (England, Wales and Northern Ireland), Liechtenstein and Turkey, all students pay tuition fees (exclusively or in combination with administrative fees or contributions to student associations (see below) which may not be mandatory for all).

Independently of, or in addition to tuition and administrative fees, a system of compulsory payments to student organisations may be in force. These are contributions to costs associated with student life or services, such as those arising from cultural activities or for certain kinds of insurance. Where they are required, these payments are usually much lower than other fees. Sweden repealed the mandatory student association membership and fee in 2010, and since April 2008, students no longer have to pay the 'Graduate Endowment' in recognition of the support they have received during their studies. In Finland and Norway, students only pay a contribution to their student organisation; no other charges are made.

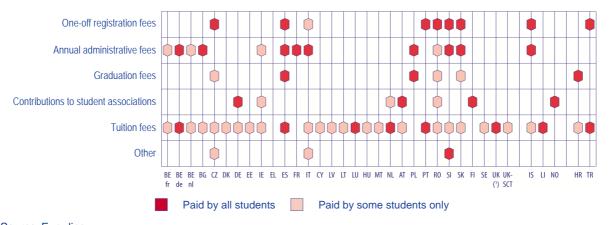


The provision of financial support to a targeted population mitigates the effects of universal schemes for charging administrative and/or tuition fees. For instance, in Italy and Spain, targeted students (identified according to family circumstances, income, disability, etc.) receive grants and are exempt from some fees.

In the Czech Republic, all students in ISCED 5A programmes pay registration fees, for some services and in some cases also administrative fees. They also pay tuition fee set by the institutions if they exceed standard duration of studies by more than 1 year, if they study in a foreign language, if they already finished a degree and have been studying the second or further degree at the same level. The students at tertiary professional schools (ISCED 5B) pay small tuition fees fixed by government decree.

In Bulgaria, Estonia, Latvia, Slovenia and Croatia, education authorities decide the number of students whose tuition fees will be fully covered by public funds and the number of places available for students who must pay tuition fees. In recent years in Croatia, tuition fees for all new students have been fully funded from public funds, but the funding of further years of study is conditional on students' academic results and based on a funding model that varies from one institution to the other.

### Figure D11: Types of private contribution paid by full-time students for a first qualification (ISCED 5) in the public and/or government-dependent private sectors, 2010/11



## Source: Eurydice. Explanatory note

Fees/private contributions are indentified here as any sum of money paid by students or their parents with which they formally and compulsorily contribute to the costs of their education. It can take the form of registration fee, tuition fee, etc.

### **Country specific notes**

**Belgium (BE fr)**: The annual amount requested from students covers registration fees and tuition fees. Following the adoption of the Act on Democratisation and Free Access to Higher Education in July 2010, students holding a grant are exempt from paying a fee. Students of modest means not eligible to receive a grant will pay reduced fees of up to 50 %. **Denmark, Malta** and **Sweden**: Only international students (from countries outside the EU or the EEA) pay tuition fees.

**Germany**: Since 2006/07, the *Länder* have been free to request contributions towards tuition costs. For more information: http://www.studis-online.de/StudInfo/Gebuehren/tuition\_fees.php

**Estonia**: Students without a subsidised place pay contributions to tuition costs.

**Ireland**: All students pay an annual student contribution charge 'administrative fee', however, the state pays this charge on behalf of targeted students (means-tested).

Greece: Provision is free at Bachelor level except for the Hellenic Open University.

**France**: Information concerns only tertiary institutions under the responsibility of the Ministry of higher education and research. In addition to the annual administrative fees which are set at central level, tertiary institutions may collect specific fees to finance sports, medical provision from the *Service Universitaire de Médecine Préventive et de Promotion de la Santé* (SUMPPS) or guidance activities from the *Service Universitaire d'Information et d'Orientation* (SUIO).

**Italy**: 'Other' category refers to the regional tax for student welfare.

Latvia: The Figure relates to students without a state-subsidised place (around three-quarters of all students). Subsidised students are not charged fees. A relatively small amount is paid by students for processing (hard cover) graduation documents.

Lithuania: From 2011, registration fees were no longer charged.



**Austria**: Students from European Union countries and those who are accorded the same rights currently do not pay tuition fees. Only when they exceed the minimum study period plus two semesters, they have to pay EUR 363.36 per semester. Universities of applied science may waive payment of tuition fees, but students qualifying for social grants also have their tuition fees reimbursed.

**Poland:** According to the Law of 18 March 2011, which amended the Law on Higher Education and became effective from 1 October 2011, full-time students in public HEIs pay tuition fees for a second/subsequent full time study programme.

**Slovenia**: Other fees paid by full-time students of public higher education institutions on state-funded places include costs linked to the implementation of the study programme, fieldwork and professional field trips; costs for taking an exam for the fourth time or more in the same subject, and costs of the examinations commission.

**Sweden**: The mandatory membership in and fee to student association was repealed in 2010. Since April 2008, the students do not have to make a compulsory payment anymore in recognition of the support they have received once they have graduated ('Graduate Endowment').

**United Kingdom (SCT)**: There are no fees for Scottish home students and students from other European Union countries, but fees exist for students from England, Wales and Northern Ireland as well as for international students.

**Norway**: In some institutions in the government-dependent private sector, students also have to pay administrative entrance fees, annual registration fees, and a contribution to tuition costs.

## ALL COUNTRIES PROVIDE SCHEMES TO HELP TERTIARY EDUCATION STUDENTS WITH LIVING COSTS

Students in tertiary education and/or their parents may benefit from a system of financial support that is generally underpinned by social principles including the equality of educational opportunity for all and, more specifically, the widening of access to tertiary education. The principle that tertiary students are financially independent of their families may also play a part in some countries. Three major categories of support are considered here:

- financial support to students to cover the cost of living, in the form of loans and/or grants;
- financial support for the payment of administrative fees and contributions to tuition costs, in the form of loans and/or grants, exemptions and/or reductions;
- financial assistance to the parents of students in tertiary education, in the form of family allowances and/or tax relief.

Only seven countries provide all three types of support mentioned above (Germany, France, Italy, Latvia, Lithuania, Austria and Slovakia). However, all countries provide financial support to *students* to cover living costs, although many countries do not provide support to *parents* of students enrolled in programmes at ISCED level 5 for a first tertiary qualification. This suggests a model based on student financial independence. In one group of countries (Denmark, Malta, Finland, Sweden and Norway), where admission to tertiary education is free or almost free (students only pay a contribution to the student organisation), financial support is only awarded for student living costs. In contrast, in Luxembourg, Hungary, Romania and Croatia, supporting living costs is the only type of support available to students even though many students are charged tuition or administrative fees. In the Netherlands, the United Kingdom (England, Wales and Northern Ireland), Iceland, Liechtenstein and Turkey, in addition to help with living costs, students may also be awarded support for administrative or tuition fees depending of the country.

The second model is based on students' continuing dependency on their parents. Support in the form of family allowances and/or tax relief is provided to parents of students enrolled for a first tertiary qualification at ISCED level 5 and this complements the direct support to students to help with living costs.

Some countries/regions do not allocate support for specific purposes but make a general all-purpose award to any student who meets the awarding criteria (Belgium - French- and German-speaking



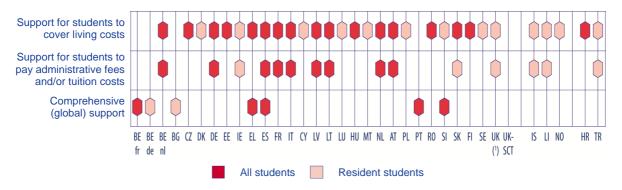
Communities, Bulgaria, Greece, Ireland, Spain and Portugal). Of these, Belgium (German-speaking Community), Bulgaria and Ireland do not take into account students' residency status.

Finally, various countries provide different types of support depending of the specific students needs In Spain, for example, there are specific support programme for students to pay administrative fees and tuition costs, and also mobility grants for students that study in a different Autonomous Community from the one they reside. These grants cover residence and other costs. Finally, there are also so-called 'General grants'for students that study in the same Autonomous Community they reside. These grants include expenses related to residence, material, commuting to the education centre, and a compensation for the incompatibility of following studies and having a job.

There are several ways of encouraging student mobility across Europe including the provision of financial support to those who wish to study abroad and the guarantee of the portability of grants and loans awarded in the home country. One further way is for host countries to award support regardless of the residential status of students.

Half of the countries examined do not include residency among the awarding criteria for student financial support. However, even when students are non-residents, they may receive support from the host country as the qualifying criteria may include citizenship (Belgium (French Community), Germany, Ireland, Greece and Latvia) although the conditions applied usually differ between EU and other citizens. In Germany, all national and foreign students are eligible for fee remissions or participation in loan schemes depending on the regulations applicable in the *Land* in which the institution is located (support for the payment of fees). Foreign students are also eligible for the BAföG under certain conditions. EU and EEA nationals are eligible if they are permanent residents in Germany or enjoy the right of free movement as a worker or a worker's child or spouse. Since a reform in 2008 (22nd BAföG-amendment act), other foreign students are eligible if they are already living in Germany legally and intend to stay long term, irrespective of whether their parents fulfil the requirements regarding the minimum previous period of employment.

 Figure D12: Purpose of the public financial support for full-time students in a first tertiary qualification programme (ISCED 5) in the public and/or government-dependent private institutions, 2010/11



Source: Eurydice.

Explanatory note

The Figure takes account of full-time students enrolled with a state-subsidised place in full-time courses for a first tertiary qualification (ISCED 5). Comprehensive (global) support or award does not dissociate support to cover student living costs from support for the payment of administrative fees and/or contributions to tuition costs). See the Glossary for definitions of support.



### **Country specific notes**

**Belgium**: Parents of students in education or training continue to receive child allowance till the age of 26 as a form of Comprehensive (global) support. If the student lives separately from the family he receives the allowance directly.

Czech Republic: The criteria that a student has to fulfil differ from one institution to the next. Usually they include the distance between the institution and the place where student lives; whether he/she exceeds the standard duration of studies more than one year; whether he/she fully pays his/her studies. Foreign students benefit from some support for living costs. The canteen receives a public support grants depending on number of students (regardless of their citizenship). At ISCED level 5B, support for students to cover cost of living does not consider the citizenship criterion. In addition, other supports (health insurance up to the age of 26, subsidies for meals, transport and cultural activities) are available.

**Germany**: In addition to the BAföG student support there are different loan schemes at federal level offered by the KfW-Bank (which is a public bank) at favourable conditions (low interest rates). Moreover, a form of support based on merit was introduced in 2010 (*Deutschlandstipendium*). Support for living costs (BAföG) is half non-refundable and half-refundable (interest free).

Estonia: Financial support for students in real poverty concerns only resident students.

**Ireland**: Full-time EU/EEA/Swiss nationals studying in approved higher education institutions who meet the criteria of the free fees scheme have their undergraduate tuition fees paid on their behalf by the State.

**Greece**: Transport subsidies are available for all students as well as reductions to all publicly funded events, museums etc. Finally, in some regional universities, transportation is also free of charge for all students.

**Spain**: There are also tax reliefs for the families with children in tertiary education depending of the family composition and place of residence and study of the student.

**France**: Annual and occasional study allowances are available to assist students who encounter particular difficulties during their year of study (such as the break-up of their family, proven independence from their family, or who return to study after the age 26).

Latvia: The support awarded to parents may also be available to students themselves. It is possible for students to recover part of the annual funds invested in education, health insurance, etc.

Hungary: For students with state-funded places.

Austria: Foreign students are eligible for financial support under certain conditions according to the Student Support Act

**Slovenia**: A comprehensive support scheme exists: funds are not allocated directly to students but to service providers for accommodation and transport (resident students) and meals (all students).

**Sweden:** In parallel to the introduction of tuition fees for international students, two new scholarship programmes targeted at fee paying students have been introduced.

**Norway**: The Figure takes into account only students in public institutions. Students in government-dependent private institutions have to contribute to tuition fees, and special forms of financial support are available for these students. In public institutions, no students, resident or foreign, have to pay tuition fees of any kind.

# INITIAL EDUCATION FOR TEACHERS OF STUDENTS IN COMPULSORY EDUCATION USUALLY FOLLOWS THE CONCURRENT ROUTE

In all European countries in order to become a qualified school teacher, candidates are required to have undertaken academic studies, including a course of study in education which provides them with the theoretical and practical skills (including school placements) needed to join the teaching profession.

There are two models of initial teacher education. Under the **concurrent model**, the professional education component is provided from the outset alongside general education and/or study of the subject(s) the prospective teacher is intended to teach. Under the **consecutive model**, students pursue their academic/subject studies first and take a professional course in education after completing their academic degree. Since the launch of the Bologna process, initial teacher education has seen many changes; therefore, historical comparisons have to be made with caution. With this in mind, it can be noted that since 2002/03 (Eurydice, 2005), the number of countries offering the consecutive model of teacher education, in addition to the concurrent model, has increased for all levels of education.

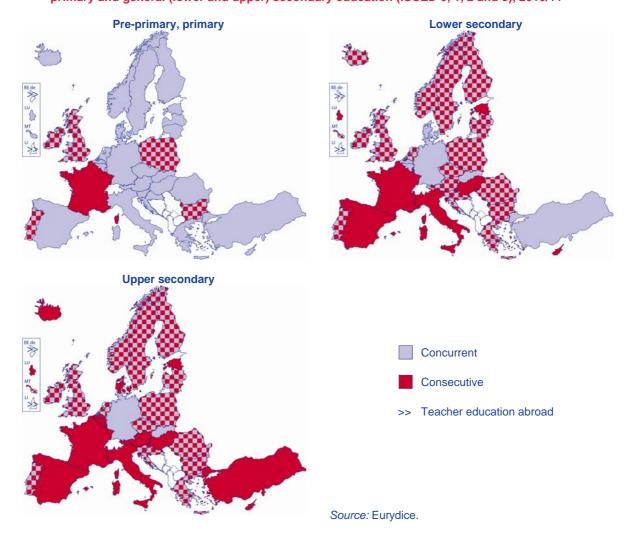
In almost all European countries, teachers at pre-primary and primary levels of education are trained under the concurrent model. In Bulgaria, Ireland, Poland, Portugal and the United Kingdom (England, Wales and Northern Ireland), both the concurrent and the consecutive routes are available. However, while Ireland and Poland report that the concurrent model is the most common model for intending pre-primary and primary teachers, in the United Kingdom (England) the consecutive model is more usual.

For general lower secondary education, the situation is more mixed. The concurrent model is the only possible option in Belgium, Denmark, Germany, Slovakia and Turkey. However, in Estonia, Spain, France, Italy, Cyprus, Luxembourg and Hungary, the consecutive model is the only available pattern of training. In the majority of all other countries where both models exist, the concurrent model is the most widespread route for this level of education.

Many countries offer both training routes for general upper secondary teachers but the consecutive model of teacher education is more common, particularly so in Greece, Slovenia and Norway. Likewise, in the United Kingdom (England, Wales and Northern Ireland), at both lower and upper secondary level, teachers are subject specialists and the consecutive model is predominant. Concurrent programmes are available for a limited number of subject specialisms only.

In Germany and Slovakia, the concurrent model is the only possible route into teaching at all levels of education. In France, only the consecutive model is available.

Figure E1: Structure of initial teacher education for pre-primary, primary and general (lower and upper) secondary education (ISCED 0, 1, 2 and 3), 2010/11



## **Explanatory note**

The **concurrent model** involves general education and mastery of the particular subject(s) that trainees will teach when qualified; students learn the professional aspects of teaching from the start of their higher education studies. Under the **consecutive model**, students obtain an academic degree (bachelor's or bachelor's + master's) before embarking on their professional studies.

### Country specific notes

**Belgium (BE de)**: Initial teacher education for secondary level teachers is provided outside the German-speaking Community. Most teachers are trained in the French Community of Belgium.

**Luxembourg**: For general secondary education, prospective teachers usually obtain their master's degree abroad and subsequently attend their professional training within the country.

Liechtenstein: Initial teacher education takes place abroad. Prospective teachers are trained mostly in Switzerland and Austria.

# INITIAL TEACHER EDUCATION IS USUALLY PROVIDED EITHER AT BACHELOR'S OR MASTER'S LEVEL AND IS FOLLOWED BY AN INDUCTION PERIOD IN 13 COUNTRIES

There are differences between countries with respect to the level of qualification teachers must attain in order to meet the requirements to become a fully qualified teacher. The minimum requirement for becoming a teacher at **pre-primary level** in most European countries is a tertiary level qualification gained after three or four years of study. Most countries require pre-primary teachers to hold a Bachelor's degree or its equivalent. However, in the Czech Republic, Germany, Ireland, Malta, Austria

and Slovakia, the minimum level of initial teacher qualification is either upper secondary (ISCED 3) or non-tertiary post-secondary level (ISCED 4). Conversely, a master's degree is required in France, Portugal and Iceland. Overall, it can be noted that the minimum level of qualification required for becoming a pre-primary teacher has risen across Europe compared to 2006/07 (Eurydice, 2009).

Similarly, the great majority of countries require prospective **primary teachers** to have a Bachelor's degree or its equivalent, which takes three or four years' study. The exceptions to this rule are ten European countries – the Czech Republic, Germany, Estonia, France, Portugal, Slovenia, Slovakia, Finland, Iceland and Croatia – where initial education for primary teachers is at master's level and usually takes five years. Compared to 2006/07 (Eurydice, 2009), an increase in the minimum length of initial teacher education can be noted for many countries in 2010/11.

For those intending to work at **lower secondary level**, in around half of the countries studied, initial teacher education take place at bachelor's level (three to four years) and in the other half at master's level (usually around five years). For prospective **upper secondary teachers**, the minimum qualification required in the majority of European countries is a master's degree, except in 11 countries or regions where the minimum qualification level is at bachelor's level and applies to teachers at all levels of school education.

Finally, in addition to educational and professional qualifications, teachers must also undergo an induction period in 13 countries or regions, usually directly after gaining their qualification. The induction phase is generally seen as a structured support programme for prospective teachers. In some countries, it applies to teachers at all school levels in general education, in others it is a requirement only at secondary or at primary level but not at pre-primary level. During induction, newly qualified teachers carry out all or many of the tasks incumbent on experienced teachers, and they are remunerated for their work. Most countries provide this induction phase in addition to the compulsory professional training received before the acquisition of a teaching diploma.

### **Explanatory note (Figure E2)**

Prospective teachers may follow either the concurrent or the consecutive model of **initial teacher education**, depending on the level of education and the country concerned (see note to Figure E1). The period of study includes the time taken to acquire the necessary academic degree prior to embarking on the initial teacher education course under the consecutive model.

The **induction phase** is a structured phase of support given to newly qualified teachers when they begin their first teaching post. During the induction period, these teachers carry out all or many of the tasks incumbent on experienced teachers, and they are remunerated for their work. Normally, this phase also includes a theoretical aspect; it is an additional requirement to the compulsory professional training received before acquiring a teaching diploma. The induction phase is different from a purely administrative probationary period. It normally lasts at least several months.

### **Country specific notes**

Ireland: Currently, engagement by probationary teachers in a formal induction programme is still voluntary, but will become mandatory in 2012.

**Cyprus**: The duration of the induction phase is 39 days for prospective teachers at all levels.

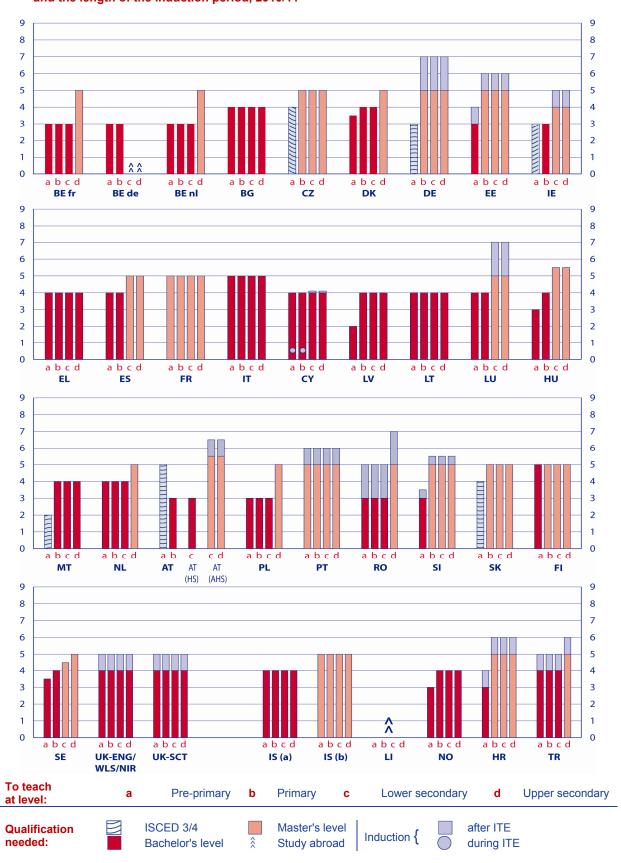
**Sweden**: Prospective teachers will have to take a final induction year at a school under the leadership of an experienced teacher as part of their initial education as of autumn 2011.

**United Kingdom (ENG/WLS/NIR)**: The Postgraduate certificate in education (PGCE, i.e. consecutive route professional training programme) is not a master's programme but may include some master's level study that can contribute to a master's degree.

**Iceland**: The Law on teacher education and employment of teachers No. 87/2008 stipulates that teacher education for qualified teacher status should be at master's level but this will not come fully into effect until 2013. There is a transition period during which teacher education institutions are running two programmes (a and b).

**Norway**: There are other pathways to the teacher qualification in addition to the 3-year programme, including a five-year concurrent teacher education programme at master's level.

Figure E2: Required level and minimum length of initial teacher education for teachers from pre-primary to upper secondary education (ISCED 0, 1, 2 and 3), and the length of the induction period, 2010/11





# SOME EUROPEAN COUNTRIES ARE FACING A SERIOUS SHORTAGE OF QUALIFIED TEACHERS FOR CORE SUBJECTS

Teachers have a key role in the teaching and learning process, and so it is important for schools to recruit, train and retain a highly qualified teaching staff. Around half of the European countries studied do not face any major problems in this area. However, an analysis of the current teaching body reveals that the supply of suitable teachers is an issue in some countries.

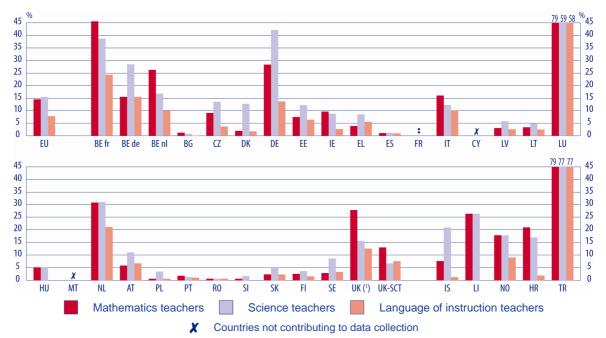
Data from the latest PISA survey (2009) shows that on average in the participating European countries, around 15 % of all 15-year-old students were taught in schools where the school head reported that teaching is, at least to some extent, hindered by a lack of qualified science and mathematics teachers. The EU average is lower for the language of instruction, with 7.7 % of students being taught in schools experiencing a shortage of teachers in this subject.

Belgium (French Community), Germany, Luxembourg and Turkey were the most affected by teacher shortages, as more than 40 % of 15-year-olds in these countries attended schools where the heads reported that this was a problem. The percentages were nearly 80 % in the case of mathematics teachers in Luxembourg and for teachers in all three subjects in Turkey.

These countries were followed by Belgium (German-speaking and Flemish Communities), the Netherlands, the United Kingdom (England, Wales and Northern Ireland), Iceland and Liechtenstein, where between 20 and 40 % of students have school heads who reported a lack of qualified science, mathematics or language of instruction teachers.

Comparing the shortage of teachers in core subjects with those in other subjects (see data table below Figure E3), it becomes evident that in some countries, such as Germany, the Netherlands or Turkey, the percentages are high in all subjects, indicating that there is a general teacher shortage in the country. Whereas in several others, such as Belgium (French and German-speaking Communities), Ireland and Slovakia, the shortage is less acute in core subjects than in others.

# Figure E3: Percentages of students aged 15 attending schools where teaching is affected by a lack of qualified teachers in the core subjects, 2009



Source: OECD, PISA 2009.

<u>Data</u>																		
_	EU	BE fr	BE de	BE nl	BG	CZ	DK	DE	EE	ΙE	EL	ES	FR	IT	CY	LV	LT	LU
Mathematics teachers	14.6	45.6	15.6	26.3	1.2	9.0	1.9	28.4	7.4	9.6	3.8	1.1	:	16.1	Х	3.1	3.4	79.3
Science teachers	15.5	38.7	28.5	16.9	0.7	13.6	12.8	42.2	12.1	8.7	8.4	1.2	:	12.2	Х	5.7	4.8	58.5
Language of instruction teachers	7.7	24.4	15.6	9.8	0.1	3.6	1.7	13.8	6.4	2.7	5.5	0.9	:	10.0	Х	2.6	2.5	58.2
Other subjects	22.4	73.1	80.4	30.7	10.5	31.4	22.1	50.7	19.0	34.8	4.8	6.3	:	22.4	Х	5.4	10.9	35.7
	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	<b>UK</b> (1)	UK- SCT	IS	LI	NO	HR	TR
Mathematics teachers	5.2	Х	30.8	5.8	0.6	1.8	0.6	0.6	2.4	2.6	2.9	27.8	13.0	7.6	26.3	17.8	20.9	79.4
Science teachers	5.2	Х	30.9	11.0	3.4	1.3	0.6	1.7	5.3	3.6	8.6	15.6	6.7	20.8	26.3	17.7	17.0	76.9
Language of instruction teachers	0.0	Х	21.1	6.7	0.6	1.1	0.6	0.0	2.3	1.6	3.3	12.5	7.6	1.2	0.0	9.0	1.9	76.6
Other subjects	6.2	Х	42.5	21.2	5.3	4.7	5.9	4.5	28.1	13.4	14.7	14.8	20.5	12.7	19.3	29.8	21.1	81.3

# **Explanatory note**

The figure summarises principals' responses to the option 'lack of qualified mathematics teachers' as part of the question 'ls your school's capacity to provide instruction hindered by any of the following issues?' It aggregates two out of the four available answer categories **'to some extent'** and **'a lot'** but omits the responses 'not at all' and 'very little',

UK (1) = UK-ENG/WLS/NIR

# **Country specific notes**

Source: OECD, PISA 2009.

**France**: The country took part in PISA 2009 but didn't administer the school questionnaire. In France, 15 year-old students are distributed between two different types of school and therefore an analysis at school level might be not consistent.

Luxembourg: The data for Luxembourg may be unreliable due to the small number of participating schools.

**Austria**: The trends are not strictly comparable, as some Austrian schools have boycotted PISA 2009 (see OECD, 2010). However, Austrian results are included in the EU-27 average.

# REGULATIONS OR RECOMMENDATIONS ON SUPPORT MEASURES FOR NEWLY QUALIFIED TEACHERS ARE INCREASINGLY WIDESPREAD

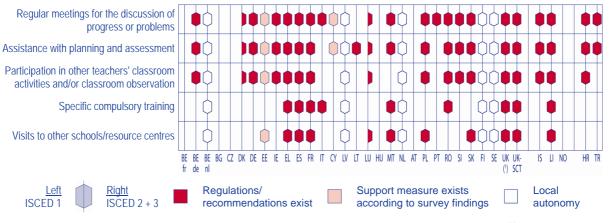
Teachers may face many challenges in the early years of their career. Although only 13 countries or regions offer comprehensive, system-wide induction programmes (see Figure E2), many provide separate support measures that can help teachers overcome the difficulties they may experience as newcomers to the profession, and help to reduce the likelihood that they will leave the profession early. Moreover, a mentor, who may be the school head or an experienced teacher with a significant period of service, is often appointed to take responsibility for newly qualified teachers.

Support measures for new teachers have become increasingly widespread in Europe. While in 2002/03 only 14 countries offered formal assistance under central regulations or recommendations (Eurydice, 2005), this number increased to 20 in 2006/07 (Eurydice, 2009). In 2010/11, 21 countries reported that central guidance on support measures for new teachers existed. These measures include, in particular, regular discussions of progress and problems, and assistance with the planning of lessons and student assessment.

In Greece, Spain, France, the United Kingdom and Liechtenstein, central level regulations or recommendations ensure the provision of all types of support measures for new entrants. In contrast, in Belgium (Flemish Community), Latvia, the Netherlands, Finland and Sweden, schools are free to decide which types of support they will provide.

In Estonia and Cyprus, although there are no central regulations in this area, according to survey results, some of the support measures mentioned below are provided for new teachers. Several other countries also report having no regulations or recommendations on support for new teachers, although in practice such measures may exist at some schools.

 Figure E4: Types of support available to new entrants to the teaching profession in primary and general (lower and upper) secondary education (ISCED 1, 2 and 3): regulations, recommendations or survey findings, 2010/11



Source: Eurydice. UK (1) = UK-ENG/WLS/NIR

### **Explanatory note**

The support measures listed here are examples of the type of activities that a school would be expected to provide depending on an individual teacher's specific development needs.

### **Country specific notes**

Denmark: Regulations on support measures for new teachers only apply to those teaching at ISCED 3.

Estonia: All support measures, except for those concerning the induction phase, apply to new teachers teaching at ISCED 2.

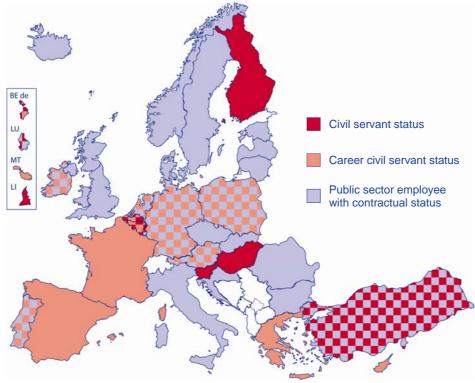
Malta: Special compulsory training refers to a three half-day course for all newly qualified teachers that is held just before the start of the school year.

# IN MANY EUROPEAN COUNTRIES TEACHERS ARE EMPLOYED ON A CONTRACTUAL BASIS

In European countries, the employment status of fully qualified teachers for primary, lower secondary and upper secondary levels of public sector education falls into two main categories. In more than half of the countries studied, teachers are usually employed under open-ended contracts subject to general employment legislation. As public-sector employees, teachers are employed at local or school level, although they are usually directly employed by the school in which they teach. Elsewhere, teachers have the status of civil servants, and in most countries, they are appointed for life as career civil servants. In Germany, Ireland, Luxembourg, the Netherlands, Austria, Poland, Portugal and Turkey, both the category of civil servants exist alongside the category of teachers as public sector employee.

Teachers who are civil servants are employed by public authorities at central, regional or local level. They are employed in accordance with a regulatory framework, which is distinct from legislation governing contractual relations in the public or private sectors. In some cases, such as in Ireland, newly qualified teachers who have not achieved permanent status may, after a certain number of years in a school, obtain contracts of indefinite duration. The concept of permanent appointment for life is very important, as teachers lose their jobs only under very exceptional circumstances.

# Figure E5: Teacher employment status in primary education and general (lower and upper) secondary education (ISCED 1, 2 and 3), 2010/11



Source: Eurydice.

## **Explanatory note**

Only fully qualified teachers in the public sector are considered here (i.e. those who work in schools that are funded, managed and directly controlled by the public authorities), except in Belgium, Ireland and the Netherlands where the majority of students attend grant-aided private schools (i.e. schools over half of whose basic funding is from the public purse).

**Civil servant** status means a teacher employed by public authorities (at central, regional or local level), in accordance with legislation that is distinct from laws governing contractual relations in the public or private sector.

Career civil servants are those appointed for life by the appropriate central or regional authority where these correspond to the top-level authority for education.

**Public-sector employee with contractual status** refers to teachers employed generally by local or school authorities on a contractual basis in accordance with general employment legislation and with or without central agreements on pay and conditions.

### **Country specific notes**

**Belgium:** Teachers working in schools administered by each of the three Communities are appointed as civil servants. Teachers working in the grant-aided private sector are considered to be 'assimilated' to civil servant status although they are employed under general employment legislation.

**Germany**: Teachers in some of the *Länder* are employed under permanent government contracts. Broadly speaking, their status is comparable to that of a civil servant.

**Malta**: At ISCED 3, career civil servant applies to those schools that fall under the remit of the Educational Directorates; whereas public sector employees at the Junior College are employed with contractual status since Junior college falls under the remit of the University of Malta.

