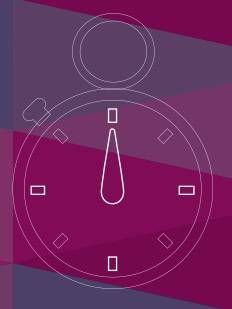


Recommended Annual Instruction Time

in Full-time Compulsory Education

in Europe 2016/17

Eurydice – Facts and Figures



Education and Training



Recommended Annual

Instruction Time

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INTRODUCTION

The Eurydice network has been collecting data on instruction time for more than two decades. These data have been published in many Eurydice publications, notably all editions of the 'Key Data on Education in Europe'. Since 2010, an annually updated report has been made available on the Eurydice website.

Since 2013, Eurydice has collected data on instruction time jointly with the OECD (the NESLI network). For many years too, the OECD has been collecting such data through the INES network for the collection and adjudication of system-level descriptive information on educational structures, policies and practices (NESLI, previously Network C). Given the great similarities between the two data collections, the OECD and Eurydice networks decided to develop a common data collection tool on instruction time and administer it jointly. This shared work avoids inconsistencies and overlaps between similar sets of internationally comparable data.

This Eurydice report includes an overview of instruction time across countries, national data sheets and country-specific notes.

Part I provides the definitions and the scope of the data collection.

Part II contains a comparative analysis on the recommended annual instruction time and its distribution across the curriculum subjects.

Part III Section 1 consists of a reading guide to the diagrams (national data sheets), including a list of the acronyms and abbreviations used. The diagrams are shown in Part III Section 2 (Instruction time by country), and Part III Section 3 (Instruction time by subject). Part III Section 4 contains an appendix with the diagrams for some subject categories (i.e. languages 4 and 5) and for the non-compulsory curriculum). Part III Section 5 provides the country-specific notes.

PART I: SCOPE, DEFINITIONS AND CODES

This publication focuses on the **recommended minimum annual instruction time in full-time compulsory general education** as specified in regulations or policy documents of the competent education authorities.

Instruction time

The intended instruction time includes the time a public school is expected to provide instruction to students on all the subjects integrated in the compulsory and non-compulsory curriculum in the school premises or in out-of school activities which are formal parts of the compulsory programmes. The instruction time excludes:

- Breaks between classes or other types of interruptions.
- Non-compulsory time outside the school day.
- Time dedicated to homework activities.
- Individual tutoring or private study.
- Days when schools are closed for festivities, such as national holidays, and days when students are not expected to be at school because of teacher development days or examination periods.

National data sheets (Part III, Sections 2 and 3) present data as **annual instruction time in hours of 60 minutes per grade**, taking into account the number of instruction days per week and per year and the number and length of periods (¹). When the data collected from the national policy document is provided in periods (usually between 35 and 50 minutes), per week or per year, calculations are done in order to obtain standard annual data in hours.

Education levels and programmes

In many countries, full-time compulsory education coincides with the end of ISCED level 2 (²). In nearly all countries, full-time compulsory education starts with the first grade of ISCED level 1. Pre-primary education (ISCED 0), even if compulsory, is not within the scope of this document (³).

This publication focuses on **general education programmes** in public sector schools; secondary education programmes with vocational profiles and programmes specifically designed for students with special needs are out of the scope of this document.

Reference year

The reference year is **2016/17** or otherwise stated in the country-specific notes.

Definitions of subject categories

The subjects taught during full-time compulsory education in Europe vary across countries. In order to be able to compare the information, it is necessary to group them according to more general subject categories. Most subject categories cover several subjects (e.g. natural sciences: physics, chemistry or biology).

⁽¹) All figures are rounded up to the next complete number and for this reason some non correspondence between individual subjects and total annual figures might exist. For more information on ISCED classifications, see: http://www.uis.unesco.org/Education/Documents/isced-2011-en.pdf

⁽²⁾ For more information on ISCED classifications, see: http://www.uis.unesco.org/Education/Documents/isced-2011-en.pdf

⁽³⁾ For more information on the situation in each country, see the brochure: https://webgate.ec.europa.eu/fpfis/mwikis/eurydic e/index.php/Publications:The_Structure_of_the_European_Education_Systems_2016/17:_Schematic_Diagrams

The category 'reading, writing and literature' is associated to 'language 1'. Additional languages learnt by students – usually but not necessarily foreign languages, are referred to as 'language 2', 'language 3', 'language 4' and 'language 5'.

The following table defines the subject categories which are included in the national data sheets.

Subject categories	Definitions
Reading, writing and literature (L1)	Covers skills such as spelling, reading, and writing in the language of instruction and includes subjects such as grammar, language of instruction and literature. It can be considered as the first language taught to students. If there are two languages of instruction in almost every public school, then hours allocated to reading, writing and literature in both languages of instruction should be reported.
Mathematics	Covers all numeracy skills and subjects such as arithmetic, algebra, geometry, statistics, etc.
Natural sciences	Includes subjects such as science, physics, chemistry, biology, environmental sciences and ecology.
Social studies	Includes subjects such as history, geography and all related studies. May also include community studies, social and political instruction, philosophy or civics education.
Languages (L 2-5)	Includes subjects that develop students' knowledge of a language viewed in the curriculum as 'foreign' (or modern) languages, other national languages and/or regional and minority languages. This definition of languages in the curriculum is educationally based and unrelated to the political status of languages.
Physical education and health	Includes subjects such as education in sports and health enhancing physical activities, as well as time devoted to instruction in competitive and traditional games, gymnastics, swimming, athletics, dance or other activities that develop pupils' physical and social competences (including knowledge, skills, psychomotor coordination, cooperation and leadership) and an active healthy lifestyle.
Arts education	Includes subjects such as arts, history of arts, music, visual arts, drama, music and dance performance, photography, and creative handicraft.
Religion/ethics/ moral education	Includes subjects whose aim is to teach the principles and history of one or more religions, and subjects such as ethics whose aim is to determine how to live and behave in accordance with human and social principles.
Information and communication technologies (ICT)	Includes subjects such as informatics, information and communication technologies or computer science. These subjects include a wide range of topics concerned with the new technologies used for the processing and transmission of digital information, including computers, computerised networks (including the Internet), microelectronics, multimedia, software and programming, etc.
Technology	Includes subjects that provide knowledge on the practical use of scientific or technological discoveries that use specific instruments and processes. For example, construction, electricity, electronics, graphics and design, etc.

Subject categories	Definitions									
Practical and vocational skills	Includes vocational skills (preparation for a specific occupation), accountancy, business studies, career education, clothing and textiles, driving and road security, home economics, nursing, secretarial studies, tourism and hospitality, woodwork, metalwork and sewing.									
Other subjects	This category includes different subjects that cannot be classified within the other groups or which specifically reflect national concerns. In this category, the following types of subjects may be included: classical languages and minority languages which the curriculum does not consider to be other languages, personal development/well-being.									

Definitions of curriculum categories

The intended instruction time might be composed of a compulsory curriculum and a non-compulsory curriculum. The compulsory curriculum refers to the amount and allocation of instruction time that has to be provided in almost every public school and must be attended by almost all public sector students.

The compulsory curriculum contains compulsory subjects defined as such by central education authorities and taught to all pupils. It may also be flexible in various ways as local authorities, schools, teachers and/or students may have varying degrees of freedom to choose the subjects and/or the allocation of compulsory instruction time.

The following table defines the curriculum categories which are included in the information presented in the national data sheets.

Curriculum categories	Definitions
Compulsory subject	Subject that must be studied by all students.
Compulsory options chosen by the students	Includes the total amount of instruction time for subjects that are chosen by students, where there is a list of subjects that school must offer and each student must choose one or more from the list.
Compulsory flexible subjects chosen by schools	Includes the total amount of compulsory instruction time indicated by the central authorities, which regional authorities, local authorities, schools or teachers allocate to subjects of their choice (or subjects they chose from a list defined by central education authorities). For example, schools may be able to choose between offering religious education or more science, or art, etc., but to offer one of these subjects is compulsory for the school and students must study it.
Compulsory subjects with flexible timetable (total time devoted to)	Includes the total amount of instruction time indicated by the central authorities for a given group of subjects, which regional authorities, local authorities, schools or teachers allocate to individual subjects. There is flexibility in the time spent on a subject, but not in the subjects to be taught. For example, central authorities may define the total number of hours that students should be studying reading, writing and literature, mathematics, science and modern foreign languages per year and schools may choose how to distribute this time between these individual subjects.
Non-compulsory curriculum	Includes the total amount of instruction time to which students are entitled beyond the compulsory hours of instruction and that almost every public school is expected to provide. Subjects can vary from school to school or from region to region and take the form of elective subjects. For example, students may have the possibility to take a mathematics enrichment course or to study an additional language, above the compulsory hours of instruction. Students are not required to choose one of these elective subjects, but all public schools are expected to offer this possibility.

Country codes

EU/EU-28	European Union	AT	Austria
BE	Belgium	PL	Poland
BE fr	Belgium – French Community	PT	Portugal
BE de	Belgium – German-speaking Community	RO	Romania
BE nl	Belgium – Flemish Community	SI	Slovenia
BG	Bulgaria	SK	Slovakia
CZ	Czech Republic	FI	Finland
DK	Denmark	SE	Sweden
DE	Germany	UK	United Kingdom
EE	Estonia	UK-ENG	England
IE	Ireland	UK-WLS	Wales
EL	Greece	UK-NIR	Northern Ireland
ES	Spain	UK-SCT	Scotland
FR	France	EEA	and Candidate countries
HR	Croatia	ВА	Bosnia and Herzegovina
IT	Italy	СН	Switzerland
CY	Cyprus	IS	Iceland
LV	Latvia	LI	Liechtenstein
LT	Lithuania	ME	Montenegro
LU	Luxembourg	MK*	Former Yugoslav Republic of Macedonia
HU	Hungary	NO	Norway
МТ	Malta	RS	Serbia
NL	Netherlands	TR	Turkey

MK*: ISO code 3166. Provisional code which does not prejudge in any way the definitive nomenclature for this country, which will be agreed following the conclusion of negotiations currently taking place under the auspices of the United Nations (http://www.iso.org/iso/country_codes/iso_3166_code_lists.htm)

Statistical codes

: Data not available (–) Not applicable

PART II: COMPARATIVE ANALYSIS

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Introduction

The amount of instruction time available to students is an important factor in their learning process. Existing evidence suggests that the quality of instruction and the time available for learning can have a positive effect on student achievement and can compensate for weaknesses in other areas such as students' capabilities or willingness to learn (¹). Furthermore, the amount of instruction time allocated to a specific discipline can help to raise interest levels in that subject as well as improve performance (²). The positive relationship between instruction time and achievement has been shown to be particularly relevant in the case of disadvantaged students such as those from immigrant backgrounds or from families with low levels of education (³). Although many other factors have an impact on student learning, the significance of instruction time cannot be underestimated since it can help students compensate for other weaknesses. On a wider scale, the relative distribution of instruction time between subjects is a means by which education policy priorities can be embedded at school level.

This comparative overview examines the recommended minimum instruction time in full-time compulsory general education in 42 European education systems. For the Netherlands, Austria and Liechtenstein, the information is broken down into the different education pathways or programmes that exist in full-time compulsory general secondary education in these countries (⁴). The overview pays special attention to several subjects which are currently of particular interest at European level. These are: health and physical education; reading, writing and literature (in the main language of instruction); other languages; maths; and natural sciences.

The Council of the European Union has acknowledged the benefits of physical activity on individuals' health and the contribution sports can make in promoting a more inclusive society, especially amongst its youngest members. Schools are deemed an 'effective tool' for increasing awareness of health-enhancing physical activity (HEPA), and instruction time on physical education in primary and secondary schools is one of the indicators proposed by the Council for the evaluation of HEPA levels and policies (⁵).

Moreover, the Council has set a benchmark for reading, mathematics and science – by 2020, the proportion of 15-year-olds with low achievement should be less than 15 % (6). The minimum

⁽¹) Gettinger, M, 1985. Time allocated and time spent relative to time needed for learning as determinants of achievement. Journal of Educational Psychology, 77, pp. 3-11. Carroll, J. B., 1989. The Carroll Model: A 25-years retrospective and prospective view. Educational Researcher, 18 (1), pp. 26-31. Dobbie, W. and Fryer R. G., 2013. Getting beneath the veil of effective schools: Evidence from New York City. American Economic Journal: Applied Economics 2013, 5(4), pp. 28-60. Kidron, Y., and Lindsay, J., 2014. The effects of increased learning time on student academic and non-academic outcomes: Findings from a meta-analytic review (REL 2014-015). Washing-ton, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Appalachia. https://ies.ed.gov/ncee/edlabs.

⁽²⁾ Traphagen, K., 2011. Strengthening science education: The power of more time to deepen inquiry and engagement. Washington, DC: National Center on Time and Learning. Blank, Rolf K., 2013. Science instructional time is declining in elementary schools: What are the implications for student achievement and closing the gap? *Science Education*, 97, pp. 830-847. Fitchett, P.G.; Heafner, T.L., Vanfossen, P., 2014. An analysis of time prioritization for social studies in elementary school classrooms. *Journal of Curriculum & Instruction*. 8 (2), pp. 7-35.

⁽³⁾ Lavy, V., 2010. Do differences in schools' instruction time explain international achievement gaps? Evidence from developed and developing countries. Working Paper 16227, National Bureau of Economic Research. http://www.nber.org/paper/w16227.

⁽⁴⁾ In secondary education in the Netherlands, there are three different pathways, VWO, HAVO and VBMO. In Austria, the data for secondary education concerns the Neue Mittelschule (new secondary school, NMS) and Allgemeinbildende höhere Schule (academic secondary school, AHS). Also at secondary level, there are three pathways in Liechtenstein, Gymnasium, Oberschule and Realschule.

⁽⁵⁾ See the Council Recommendation of 26 November 2013 on promoting health-enhancing physical activity across sectors (2013/c 354/01) http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2013:354:0001:0005:EN:PDF

⁽⁶⁾ See the May 2009 Council Conclusions on a strategic framework for European co-operation in education and training: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:119:0002:0010:en:PDF

instruction time that education authorities set for these subject areas may contribute to the achievement of this goal.

Lastly, given the diverse linguistic landscape of the European Union and the key role of language skills in the mobility and employability of European citizens, it is also important to examine the instruction time provided for teaching languages other than the language of instruction (⁷).

This comparative overview is organised as follows:

Section 1 examines the recommended annual minimum instruction time in full-time compulsory general education in 42 European countries in 2016/17.

Section 2 shows how the total recommended instruction time generally depends on the number of years of full-time compulsory education in each country.

Section 3 describes the main policy changes that have taken place in some of these countries over the last year regarding the recommended instruction time and its distribution across subjects.

Section 4 looks into the flexibility that local authorities and schools have in the different countries to allocate the recommended instruction time across grades and/or subjects, as well as to choose the subjects they teach.

Section 5 analyses the instruction time provided for health and physical education by education level across Europe.

Section 6 examines the minimum instruction time for reading, writing and literature in primary and full-time compulsory general secondary education.

Section 7 focuses on the minimum time recommended centrally for teaching languages other than the main language of instruction.

Section 8 studies the minimum instruction time recommended for maths, and compares it with the instruction time reported by teachers in grade 4 in TIMSS (⁸) and with the instruction time reported by 15-year-olds in PISA (⁹).

Section 9 analyses the minimum instruction time recommended for natural sciences, and compares it with the instruction time reported by teachers in grade 4 in TIMSS and with the instruction time reported by 15-year-olds in PISA.

⁽⁷⁾ Council Conclusions on multilingualism and the development of language competences http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/educ/142692.pdf

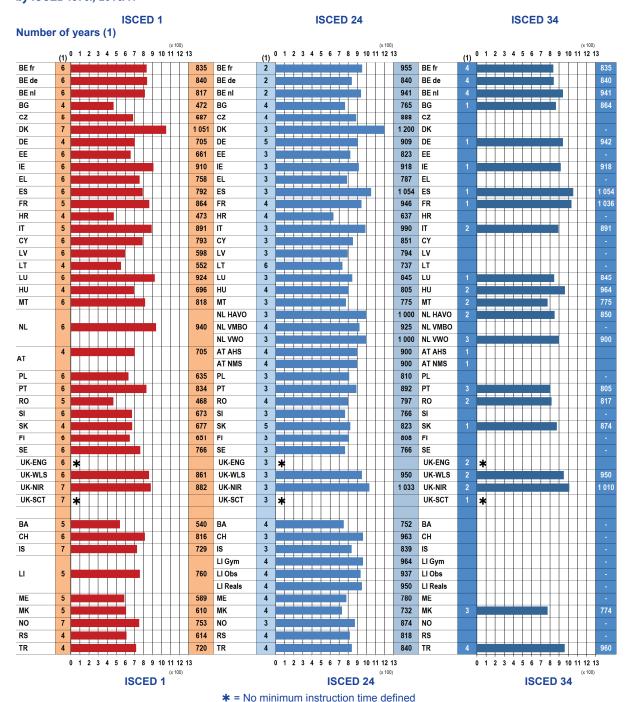
⁽⁸⁾ TIMSS is an international assessment of mathematics and science at the fourth and eighth grades. Data on instruction time for this report have been extracted from the teachers' questionnaire of TIMSS 2015.

⁽⁹⁾ The Programme for International Student Assessment (PISA) is a triennial international survey which aims to evaluate education systems worldwide by testing the skills and knowledge of 15-year-old students. Data on instructional time for this report have been extracted from the students' questionnaire of PISA 2015.

1. The annual minimum instruction time tends to increase with the education level, and differences between countries become less significant

The number of years of full-time compulsory general education varies across European countries: from eight years in Croatia and Serbia to twelve years in Belgium, Portugal, the United Kingdom – Northern Ireland, the former Yugoslav Republic of Macedonia and Turkey. In the majority of cases, full-time compulsory general education covers only primary and general lower secondary education, which normally correspond with ISCED levels 1 and 24 respectively. However, in 23 of the 42 education systems covered by this report, it also includes one or more grades of ISCED level 34 (general upper secondary education in most cases).

Figure 1: Recommended minimum instruction time for the compulsory curriculum, in hours, per notional year and by ISCED level, 2016/17



Source: Eurydice.

Explanatory note (Figure 1)

The bar chart shows the recommended minimum instruction time (number of hours) per notional year. For each country, the minimum instruction time in hours for the compulsory curriculum for each ISCED level has been divided by its duration in years. The number of compulsory years per education level is shown before each bar for the three education levels.

This figure only covers primary and full-time compulsory general secondary education. Grades at pre-primary level are excluded even if they are part of full-time compulsory education.

The column for ISCED 34 only captures information for the countries where full-time compulsory general education includes one or more grades of upper secondary education.

Country-specific notes

Germany: The data represent the weighted average instruction time for the compulsory core curriculum subjects, calculated by the Secretariat of the Ministers of Education and Cultural Affairs of the *Länder* on the basis of the number of students enrolled in the different types of school (reference year 2015/16).

Spain: The data on intended instruction time are based on national and regional regulations on curriculum and school calendars (reference year 2016/17). To calculate the weighted averages, statistics were used on the number of students per grade and Autonomous Community, as reported by the statistics office of the Ministry of Education, Culture and Sport (reference year 2014/15).

Austria: Data for grade 9 are not available although this grade is part of full-time compulsory general education.

Sweden: The minimum instruction time is centrally defined for the nine years of compulsory education. It has been artificially allocated to ISCED level 1 and 24 proportionally to the number of years in each education level (6 and 3 respectively).

United Kingdom (ENG): Since 2011, the Department for Education has not provided guidance on minimum weekly lesson time. However, the requirement remains for schools to allow sufficient instruction time to deliver a broad and balanced curriculum that includes all statutory requirements, including the number of days that schools must be open to teach students.