**Netherlands**: Teachers in public-authority schools are civil servants according to the Central and Local Government Personnel Act. Teachers in grant-aided private schools sign a (private law) contract with the board of the legal entity whose employment they enter. However, these staff may share the status of public-sector personnel in respect of those working conditions that are determined by the government. Collective agreements cover the whole education sector (both public-authority and grant-aided private schools).

**Poland**: Teachers in the 1st and 2nd categories on the teacher promotion scale (i.e. trainee and contractual teachers) have contractual status and teachers in the 3rd and 4th categories (i.e. appointed and chartered teachers) have an equivalent status to career civil servants.

**Slovenia**: Teachers working in public schools are civil servants according to the Civil Servants Act, but they sign the employment contract with the school head, since public schools are constituted as separate legal entities.



# ACADEMIC TEACHING STAFF IN HIGHER EDUCATION ARE CONTRACTUAL EMPLOYEES IN THE MAJORITY OF COUNTRIES

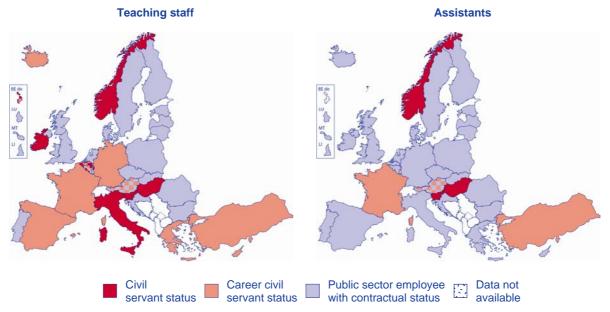
Although, the recruitment procedures for academic staff are generally dependent on official regulations, higher education institutions (HEIs) are largely autonomous in their role as employers and negotiators of contracts.

In the majority of European countries, teaching staff at public or government-dependent private HEIs are employees working under contracts governed by general labour legislation (contracts may or may not be permanent). The general trend seems to be that this employment status is increasingly replacing that of civil servant status. However, in fourteen countries or regions, the majority of teaching staff are still civil servants or career civil servants, such as in Germany, Greece, Spain, France, Cyprus, Iceland and Turkey.

In, Belgium (French Community) and Austria, there is a mixed statutory framework (teaching staff hired as civil servants or on a contractual basis). In Austria, the teaching staff at universities of applied sciences (Fachhochschulen) are all employees with contractual status.

Other academic staff, such as assistants, are public sector employees with contractual status in the large majority of European countries. The exceptions are Hungary, Slovenia and Norway where assistants have the status of civil servants; and France and Turkey where assistants can have the status of career civil servants.

### Figure E6: Employment status of academic staff in tertiary education (ISCED 5 and 6), 2010/11



Source: Eurydice.

## **Explanatory note**

The category 'teaching staff' refers to academic personnel whose main tasks are teaching and research. The category 'assistants' refers to individuals who assist teaching staff with teaching duties.



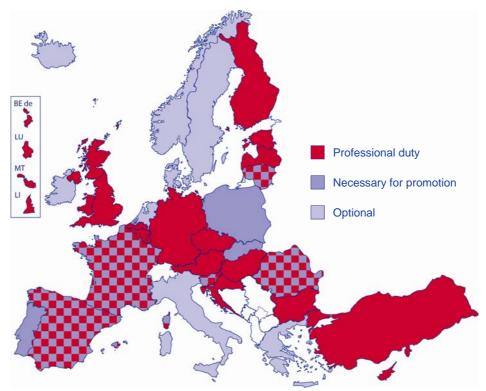
# CONTINUING PROFESSIONAL DEVELOPMENT IS A PROFESSIONAL DUTY FOR TEACHERS IN THE MAJORITY OF EUROPEAN COUNTRIES

Continuing professional development (CPD) has gained considerable importance over the years. While in 2002/03, it was optional for teachers to participate in CPD activities in around half of European countries (Eurydice, 2005); it is now considered a professional duty in 24 countries or regions. In Spain, France, Lithuania, Romania and Slovenia, CPD participation is, moreover, a prerequisite for career advancement and salary increases.

In some countries, teachers are not explicitly obliged to engage in CPD. However, in Poland, Portugal, and Slovakia CPD is clearly linked to career progression. In Portugal, non-participation in CPD activities may even be penalised or regarded as a negative element in teachers' appraisal.

Specific CPD linked to the introduction of new educational reforms and organised by the relevant authorities is, in general, a professional duty for teachers in all countries.

# Figure E7: Status of continuing professional development for teachers in primary and general (lower and upper) secondary education (ISCED 1, 2 and 3), 2010/11



Source: Eurydice.

# **Explanatory note**

**Continuing professional development** refers to formal and non-formal training activities, which may for example include subject-based and pedagogical training. In certain cases, these activities may lead to supplementary qualifications.

Professional duty means a task described as such in working regulations/contracts/legislation or other regulations on the teaching profession.

# **Country specific note**

**Malta**: In public schools, CPD is not necessary for promotion but extra qualifications are an asset for promotion. However, at ISCED 3, schools that do not fall under the remit of the Educational Directorates, CPD is necessary for promotion. This applies to the Junior College, where academic staff requires CPD to progress from assistant lecturer to Lecturer and further on to a status of Professor.



# MOST COUNTRIES DEFINE MORE THAN WEEKLY TEACHING TIME IN TEACHERS' EMPLOYMENT CONTRACTS

In most countries, teachers' employment contracts specify the number of hours they are required to teach. In 2010/11, teachers in Europe were contracted to be engaged in teaching activities, on average, between 19 and 23 hours a week – slightly more than in 2006/07 when the average was 18 to 20 hours a week (Eurydice, 2009). This figure excludes planned breaks and any other contact time with students that does not involve teaching. There are, however, considerable variations between countries.

In general, the weekly teaching time of teachers in lower and/or upper secondary education is less than in primary education. Only in Bulgaria, Denmark and Croatia does the number of teaching hours for teachers in secondary education increase. In around a dozen countries, teachers are required to teach exactly the same amount of hours in both primary and secondary education.

Very few countries, however, define only teaching hours in employment contracts. In the majority of European countries, an overall number of working hours per week is also set, based on the amount of working time in other employment sectors. This is between 35 and 40 hours in most of these countries, as specified in collective bargaining or other agreements.

Seventeen countries or regions also prescribe the amount of time that teachers should be available in school each week. In general, this figure does not exceed 30 hours, except in Portugal, Sweden, the United Kingdom (England, Wales and Northern Ireland), and in both Iceland and Norway only at primary and lower secondary education. The overall number of working hours and the amount of time teachers should be available in school are very similar across a number of countries at the various levels of education.

### Country specific notes (Figure E8)

**Belgium (BE fr)**: The total annual amount of time for all services performed by teachers in primary education may not exceed 962 hours annually. It includes lessons, supervisory duties, meetings and consultation with colleagues (which correspond to at least 60 periods). Only time spent teaching is shown.

Belgium (BE nI): The data refer to the maximum weekly workload.

**Denmark**: The number of days per school year and the length of breaks are not regulated by the ministry, but left to the discretion of the individual institutions. There might therefore be variations in the teaching hours.

**Germany**: The overall time of 40 hours represents the average for all *Länder*.

Latvia: The time available at school includes two paid hours per week that all teachers have for providing learning support for students.

Malta: At ISCED levels 1, 2 and 3, the number of hours refers to full days. For teachers at the Junior College, the number of hours of availability at school at ISCED 3 is 40 hours, and the number of teaching hours is 19 hours.

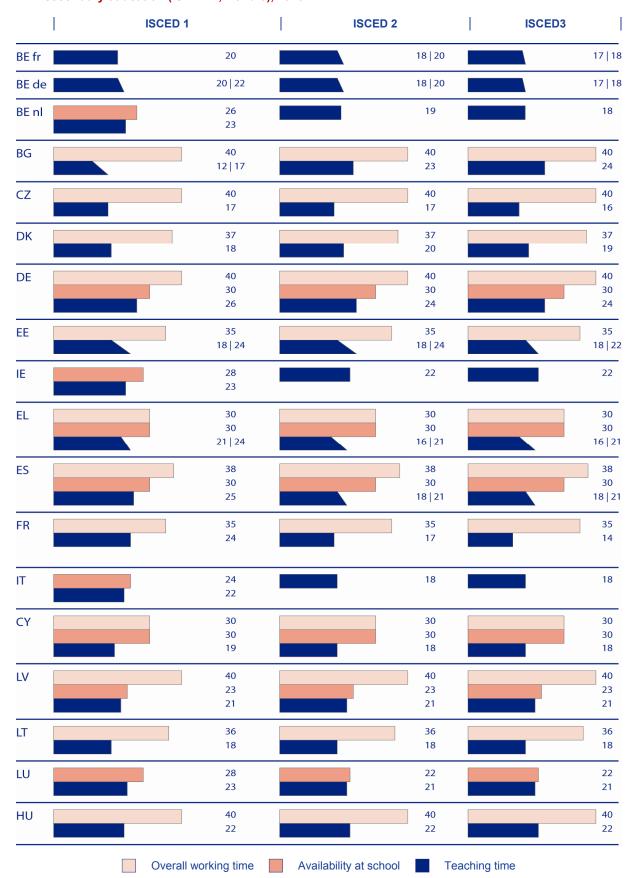
**Netherlands**: Only the number of days for teaching each year (200) and the overall number of hours each year (1 659) are specified.

**Poland:** Besides teaching time and overall working time, teachers are obliged, according to the legislation, to be available at school 2 extra hours in primary and lower secondary level and one extra hour in upper secondary schools.

**Portugal**: The teaching component in the work of 1st cycle teachers consists of 25 teaching hours a week; in the 2nd and 3rd cycles of *ensino básico*, it is 22 hours; and in upper secondary education, 20 hours a week, provided all teaching is done in this level of education.

**Iceland**: The compulsory teachers union's contract sets out the weekly workload of teachers based on 37 weeks of teaching per year.

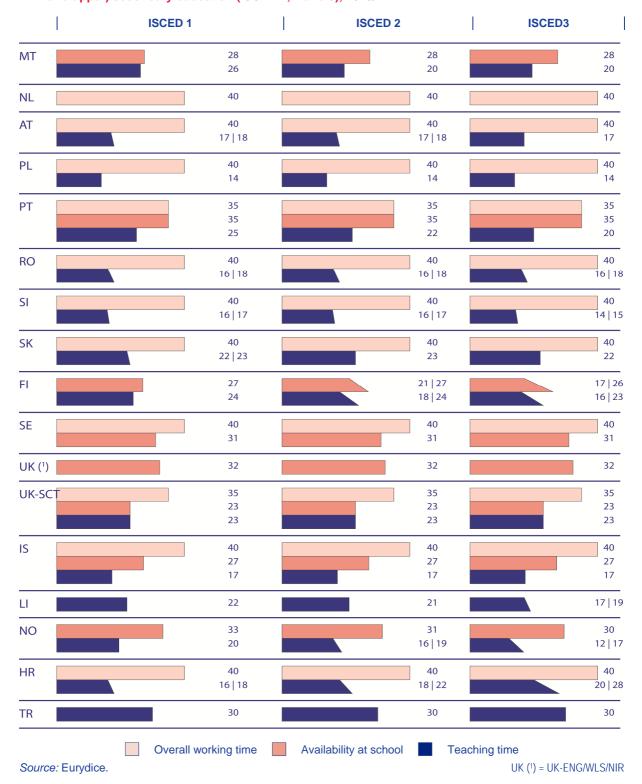
# • Figure E8: Weekly workload of full-time teachers in hours for primary and general (lower and upper) secondary education (ISCED 1, 2 and 3), 2010/11



Source: Eurydice (updated 19 April 2012).



■ Figure E8 (continued): Weekly workload of full-time teachers in hours for primary and general (lower and upper) secondary education (ISCED 1, 2 and 3), 2010/11



### **Explanatory note**

The Figure shows the situation of a teacher working full-time who does not have other duties, such as management duties. Variations within a country are shown where they relate to specific factors such as the subject taught or the employment status of the teacher, or where they represent flexibility at school level to establish the number of teaching hours or time available at school for each teacher. Reduced timetable conditions for teachers who are not yet qualified or who are newly qualified are not shown; neither is the flexibility to reduce the number of hours in accordance with the length of service or when taking on other duties.

The Figure gives information solely in hours per week. The real working time of teachers may also vary in accordance with the annual number of service days.

**Teaching time** refers to the time spent by teachers with groups of students. This number is calculated to exclude time for breaks or time spent with students that does not involve teaching. It is obtained by multiplying the number of lessons by the time each lesson lasts and dividing the product by 60.

**Availability at school** refers to the amount of time each week that teachers must be available, including teaching time, for performing duties at school or in another place specified by the school head.

**Overall working hours time** includes the number of teaching hours per week, additional hours of availability at school, and the amount of working time spent on preparation and marking activities, which may be done outside the school.

# WOMEN TEACHERS ARE OVER-REPRESENTED AT PRIMARY AND SECONDARY LEVEL BUT NOT IN TERTIARY EDUCATION

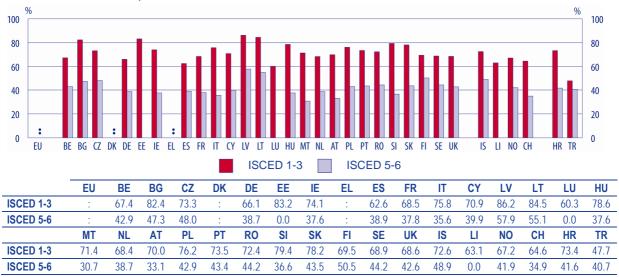
Women account for the majority of teachers at primary and secondary level. Since 2002/03, there has been a slight increase in the proportion of female teachers at these levels of education (Eurydice, 2009). However, their representation decreases markedly the higher the level of education.

In 2009, in all European countries for which data are available, over 60 % of teachers in primary and secondary education (ISCED 1, 2 and 3) were women. In four countries – Bulgaria, Estonia, Latvia and Lithuania – 80 % of teachers at these levels were women.

This contrasts sharply with the representation of women at tertiary education levels (ISCED 5 and 6). Women teachers represent less than 50 % of teachers at this level in all countries, with the exception of Latvia, Lithuania and Finland. In Finland, the percentage of female teachers in tertiary education increased from 47.7 % in 2006 to 50.5 % in 2009.

In a dozen countries, women make up less than 40 % of teachers in tertiary education. The drop in female representation at tertiary level compared to ISCED levels 1-3 is very marked in Hungary, Malta and Slovenia.

 Figure E9: Percentage of women teachers in primary and general (lower and upper) secondary education (ISCED 1, 2 and 3) compared with tertiary education (ISCED 5 and 6), public and private sectors combined, 2009



Source: Eurostat, UOE and Labour force survey.

# **Explanatory note**

Only teachers involved in providing direct instruction are taken into account. Data include teachers in special education and all others who work with students as a whole class in a classroom, with small groups in a resource room, or on a one-to-one basis inside or outside a regular classroom. Both full-time and part-time working teachers in the public and private sectors are included. Trainees or teachers' assistants are not included.

# **Country specific notes**

Belgium: Teachers in the German-speaking Community and those working in independent private institutions are not included. ISCED 3 includes ISCED 4.

Ireland, Finland and United Kingdom: ISCED 3 includes ISCED 4.

**Luxembourg**: The Figure relates solely to the public sector.

Netherlands: ISCED 1 includes ISCED 0.

Finland: At ISCED levels 5-6 the data on academic staff includes only teaching personnel. Research personnel are

excluded. Previously research personnel were also included in academic staff at ISCED levels 5-6.

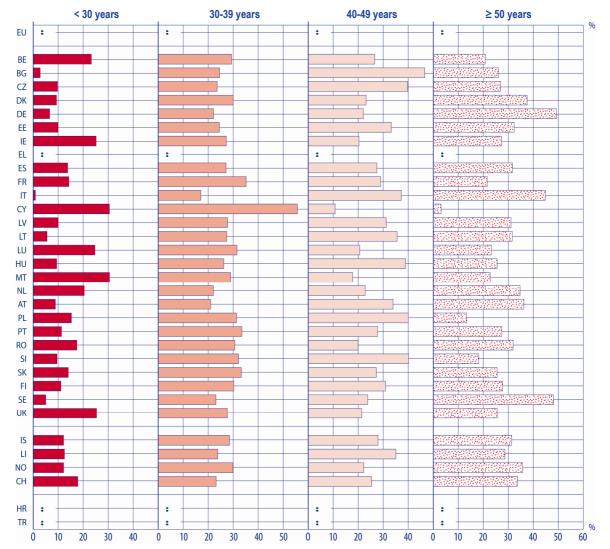
Sweden: Postgraduate students performing teaching tasks are included in academic staff.

Iceland: ISCED 3 partially includes ISCED 4.

# A HIGH PERCENTAGE OF PRIMARY SCHOOL TEACHERS ARE IN THE OLDER AGE GROUPS IN MANY EUROPEAN COUNTRIES

The European Union is facing demographic changes characterised, amongst other things, by an ageing population. Naturally, this affects many professions in society, including the teaching profession and this may be one of the reasons for the lack of qualified teachers in some countries (see Figure E3). This situation may worsen over the next decades.

# Figure E10: Distribution of teachers by age group in primary education (ISCED 1), public and private sectors combined, 2009



Source: Eurostat, UOE.

Data																	
	EU	BE	BG	CZ	DK	DE	EE	ΙE	EL	ES	FR	IT	CY	LV	LT	LU	HU
< 30	:	23.3	2.8	9.7	9.3	6.6	10.0	25.2	:	13.8	14.3	0.9	30.5	10.0	5.5	24.7	9.4
30-39	;	29.3	24.6	23.6	30.0	22.1	24.5	27.3	:	27.1	35.2	17.1	55.7	27.7	27.4	31.5	26.2
40-49	:	26.6	46.6	39.8	23.1	22.0	33.2	20.3	:	27.4	28.9	37.2	10.8	31.2	35.5	20.6	38.9
≥ 50	:	20.8	26.0	26.9	37.6	49.3	32.4	27.3	:	31.7	21.6	44.8	3.1	31.1	31.6	23.2	25.5
	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	LI	NO	CH	HR	TR
< 30	30.5	20.4	8.9	15.3	11.3	17.5	9.5	14.0	11.1	5.0	25.3	12.2	12.5	12.1	17.9	:	:
30-39	28.9	22.1	21.0	31.3	33.5	30.6	32.1	33.2	30.2	23.1	27.7	28.5	23.8	29.9	23.2	:	:
40-49	17.8	22.8	33.9	40.0	27.8	20.0	40.1	27.3	30.9	23.8	21.4	27.9	35.1	22.2	25.3	:	:
≥ 50	22.8	34.7	36.2	13.4	27.4	31.9	18.2	25.5	27.7	48.1	25.6	31.4	28.7	35.7	33.7	:	:

Source: Eurostat, UOE.

### **Explanatory note**

Only teachers involved in providing direct instruction are taken into account. Data include teachers in special education and others who work with students as a whole class in a classroom, with small groups in a resource room, or on a one-to-one basis inside or outside a regular classroom. Both full-time and part-time working teachers in the public and private sectors are included. Trainees or teachers' assistants are not included.

## **Country specific notes**

Belgium: Teachers in the German-speaking Community and those working in independent private institutions are not included.

**Luxembourg**: The Figure relates solely to the public sector. **Netherlands**: Teachers at ISCED level 0 are included.

In Germany, Italy, and Sweden, nearly half of all teachers in primary education are in the 50+category; in other words, a large proportion of teachers are approaching retirement age.

These are followed by 10 others (Bulgaria, the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Slovenia, Finland and Liechtenstein), where the 40-49 age group was the largest. This group accounts for 40 % or more of all teachers in Bulgaria, Poland and Slovenia.

In Belgium, Ireland, Cyprus, Luxembourg, Malta and the United Kingdom, primary school teachers are relatively young, with more than 20 % of teachers being under 30 or in the 30-39-year-old category.

In Belgium and the United Kingdom, the breakdown of teachers by age is the most evenly balanced. Each age group accounts roughly for around a quarter of teachers.

# TEACHERS IN SECONDARY EDUCATION ARE OLDER THAN THOSE IN PRIMARY EDUCATION

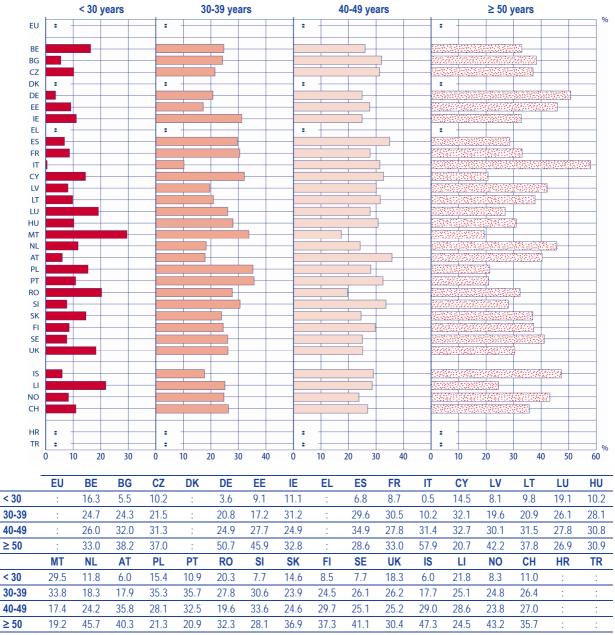
In the majority of countries, teachers in secondary education are older than those in primary education (see Figure E10). The most strongly represented age group at this educational level is the 50 and over group.

In Germany and Italy, teachers aged 50 and over account for more than 50 % of all teachers. Conversely, very low numbers of teachers under 30 years of age can be found in these countries or in Bulgaria, Spain, Austria and Iceland.

Secondary education teachers are the youngest in Malta, Poland and Portugal. In the latter two countries, the 30-39-year-old age group is the most strongly represented numerically, while in Malta those aged 30-39 and those under 30 account for more than half of all secondary teachers.

# E

# Figure E11: Distribution of teachers by age group in general (lower and upper) secondary education (ISCED 2 and 3), public and private sectors combined, 2009



Source: Eurostat, UOE.

## **Explanatory note**

Data take into account teachers involved in providing direct instruction. They include teachers in special education and others who work with students as a whole class in a classroom, with small groups in a resource room, or on a one-to-one basis inside or outside a regular classroom. Both full-time and part-time working teachers in the public and private sectors are included. Trainees or teachers' assistants are not included.

### **Country specific notes**

**Belgium**: Teachers in the German-speaking Community and those working in independent private institutions are not included. Teachers at ISCED level 4 are included.

**Denmark**: Teachers at ISCED level 1 are included.

Ireland, Finland and United Kingdom: Teachers at ISCED level 4 are included.

**Luxembourg**: The Figure relates solely to the public sector. **Iceland**: Teachers at ISCED level 4 are partially included.



# A MAJORITY OF TEACHERS RETIRE AS EARLY AS POSSIBLE

In most European countries, teachers in primary or secondary education retire from their profession as soon as they are offered an opportunity to do so. Teachers thus retire when they have completed the required number of years and/or reached the minimum age for full pension entitlement.

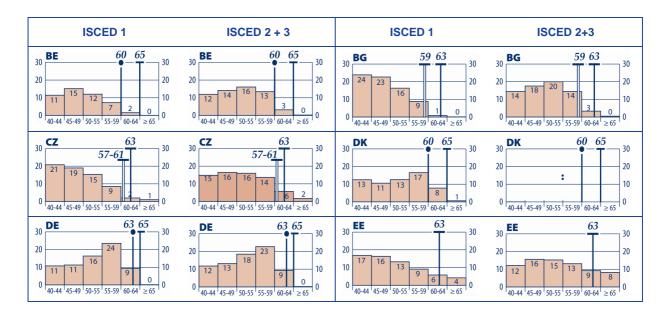
However, a significant percentage of teachers (more than 5 %) remain in their occupation after the minimum retirement age in Denmark at primary level; in Italy, Cyprus, Poland and Finland at secondary level; and in Germany, Sweden and Norway at both primary and secondary level. In the Czech Republic, Estonia, Latvia, and Slovenia more than 5 % of teachers continue working even beyond the official retirement age.

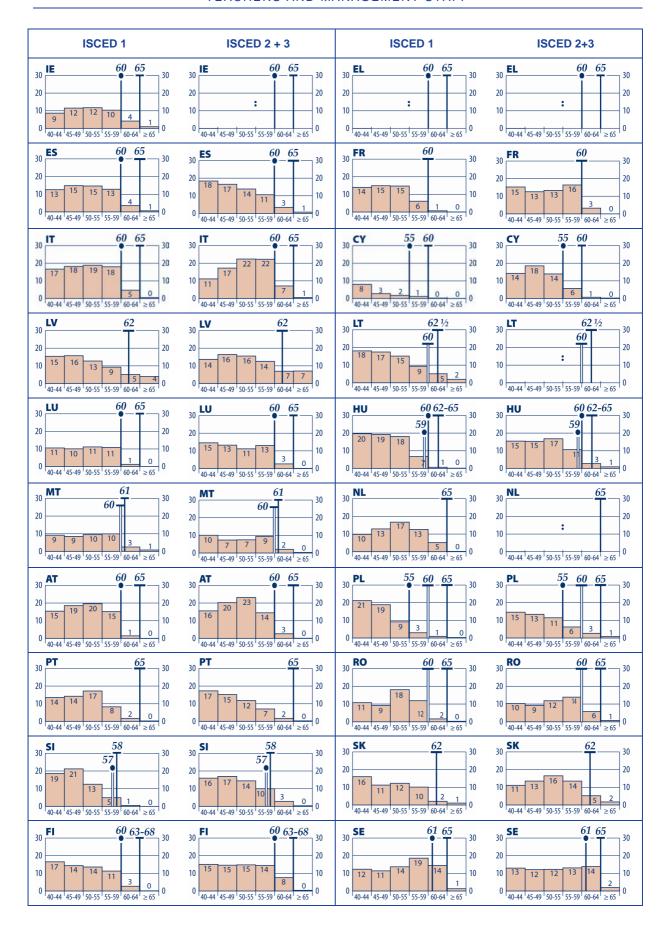
It should be noted that since 2001/02 (Eurydice, 2005), the official retirement age and/or the minimum retirement age with full pension entitlement has increased in around one third of all European countries.

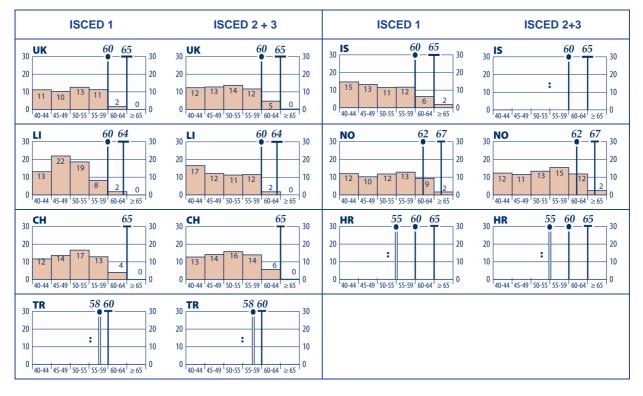
The data also shows which countries risk experiencing problems of teacher shortage in the years ahead, if the situation remains unchanged in all other respects. Countries where proportions of teachers in successive age groups over 40 first peak at a high level and then fall, as in Germany, Italy or Austria, will experience teacher retirement on a very large scale in the near future. The demographic bulge in the diagrams for these countries indicates that the age groups closest to retirement are over-represented. By contrast, in countries where the proportions tend to decrease through the older age groups – as in Belgium, Bulgaria, Lithuania, Hungary and Iceland at primary level; in Spain and Portugal at secondary level; and in the Czech Republic, Estonia, Latvia, Poland and Finland at both primary and secondary level – retirements will occur more evenly over time.

Ireland, Cyprus (primary education) and Malta are among the few countries for which the diagrams represent a very gentle slope and low percentages in the age groups close to retirement. This indicates that their teacher workforce as a whole is more evenly spread across the age groups and is fairly young (see also Figures E10 and E11).

• Figure E12: Proportions of teachers in age groups close to retirement in primary education (ISCED 1) and general (lower and upper) secondary education (ISCED 2 and 3), public and private sectors, 2009







Women Men and women/men only

Official retirement age
 Minimum retirement age with full pension entitlement

Source: Eurostat, UOE and Eurydice.

### **Explanatory note**

Data take account of teachers involved in providing direct instruction. They include teachers in special education and others who work with students as a whole class in a classroom, with small groups in a resource room, or on a one-to-one basis inside or outside a regular classroom. Both full-time and part-time working teachers in the public and private sectors are included. Trainee or auxiliary teachers are not included. Further information on the representation of teachers by age group is given in Figures E10 and E11.

Official retirement age: sets the limit at which teachers stop to work. In certain countries and in special circumstances, they may continue to work beyond this age limit.

**Minimum retirement age with full pension entitlement**: offers teachers the possibility to retire before they reach official retirement age. Their full pension entitlement is subject to completion of the number of years of service required. This minimum retirement age with full pension entitlement does not exist in all countries.

# **Country specific notes**

**Belgium (BE nI)**: Although the minimum retirement age is 60, teachers who teach at ISCED 1-3 in the Flemish Community can currently decide to leave their profession at 58.

**Czech Republic**: The ages relate to the year 2011. Official retirement age for women depends on the number of children brought up. The age of 57 relates to women with 5 and more children whereas the age of 61 relates to those who are childless (women with one child: 60 years; women with two children: 59 years; women with 3 or 4 children: 58 years). According to the recent adjustments of the pension reforms, the official retirement age was set to be prolonged gradually and no maximum retirement age has been defined.

**Hungary**: The Act on social security and retirement allowance (LXXXI of 1997) was amended in 2009. Since then there is a phasing-in system: The official retirement age will be gradually changed from 62 to 65 (e.g. 62 is applicable for people born before 1952, and for people born in 1957 or later it is 65) In addition, according to the modifications of the Act in 2010, as of 1 January, 2011 women with 40 years of service can retire regardless of their age.

**Malta**: Following amendments to the pension system the year of birth is the deciding factor at which age employees can draw their state pension. It ranges from 60 for females and 61 for males for those born in or after 1951, to 65 for anyone born in 1962 or later.

**Poland**: The data refers to the period 2009-2014. On the basis of the Act of 22 May 2009 on compensation measures for teachers, a requirement for teachers was introduced to reach the minimum age in order to be entitled to a full pension. Starting in 2015 this age will increase every two years to reach the maximum of 59 for women and 64 for men in 2031.



# SALARY ADJUSTMENTS IN THE LAST DECADE WERE NOT ALWAYS EFFECTIVE TO KEEP TEACHERS' PURCHASING POWER

The positive evolution in real terms of the teachers' statutory salaries is one of the main factors that determine the attractiveness of the teaching profession and teachers' purchasing power. The increase of the statutory salaries is mainly due to three factors: reforms of the salaries in the education sector; increase for adjustment to the cost of living for teachers and general adjustment of the salaries in the public sector.

In the last decade, in all European countries the education authorities increased the absolute statutory salaries for teachers. In some cases, this increase for the last ten years was of more than 40 %. However, the absolute increase of the salaries is not always followed by a real increase due to the faster raise of the cost of living. The present indicator is comparing the evolution in real terms of the teachers' statutory salaries in the period 2000-2009 expressed in PPS Euro to permit the cross-country comparability and expressed the price levels of the year 2000. The present indicator is not comparing the monetary value of teachers' wages where wide variations exist between countries (1). Moreover, the relatively high increase of the statutory minimum salaries in some countries can be explained by their very low levels in the reference year 2000 so the present indicator must be interpreted with caution.

In all countries, with the exception of Greece and France, the statutory salaries in constant prices increased during the last decade both for primary as well as for upper secondary teachers. In twelve countries a considerable absolute increases of more than 20 % of the salaries for both primary and upper secondary teachers was registered. Similar relevant increase is also observed only for primary education teachers in Iceland and for upper secondary education teachers in Spain.