United Kingdom (SCT): The Scottish Curriculum for Excellence does not specify any instruction time for the curriculum areas that must be taught, except a minimum of 2 hours per week for physical education.

Switzerland: With the exception of a minimum number of lessons for physical education, there is no standard curriculum and no standard instruction time defined at national level. Curricula and intended instruction time are determined by the 26 Cantons. The figures represent weighted averages of the cantonal requirements for each grade and the total of instruction time as given by the cantonal timetables (*Stundentafeln/grilles horaires*).

Given that full-time compulsory general education does not span the same number of years in all countries and that the recommended instruction time varies across grades, in order to improve cross-country comparison, this section, and in particular Figure 1, shows the minimum instruction time per notional year, which is calculated by dividing the total instruction time recommended for primary, lower secondary and upper secondary education respectively by the number of years covered by each education level.

In primary education, the average minimum instruction time per notional year is 734 hours – the lowest of the three education levels (¹⁰). Differences between countries are also more significant at this education level, ranging from 468 hours in Bulgaria to 1 051 in Denmark, i.e. more than double (¹¹). In Ireland, Luxembourg and the Netherlands, the minimum for the school year also exceeds 900 hours. The lowest values can be found in Bulgaria, Croatia, Latvia, Lithuania, Romania, Bosnia and Herzegovina, and Montenegro. It is worth noting that while in the majority of countries, all grades at primary level have a similar number of hours, in seventeen, the annual instruction time is lower in the first grades (i.e. Bulgaria, the Czech Republic, Denmark, Germany, Latvia, Hungary, Austria, Romania, Slovenia, Slovakia, the United Kingdom (Wales and Northern Ireland), Bosnia and Herzegovina, Switzerland, Liechtenstein, Montenegro and the former Yugoslav Republic of Macedonia) (¹²).

In general lower secondary education, the minimum number of hours per notional year ranges from 637 hours in Croatia to 1 200 hours in Denmark. In Spain, the Netherlands (HAVO and VWO) and the United Kingdom (Northern Ireland), it is also 1 000 hours or more. Differences between countries are slightly less than in primary education (¹³). The average recommended annual instruction time is

⁽¹⁰⁾ Only the education systems for which there are data on minimum total instruction time have been taken into account in the calculations. The United Kingdom (Scotland) is not included.

⁽¹¹⁾ In primary education, the standard deviation from the average value is 137 hours.

⁽¹²⁾ See Part III: National Diagrams, Section 2 for the distribution of the total minimum instruction time across grades.

⁽¹³⁾ In lower secondary education, the standard deviation from the average value is 106 hours, compared to 137 in primary education.

864 hours, i.e. 129 more than at primary level (¹⁴). In the great majority of the education systems, the minimum instruction time per notional year in lower secondary education is higher than in primary education, 23 % on average. In Bulgaria and Romania, it is over 60 % higher. Only in Luxembourg, Malta and the Netherlands [VMBO]), is the recommended annual minimum instruction time higher in primary education than in lower secondary education. In the German-speaking Community of Belgium, it is the same at both education levels; whereas in Sweden, the instruction time is prescribed for the whole of compulsory education (not per education level).

In 23 education systems, at least one grade of ISCED level 34 (which normally coincides with general upper secondary education) is compulsory. Excluding the United Kingdom (England and Scotland), where the minimum instruction time is not centrally defined, the average recommended per notional year at this education level is 900, 36 hours higher than in general lower secondary education (¹⁵). In Spain, France and the United Kingdom (Northern Ireland), it exceeds 1 000 hours. The lowest values can be found in Malta (775 hours) and the former Yugoslav Republic of Macedonia (774). Differences between countries decrease further at this education level (¹⁶).

2. The total instruction time is positively correlated to the number of years of full-time compulsory education

The total instruction time recommended for the whole of full-time compulsory education is positively correlated to the number of grades concerned. Full-time compulsory education refers to all the grades that are compulsory for all full-time students in a country. The data in this report only concern general programmes but some of the student population may be enrolled in vocational programmes, where requirements on minimum instruction time may be different. The more grades covered by full-time compulsory general education, the higher the total number of hours (see Figure 2a). However, in the countries where full-time compulsory education spans fewer years, students in general programmes may receive a similar amount of instruction time in the post-compulsory phase of education but this does not show in the data.

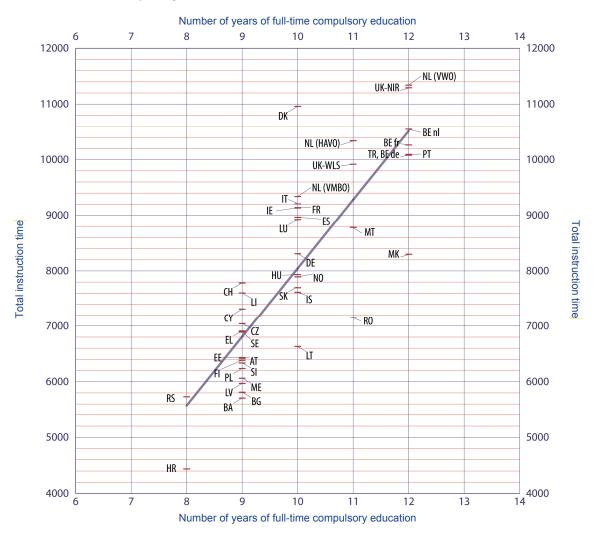
For this reason, in analysing the relationship between the total instruction time and the number of years of full-time compulsory general education, it is important to identify the groups of countries which offer the same number of years and compare the differences between them in the hours of instruction provided. For instance, among the countries providing eight years of full-time compulsory general education, the recommended total instruction time is relatively low in Croatia. Similarly, Bulgaria, Latvia, Bosnia and Herzegovina and Montenegro provide relatively fewer hours of instruction compared to others with nine years. Clear outliers on the low side among the countries with 10, 11 and 12 years respectively are Lithuania, Romania and the former Yugoslav Republic of Macedonia. As shown in Figure 1, these are the countries where the minimum instruction time per notional year tends to be lower. Conversely, the recommended total instruction time is relatively high for the number of years of full-time compulsory general education especially in Denmark (with 10 years); and to a lesser extent also in Ireland, France, Italy and the Netherlands (VMBO programme) (also 10 years). Similarly, the total instruction time is relatively high in the Netherlands (HAVO programme) and the United Kingdom (Wales) (both with 11 years of full-time compulsory general education); and in the Netherlands (VWO programme) and the United Kingdom (Northern Ireland) (with 12 years). In all these countries, the minimum instruction time per notional year tends to be higher (see Figure 1).

⁽¹⁴⁾ At ISCED level 24, for the Netherlands, 1 000 hours have been counted (HAVO and VWO), and for Liechtenstein, 950 (Realschule).

⁽¹⁵⁾ At ISCED level 34, for the Netherlands only VWO has been included in the calculations.

⁽¹⁶⁾ In upper secondary education, the standard deviation from the average value is 82 hours.

Figure 2a: Correlation between the number of years of full-time compulsory education and the total recommended instruction time for the compulsory curriculum, 2016/17



Minimum instruction time in hours for the compulsory curriculum for each education level, 2016/17

	BE fr	BE de	BE nl	BG	CZ	DK	DE	EE	ΙE	EL	ES	FR	HR	IT	CY	LV
ISCED 1	5 012	5 040	4 900	1 888	3 434	7 360	2 822	3 964	5 460	4 550	4 750	4 320	1 890	4 455	4 760	3 589
ISCED 24	1 909	1 680	1 883	3 060	3 550	3 600	4 544	2 468	2 755	2 360	3 161	3 784	2 546	2 970	2 554	2 381
ISCED 34	3 341	3 360	3 765	864			942		918		1 054	1 036		1 782		
	LT	LU	HU	MT		NL		AT		PL	PT	RO	SI	SK	FI	SE
ISCED 1	2 208	5 544	2 785	4 907		5 640		2 82	0	3 807 5 004			4 039	2 707	3 905	4 593
					HAVO	VMBO	VWO	AHS	NMS							
ISCED 24	4 424	2 535	3 221	2 324	3 000	3 700	3 000	3 600	3 600	2 430	2 675	3 186	2 298	4 117	2 423	2 297
ISCED 34		845	1 928	1 549	1 700		2 700				2 414	1 634		874		
	UK- ENG	UK- WLS	UK- NIR	UK- SCT		ВА	СН	IS		LI		ME	MK	NO	RS	TR
ISCED 1	*	5 168	6 175	532		2 700	4 894	5 100		3 802		2 943	3 048	5 272	2 457	2 880
									Gym	Gym Obs Reals						
ISCED 24	*	2 850	3 098	190		3 008	2 890	2 516	3 857	3 746	3 802	3 120	2 928	2 622	3 273	3 360
ISCED 34	*	1 900	2 021	63									2 322			3 840

* = No minimum instruction time defined

Source: Eurydice.

Explanatory note

Figure 2a shows the relationship between the number of years and the total hours of instruction in full-time compulsory general education. The table shows the total minimum instruction time (number of hours) recommended for the duration of each ISCED level. The duration of each ISCED level is presented in Figure 2b (below).

Country-specific notes

Germany: The data represent the weighted average instruction time for the compulsory core curriculum subjects, calculated by the Secretariat of the Ministers of Education and Cultural Affairs of the *Länder* on the basis of the number of students enrolled in the different types of school (reference year 2015/16).

Spain: The data on intended instruction time are based on national and regional regulations on curriculum and school calendars (reference year 2016/17). To calculate the weighted averages, statistics were used on the number of students per grade and Autonomous Community, as reported by the statistics office of the Ministry of Education, Culture and Sport (reference year 2014/15).

Austria: Data for grade 9 are not available although this grade is part of full-time compulsory general education.

Sweden: The minimum instruction time is centrally defined for the nine years of compulsory education. It has been artificially allocated to ISCED level 1 and 24 proportionally to the number of years in each education level (6 and 3 respectively).

United Kingdom (ENG): Since 2011, the DfE has not provided guidance on the minimum weekly lesson time. However, the requirement remains for schools to allow sufficient instruction time to deliver a broad and balanced curriculum that includes all statutory requirements, including the number of days that schools must be open to teach students.

United Kingdom (SCT): The Scottish Curriculum for Excellence does not specify any instruction time for the curriculum areas that must be taught, except a minimum of 2 hours per week for physical education.

Switzerland: With the exception of a minimum number of lessons for physical education, there is no standard curriculum and no standard instruction time defined at national level. Curricula and intended instruction time are determined by the 26 Cantons. The figures represent weighted averages of the cantonal requirements for each grade and the total of instruction time as given by the cantonal timetables (*Stundentafeln/grilles horaires*).

Even though the minimum instruction time per notional year is higher in general lower secondary education (see Section 1), it is primary education that often includes more hours of instruction time overall (¹⁷). On average, primary education covers at least 4 075 hours of instruction, and general lower secondary education 2 934. This is due to the fact that in most education systems primary education spans a greater number of years, from four to seven depending on the country (5.5 on average), while lower secondary education covers from two to six years (3.5 on average). The minimum instruction time recommended for general lower secondary education is higher than the minimum for primary in countries where primary education only spans four years (Bulgaria, Germany, Croatia, Lithuania, Hungary, Austria, Slovakia, Serbia and Turkey) or where the instruction time recommended for the first grades of primary is particularly low (the Czech Republic, Romania, Bosnia and Herzegovina, and Montenegro).

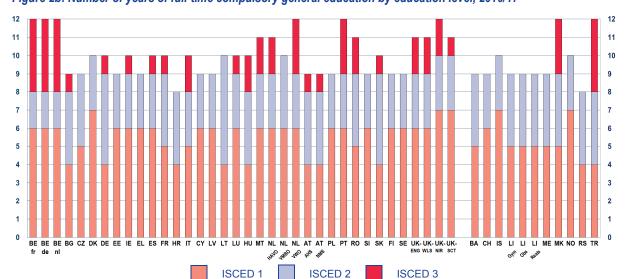


Figure 2b: Number of years of full-time compulsory general education by education level, 2016/17

Source: Eurydice.

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⁽¹⁷⁾ ISCED 34 is excluded from the analysis because in many countries it is not part of full-time compulsory education and, where it is, the number of grades that are compulsory varies between countries.

3. Minimum instruction time tends to be stable - changes in the allocation for particular subjects usually reflect education policy priorities

In the majority of countries, there have been no changes in the minimum instruction time in 2016/17. In some countries, the minimum instruction time has slightly increased – either overall or in a specific subject area, while in a few it has decreased as a result of a reduction in the number of instruction days in the school year (see Figure 3). The most significant policy changes with an impact on the minimum instruction time have taken place in Greece, France and Hungary.

In Greece, from the 2016/17 school year, there is now only a single type of all-day primary school (18), and the minimum instruction time and its distribution across subjects has changed. The number of hours of instruction per week has increased in grades 1 and 2, and slightly decreased from grades 5 to 9. Nevertheless, the number of instruction days in the school year and, therefore, the total instruction time has increased. Across subjects, the minimum instruction time recommended for reading, writing and literature, maths and other languages has increased both in primary and lower secondary education, while the time for natural sciences has decreased. At secondary level, central authorities no longer set a minimum instruction time for the subjects schools choose to teach.

In France, new legislation adopted in 2013 and fully implemented in 2016/17 has led to some changes in terms of the minimum instruction time (19). In primary education, the total recommended instruction time has remained the same although it is now distributed differently. A specific amount of time (36 hours per year) has been explicitly allocated to the subject civic and moral education (20) and, in grade 3, reading, writing and literature gained some time from natural sciences, social studies and to a lesser extent arts education. The total recommended instruction time decreased in lower secondary education. The decrease is mainly related to the integration of two subjects in the other compulsory subjects: accompagnement personnalisé (i.e. tailored teaching and support to students) in grade 6, and 'interdisciplinary projects' in grades 8-9. In grade 6, the time devoted to natural sciences has increased significantly due to the inclusion of technology (which is now taught as part of natural sciences) and the introduction of a new physics subject. The instruction time recommended for reading, writing and literature also increased in ISCED 2, and the teaching of a second foreign language became compulsory in grade 7, that is, one grade earlier than before.

In Hungary, the phasing in of the new regulation on minimum instruction time was completed for grades 4 and 8 in 2016/17, leading to an increase in the number of instruction hours both at primary and secondary level. Across the subjects, the minimum instruction time increased in grade 4 in maths, arts education, physical education and moral education, while it decreased in reading, writing and literature, natural sciences and the foreign language. In grade 8, the minimum time was increased in reading, writing and literature, physical education, moral education and technology and it decreased in natural sciences, social studies and the teaching of a foreign language. Nevertheless, in both grades, the time that schools can allocate to these or to subjects of their choice increased (21).

Ten countries showed a slight increase in the minimum instruction time in 2016/17 as compared to the previous year. In Spain, the phasing in of the new education law LOMCE (22) was completed in 2016/17 but had less impact on instruction time. Overall, the minimum instruction time increased slightly at lower secondary level. With the new legislation, some subjects in the categories arts education and technology became compulsory flexible subjects chosen by schools (23) and the recommended instruction time for religion, ethics and moral education decreased. As in the case of Germany, variations can also be due to the methodology used. Data correspond to the weighted averages of the minimum instruction time defined by each of the regional governments, which can vary from one year to another due to fluctuations in the student population.

In the other eight countries, the education authorities increased the minimum instruction time for certain subjects. In Sweden, the minimum recommended for mathematics increased, while in Norway the increase was in natural sciences (only in primary education). In Bulgaria, the minimum instruction time increased in grade 5 for reading, writing and literature and mathematics; in Malta, in grade 9 for physical education and in the former Yugoslav Republic of Macedonia, in grade 4 for the subject

⁽¹⁸⁾ The distinction between schools implementing the regular curriculum and the unified revised curriculum was eliminated.

⁽¹⁹⁾ The reform has also grouped grades at ISCED levels 1 and 2 in three cycles (fundamental learning stage, consolidation stage and development stage) and adopted a new common core of knowledge, skills and culture spanning from primary to

⁽²⁰⁾ Before the reform, this subject was taught as part of other subjects in grades 1-2, and in social studies in grades 3-5.

⁽²¹⁾ Similar trends were observed in previous years in the other grades where the reform was gradually implemented.

⁽²²⁾ Only Cataluña has not yet applied the LOMCE.

⁽²³⁾ In accordance with the relevant guidelines issued by the regional governments (Autonomous Communities).

information and communication technologies. In Portugal and Slovenia, the instruction of a foreign language became compulsory at grades 4 and 2 respectively (one year earlier), increasing the minimum instruction time accordingly. In Switzerland, the minimum instruction time slightly increased in primary and lower secondary education and the subjects of religion, ethics and moral education and practical and vocational skills became compulsory at primary level.

In Finland, although the total instruction time remained the same (showing 'no changes' in Figure 3), the time allocated to some subject areas (e.g. social studies, arts and physical education and health) slightly increased.

Significant changes

Small increase

No changes

Decrease due to a reduction in instruction days

Figure 3: Changes in the recommended minimum instruction time between 2015/16 and 2016/17

Variation in the number of hours of instruction time between 2015/16 and 2016/17

	BE nl	BG	CZ	DE	IE	EL	ES	FR	HU	MT	PT	RO	SI	SK	SE	CH	MK	NO
ISCED 1	-56	13	-35	10	-30	240	4	0	124	32	72	-162	53	-43	70	7	48	38
ISCED 2	-21	0	-37	7	-50	3	29	-180	163	-27	0	-114	0	-66	35	16	0	0
ISCED 3	-43	0	(-)	-4	-17	(-)	-6	0	11	-18	0	-58	(-)	-14	(-)	(-)	0	(-)

Source: Eurydice.

Explanatory note

Significant changes refers to countries where a policy reform has led to significant variations in instruction time (over 100 hours) at one or more education levels.

Small increase refers to countries showing an increase of less than 100 hours in the minimum instruction time.

Decrease due to a reduction in instruction days includes countries where the minimum instruction time has fallen due to a reduction in the number of instruction days in the school year at primary and secondary level.

The table below the map shows the variation in the number of hours of instruction for the countries that have experienced changes.

Country-specific notes

Belgium (BE fr, BE de): Teaching development days have been excluded this year for the first time. The minimum instruction time reported in the study is slightly smaller than in the previous data collections, where these days had been counted in. But regulations on instruction time have not changed.

Germany: The data correspond to the weighted averages of the minimum instruction time defined by each of the *Länder*, which can vary from one year to another due to fluctuations in the student population.

Spain: The data on intended instruction time are based on national and regional regulations on curriculum and school calendars (reference year 2016/17). To calculate the weighted averages, statistics were used on the number of students per grade and Autonomous Community, as reported by the statistics office of the Ministry of Education, Culture and Sport (reference year 2014/15).

Malta: In primary education, there were more instruction days than the previous school year and, therefore, the total instruction time increased. Conversely, there were fewer days and a lower minimum instruction time in secondary education.

Finland: The instruction time is prescribed for groups of grades (vertical flexibility). As from 2016/17, the groups are confined within a single ISCED level (before the groups could cover more than one ISCED level). Although the total instruction time remained the same, its allocation changed for some subject areas.

Over the past year, the minimum instruction time decreased in five countries due to a decrease in the number of instruction days in the school year. In Romania, the decrease was more significant; there were six fewer school days in the year. In Slovakia, there were three fewer instruction days, and, in the Flemish Community of Belgium and the Czech Republic, three were two fewer. In Ireland, schools were permitted to close during 2016/17 for one day at primary level and for three days at secondary level in order to facilitate whole school teaching staff engagement in continuing professional development and school planning. Moreover, at lower secondary level, a new Junior Cycle specification has been introduced for English, which provides for an intended minimum of 240 hours instruction time (at least 2.4 hours per week) over the course of the three years of the junior cycle and gives schools the flexibility to timetable additional time.