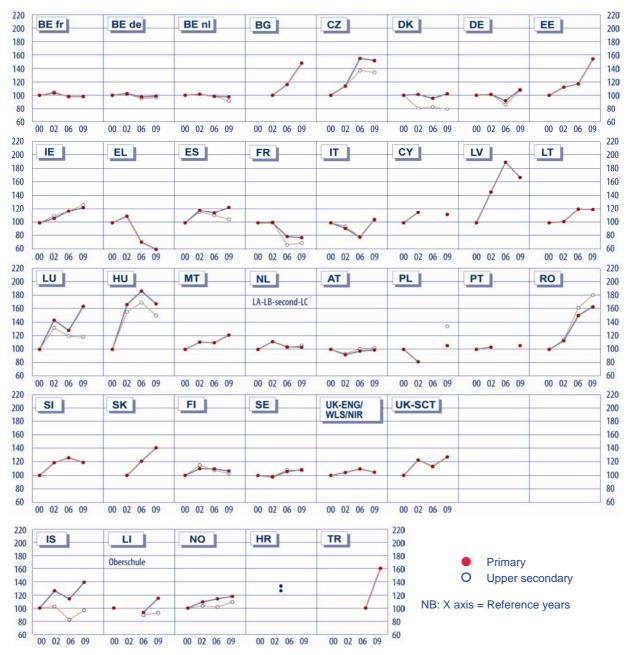
In Denmark (primary level), Germany, Italy, the Netherlands, Austria, Portugal, Finland, Sweden and the United Kingdom (England, Wales and Northern Ireland) teachers' wages kept their purchasing power at similar level as in 2000.

The recent financial and economic crisis (2010-2011) has an important impact on public finances. In the 2009/10 school year and especially after January 2010, the effect of the economic downturn and the pressure on the public finances was much more pronounced and more countries were obliged to apply salary cuts for public employees. This is the case of Spain, where the initially planned salary increase of 0.3 % with respect to 2009, which was approved and in force until May 2010, was overturned by the general reduction of around 5 % applied to the salaries of all civil servants' from 1 June 2010. Ireland, Greece and Romania also reduced the absolute levels of teachers' salaries as well as the salaries of other public employees. This reduction had a very high impact in Romania, where a considerable reduction of 25 % has been in place since July 2010 in order to restore the budget balance.

In Latvia, there was a significant reduction of the public budget for education of almost 40 % in September 2009, which included teachers' salaries. However, in January 2010, the total funding for salaries increased again by 37 % and a possibility for salary increase through salary indexation and through rewards for additional responsibilities was introduced. In Estonia, teachers' salaries remained unchanged in 2008/09 and 2009/10 regardless of the reduction of salaries applied to other public sector employees.

<sup>(</sup>¹) For more information on the Teachers' and School heads' salaries, see the Eurydice publication 'Teachers' and School Heads' Salaries and Allowances in Europe', 2009/10.

Figure E13: Trends in the minimum basic gross annual statutory salary in PPS EURO (in 2000 prices) for teachers in primary and upper secondary education (ISCED 1 and ISCED 3), 2000-2009



Source: Eurydice.

# **Explanatory note**

Data used for the calculation of the trend in minimum statutory teachers' salaries are from Key Data on Education 2009, 2005, 2002 data collections and the specific report on Teachers salaries published in 2011 (data collection 2010). For some countries, the represented index data might be inconsistent due to change in the reporting methodology.

The annual basic statutory salaries have been converted into purchasing power standard based on the Euro (PPS - see the 'Glossary and Statistical Tools' section) to eliminate price differences between countries and deflated by the EU-27 GDP price index (base year 2000).

The annual growth index is calculated by dividing the statutory salaries for concerned year converted in EURO PPS and deflated to the 2000 EU 27 price index by the statutory salary converted in EURO PPS for 2000 multiplying the result by 100.

2000 = 100 except in the case of Bulgaria and Slovakia where it is 2002 and Turkey with base data from 2006.

# **Country specific notes**

**Sweden**: There are no salary scales or statutory salaries. The indicated minimum salaries correspond to the lower decile of the actual teachers' salaries.

**United Kingdom (ENG/WLS/NIR)**: The drop in minimum salaries is in part explained by the change in reporting methodology. Data for earlier years included inner London weighting.

Liechtenstein: Data for Switzerland are taken as conversion PPS rates and price index.

In a large group of countries, a considerable effort was made to keep teacher salaries at least at their 2009 level, not applying salary cuts or salary increase programmes already in place. This is the case in the United Kingdom (England, Wales and Northern Ireland), which continued to apply the recommendations of the School Teachers Review Body from 2008 by implementing a 2.3 % rise in teachers' salaries in 2009/10 and 2010/11 in spite of pay freezes introduced for other public sector workers. Teachers in United Kingdom (Scotland) received in 2009 a pay increase 2.5 % and in 2010 an increase of 2.4 % and in April 2011 a two year pay freeze came into force.

The reforms introduced by the Netherlands and Poland in 2009 continued to be implemented in 2010, resulting in a pay rise for teachers. In the Czech Republic also although the public resources for the salaries of public employees in general have been cut by 10 % in 2011, funds for teachers' statutory salaries, on the contrary, have been increased. Three countries that did not adjust teachers' salaries in 2009, namely Bulgaria, Italy and Iceland, but also Slovakia implemented different types of reforms in teachers' wages in 2010.

Bulgaria introduced an increase of between 7 % and 13 % for the statutory salaries for 'senior teachers' and 'chief teachers'. Iceland also applied a scheduled increase for those upper secondary teachers with the lowest salaries and which were affected by the previous wage deal. In Italy, salary increases are foreseen by the latest National Agreement, but their implementation could be affected by the latest decisions on general budgetary restrictions. Finally, in Slovakia since November 2009, teachers' salaries have been reformed in accordance with the new Act on pedagogical employees which introduced changes in funding and innovations in the system of evaluation and remuneration of teachers.

# THE RELATIVE INCREASE OF TEACHERS SALARIES IS CORRELATED TO THE NUMBER OF YEARS NEEDED TO OBTAIN THE MAXIMUM SALARY

The relation between maximum and minimum basic annual salaries is a pointer to the long-term prospects of teachers in terms of the salary increases they can reasonably expect throughout their careers if only their length of service is taken into account. The present indicator is analysing the difference between the minimum and maximum statutory salaries and the number of years need to obtain this maximum salary, and thus is not comparing the absolute values of the teachers' salaries.

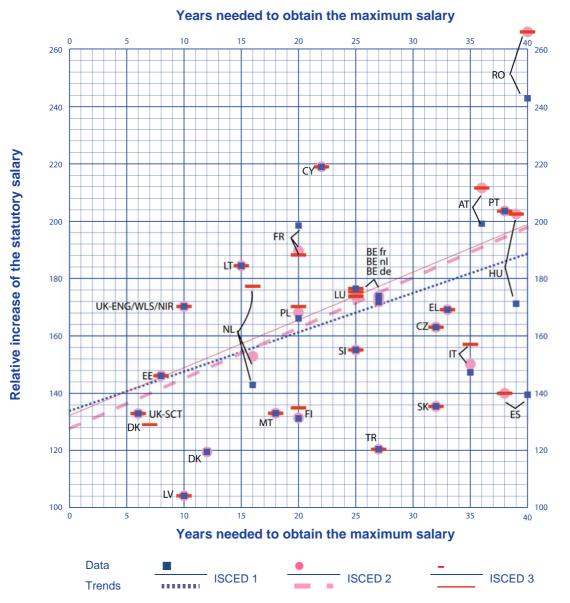
On this basis, maximum and minimum levels of statutory salaries expressed in PPS EUR generally differ by less than a factor of two. Teachers in primary education in Denmark, Latvia, Slovakia, Finland Sweden, Iceland, and Norway may hope for no more than a 30 percent salary increase during their professional carrier. However, in upper secondary education, the maximum statutory salaries in Cyprus, Hungary, the Netherlands, Austria, Portugal and Romania are almost double compared with the salary at the beginning of the professional career. This fact, together with the frequency of salary increases, may explain why teaching may be more attractive at some stages of a career than others. Clearly, teachers whose salaries rise significantly throughout their entire career may be less inclined to leave the profession than those whose salaries do not progress beyond the early years of experience.

In most of the European countries, the average number of years that a reference teacher must complete to obtain the maximum basic statutory salary is between 15 and 25 years. Nevertheless, in

the Czech Republic, Greece, Spain, Italy Hungary, Austria, Romania and Slovakia, it takes more than 30 years to achieve the maximum statutory salary. On the other hand, in Denmark, Estonia and the United Kingdom, a teacher with 10 years of professional experience is already at the maximum salary scale.

At all three education levels, a positive correlation can be seen between the level of increase between the minimum and the maximum statutory salary and the number of years needed to obtain such salary. A strong correlation can be seen in Hungary, Austria, Portugal and Romania, the four countries with a biggest difference between the maximum and minimum salaries and the highest number of year needed to obtain this maximum salary. The same correlation is true also in Denmark, Estonia, Latvia and United Kingdom (Scotland) where in less than 13 years of experience teachers already get the maximum statutory salary that is only around 30 % higher than the minimum.

Figure E14: Relationship between the relative increase of the statutory salary in general education and the years needed to obtain the maximum salary (ISCED 1, 2 and 3), 2009/10



Relative increase of the statutory salary

Source: Eurydice.

### **Country specific notes**

**Bulgaria**: The teachers' statutes determine only the minimum basic statutory salary but not the maximum one. The indicated values are for junior teachers without teacher experience.

**Denmark**: At ISCED 3, teachers in general upper secondary education.

**Germany**: The different *Länder* are responsible for the definition of the basic statutory salaries. Given the complexity and wide variety of circumstances, the values presented for statutory salaries represent a weighted average of the data available at *Länder* level for civil servants and include allowances.

**Spain**: The total amounts correspond to average salaries in public education, calculated as a weighted average of the salaries in the different Autonomous Communities. Only data on general teachers is shown.

France: At ISCED level 2, salaries refer to professeurs certifies. At ISCED 3, salaries refer to professeurs agrégés.

Italy: Data for teachers that obtained Laurea/Master degree.

Netherlands: At ISCED 1, teachers in category LA; At ISCED 2, teachers in category LB. At ISCED 3, teachers in category LC.

Austria: At ISCED2 level, data on salaries of Hauptschule teachers.

**Finland**: The amount of maximum salaries may vary extensively depending on teachers' years of service and individual increments. The information shown provides an estimate of the annual basic gross maximum salary.

**Sweden**: There is no salary scale. Individual teachers' salaries are based on individual agreements between the teachers and the employers and are not specifically linked to the number of years in the profession.

Liechtenstein: There is no information on the average number of years from minimum to maximum salary

Norway: There is no information on the average number of years from minimum to maximum salary.

However, a few countries are not following this tendency. For example in Lithuania, the Netherlands and the United Kingdom (England, Wales and Northern Ireland), the maximum statutory salary is between 70 % and 90 % higher than the minimum and teachers can get this maximum wage only after between 10 and 15 years of experience. On the opposite, in Spain, Italy, Slovakia and Turkey, the maximum salaries are only 40 % higher than those for entry teachers but teachers get those only after 25 to 35 years of experience. Finally, In France and Cyprus the maximum teachers' salaries are almost (or more than double) comparing with those for starting teachers but it takes around 20 years to obtain them.

As a general tendency, actual teacher salaries in many of the countries with available data are located close to the maximum statutory salary. This can be explained in part by the aging teacher population. In Denmark, Greece, Finland and the United Kingdom, the actual teachers' salaries are even higher than the basic statutory ones, mainly due to the range of additional allowances that teachers may receive. On the other hand, in Italy, Luxembourg and Portugal, the actual teacher's salaries are almost in the middle of the statutory scale. This fact can be partly explained by the relatively long professional experience (between 25 and 38 years) required to obtain the maximum salary scale and in the case of Luxembourg and Portugal by the fact that almost 50 % of teachers are under 40 years old. However, this is not the case in Italy where most of the teachers are older than 50.

# IN ADDITION TO PROFESSIONAL TEACHING EXPERIENCE, SPECIFIC TRAINING IS REQUIRED IN MOST COUNTRIES TO BECOME A SCHOOL HEAD

School heads are today faced with many varied tasks, including the management of teaching staff, funding and curriculum content. Selecting the right people is crucial and so a number of different criteria must be considered when appointing someone as a school head. In all European countries, there are regulations, which set out the official requirements expected of those wishing to become school heads. Almost everywhere, professional teaching experience is the basic condition for appointment. However, the amount of experience required may vary (see Figure E16) and in most countries, one or more additional conditions are applied.

In Greece, Lithuania and Turkey, prospective school heads must have professional teaching experience and administrative experience. In Lithuania, leadership and management competencies are additionally explicitly required.

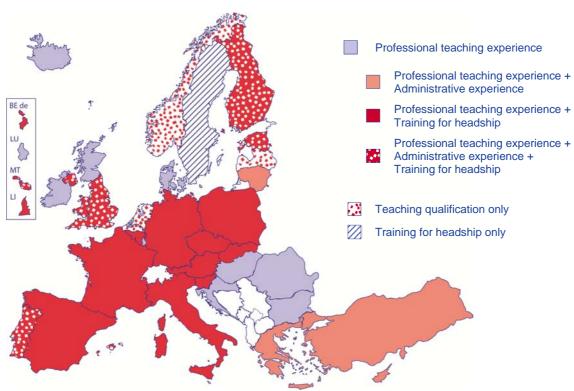
In Belgium (French and German-speaking Communities), the Czech Republic, Spain, France, Italy, Austria, Poland, Slovenia, Slovakia and Liechtenstein, applicants for a post as school head must have worked as teachers and received special training for headship. In Slovenia, school heads should also have the promotion title of adviser or counsellor, or have held the promotion title 'mentor' for at least 5 years.

In five countries – Estonia, Malta, Portugal, Finland and the United Kingdom (England, Wales and Northern Ireland) – prospective school heads must meet all three requirements: professional teaching experience, administrative experience and training for headship.

Four countries – Belgium (Flemish Community), Latvia, the Netherlands and Norway stipulate that the only official condition for being appointed to the position of school head is having a teaching qualification. However, in practice, those who become school heads also have professional teaching experience.

In Sweden, the only condition for becoming a school head (for those employed later than March 2010) is to pass a specific training course arranged by the Swedish National Agency for Education (NAE). Formerly this course was not compulsory.

 Figure E15: Professional experience and training officially required for headship in primary and general (lower and upper) secondary education (ISCED 1, 2 and 3), 2010/11



Source: Eurydice.

# Explanatory note

**Professional experience** in teaching means a certain number of years working professionally as a teacher, most of the time at the level of education at which the person concerned is seeking appointment as a school head.

**Administrative experience** means experience in school administration/management acquired, for example, in the post of deputy school head.

**Training for headship** means a specific training course, which takes place subsequent to initial teacher education and qualification as a teacher. Depending on circumstances, training may be provided prior to the application for a post as school head or involvement in the recruitment procedure, or during the first few years after taking up a post. Its aim is to equip future school heads with the skills required to carry out their new duties. It is not to be confused with the continuing professional development of school heads.



### **Country specific notes**

**Belgium (BE de)**: To be appointed to the permanent position of a school head in an establishment administered by the Community, a certificate in management is required.

**Czech Republic**: Teaching experience can be replaced by an experience in activities requiring the same or similar knowledge, in a senior management position, or in research and development activities. This applies also to school heads in the entire grant-aided private sector. Training is compulsory only for heads of public schools including schools established by the Ministry of Education, Youth and Sports.

Germany: Training for headship is only required at ISCED 2 and 3.

Luxembourg: No school heads at ISCED 1.

**Hungary** and **Iceland**: To become a school head an additional qualification in management is required. In the case of Hungary, it only applies to school heads undertaking a second term of headship.

**Malta**: Besides the ten years teaching experience prospective Heads of Schools also need to have a minimum of four years experience in the post of Assistant Head of School (this apply to schools falling under the remit of the education Directorates).

**Netherlands**: At large secondary schools with a central management board *(centraal school bestuur)*, teaching qualifications are not required for board members who do not perform teaching activities.

**Slovenia**: Teaching experience can be replaced by experience in school counselling work. The special training programme ends with the final head teacher examination. Exceptionally, the head teacher may take this exam within one year of appointment to the position.

**United Kingdom (ENG/WLS/NIR)**: In England and Wales, the National Professional Qualification for Headship is mandatory for all first-time head teachers. In Wales, the programme must be completed before appointment. In Northern Ireland, the equivalent programme is the Professional Qualification for Headship which is not mandatory.

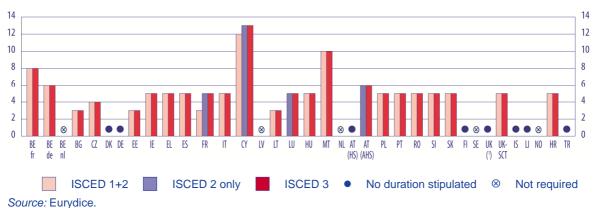
# SCHOOL HEADS ARE GENERALLY REQUIRED TO HAVE A MINIMUM OF FIVE YEARS TEACHING EXPERIENCE

Among the requirements for becoming a school head (see Figure E15), a minimum period of professional teaching experience is common. It ranges from three years in Bulgaria, Estonia, France (for school heads at ISCED 1) and Lithuania to 10 years in Malta and 12 and 13 years for primary and general (lower and upper) secondary level, respectively, in Cyprus.

In most countries, the required minimum period is between three and five years. In Denmark, Germany, Austria (primary education and *Hauptschule*), Finland, the United Kingdom (England, Wales and Northern Ireland), Iceland, Liechtenstein and Turkey, teaching experience is required but the duration is not stipulated.

Finally, in Belgium (Flemish Community), Latvia, the Netherlands, Sweden and Norway, professional teaching experience is not a requirement for becoming school head.

# Figure E16: Minimum number of years of professional teaching experience required to become a school head in primary, general (lower and upper) secondary education (ISCED 1, 2 and 3), 2010/11



# Country specific notes

**Estonia**: At least three years of teaching experience is required when a person has undertaken pedagogical higher education; a person who has undertaken other types of higher education is required to have at least five years' teaching experience.

**Cyprus**: From the minimum shown, at least five years must be spent teaching in schools; in addition, for primary education at least two years as assistant head teacher and for secondary at least two years as assistant head plus at least one year as assistant head at level A.

**Greece**: According to the law 3848/2010 the preconditions for granting teachers the right to become school heads are that they should have reached level A (depending on the years of service) with at least 8 years' work service; and they should have five years' professional teaching experience of which three years should be in the relevant level.

**Lithuania**: A minimum of two years of professional teaching experience is required for becoming school head for those who hold a master's degree and teacher qualifications, and a minimum of three years for those with a teacher qualification only.

Luxembourg: No school heads at ISCED 1.

**Austria**: At primary level and *Hauptschule* (HS), teaching experience is required but the duration is not stipulated. For *Allgemeinbildende Höhere Schule* (AHS), duration of 6 years professional teaching experience is required.

Slovenia: Teaching experience can be replaced by experience in school counselling work.

# SIZE OF THE SCHOOL IS OFTEN TAKEN IN CONSIDERATION FOR THE DEFINITION OF THE SCHOOL HEAD STATUTORY SALARY

School heads or head masters are responsible for the management of a school or a group of schools alone or within an administrative body such as a board or council. Depending on circumstances, the person concerned may also exercise educational responsibilities (which may include teaching tasks), but also responsibility for the general functioning of the institution in areas such as the timetable, implementation of the curriculum, decisions about what is to be taught and the materials and methods used, management of staff and/or financial responsibilities.

In 11 countries or regions, the size of schools has a direct bearing on the salaries of school heads in that the higher the enrolment at a school, the higher the salary of its head. By contrast, the educational level of the schools (except for pre-primary settings) is generally of little significance. In ten countries the basic salaries of school heads are exactly the same at all three levels of education. A specific situation exists in the United Kingdom (England, Wales and Northern Ireland) where school heads share the same overarching salary scale, but within that scale each head has his/her own salary range. This range is related both to the size of the school and the ages of its students. This means that secondary school heads tend to be paid more than primary school heads. In countries with single education structure, where there is no break between primary and general lower secondary education levels, the same basic salary indicated for both levels is corresponding to the same school head post.

For the rest of the countries, in general, basic statutory salary for the school heads in primary education is lower than in secondary schools, especially in upper secondary schools. The same tendency is also true for the distribution of the salaries of teachers. In addition, in all countries, the basic statutory salaries of school heads are higher than those of teachers working at the same educational level. This may be put down to the fact that, in most countries, a certain number of years' teaching experience are required in order to become a school head (see Figure E16). Other conditions, such as the obligation in some countries to have received special training (see Figure E15) may also be relevant.

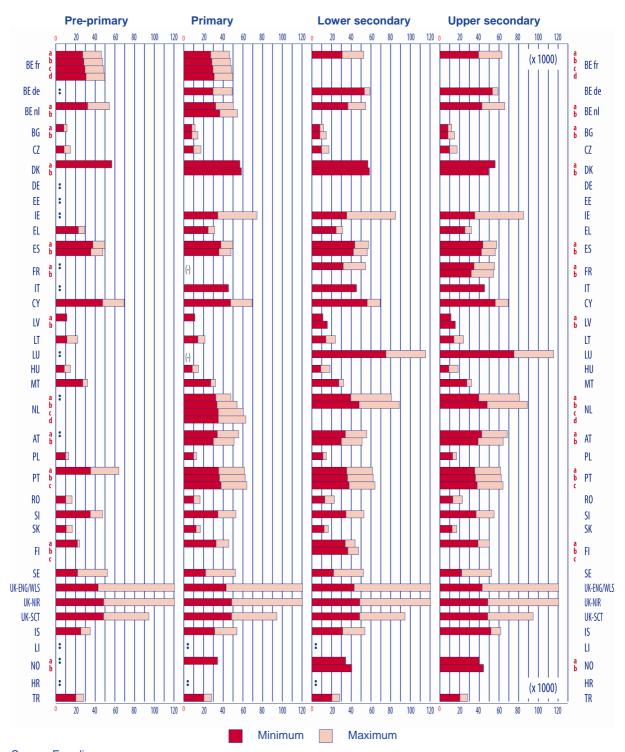
When comparing the school heads' salaries between countries a wide variation is observed. At primary level, the minimum wages vary from less than PPS EUR 9 000 in Bulgaria and Hungary to more than PPS EUR 100 100 in the United Kingdom (England, Wales and Northern Ireland). At secondary level, the highest statutory salaries of school heads a part in the United Kingdom are also allocated in Luxembourg (PPS EUR 115 508), Ireland (PPS EUR 84 979) and the Netherlands (PPS EUR 80 803).

The contrast between the maximum and minimum basic salaries of school heads as a means of assessing their prospects for an increase in their basic salary throughout their careers is not as marked as in the case of teachers. Although the salary increases of school heads during their career are not exceptional, their maximum salaries remain higher than those of their teacher colleagues, given that their starting salaries are higher.



On this basis, maximum and minimum levels of statutory salaries expressed in PPS EUR generally differ by less than a factor of two. School heads in primary education in Greece, Spain, Poland, Slovakia, Finland and Turkey may receive no more than a 30 percent salary increase during their professional carrier. However, in upper secondary education, the maximum statutory salaries in Ireland and the United Kingdom might be more than double compared with the salary at the beginning of the professional career.

# Figure E17: Minimum and maximum basic annual statutory salary for school heads in PPS EURO, (ISCED 1, 2 and 3), 2009/10



Source: Eurydice.

### **Explanatory note**

The basic gross annual statutory salary is the amount paid by the employer in a year, including general increases to salary scales, the 13th month and holiday-pay (where applicable) excluding the employers' social security and pension contributions. This salary does not include other salary allowances or financial benefits (related for example to further qualifications, merit, overtime, additional responsibilities, geographical location, the obligation to teach classes in challenged circumstances, or accommodation, health or travel costs). The indicated minimum salary is the basic gross salary received by school heads in the above-mentioned circumstances at the start of their career. The maximum salary is the basic gross salary received by school heads in the above-mentioned circumstances on retirement or after a certain number of years of service. The maximum salary includes solely increases related to length of service and/or the age.

### Country specific notes

**Belgium (BE fr)**: **a)** schools with less than 71 pupils, **b)** schools with between 72-140 pupils, **c)** schools with between 141-209 pupils, **d)** schools with more than 210 pupils.

Belgium (BE nI): a) schools with less than 180 pupils (less than 100 pupils in Brussels), b) schools with more than 350 pupils. In lower and upper secondary schools, there are different scales regarding the fact whether or not school head has a lesson duty.

Bulgaria: a) general provision, b) big schools.

**Denmark**: Primary and lower secondary level: **a)** schools with less than 9 full-time employees, **b)** schools with more than 9 full-time employees. Upper secondary level **a)** schools with less than 700 full-time students, **b)** schools with more than 700 full-time students.

Spain: a) big schools, b) small/very small schools.

France: a) school-heads in Lycées, b) school heads in Lycées professionnels.

Latvia: a) schools with less than 100 students, b) schools with more than 1201 students.

**Lithuania**: the salaries of school heads depend on the number of groups in pre-school institutions and on the school size in the secondary education schools, also from head's qualification category and the years of pedagogical practice (in all levels).

Netherlands: Primary level: a) schools with less than 200 pupils b) schools with between 200-399 pupils, c) schools with between 400-899 pupils, d) schools with more than 900 pupils. Secondary level a) School leaders, b) Chairman central board.

Austria: Primary and Lower secondary (Hauptschulen) level: a) schools with more than 4 classes, b) schools with only one class. Upper secondary level: a) schools with more than 12 classes b) schools with 1-3 classes.

Portugal: a) schools with less than 800 students, b) schools with between 801 and 1200 students, c) schools with more than 1200 students.

Finland: a) schools with 7-14 groups of 32 students, b) schools with 15-19 groups of 32 students, c) schools with more than 20 groups of 32 students.

Norway: a) schools with less than 10 full-time employees per year, b) schools with more than 10 full-time employees per year.



# **EDUCATIONAL PROCESSES**

# SECTION I - TAUGHT TIME

# TAUGHT TIME INCREASES IN MOST COUNTRIES AS CHILDREN PROGRESS THROUGH SCHOOL

Taught time is the amount of time during which young people receive instruction in school (for a full definition see the 'Glossary and Statistical Tools' section). The total taught time is affected by several factors including the length of the school year, the length of the school week and the number and duration of lessons in the school day. Nevertheless, almost all countries have central recommendations or regulations on the minimum recommended amount of taught time to be provided by schools.

The average duration of the school year during the period of compulsory education in Europe is 185 days with Denmark, Italy, the Netherlands and Liechtenstein being the longest with 200 days. In Bulgaria, Latvia and Lithuania, the duration of the school year increases with the age of pupils, starting at only 155 days in Bulgaria and progressively growing to 195 days in secondary education in Lithuania (1).

Across Europe, teaching is generally spread over five days a week, except in France where it is only four days, and in Italy where, in practice, many schools have classes over six days. Some *Länder* in Germany also have a six-day school week with school on two Saturdays per month.

The duration of school lessons also varies between countries. In the majority of cases, a lesson or school period is between 40 and 55 minutes. The length of a lesson may vary according to the grade or year group with shorter lessons during the first years of primary schooling, as in the case of Bulgaria, Cyprus, Lithuania (for the first grade), Malta and Turkey. In some other countries, the duration of lessons is variable as schools or teachers may decide, and differences may occur depending on the subject or the specific activities.

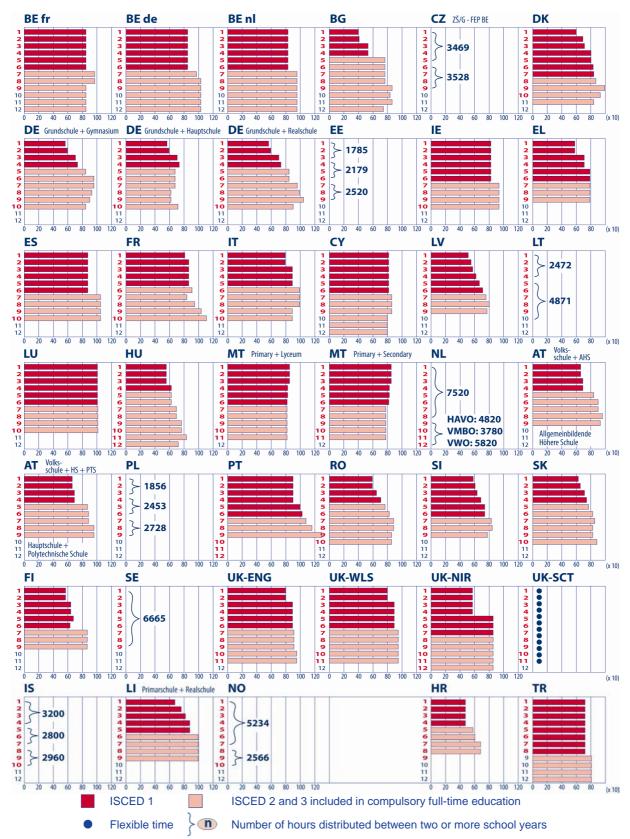
Due to the variations mentioned above in the duration of the school year, school week and length of lessons, this analysis is based on a comparison of the annual **minimum** recommendations for taught time by grade expressed in terms of hours.

In many countries, the official recommendations on minimum taught time envisage a shorter intensive learning period at the beginning of primary education (generally for the first two years), then the number of hours steadily increases through the period of compulsory education, with a significant increase in the later stages of secondary level.

Other countries have the same annual taught time for all grades within each level of education. In Belgium, Ireland, Spain, Italy, Cyprus and Turkey, the annual taught time remains the same throughout primary and lower secondary education. Nonetheless, the workload does increase between these two levels. In Belgium (French Community) for example, it increases from about 850 hours a year in primary education to 971 a year in lower secondary education. In Spain, the increase is from 875 to 1 050 hours a year.

<sup>(1)</sup> More information on the School and Academic calendars can be seen at: http://eacea.ec.europa.eu/education/eurydice/tools\_en.php

# Figure F1: Recommended minimum annual taught time during full-time compulsory primary and secondary education, 2010/11



Grades in **Bold Red** correspond to compulsory education

Source: Eurydice.

#### **Explanatory note**

The taught time illustrated in this figure corresponds to the notional minimum workload of pupils and is based on the minimum national recommendations. The information is presented as annual recommended taught time in hours per grade, bearing in mind the number of taught days and weeks per year as well as the number and length of lesson periods. All figures are rounded up to the next complete number. When the data collected from the national steering document is presented in periods (from 35 to 50 minutes), per week or per year, calculations are done in order to obtain standard annual data in hours. Recreational or other breaks of any kind, as well as the time given over to optional lessons, are not taken into account.

## **Country specific note**

Detailed country notes and national specific information can be seen at: http://eacea.ec.europa.eu/education/eurydice/tools\_en.php#taught\_time

Finally, in the Czech Republic, Estonia, Lithuania, the Netherlands, Poland, Sweden, Iceland and Norway, the total taught time for compulsory subjects is not set for individual school years but rather for a stage within an educational level or, alternatively, for the whole period of primary and/or secondary education. This allows schools the flexibility to allocate the number of hours for each school year as they see fit. Furthermore, the recent Scottish Curriculum for Excellence does not prescribe any total annual taught time or taught time per subject and local authorities and schools are themselves responsible for agreeing the time devoted to each subject and school year.

# GROWING SCHOOL AUTONOMY FOR DISTRIBUTING ANNUAL TAUGHT TIME BETWEEN SUBJECTS

The amount of taught time officially allocated to a particular subject does not always provide an accurate reflection of the actual time students spend on it. In many cases, schools have the right to allocate additional time to subjects or they may have complete autonomy in the overall distribution of taught time. However, in primary education, the compulsory subjects specified in official curricula are almost the same in all countries, a fact that facilitates a comparison between countries.

Where recommendations exist on the time to be spent on each subject, it is possible to compare the relative proportions of each one as part of the total curriculum. The language of instruction is clearly the most important subject in terms of taught time, which is generally between a quarter and a third of the recommended total amount. The only exception is Luxembourg, where the situation is most unusual in that German and French, both of which are official languages, are treated as foreign languages in the curriculum and are taught from the beginning of primary education onwards. This explains the very high proportion of time allocated to foreign languages (39 %).

In most countries, mathematics takes second place in terms of the total recommended taught time. Malta is the only country in which compulsory mathematics teaching is allocated proportionally more time than the language of instruction (19 % compared to 15 %). Malta also has its own particular reasons for spending more time on foreign language teaching – Maltese and English are both official languages.