4. More flexibility is allowed for allocating the recommended minimum instruction time than for choosing curriculum subjects

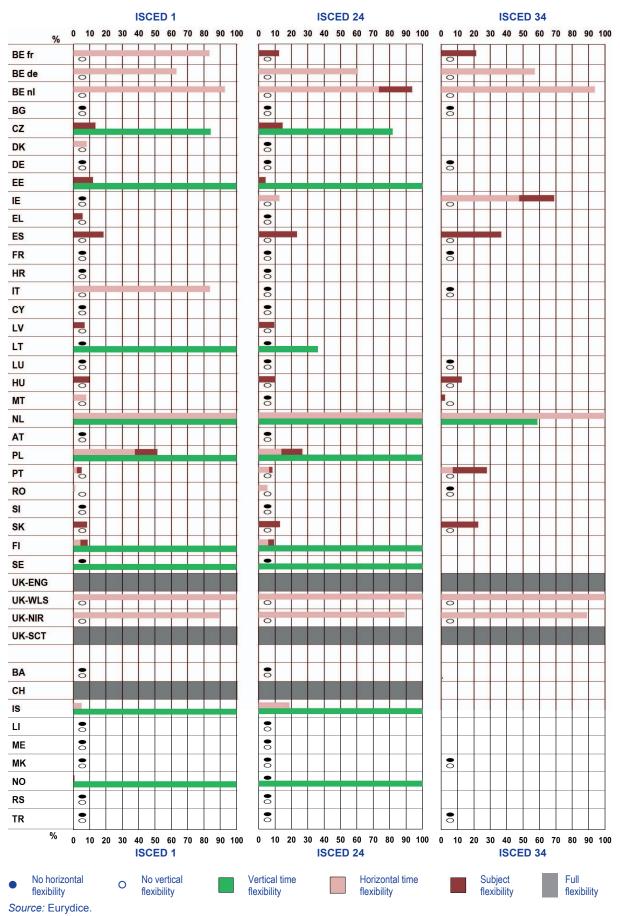
In most countries, the official steering documents define how the recommended minimum instruction time should be allocated across grades and subjects. In some countries, however, there are fewer centrally defined requirements, and local authorities and schools enjoy greater flexibility to decide on the amount of instruction time to devote to the different compulsory subjects or even to choose which subjects to offer. This flexibility gives schools some scope to tailor education to the specific needs of their students and may contribute to coordination across grade levels and disciplines. This section examines the type and degree of flexibility that schools and local authorities are granted for allocating instruction time (time flexibility) and choosing curriculum subjects (subject flexibility). Time flexibility can extend upwards through grades (vertical flexibility) or across subjects (horizontal flexibility).

Vertical flexibility occurs when central education authorities indicate the total number of hours for a specific subject to be taught across more than one grade, without specifying how these hours should be distributed. This is how all the minimum instruction time is defined in Estonia, the Netherlands, Lithuania (primary education), Poland, Finland, Sweden, Iceland and Norway (see Figure 4). In Lithuania, at secondary level, only one third of the curriculum is subject to vertical flexibility. In the Czech Republic, vertical flexibility applies to around 84 % of the recommended instruction time in primary education, and 82 % in lower secondary education.

Vertical flexibility operates differently in countries. In some cases, the total instruction time is indicated for a complete level of education, in others it applies to a group of grades within a level. In the Czech Republic, the Netherlands and Norway, the instruction time is indicated for the whole level of education. In Estonia, Poland and Iceland, at primary level, grades are split into two groups. In Lithuania, the minimum instruction time is given for each group of two grades at both primary and secondary level. In Finland, the combination of grades varies depending on the subject (i.e. groups comprise different grades depending on the subject). In Sweden, the minimum instruction time for compulsory subjects is set for the duration of compulsory education, without distinguishing between ISCED levels (²⁴).

^{(&}lt;sup>24</sup>) Additional information on the subjects affected by vertical flexibility in the different education systems can be found in Part III, National diagrams, Section 2. Some countries provide a more detailed description in Section 5: Country-specific notes.

Figure 4: Time flexibility (vertical and horizontal) and subject flexibility, % of the total instruction time per ISCED level, 2016/17



Explanatory note (Figure 4)

Vertical time flexibility: Central education authorities indicate the total instruction time for a certain subject for several grades, for a whole level or for the whole period of full-time compulsory education. Schools/local authorities are then free to decide how much time to allocate to each grade.

Horizontal time flexibility: Central education authorities indicate the total instruction time for a group of subjects within a specific grade. Schools/local authorities are then free to decide how much time to allocate to individual subjects (²⁵).

Subject flexibility: Regional/local authorities or schools choose their own subjects (in some cases from a list defined by central education authorities) and allocate the time defined by the central authorities for this purpose (²⁶).

Full flexibility: Central education authorities do not define the standard curriculum or the minimum instruction time. Regional authorities, local authorities or schools are free to decide how much time to allocate to individual subjects and grades.

There are also differences in the way that vertical flexibility is applied in countries in terms of whether it is mandatory to teach one or more subjects in every grade of a group or level of education.

In the **Czech Republic**, the core subjects must be taught in every grade of the group, but this obligation does not extend to ICT and technology (27).

In **Estonia**, instruction in the compulsory subjects is generally provided in each grade of a group even when it is not mandatory. For some subjects (e.g. citizenship), this may not be possible (²⁸).

In **Lithuania**, the education plans indicate the different options for schools to allocate the recommended weekly number of hours between the two grades in each group, including the option not to provide any instruction in one of the grades.

In the Netherlands, it is at the discretion of schools which subjects to teach in each grade.

In **Poland**, theoretically, schools are not obliged to teach a particular subject in every grade concerned, but, in practice, the weekly timetables do provide for instruction time in every grade.

In **Finland**, schools can start teaching any compulsory subject with vertical flexibility as from grade 1, and they must introduce the first foreign language in grade 3 at the latest; the second foreign language in grade 6; social studies, in grade 4; and home economics, guidance and counselling (practical and vocational skills) in grade 7.

In **Sweden**, there is no regulation on whether the subject should be taught in every grade of compulsory education but, for almost all subjects, the curriculum defines the content that should be taught for grades 1-3, 4-6 and 7-9. Schools can still decide in which grade to start within each three-year cycle (²⁹).

Horizontal flexibility occurs when the central education authorities set a total number of teaching hours for a combination of compulsory subjects within the same grade. The local authorities or the schools themselves have then to decide how much time to allocate to each subject. In two education systems, there is full horizontal flexibility. In the United Kingdom (Wales), the Welsh Government sets the minimum total instruction time for each grade but it is for schools to decide how much time to allocate to individual subjects. The Netherlands has full flexibility with respect to time allocation (horizontal and vertical). The minimum requirements for instruction time are set per education level, and schools have full flexibility to allocate it across subjects and grades.

Schools have horizontal flexibility to allocate a significant proportion of the centrally defined minimum instruction time across compulsory subjects in the German-speaking and Flemish Communities of Belgium and the United Kingdom (Northern Ireland). In the French Community of Belgium and Italy, this only takes place at primary level. In Denmark, there is only horizontal flexibility in grade 1, and in

⁽²⁵⁾ Corresponds with the category 'compulsory subjects with flexible timetable', Part III, National diagrams.

⁽²⁶⁾ Corresponds with the category 'compulsory flexible subjects chosen by the school', Part III, National diagrams.

^{(&}lt;sup>27</sup>) Reading, writing and literature, mathematics, natural sciences, social studies and arts education must be taught in all the related grades but this obligation does not extend to 'ICT' and 'technology'.

^{(&}lt;sup>28</sup>) This is the case for subjects where only one or two lessons per week are prescribed for all the grades in a group. Then, the subject is usually taught only in one of the grades.

⁽²⁹⁾ For Home and consumer studies, the core content is defined for years 1-6 and 7-9; and for Modern languages, for years 4-9 (but schools can also choose to start from year 1).

Poland, in grades 1-3. In Ireland, horizontal flexibility applies to many subjects in grade 10 (upper secondary education) (³⁰).

In a few other cases, there is some horizontal flexibility but this affects a small proportion of the curriculum. In Malta, in primary education, and in Portugal and Romania at both primary and secondary levels, in addition to the minimum instruction time established for each subject, schools have the flexibility to allocate a few additional hours across the compulsory subjects. In Finland, schools can distribute some additional centrally defined time between music, visual arts, crafts, physical education and home economics. In Poland (grades 7-9) and in Iceland (grades 5-10), education authorities prescribe the minimum instruction time for teaching two foreign languages and schools decide how much time to allocate to each of them. In Ireland, in lower secondary education, schools have some additional instruction time to allocate between English, Irish and maths.

In addition to time flexibility, schools can also be granted some flexibility to select a number of compulsory subjects either as an open choice or from a predefined list. **Subject flexibility** can be found in a similar number of countries but it affects a smaller percentage of the total instruction time in all cases (between 1 % and 23 %). In nine countries (the Czech Republic, Estonia, Spain, Latvia, Hungary, Poland, Portugal, Slovakia and Finland), there is some subject flexibility at both primary and secondary level. Schools can use this additional time defined by the education authorities to provide more instruction time for compulsory and elective subjects or to offer subjects of their own choice such as sports, foreign languages, religion and moral education, ICT and technologies (³¹). In Greece and Norway, there is some subject flexibility only in primary education. In Greece, this time is used to implement cross-thematic programmes (e.g. on environmental education, health education, culture and arts); while in Norway, primary schools can offer compulsory subjects of their own choice. In the French and Flemish Communities of Belgium, secondary schools have some flexibility to decide which elective subjects to offer to students.

The highest degree of local decentralisation and school autonomy can be found in the United Kingdom (England and Scotland) and Switzerland. In the United Kingdom (England), the Department for Education has not established a minimum instruction time since 2011, but the requirement remains for schools to allow sufficient instruction time in each year to deliver the statutory curriculum areas. In the United Kingdom (Scotland), the *Curriculum for Excellence* does not establish any minimum instruction time overall for the curriculum or for any subject (with the exception of 'physical education') but it states that the Broad General Education Phase (grades 1-10) should include all of the experiences and outcomes across eight curriculum areas. In Switzerland, at national level, only education standards (basic competences) for core subjects are defined. There is no standard curriculum and no predefined instruction time (with the exception of a minimum number of hours for physical education) at national level. Within the framework of the education standards, at regional level, the Cantons are free to determine curricula (at the level of language-regions) and intended instruction time (at cantonal level).

(30) Additional information on the subjects affected by horizontal flexibility in the different education systems can be found in Part III, National diagrams, Section 2. A more detailed description is available in Section 5: Country-specific notes.

⁽³¹⁾ In the Czech Republic, schools can use this time to increase the instruction in compulsory or elective subjects, to start teaching a foreign language in grades 1-2, to teach a second foreign language or swimming in primary education or to teach additional foreign languages. In Estonia, schools usually offer religion and moral education and information and communication technologies. In Spain, this category includes the instruction time that Autonomous Communities must provide on subjects of their choice (normally from a predefined list). In Latvia, the education authorities recommend that schools devote this additional time to sports. In Hungary, schools can increase the time spent on compulsory subjects or offer other subjects of their choice. In grade 5, they must offer either Drama-dance or Homeland and peoples, and in grade 9 either Drama-dance or Media. In Poland, schools can use this time to teach subjects of their choice or to organise specific classes according to pupils' needs and interests. In Portugal, this time can be allocated to any of the compulsory or elective subjects. In Slovakia, schools can increase the instruction time of the compulsory subjects or offer a second and third language, technology or other subjects. In Finland, schools can offer any subject.

5. In the majority of countries, students spend at least two hours a week on physical education and health in primary and lower secondary education

The EU has acknowledged the role that sport can play not only in individuals' health and fitness, but also in contributing to the integration of marginalised groups and promoting participation and tolerance among young people. In its 2011 Communication on sport, the European Commission noted that physical activity is one of the most important health determinants in modern society and launched a new EU policy initiative to promote health-enhancing physical activity (HEPA), taking into account the large differences between member states in physical activity levels and public approaches to health and sport (³²). The Council of the European Union deems schools an 'effective tool' to increase awareness of HEPA and, accordingly, the instruction time on physical education in primary and secondary schools is one of the indicators proposed for the evaluation of HEPA levels and policies (³³). Moreover, physical activity can contribute to improving students' ability to focus in class and their readiness to learn.

Compared with the core academic subjects, health and physical education represents a small share of the total curriculum both at primary and secondary level. The percentage of the total instruction time recommended for this subject area for the whole of primary education ranges from 4 to 20 % depending on the country. The share of reading, writing and literature goes from 15 to 38 % and that of mathematics from 14 to 26 %. In full-time compulsory general secondary education, education authorities allocate between 5 and 16 % of the minimum instruction time to physical education and health, while reading, writing and literature and mathematics each takes up between 9 and 26 % of the curriculum at this education level.

In the case of physical education, it is nevertheless more meaningful to look at the number of hours devoted to physical activity and health during the school week. On average, around two hours a week are allocated to this subject area in primary and lower secondary education, and around one hour and 45 minutes in upper secondary education (in the grades that some countries include in full-time compulsory general education).

Hours/week Hours/week ISCED 3 3 3 2 2 1 3 3 2 1 0 3 3 2

Figure 5: Minimum number of hours <u>per week</u> allocated to PHYSICAL EDUCATION AND HEALTH by education level, 2016/17

Source: Eurydice.

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Flexible timetable

⁽³²⁾ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Developing the European dimension in sport, COM/2011/0012 final.

⁽³³⁾ See the Council Recommendation of 26 November 2013 on promoting health-enhancing physical activity across sectors (2013/c 354/01) http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2013:354:0001:0005:EN:PDF

Data (Figure 5)

Number of hours per week of instruction time allocated to physical education and health by ISCED level, 2016/17

	BE fr	BE de	BE nl	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT
ISCED 1	1.7	•	•	1.4	1.5	3.8	2.1	2.0	1.0	1.9	2.0	3.0	2.1	•	1.6	1.3	2.1	2.4	3.8	1.9
ISCED 24	2.5	•	•	1.7	1.9	3.8	2.0	1.5	2.0	1.5	2.0	3.3	1.5	2.0	2.2	1.3	1.6	1.9	3.8	2.6
ISCED 34	1.7	•	•	1.6			1.8		•		2.0	2.0		2.0				1.7	3.7	0.7
	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	UK-	ВА	СН	IS	LI	ME	MK	NO	RS	TR
									-	(1)	SCT									
ISCED 1	•	2.1	3.0	1.8	1.7	2.6	1.5	1.7	1.6	(1)	2.0	2.4	2.3	2.0	2.3	2.3	2.0	2.1	2.3	2.8
ISCED 1	•	2.1	3.0	1.8	1.7	2.6	1.5			()										

Source: Eurydice.

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

Explanatory note

This figure shows the minimum number of hours per week that students receive in primary and full-time compulsory general secondary education, which has been calculated by dividing the total instruction time for each education level by the number of years concerned and the number of weeks in the 2016/17 school year.

Country-specific notes

Denmark: All students must receive at least 45 minutes of physical education every day. In the national diagrams (Part III), this time is captured partly in 'physical education and health' and partly in 'other subjects', which include the time that schools can devote to either physical education or other supportive learning activities.

Poland: In grades 4-9, schools have to provide at least four periods (of 45 minutes) of physical education per week. At primary level, the number of hours in the figure only refers to grades 4-6.

Switzerland: In primary and lower secondary education, schools have to provide a minimum of 3 periods (of 45 minutes) a week

In almost two-thirds of the countries, students in primary education are expected to receive at least two hours a week of instruction in physical education and health. In Denmark and Hungary, students have a 45-minute lesson every day (i.e. 3 hours and 45 minutes a week). In France and Poland, the recommended instruction time also reaches 3 hours a week. In contrast, in Bulgaria, the Czech Republic, Ireland, Latvia and Slovakia, the minimum recommended is one-and-a-half hours or less.

In half of the countries, students in lower secondary education are expected to receive at least two hours a week of instruction in physical education and health. In Denmark and Hungary, students also have a 45-minute lesson every day at this education level (i.e. 3 hours and 45 minutes a week). The minimum recommended is also particularly high in France (3 hours and 15 minutes a week) and Poland (3 hours per week). In contrast, in Estonia, Greece, Croatia, Latvia, Romania, Slovakia, Bosnia and Herzegovina and Turkey, the minimum recommended is one-and-a-half hours or less.

In 15 countries, the education authorities provide for a similar number of hours per week in primary and lower secondary education (i.e. Denmark, Germany, Spain, Latvia, Hungary, Poland, Portugal, Slovakia, Sweden, Switzerland, Iceland, Liechtenstein, the former Yugoslav Republic of Macedonia, Norway and Serbia). In 11 cases (i.e. Estonia, Greece, Croatia, Lithuania, Luxembourg, Romania, Slovenia, United Kingdom (Scotland), Bosnia and Herzegovina, Montenegro and Turkey), the number of hours decreases with the education level. In contrast, in nine education systems (i.e. the French Community of Belgium, Bulgaria, the Czech Republic, Ireland, France, Cyprus, Malta, Austria and Finland), the number of hours is higher in lower secondary education than in primary education.

In those countries where one or more grades at upper secondary level are part of full-time compulsory general education, the weekly instruction time defined for physical education and health in these grades is usually similar to that for lower secondary education (or in some cases slightly less). In the French Community of Belgium, France and Malta, however, it is significantly lower. It is higher only in Portugal.

There have been limited changes to the centrally recommended minimum instruction time for physical education and health since the 2014/15 school year. In three countries, it has increased at primary

level (Greece, Cyprus and Romania), and in three others at secondary level (Hungary, Malta and Finland). In the remaining countries, there have been no changes (³⁴).

In addition to the compulsory time that all students must spend on physical education and health, in some countries schools may also offer additional instruction time as part of the compulsory or the non-compulsory curriculum. For instance, in the Czech Republic, swimming and, in Latvia, sport more generally, are among the compulsory flexible subjects that schools can offer to students. In France, in grade 10 and in Turkey at lower secondary level, students may also take physical education as an elective subject. In Greece, Portugal and Slovenia, physical education and sport – besides being a compulsory subject – are also part of the non-compulsory curriculum (35).

6. Reading, writing and literature takes up the largest share of the curriculum, especially in primary education

This section examines the relative importance of reading, writing and literature (in the main language of instruction or language 1) (³⁶). The bar chart in Figure 6 shows the proportion of total instruction time allocated to this subject area in primary and full-time compulsory general secondary education. The number of hours by education level is indicated in the table below.

Reading, writing and literature is the subject area that accounts for the largest proportion of instruction time at all education levels, being especially dominant in primary education. At this level, the minimum instruction time recommended for this subject area covers an average of more than 26 % of the curriculum, ranging from 15 % to 38 % depending on the country (³⁷). Only in countries where the teaching of a second language (language 2) also takes up a significant share of the curriculum (e.g. the German-speaking Community of Belgium, Ireland, Malta and Iceland) is the percentage relatively low as compared with other countries (between 15 and 20 %). In Bulgaria, France, Cyprus, Lithuania, Austria, Slovakia and Turkey, it accounts for 30 % or more of the total instruction time recommended for the whole of primary education.

The average number of hours of instruction allocated to reading, writing and literature across the whole of primary education is 953 hours, ranging from 525 hours in Croatia to 1 656 in France. In 15 other education systems, it also exceeds 900 hours (the German-speaking Community of Belgium, the Czech Republic, Denmark, Ireland, Greece, Spain, Cyprus, Luxembourg, Portugal, Slovenia, Sweden, Finland, Iceland, Liechtenstein and Norway). The numbers of hours are lower in countries where primary education spans fewer years (Bulgaria, Croatia, Lithuania, Romania, Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia and Serbia) (see Figure 2b).