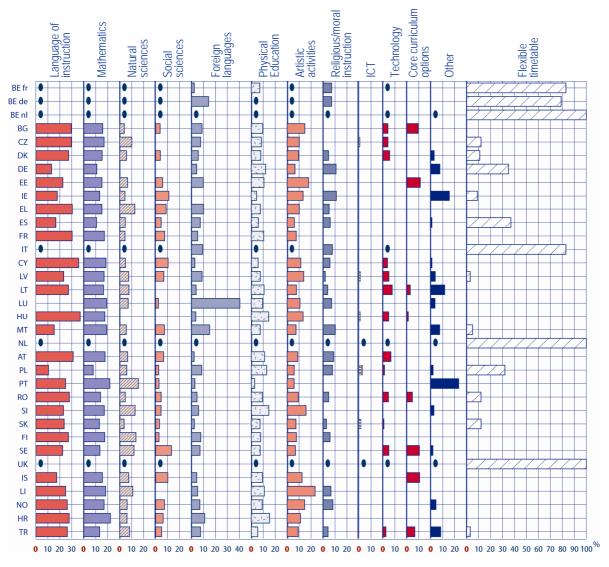
During primary education, the share of total taught time allocated to natural and social sciences taken together generally varies between 9 % and 15 %. In Ireland, Greece, Portugal, Slovenia and Iceland, however, the share of these two subject areas is more than 17 % with the highest proportion in Greece where they represent 22 %.

During the whole period of primary education, physical education and the arts also receive significant attention as together they represent an average of 20 % of the total taught time. In Hungary, Slovenia and Croatia, physical education alone represents around 15 % and in Estonia and Liechtenstein, the arts represent 18 % and 23 % respectively of the total taught time.

While foreign languages become mandatory at some point in primary education in almost all countries, they generally account for less than 10 % of taught time. Exceptions are the German-speaking Community of Belgium, Luxembourg and Malta, where they are introduced from the first year of primary education. In addition, in Austria, during the first two years, foreign language teaching is linked to other subjects (50 minutes per week) as part of an integrated approach.

During primary education, a growing number of countries allow schools the flexibility to determine all or part of their time allocation for certain subjects. Schools are entirely autonomous in this respect in the Netherlands and the United Kingdom, while in Belgium and Italy between 90 % and 75 % of primary level taught time is determined at school level. In Germany, Spain and Poland, the proportion of flexible time corresponds to between a third and a half of the total timetable. In Spain, the compulsory curriculum adopted by the central level represents between 55 % and 65 % of the total taught time and the Autonomous Communities are accountable for the remainder of the timetable and can allocate additional time to the different subjects. In Poland, this is attributable to the fact that subjects are taught in an integrated manner during the first three years of primary education.

 Figure F2: Percentages of recommended minimum taught time allocated to specific subjects or subject areas throughout <u>primary education</u>, 2010/11



Compulsory subject within flexible timetable

Source: Eurydice.

#### **Explanatory note**

The percentages by subject area for the entire period of primary education are obtained by dividing the time allocated to individual compulsory subjects and the total number of hours recommended for all of them. The calculation is based on official national minimum recommendations. Black bullet points are used to indicate that certain subjects are compulsory in countries where the curriculum stipulates merely that they should be taught, with no reference to time allocated, leaving schools free to decide how much time should be devoted to them. Taught time for ICT is shown in the diagram if it is a subject in its own right.

The 'core curriculum options' category indicates that pupils have to choose one or more subjects from a group of subjects within the compulsory curriculum.

The 'flexible timetable' category indicates either that the time to be allocated to the various compulsory subjects has not been set, or that the curriculum provides for a number of supplementary hours that pupils or the school can devote to subjects of their choice.

#### **Country specific note**

Detailed country notes and national specific information about subject allocation can be seen at: <a href="http://eacea.ec.europa.eu/education/eurydice/tools\_en.php#taught\_time">http://eacea.ec.europa.eu/education/eurydice/tools\_en.php#taught\_time</a>

### NATURAL AND SOCIAL SCIENCES TOGETHER WITH FOREIGN LANGUAGES COMPRISE 40 % OF TAUGHT TIME IN COMPULSORY SECONDARY EDUCATION

In spite of differences between the various education systems, or differences within individual countries, in secondary education the amount of taught time devoted to the different subject areas is distributed more evenly than in primary education. At secondary level, the proportion of time allocated to the language of instruction and mathematics decreases, while the time given over to natural and social sciences and to foreign languages increases in nearly all countries. In the Czech Republic, Germany (Gymnasium), Estonia, Malta (Lyceum), Romania, Slovenia, Finland and Liechtenstein, natural sciences become the subject with the greatest number of allocated taught hours.

A greater relative amount of time is also devoted to foreign languages, which are compulsory in all countries. In general, 10 % to 15 % of taught time is allocated to foreign languages during full-time compulsory general secondary education; however, in Germany, Estonia, France, Luxembourg, Malta, Iceland and Liechtenstein, more than 18 % is devoted to the study of two or three foreign languages.

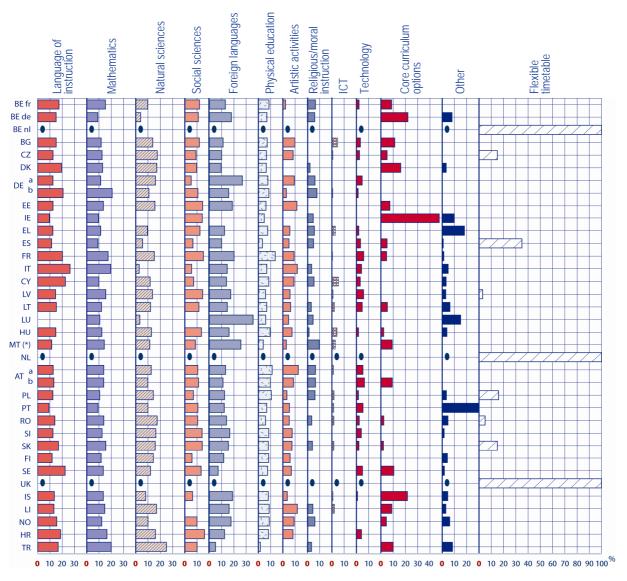
In some countries, the absolute number of hours dedicated to mathematics remains stable. In compulsory secondary education, mathematics accounts for between 10 % and 15 % of the overall timetable. In Germany (*Hauptschule*), France, Italy and Turkey, however, mathematics takes up a higher percentage of the total taught time, reaching almost 20 %.

The relative amount of taught time allocated to artistic activities in the recommendations decreases in relation to primary education. The corresponding proportion during compulsory general secondary education is normally no more than 10 %. However, more time is earmarked for artistic activities in Estonia, Italy, Austria (*Allgemeinbildende Höhere Schule* – sub-section *Realgymnasium*) and Liechtenstein (*Gymnasium*).

During compulsory secondary education, within their recommended timetables, most countries allow some hours to be allocated flexibly between subjects. In general, schools can distribute these hours between the core subjects or provide special cross-curricular activities or reinforcement lessons. Moreover, in Belgium (Flemish Community), the Netherlands, Sweden (within each subject) and the United Kingdom, schools have complete freedom to determine the time allocation for all subjects throughout the entire period of compulsory education. Furthermore, in the majority of countries, students in compulsory general secondary education are free to choose their subjects up to a point, as 'core curriculum options' enabling them to select certain subjects from a predetermined list.

Information and communications technology (ICT) is taught as a subject in its own right in almost half of all countries, but accounts for a very small proportion of taught time. Nevertheless, ICT is taught in other subjects or as part of wider technology studies; it is also often used as a tool to promote learning across the curriculum.

 Figure F3: Percentage of recommended minimum taught time allocated to specific subjects or subject areas in full-time <u>compulsory general secondary education</u>, 2010/11



Compulsory subject within flexible timetable

Source: Eurydice.

#### **Explanatory note**

See Figure F2.

Detailed country notes and national specific information about subject allocation can be seen at: <a href="http://eacea.ec.europa.eu/education/eurydice/tools\_en.php#taught\_time">http://eacea.ec.europa.eu/education/eurydice/tools\_en.php#taught\_time</a>

#### **Country specific notes**

Germany: a) Gymnasium, b) Hauptschule.

Malta: Secondary education pathway.

Austria: a) Allgemeinbildende Höhere Schule (sub-section Realgymnasium); b) Hauptschule and Polytechnische

Schule.

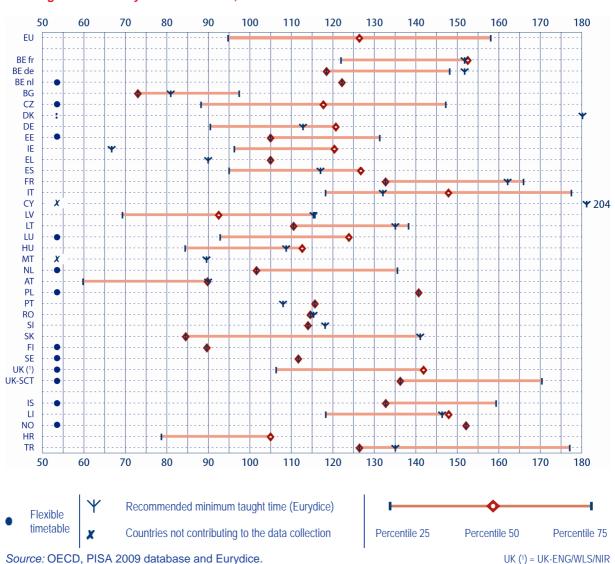
Sweden: Distribution corresponds to the whole duration of compulsory education (grades 1-9).

Liechtenstein: Oberschule.

#### ACTUAL TAUGHT TIME FOR THE LANGUAGE OF INSTRUCTION GENERALLY FOLLOWS THE OFFICIAL MINIMUM RECOMMENDATIONS

Across Europe, the language of instruction is generally the compulsory subject for which the highest minimum number of hours is recommended (see Figure F2). For countries that took part in the PISA 2009 survey, a relationship can be identified between these official recommendations and the time that 15-year-old students say they actually spend learning the language of instruction. In addition, for countries where there are no central regulations on the minimum taught time, or where schools set the amount of annual taught time for specific year groups, these empirical data give an idea of the importance of the subject in the school curriculum. As the PISA students surveyed can be in different grades and education programmes depending on the structure of different education systems across Europe, the following indictor compares the actual taught time with the minimum recommendations given at central level for the notional grade of a student at this age.

#### Figure F4: Actual annual taught time for language of instruction compared with the recommended taught time for 15-year-old students, 2009



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(p)	EU	BE fr	BE de	BE nl	BG	CZ	DK	DE	EE	ΙE	EL	ES	FR	IT	CY	LV	LT	LU
10	95	122	118	61	73	88	0	91	105	96	79	95	66	118	Х	69	111	93
20	95	122	118	122	73	88	0	91	105	96	105	95	133	118	Х	69	111	93
50	126	152	118	122	73	118	0	121	105	120	105	127	133	148	Х	93	111	124
75	158	152	148	122	97	147	0	121	131	120	105	127	166	177	Х	116	138	124
90	158	152	148	153	122	147	0	151	131	120	158	127	166	207	Х	139	138	155
	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	<b>UK</b> (1)	UK- SCT	IS	LI	NO	HR	TR
10	56	Х	68	60	141	116	57	85	85	90	74	106	102	106	118	152	79	101
20	84	Х	102	60	141	116	115	114	85	90	112	106	136	133	118	152	79	126
50	113	Х	102	90	141	116	115	114	85	90	112	142	136	133	148	152	105	126
75	113	Х	135	90	141	116	115	114	141	90	112	142	170	159	148	152	105	177
90	141	Х	135	120	169	231	115	114	141	120	149	177	170	159	148	152	105	202

<sup>(</sup>p) = percentile

Source: OECD, PISA 2009 database and Eurydice.

UK (1) = UK-ENG/WLS/NIR

#### **Explanatory note**

Students were asked in the questionnaire sent to them to indicate how many lesson periods per week they typically have in literacy, mathematics and science. The calculation of the actual **annual** taught time is obtained by multiplying the number of periods per week indicated in the questionnaires by the average duration of a class period and the number of weeks within the 2009 school year. In the interests of clarity, the figure only shows values corresponding to the 25th, 50th and 75th percentiles in the distribution.

Values for the 10th and 90th percentiles are given in the table under the Figure.

For further information on the PISA international survey and the definition of percentile, see the Glossary and Statistical Tools section.

The recommended taught time is given for the grade where students' notional age is 15.

#### **Country specific notes**

EU: European average is based on the information provided by the participating countries.

**Germany**: Recommended taught time is given for *Gymnasium*.

**Spain:** The indicated recommended taught time is only considering the number of hours for language of instruction set at central level. The total time devoted to Language of instruction can be up to 40 % higher when considering the time allocated by the Autonomous Communities.

Austria: Recommended taught time is given for Allgemeinbildende Höhere Schule (AHS).

Liechtenstein: Recommended taught time is given for Oberschule and Realschule.

On average in the European Union, at least half of all 15-year-old students have around 125 hours of language instruction per year and one in four of them study this subject for more than 155 hours. This figure falls to less than 100 hours of instruction per year in only five countries (Bulgaria, Latvia, Austria, Slovakia and Finland). In contrast, Belgium (French Community), Italy, Liechtenstein and Norway report the highest annual actual taught time with more than 145 hours per year for half of all students.

The deviation between the 25th and 75th percentiles is in general between 30 and 50 hours per year. However, in nine countries (²) there are no deviations between these two percentiles, indicating that a common programme is applied to the majority of students. On the other hand, large deviations of more than 50 hours per year can be seen in the Czech Republic, Italy, Slovakia and Turkey.

In general, the comparison between the actual taught time per year and the official recommendations show that in almost all countries the actual time is in line with the recommendations, as at least half of all students receive the recommended number of taught hours. The actual taught time for half of all students closely follows the recommendations (with a deviation of not more than 8 hours per year) in ten of the 20 countries with recommendations on the minimum taught time.

<sup>(2)</sup> Belgium (Flemish Community), Greece, Poland, Portugal, Romania, Slovenia, Finland, Sweden and Norway.

## VERY FEW 15-YEAR-OLDS SPEND TWO OR MORE HOURS A WEEK DOING HOMEWORK ON INDIVIDUAL SUBJECTS

The time spent at home for studying or for homework may be seen as complementary to school-based learning. It allows students to consolidate the content taught or to practise the skills learned in school and it may provide an opportunity for students to develop additional skills or competences. Homework is also often viewed as a way to strengthen links between home and school.

Much research has been carried out on the effectiveness of homework and on its optimum duration and frequency. The findings from the meta-analysis carried out by Hattie (2009, p. 234) conclude that the frequency of mathematics homework has a positive impact on achievement, whereas homework that requires longer periods to complete does not. Hattie also concludes that 'the effects are highest, whatever the subject, when homework involves rote learning, practice, or rehearsal of the subject matter'.

In most countries, central education authorities do not provide guidelines in steering documents on homework policy for primary or lower secondary schools. Usually, homework policy is left to the discretion of individual schools and teachers.

On this basis, it can be seen that the vast majority of the 15-year-old students who took part in the PISA 2009 survey spent less than two hours per week on homework or study at home per subject. In nine countries, more than 95 % of students study at home for less than two hours per week for each of the three analysed subjects (language, mathematics and science).

In only four countries (Estonia, Greece, Romania and Turkey) do more than 20 % of students spend over two hours on homework in each of the three subjects while only 10 % spend more than 4 hours.

When comparing the time spent on studying different subjects at home, relatively more time is devoted to mathematics in all European countries, except in Romania. In Spain and Portugal, twice as many students spend more than two hours per week on mathematics homework than on language or science homework. The situation in Greece is peculiar as there are specific regulations related to mathematics homework; in general, students do homework more frequently than in the rest of Europe and more than 50 % of Greek students do mathematics homework for more than two hours per week while 15 % do more than four hours a week.

Since the previous PISA survey (in 2006), some important changes have been observed in students' homework activities. In 2006, over a third of 15-years-olds spent two or more hours a week on both language of instruction and mathematics. In Bulgaria, Poland, Romania and Turkey, this percentage represented more than 40 % of students and in Italy over 60 %. In 2009, in Bulgaria and Poland, 25 percentage points less students did spent two or more hours a week on homework or study at home. Additionally, in PISA 2006, students in Belgium (Flemish Community), the Netherlands, Poland and Slovenia reported that they spent more time doing science homework than they did on the language of instruction. In 2009, this was not the case; mathematics and language of instruction were the subjects on which students in all four countries/regions spent more time at home.

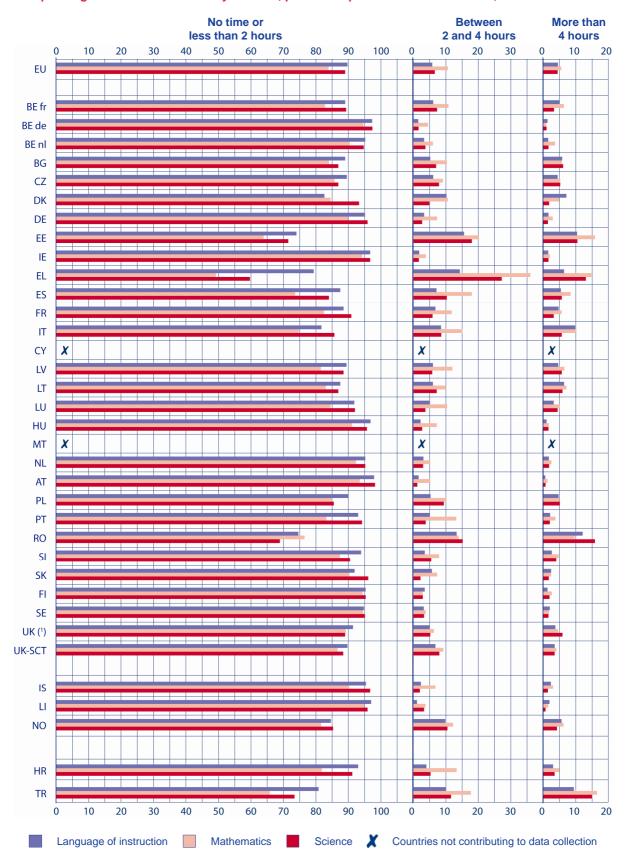
#### **Explanatory note (Figure F5)**

Pupils were asked in the questionnaire sent to them to indicate how many hours a week they spent on homework and study at home on science, mathematics and language. There were five possible answers that are grouped in the figure in the following categories: (a) no time or less than two hours, (b) between two and four hours and (c) more than four hours.

The sampling procedure involved selecting schools and then students aged 15. It sought to offer each student the same probability of being selected irrespective of the size of the school he or she attended. For this purpose, schools were weighted in such a way that the probability that they would be selected was inversely proportional to their size. Values derived from simply sampling schools themselves would have been slightly lower.

For further information on the PISA international survey and the definition of percentile, see the 'Glossary and Statistical Tools' section.

 Figure F5: Distribution of 15-year-old students according to the number of hours a week they report spending on homework and study at home, public and private sectors combined, 2009



Source: OECD, PISA 2009 database.

	No time	or less than	2 hours	Betwe	en 2 and 4	hours	Мо	re than 4 hou	ırs
	Language of instruction	Mathematics	Science	Language of instruction	Mathematics	Science	Language of instruction	Mathematics	Science
EU	89.7	83.9	89.0	5.8	10.6	6.6	4.5	5.5	4.4
BE fr	89.0	82.8	89.3	6.1	10.8	7.3	4.9	6.3	3.3
BE de	97.3	94.6	97.4	1.5	4.5	1.6	1.3	0.9	1.0
BE nl	95.2	90.4	94.7	3.3	6.0	3.7	1.5	3.6	1.6
BG	89.0	84.0	86.9	5.2	10.3	7.0	5.8	5.7	6.1
CZ	89.5	85.7	86.9	6.1	9.1	7.9	4.4	5.2	5.2
DK	82.6	84.5	93.3	10.2	10.6	4.9	7.1	4.9	1.8
DE	95.1	89.9	95.9	3.3	7.3	2.7	1.6	2.9	1.4
EE	74.0	63.9	71.5	15.6	20.2	18.0	10.4	15.9	10.5
IE	96.7	94.2	96.7	1.8	3.8	1.7	1.5	2.0	1.6
EL	79.3	49.2	59.7	14.3	36.0	27.2	6.4	14.8	13.1
ES	87.5	73.6	84.0	7.1	18.0	10.3	5.4	8.4	5.7
FR	88.5	82.5	90.9	6.8	11.8	5.9	4.7	5.6	3.2
IT	81.7	74.7	85.7	8.5	15.1	8.6	9.8	10.2	5.7
СҮ	Х	Х	Х	Х	Х	Х	Х	Х	Х
LV	89.4	81.5	88.5	6.0	12.0	5.8	4.6	6.5	5.7
LT	87.5	83.0	86.9	6.0	10.0	7.2	6.4	7.1	5.9
LU	91.8	84.5	92.0	5.1	10.4	3.7	3.2	5.1	4.4
HU	96.8	91.1	95.7	2.2	7.2	2.7	1.0	1.7	1.6
MT	Х	Х	X	Х	Х	Х	Х	Х	Х
NL	95.2	92.3	95.2	3.1	5.2	3.0	1.7	2.5	1.8
AT	97.9	93.5	98.2	1.6	5.2	1.2	0.6	1.3	0.7
PL	90.0	85.0	85.5	5.3	10.2	9.4	4.7	4.8	5.1
PT	93.0	83.2	94.2	4.9	13.2	3.8	2.1	3.7	2.0
RO	74.6	76.5	68.9	13.3	13.9	15.2	12.1	9.6	15.9
SI	93.9	87.4	90.5	3.5	7.9	5.5	2.6	4.7	4.0
SK	91.9	90.3	96.1	5.7	7.3	2.2	2.4	2.4	1.7
FI	95.3	94.4	95.3	3.5	2.9	2.9	1.3	2.6	1.9
SE	94.8	94.5	95.1	3.2	3.8	3.3	2.0	1.7	1.6
UK (1)	91.4	89.2	89.0	4.9	6.3	5.2	3.7	4.5	5.9
UK-SCT	89.7	86.7	88.4	6.8	9.2	8.0	3.5	4.0	3.5
IS	95.4	90.2	96.7	2.3	6.8	2.0	2.3	3.0	1.4
LI	97.0	94.9	95.9	1.1	3.7	3.3	1.9	1.5	0.7
NO	84.6	81.6	85.3	9.8	12.2	10.5	5.6	6.2	4.2
HR	93.0	81.8	91.2	4.0	13.3	5.3	3.0	4.9	3.5
TR	80.8	65.8	73.4	9.9	17.7	11.6	9.4	16.5	15.0

Source: OECD, PISA 2009 database.

UK (1) = UK-ENG/WLS/NIR



#### **EDUCATIONAL PROCESSES**

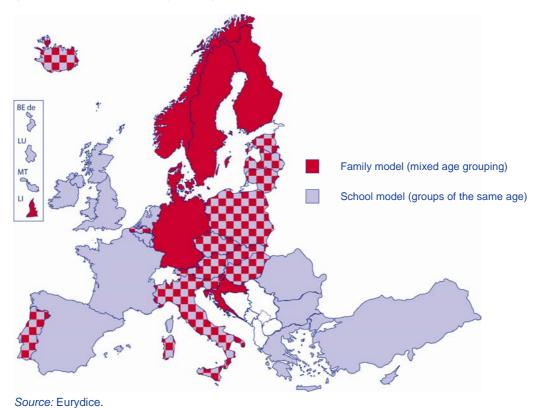
#### SECTION II - GROUPING AND CLASS SIZES

### THE SCHOOL MODEL OF GROUPING CHILDREN IS COMMON PRACTICE IN PRE-PRIMARY EDUCATION

In institutions for pre-primary education (ISCED 0), children are grouped together according to either the 'school model' or the 'family model'. The first offers a foretaste of primary school arrangements, with children grouped by age. The second is evocative of a 'family' arrangement, with children of different ages gathered in the same group.

In general, either countries opt for the school model, or they allow a mix of the two by letting institutions decide for themselves how to group their children. This latter arrangement most often occurs where schools in rural areas do not have enough children to set up classes for individual year groups (for example in Poland, Slovakia, and to a certain extent in Spain). Only in a few countries (Denmark, Germany, Finland, Sweden, Liechtenstein, Norway and Croatia), does the family model prevail. Not all countries recommend or prescribe which model schools must adopt: in some countries, the decision is left to local authorities or individual schools. This occurs in Poland and the United Kingdom where the school model is prevalent and in Sweden and Norway where the family model is more common.

#### Figure F6: Main methods of grouping children in pre-primary education (ISCED 0), 2010/11



Country specific note

Austria: The choice between school and family model depends on local needs.

### A MAXIMUM OF 25 CHILDREN PER QUALIFIED ADULT IS ALLOWED IN PRE-PRIMARY EDUCATION

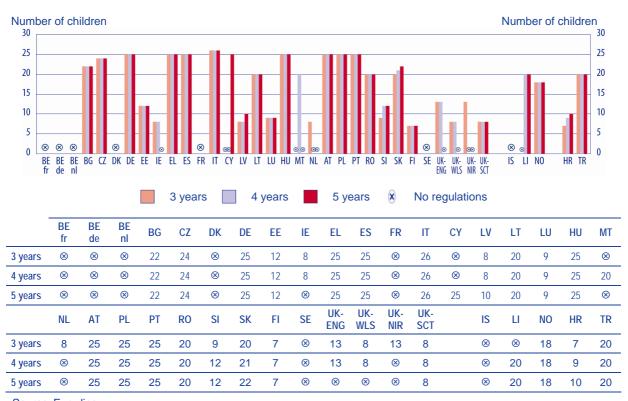
The vast majority of countries have introduced regulations establishing the maximum number of children per qualified adult in pre-primary education institutions. If that number is exceeded, either the group of children is divided, or a second qualified adult is added.

In about two thirds of the countries that have such regulations, the upper limit for a group is generally set between 20-25 children per adult. The remaining countries envisage groups of less than 15 children, with the smallest group size (seven) found in Finland and Croatia (for three year-olds only).

The same maximum number of children per adult is generally set for all age groups, with the exception of a small number of countries (Latvia, Slovenia, Slovakia and Croatia) where the limit increases with the age of children.

In comparison with the data from 2000, the maximum number of children per adult has remained quite stable in the vast majority of countries. Official regulations in several countries (Czech Republic, Estonia, Italy, Poland, Portugal, Slovenia and Slovakia) further reduce the maximum number of children per adult where one or more children have special needs.

### • Figure F7: Recommended maximum number of children per qualified adult in pre-primary education (ISCED 0), 2010/11



Source: Eurydice.

#### **Explanatory note**

The information collected and reported in the figure refers to the maximum number of children per qualified adult during the hours when educational activities are provided in the presence of a qualified teacher. Out-of-school centres, day nurseries and other childcare arrangements are therefore not considered.

#### **Country specific notes**

**Czech Republic**: The legislation explicitly states that there are 24 children per class as a maximum and not per qualified adult.

**Ireland**: Pre-primary education stops before age five, at which age children are generally enrolled in infant classes within mainstream primary schools. For children up to four years of age, the maximum number of children per adult indicated (8) refers to full-time pre-primary education. In the case of institutions where children attend part-time pre-primary programmes, the maximum number per adult is ten.

Latvia: According to the new financing principle 'money follows the pupil' implemented since 2009/10, pupils/teacher ratio is 8:1 in regions and 10.2 in cities. In average, one teacher is funded per 9.1 pupils.

**Malta**: In groups where there is a children with special needs supported by a Learning Support Assistant, the maximum number of 3 years-old children per group should be 14 and the maximum number of 4 years-old children per group should be 18. Age 5 does not fall under pre-primary education but forms part of the compulsory primary education (see Figure F8).

**Austria**: The recommended maximum number of children per adult is 25. The implementation of this regulation applies to *Länder* level; therefore, the actual maximum number of children per adult might differ in practice.

**Slovenia**: The maximum number of children per adult covers four hours each day. In the remaining hours, the number is raised until to 17-22, for children between 3 and 6 years of age.

**United Kingdom (ENG/WLS/NIR)**: Pre-primary education stops before age four/five, at which age children are generally enrolled in the first year of primary education.

**Norway**: Official regulations establish a range of 14-18 children per pedagogical leader (pre-school teacher) for children between 3 and 6 years of age. Auxiliary staff is not included and come in addition.

### DURING COMPULSORY EDUCATION, THE MOST COMMON UPPER LIMIT FOR CLASS SIZES IS 28

Two thirds of countries have introduced regulations establishing a maximum number of students per class for primary and secondary education. In about half of these, the regulations also include a minimum number of students. The remaining countries do not have central regulations on class size.

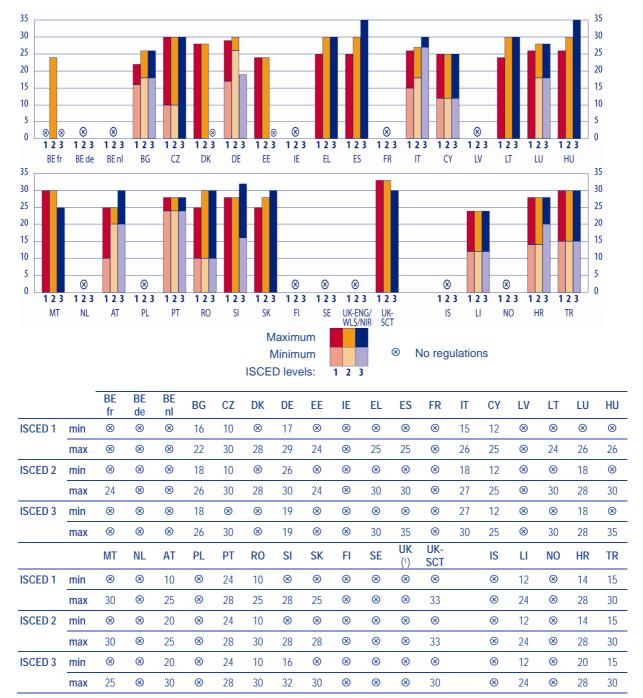
Over the past decade, there have been no significant alterations to the official maximum number of students per class. In the general European context, class size limits have remained between 25 and 35 students. The highest upper class size limits are found in the United Kingdom (Scotland) for primary and lower secondary education with a maximum number of 33, and Spain and Hungary for upper secondary with 35 students respectively. The minimum number of students required for a class to be established, can be seen in the Czech Republic and Romania, where only 10 students are required for the establishment of a class at both primary and secondary level.

Since the 2007/08 school year, in Austria, the number of students per class has been reduced at primary schools, general secondary schools, academic secondary schools and pre-vocational schools. At academic secondary schools (AHS), the limit has been raised by 20 % since students who qualify for the AHS can no longer be rejected on the grounds of insufficient capacity.

Countries tend to increase the upper class size limit with the age of students. In the majority of education systems, the maximum number of students per class is higher at secondary level than at primary level.

In general, class size regulations apply to all grades and subjects in the curriculum. However, different arrangements exist in some countries. For example, class size regulations do not apply to the subject of religion and non-denominational ethics in Belgium (French Community) at lower secondary education. In Poland, although no official regulations on class size exist, some limits to the number of students per class have been established for specific subjects. These are subjects for which the number of students has an influence on learning performance (for example, compulsory ICT classes where the number of available personal computers is limited, compulsory foreign language classes, laboratory and practical classes, and classes on 'Preparation for family life').

#### Figure F8: Class size limits in primary and general (lower and upper) secondary education according to official regulations (ISCED 1, 2 and 3), 2010/2011



Source: Eurydice.

#### **Explanatory note**

Although several countries adjust the maximum number of students per class when students with special needs are present, this is not reflected in the figure.

#### **Country specific notes**

Belgium (BE fr): The regulations stipulate an average class size but not maximum values.

Bulgaria and Malta: Data refer to 2006/07 and are available only for primary education.

**Czech Republic**: According to official regulations, the maximum class size is reduced to 24 in the case of foreign language lessons.

**Germany**: The minimum and maximum numbers indicated for ISCED 3 are the minimum and maximum average numbers of students per class.

**Estonia**: The upper limit at ISCED 1 and 2 may be exceeded by a maximum of two students per class by the owner of the school with the agreement of the head teacher and the school board. Similarly, the minimum number of students necessary to form a class may be reduced.

**Ireland**: Although there are no official recommendations on class size, in practice a cap of 24 students has been adopted for laboratory and practical classes in most secondary schools.

**Spain**: Although the minimum number of students per class is not established at national level, it is usually set by each Autonomous Community.

Luxembourg: Class size is calculated on the basis of the amount of weekly lessons per student in each commune.

**Hungary**: According to official regulations, the maximum number of students per class can be raised by 30 % in certain cases.

**Malta**: In primary and lower secondary education, in classes having students with a statement of Individual Educational Needs, the number of students must not exceed 26. In upper secondary education (grades 9 to 11), in classes having students with a statement of Individual Educational Needs, the number of students must not exceed 21.