Reading, writing and literature is the subject area allocated the largest number of hours in nearly all countries at primary level. The only exception is Malta, where the number of hours allocated to mathematics is higher. However, in this country, English (language 2) is also an official language which is taught alongside Maltese as from the first year of schooling. The instruction time allocated to language 2 at primary level equals that of reading, writing and literature, which is significantly higher than in other countries (see Section 7).

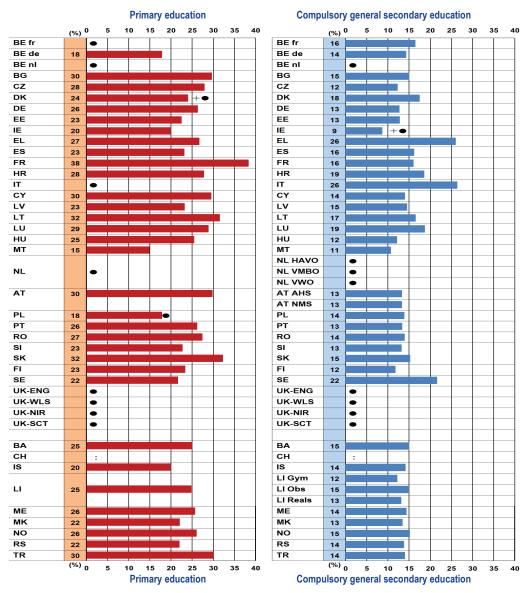
⁽³⁴⁾ European Commission/EACEA/Eurydice, 2015. Recommended Annual Instruction Time in Full-time Compulsory Education in Europe – 2014/15. Eurydice – Facts and Figures. Luxembourg: Publications Office of the European Union.

⁽³⁵⁾ The non-compulsory curriculum refers to the instruction time that schools must offer but it is not mandatory for all students.

⁽³⁶⁾ In this comparative analysis as in the rest of the document, 'reading, writing and literature' pertains to 'language 1', which is the language of instruction. Additional languages learnt by students are categorised as 'language 2', 'language 3', 'language 4' and 'language 5'. These usually refer to foreign languages but could also be official languages in some countries. In this text, 'other languages' refers to languages other than language 1.

⁽³⁷⁾ Only the education systems for which the minimum instruction time is centrally defined for this subject area have been taken into account in the calculations. Poland is not included given that the minimum instruction time for this subject is only defined for grades 4-6, whereas it is a compulsory subject with a flexible timetable in grades 1-3. At secondary level, only the *Realschule* has been taken into account for Liechtenstein.

Figure 6: Percentage of the recommended minimum instruction time allocated to READING, WRITING AND LITERATURE in primary and full-time compulsory general secondary education, 2016/17



Compulsory subject area with time flexibility

Source: Eurydice.

Minimum instruction time in hours as defined centrally for reading, writing and literature, per education level, 2016/17

	BE fr	BE de	BE nl	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV
Primary	•	900	•	560	960	1 530	744	893	1 092	1 213	1 099	1 656	525	•	1 405	835
Secondary	865	720	•	591	437	630	699	315	240	614	684	774	473	1 254	358	347
	LT	LU	HU	MT		NL		AT		PL	PT	RO	SI	SK	FI	SE
Primary	696	1 601	710	732	•		840		383	1 310	642	919	874	912	993	
Secondary	732	634	627	413	HAVO	VMBO	VWO	480 AHS	480 NMS	338	682	673	305	761	285	497
	UK- ENG	UK- WLS	UK- NIR	UK- SCT		ВА	СН	IS		LI		ME	MK	NO	RS	TR
Primary	•	•	•	•		675	•	1 020		944		756	672	1 372	540	864
Secondary	•	•	•	•		453	•	357	472 Gym	555 Obs	500 Reals	450	708	398	453	1 008

Source: Eurydice.

Explanatory note

This figure only concerns general education. The percentage for each subject is obtained by dividing the total time allocated to this subject in primary and full-time compulsory general secondary education by the minimum total instruction time provided for the respective education level (and multiplying by 100).

Country-specific notes (Figure 6)

Denmark: Grade 1 has been excluded since reading, writing and literature is a compulsory subject area with time flexibility in this grade.

Germany: The data represent the weighted average instruction time in compulsory core curriculum subjects, calculated by the Secretariat of the Ministers of Education and Cultural Affairs of the *Länder* on the basis of the number of students enrolled in the different types of school (reference year 2015/16).

Ireland: Grade 10 has been excluded since reading, writing and literature is a compulsory subject with time flexibility in this grade

Spain: The data on intended instruction time are based on national and regional regulations on curriculum and school calendars (reference year 2016/17). To calculate the weighted averages, statistics were used on the number of students per grade and Autonomous Community, as reported by the statistics office of the Ministry of Education, Culture and Sport (reference year 2014/15)

Austria: Data are not available for grade 9, but this grade is part of full-time compulsory general education.

Poland: In grades 1-3 of primary education, reading, writing and literature is a compulsory subject area with time flexibility, and the instruction time for these grades is therefore not included. The percentage shown in the figure only refers to grades 4-6.

Sweden: The recommended minimum instruction time is a total for the nine years of compulsory education. It has been artificially allocated to ISCED level 1 and 24 proportionally to the number of years at each education level (6 and 3 respectively).

In full-time compulsory general secondary education, the minimum instruction time recommended for reading, writing and literature accounts for an average of 15 % of the curriculum, significantly less than at primary level. It represents around 9 % of the total instruction time at this education level in Ireland, 11 % in Malta and 12 % in Hungary and Finland (³⁸). Only in two countries, Greece and Italy, does reading, writing and literature account for more than 20 % of the total instruction time at secondary level (in contrast with primary education where, in all countries but two, the percentage is more than 20 %).

On average, 564 hours are allocated to reading, writing and literature for the whole of full-time compulsory general secondary education, around 41 % less than at primary level. This substantial difference is partly due to the fact that primary education spans more years and takes up a greater amount of instruction time in most countries (see Figure 2b). Nevertheless, generally, there is less emphasis on this subject area in the curriculum at secondary level. The minimum instruction time allocated to reading, writing and literature for the whole of full-time compulsory general secondary education is less than 900 hours in all countries except Italy and Turkey. In around half the countries, it is similar or lower than the minimum recommended for the teaching of other languages (see Section 7), and in a few cases, it is similar to the minimum instruction time recommended for maths or natural sciences (see Sections 8 and 9).

Over the last year, the minimum instruction time allocated to reading, writing and literature increased in Greece and France, and decreased in Hungary (at primary level) (³⁹).

7. At secondary level, the teaching of other languages becomes as important as reading, writing and literature

This section examines the minimum instruction time allocated to teaching languages other than the main language of instruction as compulsory subjects. This subject area can include, depending on the country, up to four other languages (language 2, 3, 4 and 5). These usually refer to foreign languages but can also be a second (or third) official language in the country.

The minimum instruction time allocated to the teaching of other languages is much lower in primary than in compulsory general secondary education. In many countries, students start learning a second language much earlier than in the past, but it is not always compulsory from the first grade of primary education, or in some cases the amount of instruction time is less at this early stage. Additionally, it is not common for a third language to be taught at primary level. Only in Denmark, Greece and Finland

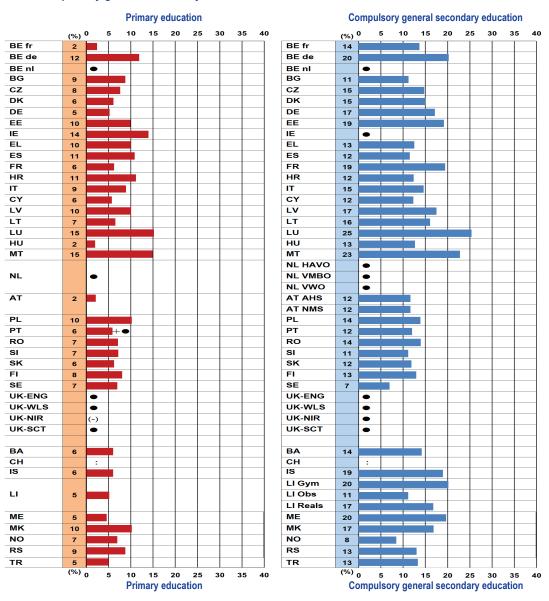
⁽³⁸⁾ In Ireland, this is the minimum instruction time prescribed for lower secondary education or the Junior Cycle but schools in practice offer more instruction time on reading, writing and literature from the time that they can distribute to their discretion across the compulsory subjects. Grade 10 has been excluded given that reading, writing and literature is a compulsory subject with time flexibility.

⁽³⁹⁾ European Commission/EACEA/Eurydice, 2016. Recommended Annual Instruction Time in Full-time Compulsory Education in Europe – 2015/16. Eurydice – Facts and Figures. Luxembourg: Publications Office of the European Union.

is a second foreign language (language 3) introduced in the last grades of primary education. At primary level, the emphasis of the curriculum is more on reading, writing and literature (in the main language of instruction). But at secondary level, in many countries, the teaching of other languages becomes as important or more important, in terms of the time allocated.

Only about 8 % of the instruction time provided for primary education is allocated on average to teaching languages other than the main language of instruction (40), ranging from 2 % in the French Community of Belgium, Hungary and Austria up to 15 % in Luxembourg and Malta. The highest values can indeed be found in those countries with more than one official language such as Ireland, Luxembourg and Malta. The percentage is also high in the German-speaking Community of Belgium, Greece, Spain, Croatia, Estonia, Latvia and the former Yugoslav Republic of Macedonia.

Figure 7: Percentage of the recommended minimum instruction time allocated to OTHER LANGUAGES in primary and full-time compulsory general secondary education, 2016/17



Compulsory subject area with time flexibility

Source: Eurydice.