**Slovenia**: In bilingual schools (Slovenian/Hungarian) and in schools where Italian is the language of instruction, class sizes at all levels of compulsory education are smaller than that the limits set in general regulations

**Slovakia**: A minimum number 8 pupils is stipulated only as a condition for establishment of zero grade designed for children who attained by 1 September the age of six, but have not achieved the school maturity or they come from socially disadvantaged background and may not master the educational programme of the first grade of primary school. **United Kingdom (ENG/WLS/NIR)**: A maximum class size of 30 applies only to pupils aged 5-7 (England and Wales) or 4-8 (Northern Ireland).

**United Kingdom (SCT)**: For primary grade 1, the maximum number of pupils per class is 25, and for primary grades 2-3, it is 30. The number indicated in the table refers to grades 4-7.

**Liechtenstein**: Reported figures apply to *Realschule* and *Gymnasium* (ISCED 2). For *Oberschule*, (ISCED 2), classes are formed as follows: up to 30 students, a maximum of two classes; up to 48 pupils, a maximum of three classes; up to 49 pupils, a maximum of four classes.

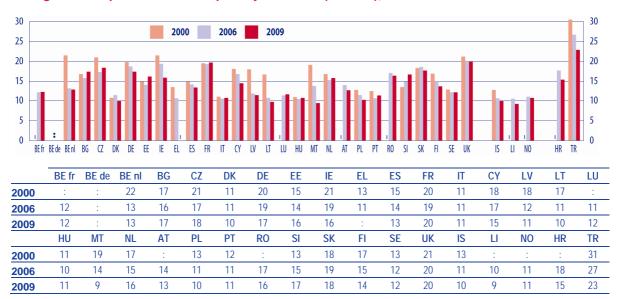
# THE STUDENT/TEACHER RATIO DECREASES BETWEEN PRIMARY AND SECONDARY EDUCATION IN THE MAJORITY OF COUNTRIES

In 2009, across Europe, the average student teacher ratio in primary schools was14:1, and in secondary schools 12:1. The student/teacher ratio is the total number of students divided by the total number of teachers (see note to Figure F9 for a complete definition) and should not be confused with class size which refers to the number of students being taught together in a single class (see Figure F8). The sharing of responsibilities for a class among several teachers working simultaneously, or the presence of specialised tutors responsible for supporting pupils with special educational needs, are among the factors influencing the student/teacher ratio without affecting the class size.

At primary level, the lowest ratio of 9:1 was found in Denmark, Lithuania, Malta, Iceland and Liechtenstein. Turkey presented the highest value, with 22:1. At secondary level, while the majority of countries have a student/teacher ratio of between 10:1 and 15:1, great variation exists amongst countries. The lowest ratio at lower secondary level (6:1) is found in Malta, while Luxembourg presents the highest ratio, with an average of 18:1. At upper secondary level, Portugal and Liechtenstein are the only countries with a ratio below 10:1, while in Estonia, Finland and Turkey the ratio rises above an average of 16:1.

Since 2000, the student/teacher ratio has declined in two thirds of countries by an average of two pupils per teacher in primary education and by one pupil in secondary education. In primary education, the greatest reduction is found in Malta (-10) and Turkey (-8). In the remaining minority of countries, the ratio increased in primary education between 2000 and 2009. In lower secondary education, the greatest reduction (-6) is found in Slovenia and in Cyprus, Latvia and Lithuania (-5). Poland and the United Kingdom are the countries where the ratio has decreased the most at upper secondary level.

#### Figure F9: Pupil/teacher ratio in primary education (ISCED 1), 2000-2006-2009



Source: Eurostat, UOE.

#### **Explanatory note (Figures F9 and F10)**

The pupil/teacher ratio is obtained by dividing the total number of pupils (expressed in full-time equivalents) at a given level of education by the total number of full-time equivalent teachers working at the same level. These teachers include not only class teachers but also support teachers, specialist teachers and any other teachers involved in working with children in the classroom, with small groups of children or with individuals. Staff who are assigned tasks other than teaching (inspectors, school heads who do not teach, teachers on secondment, etc.) and prospective teachers doing teaching practice in schools are not included.

#### **Country specific notes**

Denmark: ISCED 2 is included in ISCED 1 for years 2006 and 2009.

Luxembourg: Data for 2006 and 2009 on teachers include school-level management personnel. Data refer to the public sector only.

Netherlands: ISCED 1 includes ISCED 0.

**Portugal**: Estimated value for 2000. Data on full time equivalent teachers are not available. All teachers (head counts) are included in the denominator.

**Finland**: Changes in methodology in 2006. **Iceland**: ISCED 1 includes ISCED 2.

Liechtenstein: Data for 2006 and 2009 concern public sector only.

Norway: For year 2000, ISCED 1 is included in ISCED 2. For years 2006 and 2009, ISCED 2 is included in ISCED 1.

#### Figure F10: Student/teacher ratio in general (lower and upper) secondary education (ISCED 2-3), 2001-2006-2009



Source: Eurostat, UOE.

#### **Explanatory note (Figures F9 and F10)**

The pupil/teacher ratio is obtained by dividing the total number of pupils (expressed in full-time equivalents) at a given level of education by the total number of full-time equivalent teachers working at the same level. These teachers include not only class teachers but also support teachers, specialist teachers and any other teachers involved in working with children in the classroom, with small groups of children or with individuals. Staff who are assigned tasks other than teaching (inspectors, school heads who do not teach, teachers on secondment, etc.) and prospective teachers doing teaching practice in schools are not included.

#### Country specific notes

Belgium: ISCED 3 includes ISCED 4 for 2006 and 2009. For 2001, ISCED 3 includes ISCED 2 and 4.

Czech Republic: For 2009, ISCED 3 includes ISCED 4 and ISCED 5B.

**Denmark**: ISCED 2 is included in ISCED 1.

Estonia: For 2009 and ISCED 2, general programmes only are considered. ISCED 3 includes vocational programmes at

ISCED 2 and 4.

Ireland: ISCED 3 includes ISCED 2 and 4. For 2001, ISCED 2 includes ISCED 3 and 4.

Spain: For 2001, ISCED 3 includes ISCED 2 and 4.

Lithuania: ISCED 3 is included in ISCED 2.

**Luxembourg**: For 2009, ISCED 2 includes teachers from ISCED 3 independent private institutions, while ISCED 2 includes teachers from government-dependent private institutions. For 2001 and 2006, ISCED 2 is included in ISCED 3, data are for the public sector only, and data on teachers include school-level management personnel. For 2001, ISCED 3 is included in ISCED 2.

Hungary: The calculation of full-time equivalent teachers has been improved in 2001 compared to previous years.

Netherlands: ISCED 3 includes ISCED 2 and 4.

**Portugal**: Data for 2001 are an estimated value. Data on full-time equivalent teachers are not available. All teachers (head counts) are included in the denominator.

**Finland**: For 2001, ISCED 3 includes ISCED 4 and 5 vocational and technical programmes. For 2006 and 2009, ISCED 3 includes ISCED 4. In 2006, there have been changes in methodology.

**United Kingdom**: For 2001 and 2006, ISCED 3 includes ISCED 4. For 2009, ISCED 3 includes ISCED 4 (except general private-dependent programmes).

Iceland: ISCED 2 is included in ISCED 1. For 2009, ISCED 4 is partly included in ISCED 3. For 2001 and 2006, teachers at ISCED 4 are partly included in ISCED 3.

**Liechtenstein**: Data refer to public institutions only.

**Norway**: Data refer to public sector only. For 2006 and 2009, ISCED 3 includes ISCED 4. For 2001, ISCED 1 is included in ISCED 2, and teachers in ISCED 4 are included in ISCED3.

### THE MAJORITY OF 15-YEAR-OLDS SHARE CLASSES WITH FEWER STUDENTS THAN THE OFFICIAL MAXIMUM

On average, there are between 25 and 28 students per class in lower secondary education in Europe.

Actual class size is below the maximum prescribed by regulations in the majority of countries. Classes might happen to exceed the limit indicated in official recommendations in only Estonia, Hungary, Austria, Slovenia, Slovakia and Turkey.

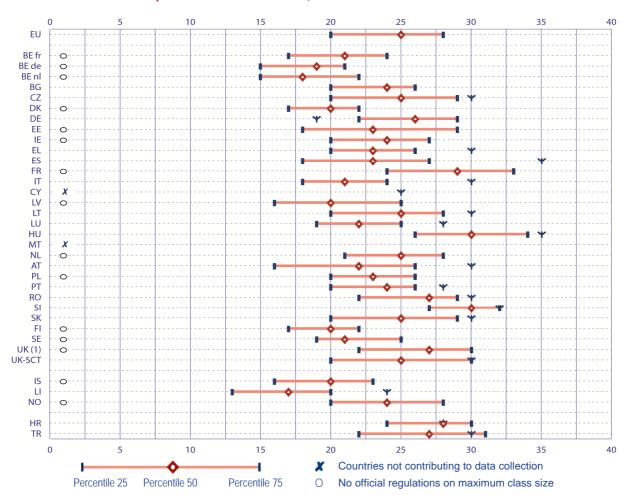
The smallest classes are found in those countries (Belgium, Denmark, Latvia, Finland and Iceland) that have no established official recommendations on the maximum size. On the other hand, some of biggest classes (of above 30 students) are more frequent in countries where an official class size ceiling has been defined.

Class sizes also vary greatly within countries. The range is greatest in Estonia, Austria and the United Kingdom (Scotland), with the majority of students in a class with between 16 and 30 students. In contrast, Denmark, Slovenia and Finland are more homogenous in term of student distribution per class.

It is important to keep in mind that class size is different from the student/teacher ratio (the number of students per teacher). In general, class size figures are higher than the student/teacher ratio since more than one teacher usually works with a given class (see note to Figure 9). No particular relationship has been established between the two indicators. However, in very few cases (in the French Community of Belgium, Italy and Lichtenstein), a low student/teacher ratio is accompanied by small class sizes.

#### SECTION II - GROUPING OF PUPILS

#### Figure F11: Distribution of 15 year-old students by class size, compared with the officially recommended or required maximum class size, 2009



Y Maximum according to official regulations on class size

(p)	EU	BE fr	BE de	BE nl	BG	CZ	DK	DE	EE	IE	EL	ES	FR	IT	CY	LV	LT	LU
p10	16	12	12	12	17	18	14	18	13	15	17	12	19	15	X	10	15	15
p25	20	17	15	15	20	20	17	22	18	20	20	18	24	18	Х	16	20	19
p50	25	21	19	18	24	25	20	26	23	24	23	23	29	21	Х	20	25	22
p75	28	24	21	22	26	29	22	29	29	27	26	27	33	24	Х	25	28	25
p90	31	26	23	24	27	30	24	30	32	30	27	30	35	27	Х	27	30	26
	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK (1)	UK-SCT	IS	LI	NO	HR	TR
p10	19	Х	17	13	17	16	13	22	17	15	15	18	16	12	11	15	19	15
p25	26	Х	21	16	20	20	22	27	20	17	19	22	20	16	13	20	24	22
p50	30	Х	25	22	23	24	27	30	25	20	21	27	25	20	17	24	28	27
p75	34	Х	28	26	26	26	29	32	29	22	25	30	30	23	20	28	30	31
p90	36	Х	30	29	28	28	30	33	31	24	27	30	30	26	22	30	32	39

(p) = Percentile UK (1) = UK-ENG/WLS/NIR

Source: Eurydice and OECD PISA 2009 database.

#### **Explanatory note**

Students were asked in the questionnaire sent to them to indicate on average, about how many students attend their language of instruction class. In the interests of clarity, the figure only shows values corresponding to the 25th, 50th and 75th percentiles in the distribution. Values for the 10th and 90th percentiles are given in the table under the Figure.

For further information on the PISA international survey and the definition of percentile, see the Glossary and Statistical Tools section.

The regulations or recommendations concerning maximum class size are taken from Figure F8.



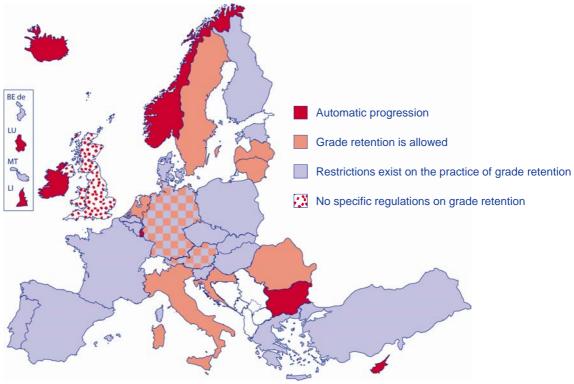
#### **EDUCATIONAL PROCESSES**

#### **SECTION III - ASSESSMENT**

#### GRADE RETENTION IS ALLOWED IN THE MAJORITY OF EUROPEAN COUNTRIES

Countries vary in the way they help individual pupils who experience problems during the school year. Depending on the legislation in force, pupils are usually offered additional support and activities to help them catch up with their peers. However, if they still fail to meet the set objectives by the end of the school year, they may have to repeat it – this process is known as grade retention or grade repetition.

#### Figure F12: Grade retention in primary education (ISCED 1) according to existing regulations, 2010/11



Source: Eurydice.

#### **Explanatory note**

**Restrictions on the practice of grade retention** include the exclusion of particular grades from the retention process and a limit on the number of times pupils can repeat a grade in the course of primary education.

#### **Country specific notes**

**Germany**: Grade retention at the end of grade 1 is not allowed in some *Länder*.

**Poland**: Pupils progress automatically from grades 1 to 3 of primary school, but in grades 4 to 6 of primary school there are no restrictions on grade retention.

**Slovenia**: Pupils from year one to six progress from one year to the next automatically, but they can repeat a year due to poor school results, illness, and moving school or for other reasons, at the request of parents and with the school's agreement. The Teachers' Assembly can decide that, even when parents do not agree, a pupil enrolled in year three to six must repeat a year due to poor school results.

**Liechtenstein**: Although there is automatic progression, grade retention is possible on a voluntary basis and only once in year 5 on request.

There are a very few countries where regulations do not allow grade retention in primary education, these are Bulgaria, Ireland, Cyprus, Luxembourg, Iceland, Liechtenstein, and Norway. In Bulgaria, pupils automatically progress through grades 1-4 and receive support in case of learning difficulties. In Norway, regulations state that all pupils are entitled to automatically progress through each year of compulsory schooling. In Iceland, the National Curriculum Guide states explicitly that children at compulsory level are to be moved up automatically from one grade to the next at the end of the school year. In Liechtenstein, legislation also provides for automatic progression through primary education.

In the United Kingdom, there are no specific requirements that children should progress to a new agerelated group each year and no legal requirements about how schools should be organised. However, there is an expectation that low attainment of individual pupils should be addressed through differentiated teaching and additional support, rather than by repetition of a year. Children with different levels of performance are normally taught with their own grade and progress automatically to the next grade except in exceptional circumstances.

In many European countries, grade retention is theoretically possible; however, statistical data shows that, in practice, there are wide variations between countries (Eurydice, 2011). In order to avoid premature use of the grade retention process, regulations exist in some countries limiting its application. Regulations may, for example, limit grade retention during primary education so that it cannot be applied in the first few years. This is the case in Austria and Portugal, where pupils do not repeat a class in the first year or primary education; and in Germany where grade retention is not allowed at the end of grade 1 in some *Länder*. Other restrictions aim to reduce the frequency of grade repetition or limit its application to certain stages of pupils' school career (e.g. the end of a cycle).

## PROGRESSION TO SECONDARY EDUCATION RARELY REQUIRES A PRIMARY SCHOOL CERTIFICATE

The organisation of compulsory education varies widely throughout Europe. In one group of countries, pupils complete all, or nearly all, of their compulsory education within a single structure system. In another group of countries, there are two successive levels of education, primary and secondary, where, for the most part, there is a 'common core' curriculum at the start of secondary education, which provides all students with the same basic course. Depending on the organisation and structure of the education system, in some countries pupils' results may have an impact on arrangements for their transition from primary to secondary education.

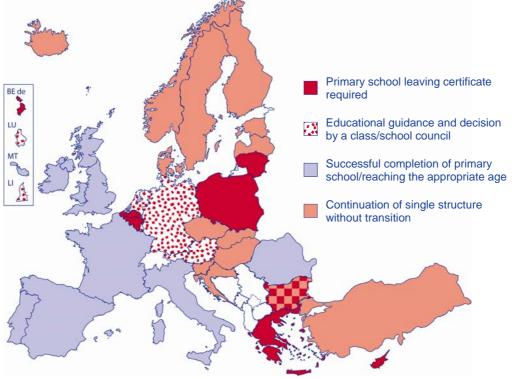
In the 14 European countries where compulsory education forms a single structure, progression to lower secondary education occurs without transition. Thus, pupils progress to the next year if they have fulfilled the requirements of the previous one. In Bulgaria, although compulsory education occurs within a single structure, pupils are required to hold a primary school leaving certificate after four years of primary education before enrolling in the fifth grade.

To gain admission to lower secondary education in Ireland, Spain, France, Italy, Malta, Portugal and Romania, pupils must have successfully completed the last year of primary school. In the United Kingdom, admission to the secondary level occurs when children reach the appropriate age.

In five countries – Germany, Luxembourg, the Netherlands, Austria and Liechtenstein – the transition to lower secondary education depends on the decision of a class council or school council.

Finally, in another group of countries where primary and secondary education are separate, the decision to transfer pupils to the next level depends generally on whether or not they have a primary school leaving certificate. This is awarded based on work during the school year in Belgium, Greece, Cyprus, Lithuania and Poland.

#### Figure F13: Conditions of admission to general lower secondary education (ISCED 2), 2010/11



Source: Eurydice.

#### **Country specific notes**

**Belgium (BE fr)**: The primary school certificate is awarded based on an external standardised examination (*Certificat d'études de base* – CEB) at the end of this education level. However, schools may decide to award pupils this certificate, based on their general achievements, even if they do not pass the examination.

**Belgium (BE de)**: Pupils who have not obtained the primary school leaving certificate on completion of the sixth year of primary education and/or who are at least 12 years old may be admitted to the first stage of lower secondary education where they can still obtain the certificate.

**Spain**: Students, who have not successfully completed primary school at the age of 12, may repeat the year, unless they have already repeated a year of primary education, in which case they are automatically promoted.

**Poland**: At the end of primary school, pupils are obliged to sit an external test which has a diagnostic rather than a selective function. However, sitting this test, regardless of the results obtained, is required for the completion of primary school and admission to lower secondary school.

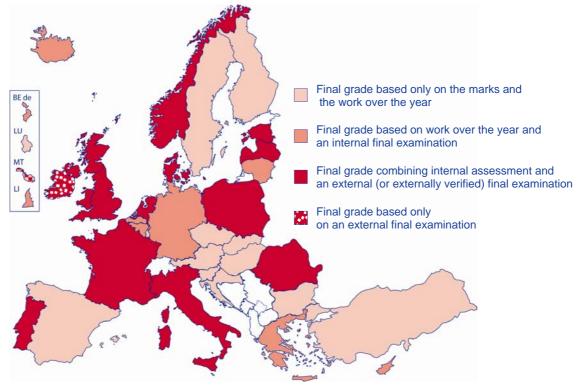
## CERTIFICATES AWARDED AT THE END OF COMPULSORY EDUCATION ARE GENERALLY BASED ON FINAL EXAMINATIONS

Students usually receive a certificate at the end of general lower secondary education or on completion of full-time compulsory education. In most European countries, this corresponds to a transition to upper secondary education.

In nine countries or regions, the certificate at this stage of education is awarded on the basis of internal final examinations and, in a further 12 countries, a combination of internal and external examinations are taken into account. In Ireland, the certificate is awarded wholly on the basis of an external final exam

In contrast, in around a dozen countries, the certificate is awarded only on the basis of students' marks and work over the year.

#### Figure F14: Certified assessment at the end of general lower secondary education (ISCED 2) or fulltime compulsory education, 2010/11



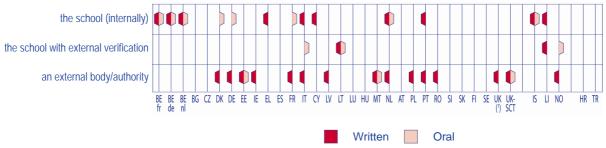
Source: Eurydice.

When a final examination is set, it includes at least one written part. Sometimes, the tests – written and/or oral – are compiled by a team from outside the school but they are usually administered by the school. Only in Belgium, Greece, Italy, Cyprus, the Netherlands, Iceland and Liechtenstein is the written part prepared within the school, which has complete responsibility for the test.

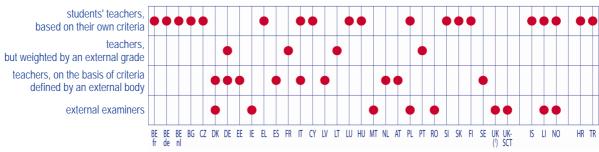
Where the certificate is awarded on the basis of marks and work during the year or the results of an examination set by the school, teachers are generally responsible for the mark shown on the certificate. In several countries, the mark given by teachers is either weighted by an external grade (Germany, France, Lithuania and Portugal) or decided solely on the basis of criteria established by an external authority (Estonia, Spain, Latvia, the Netherland, Austria and Sweden). In Ireland, Malta and Romania, the final grade is awarded solely by examiners from outside the school. In the United Kingdom (England, Wales and Northern Ireland), the final grade is also awarded by examiners from outside the school. Although internal assessment may also contribute, the external awarding organisation remains responsible for the control and moderation of any internal assessment and for the overall grade awarded.

 Figure F15: Characteristics of certified assessment at the end of general lower secondary education or full-time compulsory education (ISCED 2), 2010/11

#### When there is a WRITTEN/ORAL examination, it is set by:



#### The final grade is given by:



Source: Eurydice.

UK (1) = UK-ENG/WLS/NIR

#### **Explanatory note**

In the category 'final grade combining internal assessment and an external (or externally verified) final examination', the internal assessment can mean a final internal test, an evaluation of the marks obtained or the coursework done during the year.

#### **Country specific notes**

Belgium (BE fr): A certificate is awarded on completion of the second stage of secondary education, which is reached one year after the end of full-time compulsory education.

**Belgium (BE nI)**: Schools have a large degree of autonomy for assessing students. They can decide whether or not examinations are organised and, if so, whether they are written or oral. Legislation only states that students need to obtain the final targets. It is up to the school, or class council, to assess whether or not students have succeeded.

**Estonia**: Oral examinations apply for languages and the practical component of some subjects, e.g. sciences, arts, etc. **Ireland**: Some elements of course work (project work completed throughout the school year) are counted towards the final mark that students achieve in the external examination. The marks for this work are, in almost all cases, assigned by external examiners for work carried out in school.

Latvia: In a minority of education programmes, one part of the examination in the state language (Latvian) is oral, and is set by the National Centre for Education.

Malta: There are two different examinations: one that is taken at the end of Form 5 (the final year of secondary school), which is centrally administered by the Educational Assessment Unit of the Education Directorates, and the Secondary Examination Certificate (SEC), which is administered by the MATSEC Board of the University of Malta.

**Slovenia**: At the end of compulsory education, students take national (external) examinations in the mother tongue and mathematics and in a subject determined by the Minister. Examinations are set by the National Examination Centre. Results do not affect students' grades; they provide only additional information about their knowledge, and are written in the certificate.

**United Kingdom (ENG/WLS/NIR)**: Oral examinations only apply to certain subjects such as modern languages. External qualifications are taken on a single-subject basis. They are certified by independent awarding bodies, which are government-regulated. Assessment schemes vary, but always incorporate external assessment. Some also include externally moderated internal assessment.

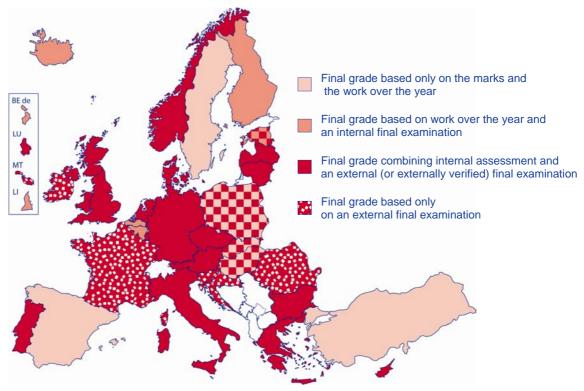
## AT THE END OF UPPER SECONDARY EDUCATION, CERTIFICATES ARE OFTEN AWARDED ON THE BASIS OF EXTERNAL EXAMINATIONS

In all countries, certificates are awarded to students who complete general upper secondary education and have met the set requirements. Upper secondary education certificates normally constitute the minimum requirement for admission to tertiary education.

In six countries – Spain, Hungary, Poland, Slovakia, Sweden and Turkey – the certificate is awarded on the basis of continuous assessment during the final year or years of general secondary education. In Hungary, Poland and Slovakia, two certificates may be awarded at the end of general upper secondary education: one is based on the marks received for work during the final school year; and the second is awarded on the basis of a final examination.

Thus, in the majority of European countries, certification follows some form of final examination. In most cases, it is based on a combination of internal assessment and external examination. However, in Belgium, Finland, Iceland and Liechtenstein, the certificate is awarded only on the basis of an internal final examination, whereas in Ireland, France, Malta, Romania, Slovenia and Croatia, it is based exclusively on an external final examination.

#### Figure F16: Certified assessment at the end of general upper secondary education (ISCED 3), 2010/11



Source: Eurydice.

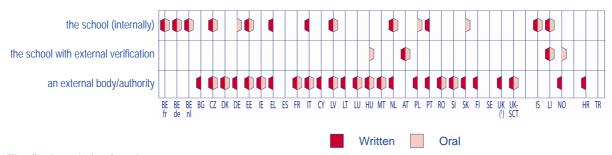
In the majority of countries, the final examination is in two parts, written and oral. In Bulgaria, Greece, Cyprus, Lithuania, Portugal, Finland and Croatia, only written exams are taken. At this level of education, the written examination is very often compiled by a body external to the school, or it may be administered by the institution and externally verified as in the case of Austria and Liechtenstein.

In most countries where the final examination is in two parts (written and oral), these are organised in the same manner, either within the school or by an external body. In the Netherlands, the final examination consists of two tests: an internal test (schoolexamen), which is oral and/or written and set and marked by the teacher, and an external test (centraal examen), which is written, set by an external body and marked by teachers according to the standards established by the external body.

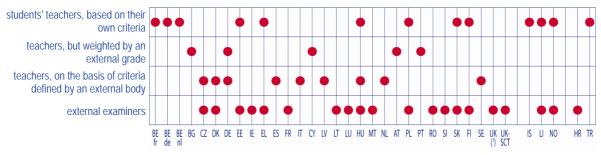
In the majority of countries, the final grade is awarded by teachers within the school who decide what marks students should get. Teachers decide whether to award the certificate on their own initiative, or on the basis of externally defined criteria or by weighting the student marks with reference to an external grade. In several countries, the final grade is awarded solely by an examining body or persons from outside the school. This applies to Ireland, France, Lithuania, Luxembourg, Malta, Romania, Slovenia, the United Kingdom (Scotland) and Croatia. In the United Kingdom (England, Wales and Northern Ireland), the final grade is also awarded by examiners from outside the school. Although internal assessment may also contribute, the external awarding organisation remains responsible for the control and moderation of any internal assessment and for the overall grade awarded.

#### Figure F17: Characteristics of certified assessment at the end of general upper secondary education (ISCED 3), 2010/11

#### When there is a WRITTEN/ORAL examination, it is set by:



#### The final grade is given by:



Source: Eurydice. UK (¹) = UK-ENG/WLS/NIR

#### **Explanatory note**

The map shows the certified assessment at the end of general upper secondary education giving access to tertiary education. In the case of countries where two certificates are awarded, both have been taken into account when choosing the categories for the map, even if one certificate on its own does not provide for admission to tertiary education.

In the category 'final grade combining internal assessment and an external (or externally verified) final exam', the internal assessment can mean a final internal test, an evaluation of the marks obtained or the coursework done during the year or over several years.

#### **Country specific notes**

**Belgium (BE nI)**: Schools have a large degree of autonomy for assessing students. They can decide whether or not examinations are organised and, if so, whether they are written or oral. Legislation only states that students need to obtain the final targets; it is up to the school, or class council, to assess whether or not students have succeeded.

**Estonia**: Oral examinations apply for languages and the practical component of some subjects, e.g. sciences, arts, etc. **Ireland**: Some elements of course work (project work completed throughout the school year) count towards the final mark that students achieve in the external examination. The marks for this work are, in almost all cases, assigned by external examiners for work carried out in school.

**Greece**: According to a regulation submitted to the House of Parliament, students in the third class of day-time general upper secondary schools had the option to acquire a secondary school leaving certificate without having to sit for the National Greek exams of the school year 2010/11. Students were examined at school level in all the subjects of the third class of general upper secondary in matters defined by the relevant teaching association.

Latvia: One part of the foreign languages examination in upper secondary education is oral, and is set by the National Centre for Education.

Hungary, Poland and Finland: At this level, two different certificates may be obtained.

Malta: Oral examinations exist for languages and the practical component of some subjects, e.g. sciences, arts, etc. United Kingdom (ENG/WLS/NIR): Apart from written exams, there may be practical assessments. Oral examinations only apply to certain subjects such as modern languages. External qualifications are taken on a single-subject basis. They are certified by independent awarding bodies, which are government-regulated. Assessment schemes vary but always incorporate external assessment. Some also include externally moderated internal assessment. GCSEs (age 16) incorporate controlled internal assessment for most subjects; this is assessment taken under supervised conditions and is either set externally and marked internally or set internally and marked externally. A levels (age 18) are assessed externally for most subjects but may also incorporate some externally moderated internal assessment.

## NATIONAL TESTS ARE A WIDELY USED ACROSS EUROPE FOR ASSESSING STUDENTS AND MONITORING SCHOOLS AND EDUCATION SYSTEMS

National testing of students, which can be defined as the national administration of standardised tests and centrally set examinations (Eurydice, 2009), is a widely used form of student assessment across Europe. Three types of national tests can be broadly distinguished. National tests, which summarise the attainment of students at the end of a particular educational stage and may have a significant impact on their school career. These tests are usually compulsory for all students. In around two-thirds of the countries, taking decision about the school career of students is the main aim of at least one national test.

The second type of national tests consists of those that have as main objective to monitor and evaluate schools or the education system as a whole. Generally, tests for monitoring schools are often compulsory for all students, while tests that concentrate on the system as a whole are either optional or taken by a representative sample. More than half of the European countries carry out such tests.

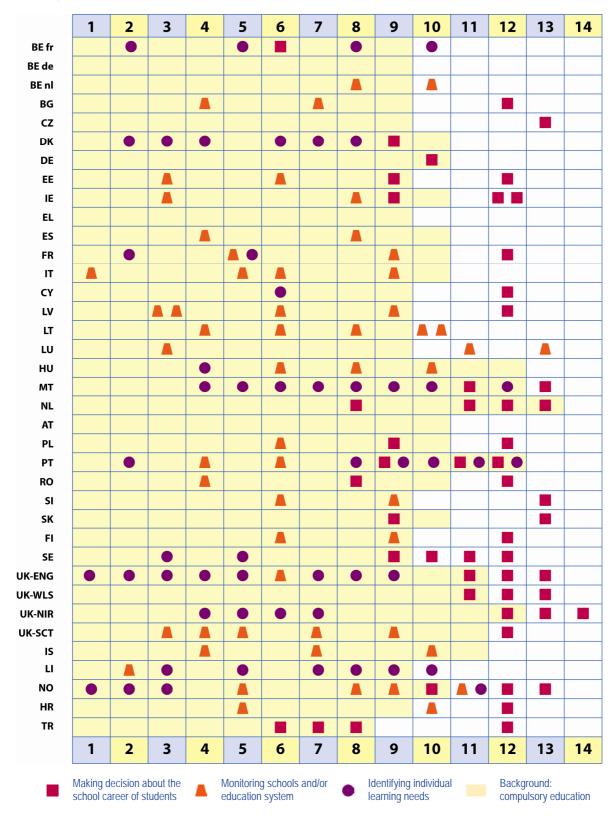
The main aim of the third type of national tests is to support the learning process by identifying the specific learning needs of students, and they can be either compulsory or optional. Twelve countries or regions organise this kind of national tests.

Some countries organise predominantly one type of national test. For example in the Czech Republic, Germany, the Netherlands, Slovakia, the United Kingdom (Wales) and Turkey, all national tests have as a main aim to help make decisions about the school career of students. Generally, these types of tests are held at later stages of schooling, for example at the end of primary education, during or at the end of lower secondary education and at the end of upper secondary education. National tests for monitoring schools and/or the education system are the only types of tests organised in Belgium (Flemish Community), Spain, Italy, Lithuania, Luxembourg and Iceland. In Belgium (French Community), Denmark, Malta, the United Kingdom (England) and Liechtenstein, most national tests serve the purpose of identifying individual learning needs. The latter two types of national tests are organised right from the beginning of schooling and mostly not beyond compulsory education.

The number of school years at which national tests are organised varies considerably across countries. For example Denmark, Malta, the United Kingdom (England) and Norway have developed national tests for almost every year of compulsory education. By contrast, several countries test a much lower number of school years. In Belgium (Flemish Community), Spain, Cyprus and Slovakia, national tests are only organised in two school years; in Germany, only one national test is carried out.

In Ireland, France, Latvia, Lithuania, Portugal and Norway, two national tests may be held during the same school year.

#### Figure F18: Types of national tests and school years in which they are administrated, 2010/11



Source: Eurydice.

#### **Explanatory note**

Only the main aim of each national test is represented in the Figure.

#### **Country specific notes**

**Belgium (BE nI)**: In the school year 2010/11, the two national assessments took place at the end of the first stage and at the end of the second stage in secondary education. In other school years, two other assessments may be organised with different subjects and/or different student populations (e.g. the end of primary education and the end of secondary education).

Bulgaria: Students in year 8 of specialised schools for foreign language studies also take national external assessments.

Austria: Two new national tests will be implemented soon: *Bildungsstandards* (starting 2012/13), compulsory for all pupils at grade 4 and 8; and New final upper secondary examinations (starting 2013/14).

**Portugal**: The national tests for identifying individual student's learning (*Testes Intermédios*) are not compulsory; schools are autonomous to decide whether to apply them.

Slovakia: The national test has another equally important objective, which is to monitor schools and the education system.

**Sweden**: At secondary level, compulsory national tests for making decisions about the school career of students are taken in the subjects Swedish, English and mathematics either in year 10, 11 or 12, depending on when the students finish the courses in question.

Norway: In most school years, separate national tests with different purposes take place for different subjects.

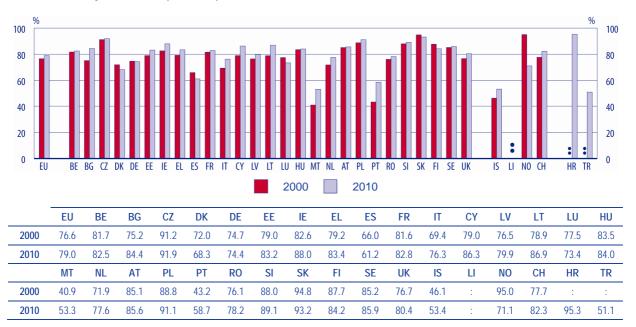
#### QUALIFICATION LEVELS AND TRANSITION TO EMPLOYMENT

## THE PROPORTION OF YOUNG PEOPLE WITH AT LEAST AN UPPER SECONDARY QUALIFICATION CONTINUES TO GROW

Seventy-nine percent of young people in Europe aged 20-24 successfully completed upper secondary education (ISCED 3) in 2010. This is a confirmation of the positive trend shown across Europe since 2000.

In fact, the vast majority of countries report a rise in the number of young people holding at least an upper-secondary qualification over the last ten years. This increase reached double figures in Portugal (+15.5 %) and Malta (+12.4 %) with Bulgaria close behind at +9.2. This data is particularly encouraging in view of the fact that Portugal and Malta are among the countries with the lowest number of young people between the ages of 20 and 24 successfully completing upper secondary education.

#### Figure G1: Proportion of the population in the 20-24 age group having completed at least upper secondary education (ISCED 3), 2010



Source: Eurostat, Labour Force Survey (data extracted July 2011).

#### **Country specific notes**

Bulgaria and Sweden: Break in series after 2001.

Denmark, Luxembourg, Hungary and Malta: Break in series after 2003.

Germany: Break in series after 2005

Latvia and Lithuania: Break in series after 2002. Luxembourg and Malta: Provisional data for 2010. Netherlands: Break in series for year 2010.

Norway: Break in series after 2006.

However, at tertiary level, a few countries (Denmark, Spain, Luxembourg, Finland, and Norway) experienced a decline in the proportion of graduates in the 20-24 age group.

Several countries report percentages well above the European average: in the Czech Republic, Poland, Slovenia and Slovakia, about nine out of ten people between the ages of 20 and 24 hold at least an upper secondary qualification. The highest level is found in Croatia, where the figure is over 95 % for this age group.

#### QUALIFICATION LEVELS AND TRANSITION TO EMPLOYMENT

Yet, some countries still face difficulties in ensuring that young people successfully complete upper secondary education. This is the case in Portugal, Malta, Iceland (despite their rapid advance in recent years), Spain (where the level has declined since 2000) and Turkey. In these countries, the share of individuals aged between 20 and 24 who hold an upper-secondary qualification barely exceeds 60 %.

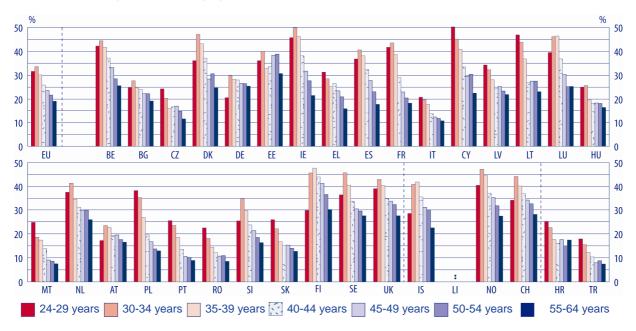
## PEOPLE IN THE YOUNGER AGE GROUPS ARE MORE LIKELY TO HOLD A TERTIARY EDUCATION QUALIFICATION

The EU average percentage of persons with a tertiary qualification has increased for each age group in question since 2000 (see Figure F4 in Key Data on Education, 2009). The highest increase is observed in the 35-39 age group, with positive variation of almost 7 %.

Notwithstanding the increase in the percentage of young people with tertiary education qualifications, significant differences remain between countries. In some (Denmark, Ireland, Cyprus, Luxembourg, Finland, Sweden, and Norway) the proportion of 30- to 34-year-olds holding a tertiary degree is well above 45 %, while in others (Italy, Malta, Romania, and Turkey) it is below 20 %.

In line with the trend of the past decades, the percentage of people holding a tertiary degree reduces with age, so that older people are much less likely to have completed tertiary education than their younger counterparts. What is interesting to note is that the attainment gap between younger and older generations is widening over time. In other words, increasingly more young people complete tertiary education while ever fewer older people hold such qualifications. On average, the difference grew by about 4 % between 2000 and 2011. In particular, Ireland, Luxembourg and Poland are the countries where the variance between generations has been the greatest.

### • Figure G2: Percentage of the population with tertiary education qualifications (ISCED 5 and 6) in the population aged 24-64, by age group, 2010



Source: Eurostat, Labour Force Survey (data extracted July 2011).

	EU-27	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	IT	CY	LV	LT	LU	HU
24-29 years	31.6	42.2	24.8	24.3	36.1	20.6	36.1	45.7	31.3	36.8	41.7	20.8	50.2	34.3	46.9	39.5	25.0
30-34 years	33.6	44.4	27.7	20.4	47.1	29.8	40.0	49.9	28.5	40.6	43.5	19.8	45.1	32.3	43.8	46.1	25.7
35-39 years	30.1	41.7	24.7	15.9	43.2	28.3	32.7	46.2	25.3	38.1	38.7	17.9	40.8	28.1	36.8	46.4	19.7
40-44 years	25.9	37.2	24.1	16.8	37.2	28.0	33.6	38.1	26.5	32.4	29.0	13.7	33.5	24.3	27.0	36.8	18.3
45-49 years	23.6	33.2	22.3	17.1	28.4	26.6	38.3	31.7	23.5	27.8	23.0	12.3	29.6	25.3	27.5	30.3	18.4
50-54 years	21.7	28.5	22.3	14.7	30.6	26.5	38.8	27.7	21.0	23.1	20.5	11.7	30.4	23.4	27.5	25.2	18.2
55-64 years	19.1	25.6	19.2	11.5	24.7	25.4	30.7	21.5	15.8	17.8	18.3	10.7	22.5	21.9	23.1	25.3	16.5
	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	LI	NO	СН	HR	TR
											• • • • • • • • • • • • • • • • • • • •				011		
24-29 years	24.8	37.6	17.2	38.3	25.5	22.5	25.4	25.9	29.8	36.5	39.1	28.5	:	40.5	34.2	25.2	17.9
24-29 years 30-34 years	24.8 18.6	37.6 41.4	17.2 23.5	38.3 35.3	25.5 23.5	22.5	25.4 34.8					- 10					
	_						-	25.9	29.8	36.5	39.1	28.5	:	40.5	34.2	25.2	17.9
30-34 years	18.6	41.4	23.5	35.3	23.5	18.1	34.8	25.9 22.1	29.8	36.5 45.8	39.1 43.0	28.5	:	40.5	34.2	25.2 22.6	17.9 15.5
30-34 years 35-39 years	18.6 17.4	41.4	23.5	35.3 26.8	23.5 18.6	18.1 14.5	34.8	25.9 22.1 16.7	29.8 45.7 47.7	36.5 45.8 40.6	39.1 43.0 40.4	28.5 40.9 41.9	:	40.5 47.3 44.6	34.2 44.2 40.2	25.2 22.6 17.7	17.9 15.5 12.3
30-34 years 35-39 years 40-44 years	18.6 17.4 14.0	41.4 34.7 31.0	23.5 22.7 19.2	35.3 26.8 19.6	23.5 18.6 13.5	18.1 14.5 12.3	34.8 29.7 23.7	25.9 22.1 16.7 15.1	29.8 45.7 47.7 44.0	36.5 45.8 40.6 33.8	39.1 43.0 40.4 34.8	28.5 40.9 41.9 35.6	:	40.5 47.3 44.6 37.2	34.2 44.2 40.2 37.0	25.2 22.6 17.7 16.1	17.9 15.5 12.3 10.4

Source: Eurostat, Labour Force Survey (data extracted July 2011).

#### FEWER TERTIARY GRADUATES IN THE FIELD OF EDUCATION AND TRAINING

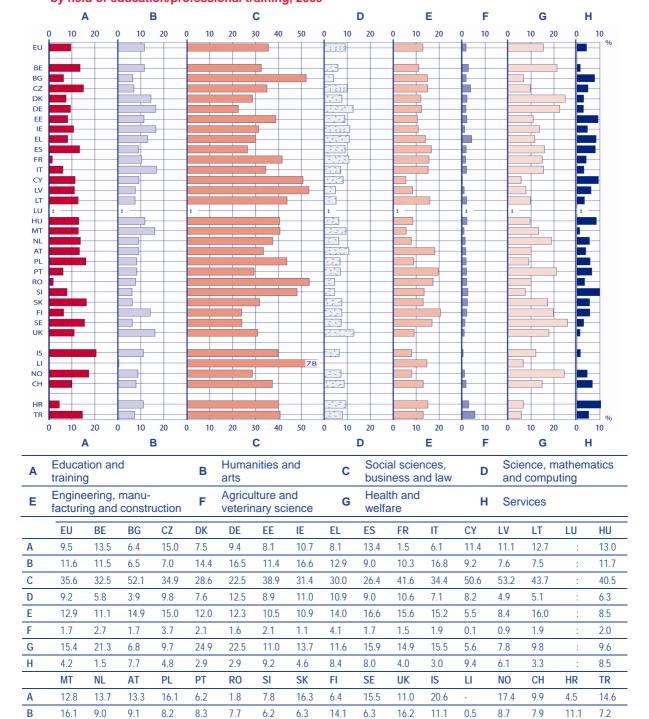
In 2009, graduates from social sciences, law and business represented the largest proportion of graduates in Europe, with over 35 % of all graduates. In comparison, there were 15.4 % of graduates in health and welfare with 12.8 % and 11.6 % respectively in engineering and humanities. In several countries (Bulgaria, Cyprus, Latvia, Romania, and Liechtenstein) the proportion of graduates from social sciences, law and business reached over 50 %, while the proportion was lower than 25 % in very few countries (Germany, Sweden, and Finland). Overall, the field with the lowest number of graduates is agriculture and veterinary science (1.67 %).

Within countries, the most significant variation since 2006 in the proportion of graduates in specific fields has been the fall in the proportion of graduates in the field of education and training with a corresponding rise in health and welfare and, to a lesser extent, the services. Whilst this general trend applies to the vast majority of countries, some show significant losses in the field of education including Portugal -6.7 %, Iceland -6 %, Hungary -5.2 %, and Belgium -4.5 %. Such decreases are likely to pose further challenges to the future supply of qualified teachers in these countries.

The most significant increases in graduates in the health and welfare disciplines are found in Germany, Ireland, Italy, Latvia, the Netherlands, and Poland. Also worthy of note is the redistribution of graduates in Liechtenstein, where, between 2006 and 2009, the share of those in engineering dropped by over 20 % while graduates in the social sciences, law and business fields rose by more than 23 %.

Compared to the distribution of tertiary graduates in 2000 (see Figure F15 in Key Data on Education, 2002), current data show the most significant variation in the share of graduates from science, mathematics and computing. Over the last decade, this percentage has reduced from around 12 % to 9 % at European level, with peaks of decline registered in Ireland (-10 %), France (-5 %) and Iceland (-6 %).

### Figure G3: Tertiary education graduates (ISCED 5 and 6) by field of education/professional training, 2009



Source: Eurostat, UOE (data extracted July 2011).

33.4

10.6

18.1

1.6

10.1

3.9

#### Country specific notes

С

D

Ε

F

G

Н

40.6

9.4

5.6

0.8

13.3

37.5

6.2

7.8

1.3

18.9

5.5

Belgium: Data for the Flemish community exclude second qualifications in non-university tertiary education.

Greece: Data are from 2008.

Italy: Data exclude ISCED 5A second degrees and ISCED 6.

43.6

6.8

8.8

1.7

9.0

29.4

7.0

19.6

1.9

21.2

53.4

4.4

17.3

2.0

10.0

48.1

4.4

13.4

2.5

7.5

10.0

23.9

7.6

20.6

2.0

19.8

5.6

31.7

7.6

13.0

2.3

17.3

24.0

7.3

16.9

1.2

25.9

2.9

30.9

12.8

9.1

0.9

17.8

1.3

39.8

6.5

8.0

0.4

12.1

1.5

78.3

14.6

6.6

28.6

7.2

8.0

1.0

24.5

4.5

37.3

8.6

13.0

1.7

14.8

6.7

40.0

9.3

15.1

2.8

6.7

10.4

40.7

7.9

13.1

5.6

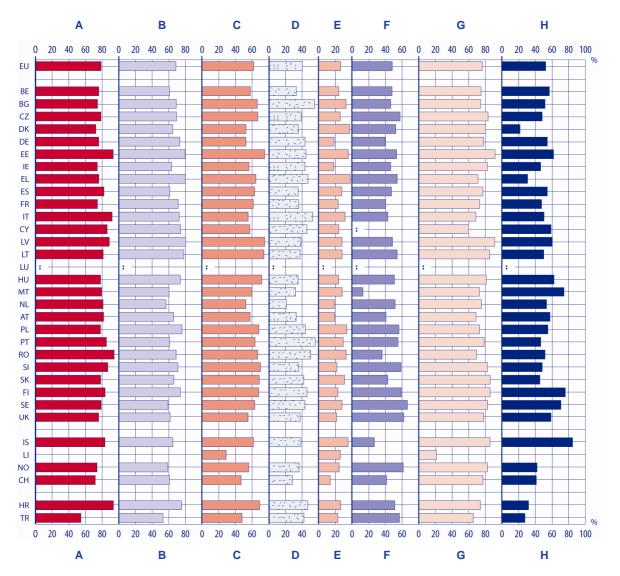
5.8



## GRADUATE WOMEN OUTNUMBER MEN IN ALL FIELDS EXCEPT NATURAL AND APPLIED SCIENCES

In line with the trend over recent years, women clearly outnumber men in most academic fields including in education and training where women make up almost 80 % of graduates; in health and welfare the figure is 76 %; in the humanities, 69 %; and in social sciences, law and business, 62 %. To a lesser extent, more women (52 %) than men graduate in the services area. Education and training is, however, the field where the predominance of women continues to be strongest, peaking at 90 % or over in Estonia, Italy, Romania and Croatia.

 Figure G4: Proportion of tertiary education qualifications (ISCED5 and 6) awarded to women by field of education/professional training, 2009



Source: Eurostat, UOE (data extracted July 2011).

Α	Education and training	В	Humanities and arts	С	Social sciences, business and law	D	Science, mathematics and computing
E	Engineering, manu- facturing and construction	F	Agriculture and veterinary science	G	Health and welfare	Н	Services

#### QUALIFICATION LEVELS AND TRANSITION TO EMPLOYMENT

EU	BE	BG	CZ	DK	DE	EE	ΙE	EL	ES	FR	IT	CY	LV	LT	LU	HU
78.7	76.0	74.5	78.5	72.5	75.9	93.3	74.2	76.1	82.2	74.4	92.0	86.0	88.6	81.3	:	78.2
68.5	60.9	69.0	69.3	64.7	73.1	79.6	63.2	79.9	61.2	71.3	72.5	74.2	80.2	77.9	:	73.9
61.8	57.8	66.2	66.9	52.7	52.5	75.1	56.3	64.5	63.0	61.3	55.3	57.2	75.2	74.2	:	71.5
40.3	33.1	55.0	38.9	35.5	43.7	44.7	43.5	47.1	35.4	36.0	52.8	45.7	38.7	37.5	:	35.3
26.2	24.0	32.7	25.8	37.1	18.4	35.6	17.9	37.8	27.7	23.4	31.7	24.1	27.9	28.0	:	23.9
48.2	47.8	46.3	57.5	52.4	39.7	53.4	46.3	54.2	47.3	40.3	42.9	:	48.5	54.1	:	50.7
76.2	74.8	74.4	83.1	80.4	77.8	91.5	82.4	71.1	77.0	73.1	68.6	60.0	91.2	85.2	:	81.2
52.4	56.8	51.6	48.1	21.6	54.3	61.8	46.3	30.7	54.3	47.4	50.4	58.7	60.3	50.0	:	62.4
MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	LI	NO	СН	HR	TR
79.4	81.1	81.8	78.0	85.2	94.5	86.8	78.2	83.6	78.8	75.8	83.4	-	73.9	71.8	93.6	54.6
60.3	56.7	65.8	76.1	60.9	68.9	70.9	66.0	74.0	59.1	61.7	64.8	-	58.7	60.9	75.4	53.1
59.9	52.4	57.5	68.2	63.4	66.7	70.0	68.6	68.0	63.1	55.2	61.6	28.9	56.0	46.9	69.2	47.9
32.1	21.1	22.0	440	EE O	E0 2	36 N	<i>/</i> 11 O	16 O	12.1	27.6	30.6		36.5	28.3	16 Q	42.4
JZ. I	21.1	32.9	44.0	55.9	30.2	30.0	41.7	40.0	43.4	37.0	30.0		30.3	20.5	40.0	72.7
28.1	18.7	18.9	33.6	29.4	32.8	21.7	31.1	22.8	27.9	21.4	35.3	25.8	24.5	13.8	26.2	22.8
28.1	18.7	18.9	33.6	29.4	32.8	21.7	31.1	22.8	27.9	21.4	35.3	25.8	24.5	13.8	26.2	22.8
	78.7 68.5 61.8 40.3 26.2 48.2 76.2 52.4 MT 79.4 60.3 59.9	78.7 76.0 68.5 60.9 61.8 57.8 40.3 33.1 26.2 24.0 48.2 47.8 76.2 74.8 52.4 56.8 MT NL 79.4 81.1 60.3 56.7 59.9 52.4	78.7         76.0         74.5           68.5         60.9         69.0           61.8         57.8         66.2           40.3         33.1         55.0           26.2         24.0         32.7           48.2         47.8         46.3           76.2         74.8         74.4           52.4         56.8         51.6           MT         NL         AT           79.4         81.1         81.8           60.3         56.7         65.8           59.9         52.4         57.5	78.7         76.0         74.5         78.5           68.5         60.9         69.0         69.3           61.8         57.8         66.2         66.9           40.3         33.1         55.0         38.9           26.2         24.0         32.7         25.8           48.2         47.8         46.3         57.5           76.2         74.8         74.4         83.1           52.4         56.8         51.6         48.1           MT         NL         AT         PL           79.4         81.1         81.8         78.0           60.3         56.7         65.8         76.1           59.9         52.4         57.5         68.2	78.7         76.0         74.5         78.5         72.5           68.5         60.9         69.0         69.3         64.7           61.8         57.8         66.2         66.9         52.7           40.3         33.1         55.0         38.9         35.5           26.2         24.0         32.7         25.8         37.1           48.2         47.8         46.3         57.5         52.4           76.2         74.8         74.4         83.1         80.4           52.4         56.8         51.6         48.1         21.6           MT         NL         AT         PL         PT           79.4         81.1         81.8         78.0         85.2           60.3         56.7         65.8         76.1         60.9           59.9         52.4         57.5         68.2         63.4	78.7         76.0         74.5         78.5         72.5         75.9           68.5         60.9         69.0         69.3         64.7         73.1           61.8         57.8         66.2         66.9         52.7         52.5           40.3         33.1         55.0         38.9         35.5         43.7           26.2         24.0         32.7         25.8         37.1         18.4           48.2         47.8         46.3         57.5         52.4         39.7           76.2         74.8         74.4         83.1         80.4         77.8           52.4         56.8         51.6         48.1         21.6         54.3           MT         NL         AT         PL         PT         RO           79.4         81.1         81.8         78.0         85.2         94.5           60.3         56.7         65.8         76.1         60.9         68.9           59.9         52.4         57.5         68.2         63.4         66.7	78.7         76.0         74.5         78.5         72.5         75.9         93.3           68.5         60.9         69.0         69.3         64.7         73.1         79.6           61.8         57.8         66.2         66.9         52.7         52.5         75.1           40.3         33.1         55.0         38.9         35.5         43.7         44.7           26.2         24.0         32.7         25.8         37.1         18.4         35.6           48.2         47.8         46.3         57.5         52.4         39.7         53.4           76.2         74.8         74.4         83.1         80.4         77.8         91.5           52.4         56.8         51.6         48.1         21.6         54.3         61.8           MT         NL         AT         PL         PT         RO         SI           79.4         81.1         81.8         78.0         85.2         94.5         86.8           60.3         56.7         65.8         76.1         60.9         68.9         70.9           59.9         52.4         57.5         68.2         63.4         66.7         70	78.7         76.0         74.5         78.5         72.5         75.9         93.3         74.2           68.5         60.9         69.0         69.3         64.7         73.1         79.6         63.2           61.8         57.8         66.2         66.9         52.7         52.5         75.1         56.3           40.3         33.1         55.0         38.9         35.5         43.7         44.7         43.5           26.2         24.0         32.7         25.8         37.1         18.4         35.6         17.9           48.2         47.8         46.3         57.5         52.4         39.7         53.4         46.3           76.2         74.8         74.4         83.1         80.4         77.8         91.5         82.4           52.4         56.8         51.6         48.1         21.6         54.3         61.8         46.3           MT         NL         AT         PL         PT         RO         SI         SK           79.4         81.1         81.8         78.0         85.2         94.5         86.8         78.2           60.3         56.7         65.8         76.1         6	78.7         76.0         74.5         78.5         72.5         75.9         93.3         74.2         76.1           68.5         60.9         69.0         69.3         64.7         73.1         79.6         63.2         79.9           61.8         57.8         66.2         66.9         52.7         52.5         75.1         56.3         64.5           40.3         33.1         55.0         38.9         35.5         43.7         44.7         43.5         47.1           26.2         24.0         32.7         25.8         37.1         18.4         35.6         17.9         37.8           48.2         47.8         46.3         57.5         52.4         39.7         53.4         46.3         54.2           76.2         74.8         74.4         83.1         80.4         77.8         91.5         82.4         71.1           52.4         56.8         51.6         48.1         21.6         54.3         61.8         46.3         30.7           MT         NL         AT         PL         PT         RO         SI         SK         FI           79.4         81.1         81.8         78.0	78.7         76.0         74.5         78.5         72.5         75.9         93.3         74.2         76.1         82.2           68.5         60.9         69.0         69.3         64.7         73.1         79.6         63.2         79.9         61.2           61.8         57.8         66.2         66.9         52.7         52.5         75.1         56.3         64.5         63.0           40.3         33.1         55.0         38.9         35.5         43.7         44.7         43.5         47.1         35.4           26.2         24.0         32.7         25.8         37.1         18.4         35.6         17.9         37.8         27.7           48.2         47.8         46.3         57.5         52.4         39.7         53.4         46.3         54.2         47.3           76.2         74.8         74.4         83.1         80.4         77.8         91.5         82.4         71.1         77.0           52.4         56.8         51.6         48.1         21.6         54.3         61.8         46.3         30.7         54.3           MT         NL         AT         PL         PT         RO	78.7         76.0         74.5         78.5         72.5         75.9         93.3         74.2         76.1         82.2         74.4           68.5         60.9         69.0         69.3         64.7         73.1         79.6         63.2         79.9         61.2         71.3           61.8         57.8         66.2         66.9         52.7         52.5         75.1         56.3         64.5         63.0         61.3           40.3         33.1         55.0         38.9         35.5         43.7         44.7         43.5         47.1         35.4         36.0           26.2         24.0         32.7         25.8         37.1         18.4         35.6         17.9         37.8         27.7         23.4           48.2         47.8         46.3         57.5         52.4         39.7         53.4         46.3         54.2         47.3         40.3           76.2         74.8         74.4         83.1         80.4         77.8         91.5         82.4         71.1         77.0         73.1           52.4         56.8         51.6         48.1         21.6         54.3         61.8         46.3         30.7 <t< th=""><th>78.7         76.0         74.5         78.5         72.5         75.9         93.3         74.2         76.1         82.2         74.4         92.0           68.5         60.9         69.0         69.3         64.7         73.1         79.6         63.2         79.9         61.2         71.3         72.5           61.8         57.8         66.2         66.9         52.7         52.5         75.1         56.3         64.5         63.0         61.3         55.3           40.3         33.1         55.0         38.9         35.5         43.7         44.7         43.5         47.1         35.4         36.0         52.8           26.2         24.0         32.7         25.8         37.1         18.4         35.6         17.9         37.8         27.7         23.4         31.7           48.2         47.8         46.3         57.5         52.4         39.7         53.4         46.3         54.2         47.3         40.3         42.9           76.2         74.8         74.4         83.1         80.4         77.8         91.5         82.4         71.1         77.0         73.1         68.6           52.4         56.8         <t< th=""><th>78.7         76.0         74.5         78.5         72.5         75.9         93.3         74.2         76.1         82.2         74.4         92.0         86.0           68.5         60.9         69.0         69.3         64.7         73.1         79.6         63.2         79.9         61.2         71.3         72.5         74.2           61.8         57.8         66.2         66.9         52.7         52.5         75.1         56.3         64.5         63.0         61.3         55.3         57.2           40.3         33.1         55.0         38.9         35.5         43.7         44.7         43.5         47.1         35.4         36.0         52.8         45.7           26.2         24.0         32.7         25.8         37.1         18.4         35.6         17.9         37.8         27.7         23.4         31.7         24.1           48.2         47.8         46.3         57.5         52.4         39.7         53.4         46.3         54.2         47.3         40.3         42.9         :           76.2         74.8         74.4         83.1         80.4         77.8         91.5         82.4         71.1         <t< th=""><th>78.7         76.0         74.5         78.5         72.5         75.9         93.3         74.2         76.1         82.2         74.4         92.0         86.0         88.6           68.5         60.9         69.0         69.3         64.7         73.1         79.6         63.2         79.9         61.2         71.3         72.5         74.2         80.2           61.8         57.8         66.2         66.9         52.7         52.5         75.1         56.3         64.5         63.0         61.3         55.3         57.2         75.2           40.3         33.1         55.0         38.9         35.5         43.7         44.7         43.5         47.1         35.4         36.0         52.8         45.7         38.7           26.2         24.0         32.7         25.8         37.1         18.4         35.6         17.9         37.8         27.7         23.4         31.7         24.1         27.9           48.2         47.8         46.3         57.5         52.4         39.7         53.4         46.3         54.2         47.3         40.3         42.9         :         48.5           76.2         74.8         74.4         <t< th=""><th>78.7         76.0         74.5         78.5         72.5         75.9         93.3         74.2         76.1         82.2         74.4         92.0         86.0         88.6         81.3           68.5         60.9         69.0         69.3         64.7         73.1         79.6         63.2         79.9         61.2         71.3         72.5         74.2         80.2         77.9           61.8         57.8         66.2         66.9         52.7         52.5         75.1         56.3         64.5         63.0         61.3         55.3         57.2         75.2         74.2           40.3         33.1         55.0         38.9         35.5         43.7         44.7         43.5         47.1         35.4         36.0         52.8         45.7         38.7         37.5           26.2         24.0         32.7         25.8         37.1         18.4         35.6         17.9         37.8         27.7         23.4         31.7         24.1         27.9         28.0           48.2         47.8         46.3         57.5         52.4         39.7         53.4         46.3         54.2         47.3         40.3         42.9         :</th><th>78.7         76.0         74.5         78.5         72.5         75.9         93.3         74.2         76.1         82.2         74.4         92.0         86.0         88.6         81.3         :           68.5         60.9         69.0         69.3         64.7         73.1         79.6         63.2         79.9         61.2         71.3         72.5         74.2         80.2         77.9         :           61.8         57.8         66.2         66.9         52.7         52.5         75.1         56.3         64.5         63.0         61.3         55.3         57.2         75.2         74.2         :           40.3         33.1         55.0         38.9         35.5         43.7         44.7         43.5         47.1         35.4         36.0         52.8         45.7         38.7         37.5         :           26.2         24.0         32.7         25.8         37.1         18.4         35.6         17.9         37.8         27.7         23.4         31.7         24.1         27.9         28.0         :           48.2         47.8         46.3         57.5         52.4         39.7         53.4         46.3         54.2</th></t<></th></t<></th></t<></th></t<>	78.7         76.0         74.5         78.5         72.5         75.9         93.3         74.2         76.1         82.2         74.4         92.0           68.5         60.9         69.0         69.3         64.7         73.1         79.6         63.2         79.9         61.2         71.3         72.5           61.8         57.8         66.2         66.9         52.7         52.5         75.1         56.3         64.5         63.0         61.3         55.3           40.3         33.1         55.0         38.9         35.5         43.7         44.7         43.5         47.1         35.4         36.0         52.8           26.2         24.0         32.7         25.8         37.1         18.4         35.6         17.9         37.8         27.7         23.4         31.7           48.2         47.8         46.3         57.5         52.4         39.7         53.4         46.3         54.2         47.3         40.3         42.9           76.2         74.8         74.4         83.1         80.4         77.8         91.5         82.4         71.1         77.0         73.1         68.6           52.4         56.8 <t< th=""><th>78.7         76.0         74.5         78.5         72.5         75.9         93.3         74.2         76.1         82.2         74.4         92.0         86.0           68.5         60.9         69.0         69.3         64.7         73.1         79.6         63.2         79.9         61.2         71.3         72.5         74.2           61.8         57.8         66.2         66.9         52.7         52.5         75.1         56.3         64.5         63.0         61.3         55.3         57.2           40.3         33.1         55.0         38.9         35.5         43.7         44.7         43.5         47.1         35.4         36.0         52.8         45.7           26.2         24.0         32.7         25.8         37.1         18.4         35.6         17.9         37.8         27.7         23.4         31.7         24.1           48.2         47.8         46.3         57.5         52.4         39.7         53.4         46.3         54.2         47.3         40.3         42.9         :           76.2         74.8         74.4         83.1         80.4         77.8         91.5         82.4         71.1         <t< th=""><th>78.7         76.0         74.5         78.5         72.5         75.9         93.3         74.2         76.1         82.2         74.4         92.0         86.0         88.6           68.5         60.9         69.0         69.3         64.7         73.1         79.6         63.2         79.9         61.2         71.3         72.5         74.2         80.2           61.8         57.8         66.2         66.9         52.7         52.5         75.1         56.3         64.5         63.0         61.3         55.3         57.2         75.2           40.3         33.1         55.0         38.9         35.5         43.7         44.7         43.5         47.1         35.4         36.0         52.8         45.7         38.7           26.2         24.0         32.7         25.8         37.1         18.4         35.6         17.9         37.8         27.7         23.4         31.7         24.1         27.9           48.2         47.8         46.3         57.5         52.4         39.7         53.4         46.3         54.2         47.3         40.3         42.9         :         48.5           76.2         74.8         74.4         <t< th=""><th>78.7         76.0         74.5         78.5         72.5         75.9         93.3         74.2         76.1         82.2         74.4         92.0         86.0         88.6         81.3           68.5         60.9         69.0         69.3         64.7         73.1         79.6         63.2         79.9         61.2         71.3         72.5         74.2         80.2         77.9           61.8         57.8         66.2         66.9         52.7         52.5         75.1         56.3         64.5         63.0         61.3         55.3         57.2         75.2         74.2           40.3         33.1         55.0         38.9         35.5         43.7         44.7         43.5         47.1         35.4         36.0         52.8         45.7         38.7         37.5           26.2         24.0         32.7         25.8         37.1         18.4         35.6         17.9         37.8         27.7         23.4         31.7         24.1         27.9         28.0           48.2         47.8         46.3         57.5         52.4         39.7         53.4         46.3         54.2         47.3         40.3         42.9         :</th><th>78.7         76.0         74.5         78.5         72.5         75.9         93.3         74.2         76.1         82.2         74.4         92.0         86.0         88.6         81.3         :           68.5         60.9         69.0         69.3         64.7         73.1         79.6         63.2         79.9         61.2         71.3         72.5         74.2         80.2         77.9         :           61.8         57.8         66.2         66.9         52.7         52.5         75.1         56.3         64.5         63.0         61.3         55.3         57.2         75.2         74.2         :           40.3         33.1         55.0         38.9         35.5         43.7         44.7         43.5         47.1         35.4         36.0         52.8         45.7         38.7         37.5         :           26.2         24.0         32.7         25.8         37.1         18.4         35.6         17.9         37.8         27.7         23.4         31.7         24.1         27.9         28.0         :           48.2         47.8         46.3         57.5         52.4         39.7         53.4         46.3         54.2</th></t<></th></t<></th></t<>	78.7         76.0         74.5         78.5         72.5         75.9         93.3         74.2         76.1         82.2         74.4         92.0         86.0           68.5         60.9         69.0         69.3         64.7         73.1         79.6         63.2         79.9         61.2         71.3         72.5         74.2           61.8         57.8         66.2         66.9         52.7         52.5         75.1         56.3         64.5         63.0         61.3         55.3         57.2           40.3         33.1         55.0         38.9         35.5         43.7         44.7         43.5         47.1         35.4         36.0         52.8         45.7           26.2         24.0         32.7         25.8         37.1         18.4         35.6         17.9         37.8         27.7         23.4         31.7         24.1           48.2         47.8         46.3         57.5         52.4         39.7         53.4         46.3         54.2         47.3         40.3         42.9         :           76.2         74.8         74.4         83.1         80.4         77.8         91.5         82.4         71.1 <t< th=""><th>78.7         76.0         74.5         78.5         72.5         75.9         93.3         74.2         76.1         82.2         74.4         92.0         86.0         88.6           68.5         60.9         69.0         69.3         64.7         73.1         79.6         63.2         79.9         61.2         71.3         72.5         74.2         80.2           61.8         57.8         66.2         66.9         52.7         52.5         75.1         56.3         64.5         63.0         61.3         55.3         57.2         75.2           40.3         33.1         55.0         38.9         35.5         43.7         44.7         43.5         47.1         35.4         36.0         52.8         45.7         38.7           26.2         24.0         32.7         25.8         37.1         18.4         35.6         17.9         37.8         27.7         23.4         31.7         24.1         27.9           48.2         47.8         46.3         57.5         52.4         39.7         53.4         46.3         54.2         47.3         40.3         42.9         :         48.5           76.2         74.8         74.4         <t< th=""><th>78.7         76.0         74.5         78.5         72.5         75.9         93.3         74.2         76.1         82.2         74.4         92.0         86.0         88.6         81.3           68.5         60.9         69.0         69.3         64.7         73.1         79.6         63.2         79.9         61.2         71.3         72.5         74.2         80.2         77.9           61.8         57.8         66.2         66.9         52.7         52.5         75.1         56.3         64.5         63.0         61.3         55.3         57.2         75.2         74.2           40.3         33.1         55.0         38.9         35.5         43.7         44.7         43.5         47.1         35.4         36.0         52.8         45.7         38.7         37.5           26.2         24.0         32.7         25.8         37.1         18.4         35.6         17.9         37.8         27.7         23.4         31.7         24.1         27.9         28.0           48.2         47.8         46.3         57.5         52.4         39.7         53.4         46.3         54.2         47.3         40.3         42.9         :</th><th>78.7         76.0         74.5         78.5         72.5         75.9         93.3         74.2         76.1         82.2         74.4         92.0         86.0         88.6         81.3         :           68.5         60.9         69.0         69.3         64.7         73.1         79.6         63.2         79.9         61.2         71.3         72.5         74.2         80.2         77.9         :           61.8         57.8         66.2         66.9         52.7         52.5         75.1         56.3         64.5         63.0         61.3         55.3         57.2         75.2         74.2         :           40.3         33.1         55.0         38.9         35.5         43.7         44.7         43.5         47.1         35.4         36.0         52.8         45.7         38.7         37.5         :           26.2         24.0         32.7         25.8         37.1         18.4         35.6         17.9         37.8         27.7         23.4         31.7         24.1         27.9         28.0         :           48.2         47.8         46.3         57.5         52.4         39.7         53.4         46.3         54.2</th></t<></th></t<>	78.7         76.0         74.5         78.5         72.5         75.9         93.3         74.2         76.1         82.2         74.4         92.0         86.0         88.6           68.5         60.9         69.0         69.3         64.7         73.1         79.6         63.2         79.9         61.2         71.3         72.5         74.2         80.2           61.8         57.8         66.2         66.9         52.7         52.5         75.1         56.3         64.5         63.0         61.3         55.3         57.2         75.2           40.3         33.1         55.0         38.9         35.5         43.7         44.7         43.5         47.1         35.4         36.0         52.8         45.7         38.7           26.2         24.0         32.7         25.8         37.1         18.4         35.6         17.9         37.8         27.7         23.4         31.7         24.1         27.9           48.2         47.8         46.3         57.5         52.4         39.7         53.4         46.3         54.2         47.3         40.3         42.9         :         48.5           76.2         74.8         74.4 <t< th=""><th>78.7         76.0         74.5         78.5         72.5         75.9         93.3         74.2         76.1         82.2         74.4         92.0         86.0         88.6         81.3           68.5         60.9         69.0         69.3         64.7         73.1         79.6         63.2         79.9         61.2         71.3         72.5         74.2         80.2         77.9           61.8         57.8         66.2         66.9         52.7         52.5         75.1         56.3         64.5         63.0         61.3         55.3         57.2         75.2         74.2           40.3         33.1         55.0         38.9         35.5         43.7         44.7         43.5         47.1         35.4         36.0         52.8         45.7         38.7         37.5           26.2         24.0         32.7         25.8         37.1         18.4         35.6         17.9         37.8         27.7         23.4         31.7         24.1         27.9         28.0           48.2         47.8         46.3         57.5         52.4         39.7         53.4         46.3         54.2         47.3         40.3         42.9         :</th><th>78.7         76.0         74.5         78.5         72.5         75.9         93.3         74.2         76.1         82.2         74.4         92.0         86.0         88.6         81.3         :           68.5         60.9         69.0         69.3         64.7         73.1         79.6         63.2         79.9         61.2         71.3         72.5         74.2         80.2         77.9         :           61.8         57.8         66.2         66.9         52.7         52.5         75.1         56.3         64.5         63.0         61.3         55.3         57.2         75.2         74.2         :           40.3         33.1         55.0         38.9         35.5         43.7         44.7         43.5         47.1         35.4         36.0         52.8         45.7         38.7         37.5         :           26.2         24.0         32.7         25.8         37.1         18.4         35.6         17.9         37.8         27.7         23.4         31.7         24.1         27.9         28.0         :           48.2         47.8         46.3         57.5         52.4         39.7         53.4         46.3         54.2</th></t<>	78.7         76.0         74.5         78.5         72.5         75.9         93.3         74.2         76.1         82.2         74.4         92.0         86.0         88.6         81.3           68.5         60.9         69.0         69.3         64.7         73.1         79.6         63.2         79.9         61.2         71.3         72.5         74.2         80.2         77.9           61.8         57.8         66.2         66.9         52.7         52.5         75.1         56.3         64.5         63.0         61.3         55.3         57.2         75.2         74.2           40.3         33.1         55.0         38.9         35.5         43.7         44.7         43.5         47.1         35.4         36.0         52.8         45.7         38.7         37.5           26.2         24.0         32.7         25.8         37.1         18.4         35.6         17.9         37.8         27.7         23.4         31.7         24.1         27.9         28.0           48.2         47.8         46.3         57.5         52.4         39.7         53.4         46.3         54.2         47.3         40.3         42.9         :	78.7         76.0         74.5         78.5         72.5         75.9         93.3         74.2         76.1         82.2         74.4         92.0         86.0         88.6         81.3         :           68.5         60.9         69.0         69.3         64.7         73.1         79.6         63.2         79.9         61.2         71.3         72.5         74.2         80.2         77.9         :           61.8         57.8         66.2         66.9         52.7         52.5         75.1         56.3         64.5         63.0         61.3         55.3         57.2         75.2         74.2         :           40.3         33.1         55.0         38.9         35.5         43.7         44.7         43.5         47.1         35.4         36.0         52.8         45.7         38.7         37.5         :           26.2         24.0         32.7         25.8         37.1         18.4         35.6         17.9         37.8         27.7         23.4         31.7         24.1         27.9         28.0         :           48.2         47.8         46.3         57.5         52.4         39.7         53.4         46.3         54.2

Source: Eurostat, UOE (data extracted July 2011).

#### Country specific notes

Belgium: Data for the Flemish community exclude second qualifications in non-university tertiary education.

Greece: Data are from 2008.

Italy: Data exclude ISCED 5A second degrees and ISCED 6.

In contrast, agriculture and veterinary sciences; natural sciences; mathematics and computing; and, most of all, engineering, are still fields were male graduates predominate. In engineering, the EU average figure for the successful completion of tertiary studies by female students is quite low (one in four). The lowest proportions (under 20 %) are found in Germany, Ireland, Netherlands, Austria and Switzerland while in Denmark, Estonia, Greece, Poland, and Iceland women comprise around one third of the total number of engineering graduates. In the broader field of science, mathematics and computing the share of women graduating from tertiary programmes is equal to or slightly above 50 % in Italy, Portugal, and Romania.

However, comparing current data to those from 2000 (see Figure F16 in Key Data on Education, 2002), a positive trend in the proportion of women graduates in engineering (+6 %) and agriculture (+5 %) is identified. In particular, Latvia (+11 %), Malta (+15 %) and Iceland (+11 %) have registered a substantial increase in the proportion of women completing tertiary studies in the field of engineering, manufacturing and construction. In contrast, the field of science, mathematics and computing and the services area have both witnessed a decline in women's participation over the last decade.



## HIGHER EDUCATION QUALIFICATIONS LEAD TO IMPROVED EMPLOYMENT OPPORTUNITIES

Holding higher education qualifications is more conducive to being in employment. On average, 86 % of tertiary graduates between 25 and 39 years of age are working, as opposed to 78 % of those with upper secondary qualifications at most, and to only 60 % of young people with lower level qualifications. This is even more true for older people (40-64 age group), where tertiary graduates are 37 % more likely to be in employment than non-graduates holding qualifications up to lower-secondary level.

The spread in employment rates between holders of tertiary and lower qualifications is particularly noticeable in some countries. Amongst young people in Slovakia, the percentage of tertiary graduates

 Figure G5: Proportion of people in employment by age group (25-39; 40-64) and highest level of education attained, 2010



Source: Eurostat, Labour Force Survey (data extracted July 2011)

#### QUALIFICATION LEVELS AND TRANSITION TO EMPLOYMENT

		EU	BE	BG	CZ	DK	DE	EE	ΙE	EL	ES	FR	IT	CY	LV	LT	LU	HU
Low	25-39	59.9	57.6	44.9	48.7	67.3	56.6	53.1	43.7	67.7	59.3	61.0	60.0	79.0	57.4	41.5	79.8	43.8
	40-64	51.4	46.3	39.5	41.1	61.3	54.7	38.7	47.8	54.6	49.8	53.9	47.0	61.4	39.1	23.1	54.8	34.7
Medium	25-39	77.5	81.9	77.6	79.9	83.2	80.1	73.2	67.2	72.2	69.8	80.9	73.2	82.9	72.7	67.4	82.6	74.2
	40-64	70.3	69.7	68.3	70.8	76.9	74.5	65.8	65.7	61.7	68.2	70.8	72.1	74.0	62.6	62.2	66.2	60.6
High	25-39	85.6	90.2	86.6	79.5	88.3	88.7	81.6	82.8	80.1	79.6	88.2	73.5	86.7	82.4	88.0	87.6	80.3
	40-64	82.4	78.9	82.0	87.2	84.6	86.1	78.8	79.0	80.0	79.9	78.8	83.0	82.8	80.1	85.7	82.4	77.0
		MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	LI	NO	СН	HR	TR
Low	25-39	65.3	70.1	64.1	52.1	76.0	60.6	61.6	24.2	60.1	62.8	57.0	70.7	:	65.7	73.9	55.4	50.3
	40-64	41.8	58.7	53.3	36.0	64.7	51.5	48.7	31.6	53.7	65.9	55.6	79.3	:	63.0	67.5	40.5	41.9
Medium	25-39	86.4	87.5	85.6	75.7	82.0	75.6	83.2	74.9	78.0	84.7	78.2	76.1	:	84.5	84.3	73.3	65.1
	40-64	75.4	76.2	73.3	59.7	76.5	63.5	66.3	66.3	71.8	82.5	76.0	86.1	:	79.8	79.6	57.6	50.9
High	25-39	92.3	92.3	88.2	87.9	87.5	88.1	90.8	80.7	85.0	87.6	88.7	87.6	:	90.8	88.4	83.9	80.1
	40-64	75.4	83.6	84.1	79.9	82.3	81.5	83.9	84.0	83.6	88.5	82.3	90.3	:	89.8	88.3	75.8	68.0

Low (ISCED 0-2)

Medium (ISCED 3-4)

High (ISCED 5-6)

Source: Eurostat, Labour Force Survey (data extracted July 2011)

#### **Explanatory note**

The indicator employment rate is calculated by dividing the number of employed people by total population in the given age group, each time within three categories of educational attainment: low, medium or high.

in employment is 57 % higher than that for people who have completed lower-secondary education at best, in Bulgaria it is 42 %, in Ireland 39 %, and in Lithuania 47 %. In contrast, Greece, Italy, Cyprus, Luxembourg, and Portugal present the lowest variation between the employment rates of the two age groups, indicating less disparity between individuals with different levels of education.

When considering the employment rates across the two age groups, irrespective of the education level, it can be concluded that younger people have a slightly higher probability of being employed than their elders. On average, the percentage of 25-39 year-olds who declared they had a job in 2010 is 7 % higher than that of 40-64 year-olds. The largest differences between the two age groups were apparent in the group with low educational attainment. Some exceptions exist: in the Czech Republic, Italy, Slovakia, Sweden, Iceland, and Switzerland, the proportion of older people in employment is equal to or higher than those below 40 years of age.

## TERTIARY EDUCATION GRADUATES FIND A RELEVANT JOB TWO TIMES FASTER THAN PEOPLE WITH AT MOST LOWER SECONDARY EDUCATION

The level of the highest educational qualification has an obvious impact on the process of transition from school to work. At European Union level, the average duration of the transition to the first significant job (measured as a job of at least 3-months duration in the survey) was 6.5 months in 2009 for all educational levels and close to 7 months for the upper secondary level. It was only 5 months for people with tertiary qualifications but double that for people with lower qualifications (9.8 months).

In all countries, people with tertiary education attainment find their first job position faster than the group of people with only secondary education. The difference is especially important in Bulgaria, Poland and Slovakia where people with at most lower secondary education attainment needed on average a year more than the tertiary graduates to find a relevant job.

In Belgium, France, Luxembourg, Finland and Norway, the duration of the transition was close or slightly below EU level across all educational groups. This was also the case in Portugal and Malta, two countries with large groups of population leaving education with at most a lower secondary level (see Figure G1).

#### QUALIFICATION LEVELS AND TRANSITION TO EMPLOYMENT

The average length of the transition was less than 4 months for all education levels in countries like Denmark (4.4 months), the Netherlands (3.5 months), Sweden (4.4 months), the United Kingdom (3.5 months) and Iceland (3.3 months) compared to 6.5 months at EU level. This was the case across all educational levels including lower secondary education in the same countries except Denmark.

Young people in some Eastern and Southern European countries faced longer transition periods than the EU average for lower and upper secondary education levels in 2009. This feature was particularly pronounced for people with at most lower secondary education in Slovakia (24.3 months), Bulgaria (21.5 months) as well as in Poland (17 months), Cyprus (15.7 months), Slovenia (14.9 months), and Romania (12.5 months).

In Greece, Spain, Italy, and Turkey the transition periods were longer for all education levels including tertiary (from 8.1 months in Spain to 13.1 months in Greece).

#### Months Months 25 20 20 15 15 10 10 5 CZ DK DE EE IE EL ES FR IT CY LV LT LU HU MT NL AT PL PT RO SI SK FI SE UK IS LI NO CH FU At most lower secondary Upper secondary **Tertiary** education attainment education attainment education attainment HU BF BG CZDK DF FS FR IT CY LU (Months) EU EE IF EL ΙV LT At most lower secondary 9.8 7.6 21.5 5.9 15.1 9.6 15.7 8.9 10.9 10.6 8.4 8.1 10.2 13.6 10.1 8.5 Upper secondary 7.4 11.7 4.6 3.6 4.8 5.1 13.9 8.8 6.6 10.5 13.7 5.1 5.7 6.4 **Tertiary** 5.1 5.3 4.1 3.1 3.8 2.8 4.1 12.2 7.0 4.6 9.8 4.8 3.7 3.0 4.2 4.0 PL PT SE MT NL RO SK FI HK IS Ш NO CH HR TR AT SI

Figure G6: Average length of transition from education to work by educational attainment level, 2009

Source: Eurostat, Labour Force Survey-ad-hoc module (data extracted July 2011)

17.0

9.0

3.6

6.7

5.7

4.7

12.5

12.0

7.3

12.0

4.9

3.7

#### **Explanatory note**

At most lower secondary

**Upper secondary** 

Tertiary

7.5

7.0

2.6

6.4

3.3

3.0

The duration of the transition from education to work is calculated as the difference between the date when leaving formal education for the last time and the date when starting the first job of at least 3 months. Results refer to people who had a first significant job. The indicator is calculated by dividing the number of employed people within age group 25-64 years having attained a specific level of education, by the total population of the same age group.

14.9

9.8

4.6

24.3

6.3

3.5

7.6

6.5

3.5

4.3

5.1

3.6

6.4

3.3

3.0

6.7

2.1

2.1

9.4

5.6

4.1

11.3

10.3

7.3

Most results are based on responses of people who left formal education within the last 5 years to avoid recall problems on dates of transition events. This is particularly the case for the United Kingdom where the rate of no answers to the 'date of first job' was significantly high beyond that threshold. The 5-year period also appears to be the most appropriate threshold value given the sample size per country. In some countries, compulsory military or community service contributes to a longer average duration of transition. This is the specially the case for Bulgaria (1.2 months), Greece (4.3 months), Cyprus (2.6 months) and Austria (1.5 months). Other countries have either few or no people in these cases.

#### **Country specific notes**

**EU**: Totals on transition are calculated without Germany accordingly.

**Germany** and **Switzerland**: Information on the first job was not collected in a comparable way in Germany and Switzerland.



## THE PROPORTION OF TERTIARY GRADUATES IN MANAGEMENT POSITIONS HAS DECLINED IN THE MAJORITY OF EU MEMBER STATES

When comparing the percentage of people employed holding a tertiary degree in different occupational categories, a steady decline can be observed when moving from professions requiring higher competencies (managers and professionals) through to those which demand basic skills (craft workers, machine operators and other elementary professions). Yet it is interesting to note that the European average percentage of managers and professionals who have completed higher education is just above 50 %, suggesting the existence of a permeable labour market where candidates with lower educational attainment can also access highly skilled positions. It is also likely that this figure can be partly explained by the existence of older managers or professionals who generally hold lower educational qualifications than their younger counterparts (as reported in Figure G2 above).

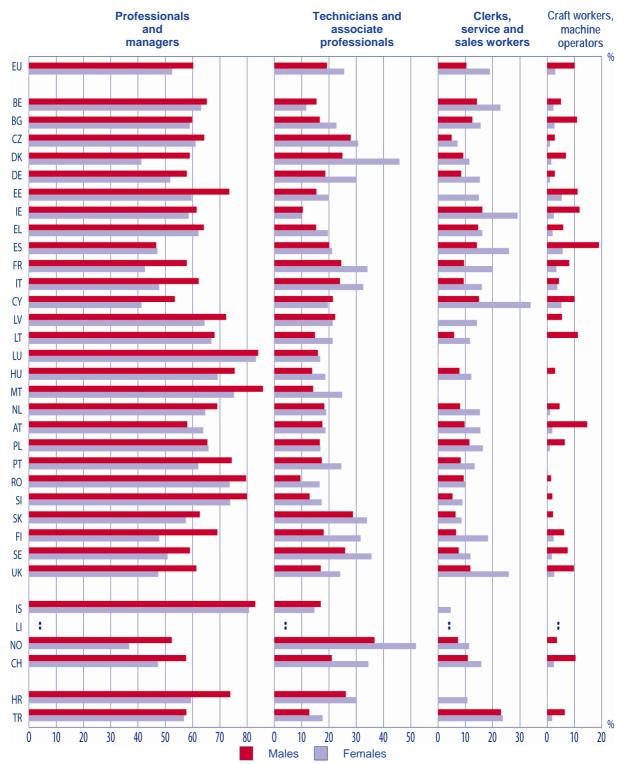
Some countries show a proportion of tertiary-level educated people working as managers and professionals well above the European average. In Luxembourg, Hungary, Malta, Romania, Slovenia and Iceland, the percentage of people having completed tertiary education and working as managers is equal to or higher than 70 %. In contrast, Spain (for both sexes), Denmark, France, Cyprus and Norway (for women) report percentages below 50 %, indicating that a majority of people with tertiary education are working in other categories of occupations than managerial ones. These differences cannot be within the limits of the present report. However, possible reasons include the structure of the labour market, which allows individuals' personal skills and abilities to be recognised as well as their formal educational qualifications. In addition, some countries might reward people who have undertaken non-traditional routes, with inclusive labour market policies that favour non-formal and vocational learning. Furthermore, the limited availability of vacancies may simply be preventing highly educated candidates from accessing management positions and the liberal professions.

When considering the gender distribution of people employed in the various occupational categories, in the majority of countries, the balance is fairly even among managers and professionals, although a slight prevalence of men can be observed. A few exceptions exist: men outnumber women by 13 % in Estonia, 8 % in Latvia, 10 % in Malta, 21 % in Finland and 14 % in Croatia. In other groups of workers, differences between men and women are apparent in the match between their level of qualification and level of work. Amongst the technical and associate professions, and in the service sector, more women than men tend to accept jobs below their level of formal education. Across Europe, between 20 % and 25% of all women employed in these sectors have completed tertiary education. In contrast, men seem to be more frequently overqualified in the manual and elementary occupations. On average, 10% of persons with tertiary education are working as crafts workers, machine operators and other occupations not demanding such education.

From the comparison with data from 2001 (Eurydice, 2002), a counterintuitive trend can be identified: the share of tertiary graduates employed as managers and professionals has declined in the majority of the 15 EU member States that were included in the previous edition. Data from 2007 confirm such trend. The decrease is particularly evident in Italy, and the United Kingdom, where respectively 8 % and 16 % less tertiary graduates are currently employed in the highest skilled professions. This trend is particularly unexpected in view of the continued growth in the number of tertiary graduates in Europe over the last decade (see Figure G2). Different hypotheses can be developed to explain such unexpected results. Although the scope of the current study does not allow much room for further speculation, a possibility is that the number of vacancies has been reducing over time, and the posts left vacant by older employees (generally less likely to have completed tertiary education) have not been filled. A second perspective suggests a low turnover between generations – vacant posts have been filled mostly with older employees and less with younger ones – as one of the factors behind the decline in the proportion of tertiary graduates in management positions.



• Figure G7: Tertiary education graduates (ISCED 5 and 6) in employment by occupational category and sex, age group 25-64, 2010



Source: Eurostat, Labour Force Survey (data extracted July 2011).

#### QUALIFICATION LEVELS AND TRANSITION TO EMPLOYMENT

		EU	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	IT	CY	LV	LT	LU	HU
Professionals	Males	60.2	65.2	59.8	64.3	59.0	57.9	73.5	61.5	64.2	46.7	57.9	62.3	53.5	72.3	68.0	84.1	75.4
and	Females	52.5	63.1	59.0	61.1	41.2	51.8	59.7	58.6	62.2	47.1	42.5	47.7	41.3	64.4	66.9	83.2	69.2
managers	TOTAL	56.3	64.2	59.1	62.9	49.5	55.3	59.4	59.8	62.9	46.9	49.8	54.7	47.1	64.2	64.8	82.0	71.3
Technicians and	Males	19.3	15.5	16.6	28.0	24.9	18.7	15.4	10.4	15.3	20.1	24.5	24.1	21.5	22.3	14.8	15.9	13.8
associate	Females	25.5	11.7	22.8	30.7	45.8	30.0	20.0	9.9	19.6	21.2	34.1	32.5	19.6	21.4	21.4	16.8	18.6
professionals	TOTAL	22.4	13.5	20.3	29.2	35.7	23.3	17.2	10.1	17.3	20.7	29.5	28.4	20.4	20.7	18.2	15.9	16.3
Clercs, service and	Males	10.4	14.2	12.6	5.0	9.2	8.5	0.0	16.2	14.7	14.2	9.5	9.4	15.0	0.0	5.9	0.0	7.8
skilled agriculture	Females	19.0	22.9	15.6	7.1	11.5	15.3	14.9	29.2	16.2	26.0	20.0	16.0	33.9	14.2	11.7	0.0	12.2
workers	TOTAL	14.7	18.7	14.4	5.9	10.6	11.3	11.4	23.0	15.6	20.2	15.1	12.9	24.5	11.1	11.0	2.1	10.3
Craft workers, and	Males	10.1	5.1	10.9	2.8	6.9	15.0	11.1	11.9	5.9	19.0	8.1	4.3	10.0	5.4	11.2	0.0	2.9
machine operatos	Females	2.9	2.3	2.7	1.1	1.5	2.9	5.3	2.4	2.0	5.7	3.4	3.7	5.2	0.0	0.0	0.0	0.0
elementary occupations	TOTAL	6.5	3.6	6.2	2.0	4.2	10.1	12.0	7.1	4.3	12.3	5.6	4.0	7.9	4.0	6.1	0.0	2.1
		MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	LI	NO	СН	HR	TR
Professionals	Males	85.8	69.1	58.1	65.4	74.3	79.6	79.9	62.7	69.1	59.0	61.4	83.0	:	52.4	57.6	73.8	57.7
and	Females	75.2	64.6	63.9	65.8	62.1	73.6	73.8	57.5	47.7	50.8	47.4	80.7	:	36.8	47.3	59.4	56.8
managers	TOTAL	77.9																
•		11.9	66.8	60.1	65.7	66.1	75.3	75.6	59.4	57.1	54.2	54.5	78.7	:	43.4	53.8	64.1	57.4
Technicians and	Males	14.2	18.3	60.1 17.6	65.7 16.6	66.1 17.4	75.3 9.6	75.6 12.9	59.4 28.8	57.1 18.1	54.2 25.9	54.5 17.0	78.7 17.0	:	43.4 36.7	53.8 21.0	26.2	12.8
Technicians and associate	Males Females													: :				
		14.2	18.3	17.6	16.6	17.4	9.6	12.9	28.8	18.1	25.9	17.0	17.0	: :	36.7	21.0	26.2	12.8
associate	Females	14.2 24.8	18.3 19.0	17.6 18.7	16.6	17.4 24.5	9.6 16.6	12.9 17.3	28.8	18.1 31.6	25.9 35.6	17.0 24.1	17.0 14.7	: : : : : : : : : : : : : : : : : : : :	36.7 51.9	21.0	26.2	12.8 17.6
associate professionals	Females TOTAL	14.2 24.8 17.2	18.3 19.0 18.6	17.6 18.7 17.9	16.6 16.9 16.8	17.4 24.5 21.5	9.6 16.6 13.0	12.9 17.3 15.3	28.8 33.9 31.2	18.1 31.6 25.7	25.9 35.6 31.2	17.0 24.1 20.5	17.0 14.7 15.1	: : : : : : : : : : : : : : : : : : : :	36.7 51.9 44.0	21.0 34.4 26.1	26.2 29.8 27.6	12.8 17.6 14.5
associate professionals Clercs, service and	Females TOTAL Males	14.2 24.8 17.2 0.0	18.3 19.0 18.6 8.1	17.6 18.7 17.9 9.7	16.6 16.9 16.8 11.5	17.4 24.5 21.5 8.3	9.6 16.6 13.0 9.4	12.9 17.3 15.3 5.3	28.8 33.9 31.2 6.4	18.1 31.6 25.7 6.6	25.9 35.6 31.2 7.5	17.0 24.1 20.5 11.8	17.0 14.7 15.1 0.0	: : : : : : : : : : : : : : : : : : : :	36.7 51.9 44.0 7.3	21.0 34.4 26.1 10.9	26.2 29.8 27.6 0.0	12.8 17.6 14.5 23.0
associate professionals Clercs, service and skilled agriculture	Females TOTAL Males Females	14.2 24.8 17.2 0.0 0.0	18.3 19.0 18.6 8.1 15.3	17.6 18.7 17.9 9.7 15.5	16.6 16.9 16.8 11.5 16.4	17.4 24.5 21.5 8.3 13.4	9.6 16.6 13.0 9.4 9.8	12.9 17.3 15.3 5.3 8.9	28.8 33.9 31.2 6.4 8.6	18.1 31.6 25.7 6.6 18.3	25.9 35.6 31.2 7.5 11.9	17.0 24.1 20.5 11.8 25.9	17.0 14.7 15.1 0.0 4.6	: : : : : : : : : : : : : : : : : : : :	36.7 51.9 44.0 7.3 11.4	21.0 34.4 26.1 10.9 15.8	26.2 29.8 27.6 0.0 10.8	12.8 17.6 14.5 23.0 23.7
associate professionals Clercs, service and skilled agriculture workers	Females TOTAL Males Females TOTAL	14.2 24.8 17.2 0.0 0.0 5.0	18.3 19.0 18.6 8.1 15.3 11.4	17.6 18.7 17.9 9.7 15.5	16.6 16.9 16.8 11.5 16.4 14.3	17.4 24.5 21.5 8.3 13.4 11.3	9.6 16.6 13.0 9.4 9.8 9.9	12.9 17.3 15.3 5.3 8.9 7.3	28.8 33.9 31.2 6.4 8.6 7.5	18.1 31.6 25.7 6.6 18.3	25.9 35.6 31.2 7.5 11.9	17.0 24.1 20.5 11.8 25.9 18.8	17.0 14.7 15.1 0.0 4.6 6.2	: : : : : : : : : : : : : : : : : : : :	36.7 51.9 44.0 7.3 11.4 9.9	21.0 34.4 26.1 10.9 15.8 12.7	26.2 29.8 27.6 0.0 10.8 8.2	12.8 17.6 14.5 23.0 23.7 23.3
associate professionals Clercs, service and skilled agriculture workers Craft workers, and	Females TOTAL Males Females TOTAL Males	14.2 24.8 17.2 0.0 0.0 5.0 0.0	18.3 19.0 18.6 8.1 15.3 11.4 4.6	17.6 18.7 17.9 9.7 15.5 12.4 14.7	16.6 16.9 16.8 11.5 16.4 14.3 6.4	17.4 24.5 21.5 8.3 13.4 11.3	9.6 16.6 13.0 9.4 9.8 9.9	12.9 17.3 15.3 5.3 8.9 7.3 1.9	28.8 33.9 31.2 6.4 8.6 7.5 2.1	18.1 31.6 25.7 6.6 18.3 13.2 6.2	25.9 35.6 31.2 7.5 11.9 10.1 7.5	17.0 24.1 20.5 11.8 25.9 18.8 9.8	17.0 14.7 15.1 0.0 4.6 6.2 0.0	: : : : : : : : : : : : : : : : : : : :	36.7 51.9 44.0 7.3 11.4 9.9 3.6	21.0 34.4 26.1 10.9 15.8 12.7 10.4	26.2 29.8 27.6 0.0 10.8 8.2 0.0	12.8 17.6 14.5 23.0 23.7 23.3 6.4

Source: Eurostat, Labour Force Survey (data extracted July 2011).

#### **Explanatory note**

Occupations are defined here in accordance with the International Standard Classification of Occupations (ISCO-88) which was initiated by the International Labour Organization (Geneva, 1990) and is used in the Eurostat Labour Force Survey (see the 'Glossary and Statistical Tools' section). The International Standard Classification of Occupations (ISCO-88) used by Eurostat has undergone revision in spring 2001, making data from 2000 non comparable with those from subsequent years.

Percentages have been calculated on the basis of the employed population and do not take account of 'non-respondents' and the 'armed forces' category (ISCO code 0) in the denominator. The total employment per category is calculated only with the available data.



# THE DIFFERENTIAL IN LEVELS OF UNEMPLOYMENT BETWEEN WOMEN AND MEN WITH THE SAME LEVEL OF QUALIFICATION IS REDUCING

Women remain, on average, more a little more likely to be unemployed than men with the same level of education. However, the differential between the genders with respect employment levels has reduced significantly from an average of 1.5 % in 2007 to a current average of around 0.3 %, across all education levels.

Figure G8: Unemployment rates for the 25-64 age group by educational attainment and by sex, 2010



Source: Eurostat, Labour Force Survey (data extracted July 2011).

#### QUALIFICATION LEVELS AND TRANSITION TO EMPLOYMENT

		EU	BE	BG	CZ	DK	DE	EE	ΙE	EL	ES	FR	IT	CY	LV	LT	LU	HU
Low	Males	14.1	12.7	21.5	24.1	9.5	18.4	32.3	23.2	10.2	23.8	12.7	8.1	9.2	29.4	39.8	:	24.9
	Females	14.4	14.0	22.0	21.8	7.6	13.3	:	11.3	14.9	26.0	13.2	11.2	4.6	24.1	33.9	:	22.2
	TOTAL	14.2	13.2	21.7	22.7	8.6	15.9	27.7	19.5	11.8	24.7	12.9	9.1	7.2	27.6	37.4	4.1	23.5
Medium	Males	7.6	5.7	8.4	5.1	6.8	7.5	17.8	16.9	9.2	16.0	6.4	5.0	4.3	21.2	22.7	2.7	9.5
	Females	8.1	7.7	8.2	7.6	5.5	6.3	18.2	9.3	17.0	19.2	8.1	7.4	5.7	15.8	17.9	4.7	9.5
	TOTAL	7.8	6.6	8.3	6.2	6.2	6.9	18.0	13.7	12.6	17.4	7.2	6.1	4.9	18.7	20.5	3.6	9.5
High	Males	4.7	4.0	4.5	2.5	5.2	3.0	12.2	7.9	6.6	9.6	4.8	4.4	4.1	10.9	8.1	2.9	4.5
	Females	5.2	4.1	4.2	2.5	4.4	3.3	7.2	5.9	10.9	11.3	5.0	6.6	5.0	9.2	5.9	4.5	3.8
	TOTAL	4.9	4.0	4.3	2.5	4.8	3.1	9.1	6.8	8.7	10.5	4.9	5.6	4.5	9.9	6.8	3.6	4.1
		MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	LI	NO	CH	HR	TR
Low	Males	7.4	5.5	9.7	15.8	10.6	7.5	12.1	42.5	11.6	10.8	11.5	7.8	:	6.7	7.2	11.8	10.0
	Females	8.9	5.8	5.6	16.9	13.2	3.8	10.0	39.2	11.7	12.0	9.0	6.5	:	3.9	7.5	11.3	7.1
	TOTAL	7.8	5.7	7.3	16.3	11.8	5.7	11.2	40.8	11.6	11.3	10.3	7.2	:	5.4	7.4	11.6	9.2
Medium	Males	:	3.3	3.7	8.2	7.6	6.8	6.6	11.4	8.0	5.3	6.7	7.3	:	2.8	4.1	8.7	8.2
	Females	:	3.6	3.3	10.0	11.8	6.5	7.3	13.4	6.9	5.9	5.4	7.0	:	1.9	4.1	11.6	17.9
	TOTAL	:	3.4	3.5	8.9	9.7	6.7	6.9	12.3	7.5	5.6	6.2	7.2	:	2.4	4.1	9.9	10.1
High	Males	:	2.8	2.1	4.0	5.5	4.3	3.9	5.1	4.6	4.7	3.8	:	:	1.7	2.5	7.3	5.5
	Females	:	2.5	2.5	4.4	6.8	3.9	4.2	4.7	4.2	3.9	3.0	1	:	1.8	3.6	6.8	9.9
	TOTAL	:	2.7	2.3	4.2	6.3	4.1	4.1	4.9	4.4	4.3	3.4	3.5	:	1.8	2.9	7	7

Low (ISCED 0-2)

Medium (ISCED 3-4)

High (ISCED 5-6)

Source: Eurostat, Labour Force Survey (data extracted July 2011).

Although unemployment rates are higher for both sexes in the lowest-educated group, the EU average disparity between men and women is slightly higher in the groups with medium and higher levels of education. The widest gap can be observed in Greece and Turkey amongst persons holding upper-secondary and post-secondary, non-tertiary, qualifications (ISCED 3 or 4), where the percentage of unemployed women in the two countries is respectively 8 % and 9 % higher than that of men.

Gender gap as concerns unemployment rates is less significant for tertiary graduates. Across countries, not only are the levels of unemployment lower, but the proportions of unemployed women and men are more even. However, a few countries stand out as exceptions. Estonia, Ireland, Greece, Spain, Latvia and Turkey reveal wider differences in the levels of unemployment between the genders, with one important difference: while in Estonia and Ireland men are more often unemployed than women, in all other countries women are less favoured in the job market.

Two interesting general trends can be noted. The first reveals a strong relationship between higher levels of unemployment and greater degrees of gender disparity. Across the educational levels, the countries that experience the highest levels of unemployment tend to report wider differences between women and men. This trend becomes more evident along the levels of education; moving from lower to higher levels of education, the coincidence between countries with high unemployment rates and wide gender gaps increases. For example, Estonia, Ireland, Greece, Lithuania, Spain, and Turkey show unemployment levels above the EU average together with more significant imbalances between men and women in employment. This may indicate that while men and women are affected by similar rates of unemployment in lower-skilled jobs, the gender disparity is generally more pronounced in jobs requiring medium and high-level qualifications.

The second trend concerns the balance between men and women in those countries that report the highest levels of variance between genders. While for lower and medium qualification levels women seem to be less affected than men by unemployment, for higher education the opposite is true. At low and medium educational levels, only Germany, Ireland, Latvia, and Lithuania show higher levels of

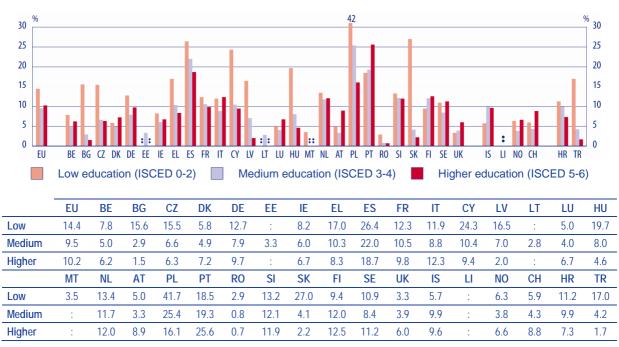
unemployment among men than women, while only Greece and Turkey report a prevalence of women. However, amongst tertiary graduates, male unemployment is generally lower than that of females, the only exceptions being in Estonia and Ireland. Highly educated women are subject to the highest levels of unemployment in Greece, Spain, and Turkey. Therefore, it appears that in countries where a gender imbalance exists, women with higher levels of education are more vulnerable to unemployment than men.

#### HIGHER LEVELS OF EDUCATION MAKE PERMANENT EMPLOYMENT MORE LIKELY

On average, between 10 % and 15 % of employees aged 25-64 in the European Union, have temporary contracts. This general figure hides great variations between countries. The lowest levels of temporary employment are registered in Estonia, Lithuania, Malta and Romania, while the highest levels are reported by Spain, Poland and Portugal. In these countries, about a quarter of the total work force is employed on fixed-term contracts.

As with the different distribution of tertiary graduates across various employment sectors discussed above (see Figure G7), it is beyond the scope of this report to investigate the reasons for the differences in the levels of temporary employment registered in European countries. However, the introduction of labour market reforms in several countries in recent years, which have enabled increased flexibility in the types and length of contracts, have probably played a part.

Figure G9: Temporary employment according to level of educational attainment, age group 25-64,
 2010



Source: Eurostat Labour Force Survey (data extracted in July 2011).

#### Explanatory note

In the low education category are included all the employed people without at least upper secondary education (ISCED 0-2). In the medium education category are included all the employed people with upper secondary education or post secondary non-tertiary education (ISCED 3-4). In the high education category are included all the employed people with tertiary education (ISCED 5-6).

#### QUALIFICATION LEVELS AND TRANSITION TO EMPLOYMENT

The proportion of temporary employees decreases along with the increase in the level of education attained. Employees with medium and higher education levels are more likely to obtain permanent contracts than employees who completed their education at lower levels. It can therefore be suggested that lower levels of education make job seekers more prone to experience work uncertainty and volatility, especially in the contexts of increasing levels of unemployment.

Eight countries of the European Union are exceptions to this general trend and the frequency of temporary employment contracts is higher for people with tertiary education attainment.

### **GLOSSARY, STATISTICAL DATABASES AND BIBLIOGRAPHY**

#### I. Classifications

#### International Standard Classification of Education (ISCED 1997)

The International Standard Classification of Education (ISCED) is an instrument suitable for compiling statistics on education internationally. It covers two cross-classification variables: levels and fields of education with the complementary dimensions of general/vocational/pre-vocational orientation and educational/labour market destination. The current version, ISCED 97 (¹) distinguishes seven levels of education. Empirically, ISCED assumes that several criteria exist which can help allocate education programmes to levels of education. Depending on the level and type of education concerned, there is a need to establish a hierarchical ranking system between main and subsidiary criteria (typical entrance qualification, minimum entrance requirement, minimum age, staff qualification, etc.).

#### > ISCED 0: Pre-primary education

Pre-primary education is defined as the initial stage of organised instruction. It is school- or centre-based and is designed for children aged at least 3 years.

#### > ISCED 1: Primary education

This level begins between 5 and 7 years of age, is compulsory in all countries and generally lasts from four to six years.

#### ISCED 2: Lower secondary education

It continues the basic programmes of the primary level, although teaching is typically more subject-focused. Usually, the end of this level coincides with the end of compulsory education.

#### > ISCED 3: Upper secondary education

This level generally begins at the end of compulsory education. The entrance age is typically 15 or 16 years. Entrance qualifications (end of compulsory education) and other minimum entry requirements are usually needed. Instruction is often more subject-oriented than at ISCED level 2. The typical duration of ISCED level 3 varies from two to five years.

#### > ISCED 4: Post-secondary non-tertiary education

These programmes straddle the boundary between upper secondary and tertiary education. They serve to broaden the knowledge of ISCED level 3 graduates. Typical examples are programmes designed to prepare pupils for studies at level 5 or programmes designed to prepare pupils for direct labour market entry.

#### ISCED 5: Tertiary education (first stage)

Entry to these programmes normally requires the successful completion of ISCED level 3 or 4. This level includes tertiary programmes with academic orientation (type A) which are largely theoretically based and tertiary programmes with occupation orientation (type B) which are typically shorter than type A programmes and geared for entry into the labour market.

#### > ISCED 6: Tertiary education (second stage)

This level is reserved for tertiary studies that lead to an advanced research qualification (Ph.D. or doctorate).

#### International Standard Classification of Occupations, 1988 (ISCO-88)

See the Eurostat's Classifications Server (RAMON): http://europa.eu.int/comm/eurostat/ramon

<sup>(1)</sup> http://www.uis.unesco.org/ev.php?ID=3813\_201&ID2=DO\_TOPIC

#### **II. Definitions**

Active population (economically active population/labour force): In accordance with the definition in the Labour Force Survey, the total of persons in employment and unemployed persons.

**Basic gross annual salary**: The amount paid by the employer in a year, including bonuses, increases and allowances, such as those related to the cost of living, the 13th month (where applicable), and holidays, etc. less employers' social security and pension contributions. This salary does not take account of any taxation at source, or other salary adjustment or financial benefit (related for example to further qualifications, merit, overtime or additional responsibilities, geographical area or the obligation to teach mixed or difficult classes, or accommodation, health or travel costs).

**Capital expenditure**: Refers to expenditure on assets that last longer than one year. It includes spending on construction, renovation and major repair of buildings and expenditure on new or replacement equipment. (It is understood that most countries report small outlays for equipment, below a certain cost threshold, as current rather than capital spending.)

**Central level**: The central level is the top education level. It is located at national (state) level in the vast majority of countries. In some countries, the regions (Communities, *Länder*, etc.) are competent in all areas relating to education. In Belgium, Germany and the United Kingdom, every region has its own education ministry.

**Central Regulations/recommendations**: Different kinds of official documents containing guidelines, obligations and/or recommendations for education institutions. **Regulations** are laws, rules or other order prescribed by public authority to regulate conduct. **Recommendations** are official documents proposing the use of specific tools, methods and/or strategies for teaching and learning. It does not have mandatory application.

**Current or operational expenditure**: Refers to expenditure on goods and services consumed within the current year, i.e., expenditure that needs to be made recurrently in order to sustain the production of educational services. Minor expenditure on items of equipment, below a certain cost threshold, is also reported as current spending. This includes expenditure on staff and operational expenditure.

**Education-oriented pre-primary institutions or settings**: Institutions or settings in which staff (responsible for a group of children) have to hold qualifications in education are shown here, irrespective of whether those institutions or settings come under the ministry of education.

**Employed persons**: In accordance with the definition in the Labour Force Survey, those who did any work for pay or profit during the reference week (even for as little as one hour), or were not working but had jobs from which they were temporarily absent. Family workers are included.

**European Statistical System (ESS)**: Consists of Eurostat and the statistical institutes, ministries, bodies and central banks which collect official statistics in the EU Member States, Iceland, Liechtenstein, Norway and Switzerland.

**Fees/private contributions** are any sum of money paid by students or their parents with which they formally and compulsorily contribute to the costs of their education. It can take the form of registration fee, tuition fee, etc.

- Graduation fees: The fees paid before graduation and related to the emission of a certificate or diploma.
- Registration fees: Fees related to the initial registration of students.
- Tuition fee: Covers differing concepts from one country to the next. In some countries, it
  refers solely to the amounts paid by students. In others, it refers to the costs of education
  borne by tertiary education institutions, which may be paid on behalf of all or a majority of
  students by a public authority. In the present publication, the second of these two situations is
  regarded as equivalent to education being free of charge.

Financial support for students: In accordance with the definition in the UOE questionnaire, this is understood as covering grants and other assistance on the one hand, and student loans on the other. The first category theoretically includes grants in the strict sense, grants in the wider sense (endowments, prizes etc.), the value of any special assistance provided for students in cash or in kind (such as free travel or reduced prices on public transport) as well as family allowances and tax allowances for students who are dependent children. Tax advantages are not included. The second category comprises loans, of which the gross amount is considered here (i.e. without deducting repayments made by borrowers from previous years).

**Flexible timetable**: Indicates either that the time to be allocated to the various compulsory subjects has not been fixed or that, as a supplement to the time allocated to them, the curriculum provides for a certain number of hours that pupils or the school can devote to subjects of their choice.

Gross domestic product (GDP): Final result of the production activity of resident producer units.

**Gross national income** (GNI): GDP minus primary income payable by resident units to non-resident units, plus primary income receivable by resident units from the rest of the world. It reflects the growing difference between the GDP and the GNI in small open economies, which is due to large and increasing profit repatriations by overseas companies that have installed their production plants there.

**Inactive persons**: In accordance with the definition in the Labour Force Survey, those not classified as either employed or unemployed.

**Independent agency**: This could be a public agency with the explicit purpose to manage parts of the selection process of students or distribute public funding to higher education institutions. It could also be a legally private body with devolved competences. Independent means, inter alia, that neither public authorities nor higher education institutions can influence allocation decisions by that body.

**Internal evaluation of schools**: Evaluation which is carried out by members of the school community, meaning individuals or groups that are directly involved in school activities (such as the school head, teaching and administrative staff and pupils) or have a direct stake in them (such as parents or local community representatives).

**Level successfully completed**: In accordance with the definition in the LFS survey, an expression associated with obtaining a certificate or a diploma, where there is certification. In cases where there is no certification, successful completion must be associated with full attendance. When determining the highest level, both general and vocational education/training should be taken into consideration.

Limited autonomy for schools in the management of resources and aspects of teaching and learning (ISCED 1-3), 2010/11 (National information complementing the country notes to Figure B13.)

**Belgium (BE fr)**: At ISCED levels 2 and 3, schools must choose from a list of optional subjects drawn up by the Community authorities.

**Czech Republic**: Schools have had less autonomy in relation to human resources since 2007 when legislation made it compulsory for schools to remunerate non-contractually stipulated duties and responsibilities according to a salary framework established at central level.

**Estonia**: Schools have full autonomy for the curriculum content of optional subjects except in the case of religious and national defence studies, for which syllabi are provided in the national curriculum. Pupils' age and the need for support services are the main criterion for determining whether they may be placed in separate groups. It is recommended that boys and girls should be separated for lessons in physical education from the fifth year of school. Where schools have sufficient financial resources, groups may be formed within classes for other lessons (such as languages). Schools may form different groups or classes for pupils with special educational needs. Teachers have to choose their textbooks from a list determined at national level.

**Ireland**: The duties and responsibilities of school heads are decided by the school itself to a considerable extent but certain functions and specific duties are nevertheless required by law (encouraging and fostering learning; evaluating students, reporting results to students and their parents; and promoting co-operation between the school and the community).

**Greece**: Teachers at ISCED levels 1 and 2 are guided and supported in their choice of teaching methods by school advisors.

**Spain**: The selection of school heads is carried out by a committee comprising representatives of the school and the education authority. The duties and responsibilities of teachers, as well as the conditions for becoming head of a subject department are defined by law, whilst decisions on the distribution of tasks regarding, for instance, tutoring and the school library are taken at school level. For capital expenditure, schools propose their expenditure but the education authority approves it and provides the finances.

France: Secondary schools are autonomous in deciding on substituting absent teachers for up to 2 weeks.

**Hungary**: Other acquisitions can be financed from the annual budget provided by the maintaining body. The purpose has to be declared and the amount has to be separated within the budget. Planning annual acquisitions is the responsibility of the school head, and is approved by the maintainer. The school head exercises the employer's right with the agreement of local government (e.g. the local authority prescribes the number of teachers to be employed by the school head).

**Hungary, Poland** and **United Kingdom (ENG/WLS/NIR**): The basic duties and responsibilities of teachers and/or school heads are defined by law but they can be further specified at school level.

**Malta**: Schools at ISCED level 2 have a limited autonomy when purchasing peripherals (printers and scanners) but they cannot purchase PC's or laptops. For ISCED level 3 (Junior College), 'limited autonomy' means that decisions need to be approved by the University of Malta.

**Romania**: School autonomy for the selection of substitute teachers varies according to the length of the period for which a substitute is needed. School heads are accountable to education authorities for their use of public funds. Schools have full autonomy for seeking private funds although the county school inspectorate is involved in the case of sponsorship.

Slovenia: Local councils (founders) have the right to draw up their own plans for the leasing of premises for community use. Where premises are used for lessons in religion, the Ministry of Education must give approval. Investment is approved by the founding-municipality and/or the public financing body (Ministry of Education, Ministry of Finance). Autonomy depends on the source of the finance (the state, the municipality or the school). Teachers are free to choose textbooks from a list drawn up in advance. The same procedures (ISCED 1, 2 and 3) apply to teaching posts funded from public or private funds. Schools publish teaching vacancies after approval by the Ministry. The Ministry of Education and Sport issues an invitation to schools to tender for co-financing of computer equipment and software. The Ministry elaborates a set of options for the institutions to take into consideration and then decide. On the other hand, schools have full autonomy in buying other computer equipment.

**United Kingdom (ENG/WLS/NIR)**: With regard to the content of optional subjects, this is up to the school for non-examination subjects but, for young people between 14 and 18, the expectation is that they will take external qualifications and only approved qualifications may be taught in schools.

**Iceland**: Over a certain amount, acquisitions in computer equipment have to be submitted to municipalities for approval.

**Liechtenstein**: Schools at ISCED levels 2 and 3 are only autonomous for raising and using private funds to finance minor projects (below CHF 3 000); above this level their autonomy is limited or non-existent.

Turkey: Schools are provided with textbooks free of charge but they may decide to buy additional textbooks.

**Monitoring of the education system**: Such monitoring has several aims, which include that of examining the system closely, reporting on its quality and enabling it to adjust so as to improve its performance. It may be assumed that the standards and goals it should strive to achieve are clearly defined, as well as the regulatory mechanisms enabling it to adjust as appropriate. It may take place at

school level, or at local, regional, or national levels. Different reference criteria may be used depending on the level concerned, as well as the particular country. They may relate to school development (or action) plans, the results of school self-evaluation, external examinations, specially prepared performance indicators, the definition of competence thresholds or final requirements, national or international evaluations (including PIRLS, TIMSS, PISA, etc.), or reliance on experts or a special authority (for example, a council set up to monitor a reform).

**Part-time work**: In accordance with the definition in the UOE questionnaire, a workload lower than 90 percent of the full-time workload. All degrees of part-time work are taken into account.

**Private schools/institutions**: An institution is classified as private if: 1) It is controlled and managed by a non-governmental organisation (e.g. a Church, a trade union or a business enterprise), or 2) Its Governing Board consists mostly of members not selected by a public agency.

**Private grant-aided (government-dependent) school/institution**: School/institution is that either receives 50 per cent or more of its core funding from government agencies or one whose teaching personnel are paid by a government agency – either directly or through government.

**Private independent schools/institutions**: School/institutions that receives less than 50 per cent of its core funding from government agencies and whose teaching personnel are not paid by a government agency.

**Public schools/institutions**: Schools/institutions which are directly or indirectly administered by a public education authority. An institution is classified as public if it is controlled and managed:

1) Directly by a public education authority or agency or, 2) Either by a government agency directly or by a governing body (Council, Committee etc.), most of whose members are either appointed by a public authority or elected by public franchise.

**Public financial support**: In accordance with the definition in the UOE questionnaire, this is understood as covering grants and other assistance on the one hand, and student loans on the other. The first category theoretically includes grants in the strict sense, grants in the wider sense (endowments, prizes, etc.), the value of any special assistance provided for students in cash or in kind (such as free travel or reduced prices on public transport) as well as family allowances and tax allowances for students who are dependent children. Tax advantages are not included. The second category comprises loans, of which the gross amount is considered here (i.e. without deducting repayments made by borrowers from previous years).

**Purchasing power parity** (PPP): A currency conversion rate which converts economic indicators expressed in a national currency into an artificial common currency that equalises the purchasing power of different national currencies. In other words, PPP eliminates the differences in price levels between countries in the process of conversion to an artificial common currency, called Purchasing Power Standard (PPS).

**Purchasing power standard** (PPS): The artificial common reference currency unit used in the European Union to express the volume of economic aggregates for the purpose of spatial comparisons in such a way that price level differences between countries are eliminated. Economic volume aggregates in PPS are obtained by dividing their original value in national currency units by the respective PPP. PPS thus buys the same given volume of goods and services in all countries, whereas different amounts of national currency units are needed to buy this same volume of goods and services in individual countries, depending on the price level.

**School**: An entity represented either by a school head or a management body. The school management body is only considered if it is located at school level. It may, however, include persons outside the school, such as those who represent the local authority.

**School expectancy**: Estimate of the number of years a typical 5-year-old child can expect to be enrolled in the education system during his or her lifetime if current enrolment patterns remain unchanged. Adding single-year net enrolment rates for each age (expressed in years) gives an estimate (in years) for the period covering those ages. Adding the single-year enrolment rates for all ages gives us an estimate of the expected number of years of education over a lifetime. This type of estimate will be accurate if current patterns of enrolment remain unchanged. Estimates are based on head-count data, meaning that there is no distinction between part-time and full-time studies.

**Single structure system**: Education is provided in a continuous way from the beginning to the end of compulsory schooling, with no transition between primary and lower secondary education and with general education provided in common for all pupils.

Taught time of pupils: The notional minimum workload of pupils which is based on minimum national recommendations. For each year of primary education or full-time compulsory general secondary education, the workload is calculated by taking the average minimum daily load multiplied by the number of teaching days a year. Recreational or other breaks of any kind, as well as the time given over to optional lessons, are not taken into account. The total annual amounts of minimum teaching time are added up to give the total minimum workload in hours for primary education and full-time compulsory general secondary education. These values are divided by the number of years corresponding to each of the two levels.

**Tax relief**: Tax relief given through the reduction of taxable income. One form of tax deduction is lump sum tax deduction or tax allowance, when a defined proportion of a person's income is not subject to tax. This can potentially alter the taxpayer's tax bracket, since it allows the person to receive a certain income free of tax, which means that only the income above this sum counts as taxable. Another form of tax deduction is when certain expenses (e.g. interest paid on loans, education expenses, etc.) can be deducted from the taxable income.

**Total public expenditure on education**: Total public expenditure on education, which includes direct public funding for educational institutions and transfers to households and firms. In general, the public sector finances educational expenditure by assuming direct responsibility for the current and capital expenditure of schools (direct public financing of schools), or by offering financial support to pupils/students and their families (public-sector grants and loans) and by subsidising the education or training activities of the private business sector or non-profit organisations (transfers to households and firms). Direct public funding for tertiary education may include research and development expenditure in certain countries in which tertiary education institutions are funded from global budgets covering resources earmarked both for teaching and for research and development activities.

**Unemployed persons**: In accordance with the definition in the Labour Force Survey, persons aged 15 to 74 who during the reference week were a) without work, i.e. neither had a job nor were at work (for one hour or more) in paid employment or self-employment, b) currently available for work, i.e. were available for paid employment or self-employment before the end of the two weeks following the reference week, and c) actively seeking work, i.e. had taken specific steps in the four weeks period ending with the reference week to seek paid employment or self-employment, as well as those who found a job to start later, i.e. within a period of at most three months.

**Unemployment rate**: Unemployed persons as a percentage of the labour force.

#### III. Databases

#### **UOE** Database

The UOE data collection is an instrument through which UNESCO, OECD and Eurostat jointly collect internationally comparable data on key aspects of education systems on an annual basis using administrative sources. Data are collected according to the ISCED 97 classification and cover enrolments, new entrants, graduates, educational personnel and educational expenditure. The specific breakdowns include level of education, sex, age, type of curriculum (general, vocational), mode (full-time/part-time), type of institution (public/private), field of study and nationality.

The methodology and questionnaires used for the 2010 UOE collection, from which the data included in the present publication are taken, may be accessed by the public at the Eurostat Education, Training and Culture Statistics website (2).

#### **Demography Database**

Eurostat collects national demographic data from responses to an annual questionnaire sent to the national statistical institutes. The annual national population estimates are based either on the most recent census or on data extracted from the population register.

#### The Community Labour Force Survey (LFS)

The Community Labour Force Survey, which has been carried out annually since 1983, is the principal source of statistics on employment and unemployment in the European Union. This sample survey is directed at individuals and households. The questions mainly cover the characteristics of employment and job-seeking. The survey also includes questions on participation in education or training during the four weeks before it is carried out, and information on the level of education attained according to the ISCED 97 classification. The concepts and definitions used in the LFS are based on those contained in the Recommendations of the 13th Conference of Labour Statisticians convened by the International Labour Organization (ILO) in 1982.

Commission Regulation (EC) No 1897/2000 offers a precise definition of unemployment in order to improve the comparability of statistical data within the European Union. This definition is consistent with the recommendations of the International Labour Organization. All the following definitions are applicable to individuals aged 15 and over who live in private households. The definitions are therefore common for all countries.

In order to achieve maximum uniformity of the reference period for the various countries and ensure that data within the *Key Data* series remain consistent, the present edition contains the data for the second quarter of the reference year (April to June). The results for the United Kingdom and Ireland are those of the spring of the reference year while those for France and Austria correspond to the first quarter. The reference period for the statistics taken from the LFS is 2010.

Like all surveys, the LFS is based on a population sample. Its findings may thus be affected by sampling conditions and errors associated with them. The national data contained in the present edition conform to the highest reliability thresholds as recommended by Eurostat. Data that did not conform to an adequate reliability threshold have been regarded as not available and indicated with the sign (:).

<sup>(2)</sup> http://epp.eurostat.ec.europa.eu/portal/page/portal/education/introduction

#### **National Accounts Database**

The European System of National and Regional Accounts (abbreviated to 'ESA 1995', 'ESA', or sometimes also 'the system') is an internationally comparable accounting framework for systematic and detailed description of a 'total economy' (i.e. a region, a country or a group of countries), its components and its relationships with other 'total economies'.

The reference year of data in this edition that involve national accounts is 2008.

#### **OECD PISA 2009 Database**

Besides measuring performance, the PISA survey include questionnaires to identify variables in the school and family context which may shed light on their findings. The questionnaires were sent to school heads and pupils during the PISA survey. The indicators contained in the present publication have been prepared using replies from these questionnaires.

- The sampling procedure involved selecting schools and then pupils. It sought to offer each pupil the same probability of being selected irrespective of the size or location of the school he or she attended. For this purpose, schools were weighted prior to sampling in such a way that the probability that they would be selected was inversely proportional to their size (3). The consequences of this procedure when interpreting the Figures are indicated in the explanatory notes.
- Where data is taken to apply to the entire population of countries, it is essential to comply with certain strict requirements such as standard error analysis (measurement of sampling-related errors), as a result of which a perceptible difference between two items of data may be considered insignificant in statistical terms.
- The survey response rate also has to be taken into account. If it is too low for the data to be
  regarded as representative, they are not included in the Figures but in an additional note
  underneath them. Where the response rate is too low in the case of a particular question and
  country, data for that country are said to be lacking.

<sup>(3)</sup> In PISA, small schools (with under 35 pupils aged 15 who had the same probability of being selected given that all of them were selected) were sampled separately in countries in which they were sufficiently representative (over 5 % of schools in this category).

#### IV. Statistical Terms

**Correlation coefficient**: The degree of association between two variables, of which the values may vary within the limits from -1 to +1. Negative values of the correlation coefficient reflect an inverse relationship between the two variables: the values of one variable decrease as the values of the other variable increase. For instance, the coefficient of variation between the age of an individual and his remaining life expectancy tends to -1. When the values of two variables increase or decrease more or less simultaneously, the correlation coefficient is positive. For instance, there is a positive correlation between the size of an individual and the size of his feet. The closer a correlation approaches -1 or +1, the stronger the relationship between the two variables. A correlation coefficient with a value of 0 reflects the absence of any relationship between the two variables.

**Decile**: this divides the entire set of data into ten groups with equal frequencies.

**Median**: the middle value in a distribution, at which the number of values below and above that value is the same.

**Percentile**: a value on a scale of one hundred that indicates the percentage of a distribution that is equal to or below this value. The median is defined conveniently as the 50th percentile. For example, the smallest test score that is greater than 90 % of the scores of the people taking the test is said to be at the 90th percentile. In short, percentiles are the 99 values that divide a set of statistical data or a frequency distribution into 100 sub-divisions, each containing the same (or approximately the same) number of individuals.

**Standard deviation**: this measures the dispersion or spread in a distribution with respect to the mean.

**Standard error**: the standard deviation of the sampling distribution of a population parameter. It is a measure of the degree of uncertainty associated with the estimate of a population parameter inferred from a sample. Indeed, due to the randomness of the sampling procedure, one could have obtained a different sample from which more or less different results could have been inferred. Suppose that, on the basis of a given sample, the estimated population average were 10 and the standard error associated with this sample estimate were two units. One could then infer with 95 % confidence that the population average must lie between 10 plus and 10 minus two standard deviations, i.e. between 6 and 14.

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The **Eurydice network** serves mainly those involved in educational policy-making at national, regional and local levels, as well as in the European Union institutions. It focuses primarily on the way education in Europe is structured and organised at all levels. Its publications output may be broadly divided into descriptions of national education systems, comparative studies devoted to specific topics, and indicators and statistics. They are available free of charge on the Eurydice website or in print upon request.

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