⁽⁴⁰⁾ Only the education systems for which the minimum instruction time is centrally defined for this subject area have been taken into account in the calculations. Poland is not included since the instruction time for this subject is only set for grades 4-6. Language 2 is a compulsory subject with time flexibility in grades 1-3. At secondary level, only the *Realschule* has been taken into account for Liechtenstein.

Data (Figure 7)

Minimum instruction time in hours as defined centrally for other languages, per education level, 2016/17

	BE fr	BE de	BE nl	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV
Primary	119	600	•	165	262	450	148	394	764	455	515	270	210	396	272	362
Secondary	716	1020	•	440	524	540	938	473	•	295	485	936	315	693	314	416
	LT	LU	HU	MT	NL			AT		PL	PT	RO	SI	SK	FI	SE
Primary	144	842	55	732	•		60		218	295	166	289	169	314	320	
Secondary	710	859	653	883	HAVO	● VMBO	VWO	420 AHS	420 NMS	338	609	673	256	592	314	160
	UK- ENG	UK- WLS	UK- NIR	UK- SCT		ВА	СН	IS	LI		ME	MK	NO	RS	TR	
Primary		•	(-)	•		162	•	306		194		135	312	366	216	144
Secondary	•	•	•	•		426	•	476	777 Gym	416 Obs	638 Reals	614	885	222	426	960

Source: Eurydice.

Explanatory note

This figure only concerns general education. The percentage for each subject is obtained by dividing the total time allocated to this subject area in primary and full-time compulsory general secondary education by the minimum total instruction time provided for the respective education level (and multiplying by 100).

Country-specific notes

Belgium (BE fr): The minimum instruction time in primary education for the teaching of other languages in the Brussels-Capital Region and in the communes with a special linguistic regime is higher (see Part III, Section 5, Country-specific notes).

Germany: The data represent the weighted average instruction time in compulsory core curriculum subjects, calculated by the Secretariat of the Ministers of Education and Cultural Affairs of the *Länder* on the basis of the number of students enrolled in the different types of school (reference year 2015/16).

Spain: The data on intended instruction time are based on national and regional regulations on the curriculum and school calendars (reference year 2016/17). To calculate the weighted averages, statistics were used on the number of students per grade and Autonomous Community, as reported by the statistics office of the Ministry of Education, Culture and Sport (reference year 2014/15).

Austria: A foreign language in the two first years of primary education is taught as part of other subjects for a minimum of 27 hours per year, but this time is not included in the figure. Data are not available for grade 9, but this grade is part of full-time compulsory general secondary education.

Poland: In grades 1-3 of primary education, language 2 is a compulsory subject area with time flexibility, and the instruction time for these grades is therefore not included. The percentage shown in the figure only refers to grades 4-6.

Sweden: The recommended minimum instruction time is a total for the nine years of compulsory education. It has been artificially allocated to ISCED level 1 and 24 proportionally to the number of years at each education level (6 and 3 respectively). In reality, the number of hours devoted to foreign languages in general lower secondary education is much higher.

On average, 312 hours are recommended for this subject area across the whole of primary education. The highest numbers of hours are found in Luxembourg (842), Ireland (764) and Malta (732), with the German-speaking Community of Belgium, Denmark, Greece and Spain following with between 450 and 600 hours.

The importance of other languages in the curriculum grows significantly at secondary level. In full-time compulsory general secondary education, the teaching of additional languages takes the same share on average (15 %) as reading, writing and literature. The percentage can range from 7 % in Sweden and 8 % in Norway to 23 % in Malta and 25 % in Luxembourg. In the German-speaking Community of Belgium, Estonia, France, Iceland, Liechtenstein (*Gymnasium*) and Montenegro, the teaching of other languages account for between 19 and 20 % of the curriculum at secondary level.

The average number of hours provided for other languages for the whole of full-time compulsory general secondary education is 565, similar to that for language 1 (reading, writing and literature). In the German-speaking Community of Belgium, Germany, France and Turkey, it exceeds 900 hours. In about half the countries, the time allocated to the teaching of other languages at secondary level is greater than that provided for the other subject areas, including reading, writing and literature.

The study of foreign languages can also be offered to students as optional subjects or within the framework of a CLIL-type programme, but this has not been taken into account in this comparative overview (41). In many countries (French Community of Belgium, Denmark, Spain, France, Malta,

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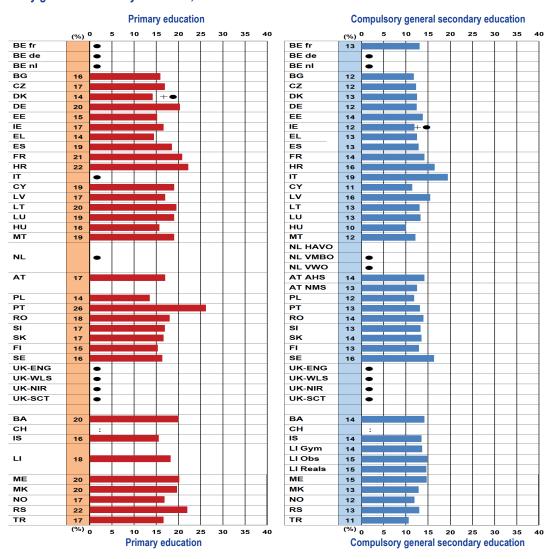
⁽⁴¹⁾ Content and Language Integrated Learning (CLIL)

Austria, Portugal, Slovenia, Slovakia, Switzerland and Norway), schools are required to offer at least one foreign language as an elective subject in some or all grades of secondary education. In Sweden, English and a second foreign language are offered as compulsory options to students as early as primary level. Foreign languages are also taught as part of the non-compulsory curriculum in Greece, Croatia, Austria, Portugal, Finland and Slovenia. Additionally, in most countries, there are also CLIL programmes in place (42).

8. Maths takes up the second largest share of the curriculum in primary education but its relative importance decreases in compulsory general secondary education

Mathematics represents the second largest share of instruction time in primary education. At secondary level, its relative importance in the curriculum decreases in favour of the teaching of other languages and natural sciences.

Figure 8a: Percentage of the recommended minimum instruction time allocated to MATHS in primary and full-time compulsory general secondary education, 2016/17



Compulsory subject area with time flexibility

Source: Eurydice.

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^{(&}lt;sup>42</sup>) Detailed information can be found in: European Commission/EACEA/Eurydice, 2017. *Key Data on Teaching Languages at School in Europe – 2017 Edition*. Luxembourg: Publications Office of the European Union.

Data (Figure 8a)

Minimum instruction time in hours as defined centrally for maths, per education level, 2016/17

	BE fr	BE de	BE nl	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV
Primary	•	•	•	300	582	900	573	604	911	657	881	900	420	•	907	609
Secondary	686	•	•	462	437	450	682	341	328	295	542	684	420	924	291	369
	LT	LU	HU	MT		NL		AT		PL	PT	RO	SI	SK	FI	SE
Primary	432	1 056	437	935	•			480 2		289	1 310	423	683	451	599	750
Secondary	581	451	518	469	HAVO	VMBO	VWO	510 AHS	450 NMS	289	353	673	306	677	314	375
	UK- ENG	UK- WLS	UK- NIR	UK- SCT		ВА	СН	IS		LI		ME	MK	NO	RS	TR
Primary	•	•	•	•		540	•	793		694		594	600	888	540	480
Secondary	•	•	•	•		426	•	340	527 Gym	555 Obs	555 Reals	459	675	313	426	768

Source: Eurydice.

Explanatory note

This figure only concerns general education. The percentage for each subject is obtained by dividing the total time allocated to this subject in primary and full-time compulsory general secondary education by the minimum total instruction time provided for the respective education level (and multiplying by 100).

Country-specific notes

Denmark: Grade 1 has been excluded since maths is a compulsory subject area with time flexibility in this grade.

Germany: The data represent the weighted average instruction time in compulsory core curriculum subjects, calculated by the Secretariat of the Ministers of Education and Cultural Affairs of the *Länder* on the basis of the number of students enrolled in the different types of school (reference year 2015/16).

Ireland: Grade 10 has been excluded since maths is a compulsory subject with time flexibility.

Spain: The data on intended instruction time are based on national and regional regulations on the curriculum and school calendars (reference year 2016/17). To calculate the weighted averages, statistics were used on the number of students per grade and Autonomous Community, as reported by the statistics office of the Ministry of Education, Culture and Sport (reference year 2014/15).

Austria: Data are not available for grade 9, but this grade is part of full-time compulsory general education.

Poland: In grades 1-3 of primary education, maths is a compulsory subject area with time flexibility, and the instruction time for these grades is therefore not included. The percentage shown in the figure only refers to grades 4-6.

Portugal: Grades 10-12 have been excluded since mathematics is an optional subject.

Sweden: The recommended minimum instruction time is a total for the nine years of compulsory education. It has been artificially allocated to ISCED level 1 and 24 proportionally to the number of years at each education level (6 and 3 respectively).

In primary education, around 18 % of the minimum instruction time is allocated on average to mathematics, varying from 14 % in Denmark to 26 % in Portugal (⁴³). In eight other countries, the percentage is also over 20 % (i.e. Germany, France, Croatia, Lithuania, Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia, Montenegro and Serbia). Only four countries allocate less than 16 % of the total instruction time at primary level to this subject (Denmark, Estonia, Greece and Finland). On average, nearly 670 hours are allocated to maths in primary education, ranging from 300 hours in Bulgaria to 1 056 in Luxembourg and 1 310 in Portugal. Denmark, Ireland, Spain, France, Cyprus, Malta and Norway also provide for 800 hours or more.

In full-time compulsory general secondary education, the minimum instruction time recommended for mathematics does not vary much between countries (44). In almost all countries, it takes between 10 and 16 % of the total instruction time recommended for this education level. The share goes up to 19 % in Italy. On average, 484 hours are allocated to this subject area at secondary level, 80 hours less than reading, writing and literature (language 1) and other languages.

Over the last year, the minimum instruction time allocated to mathematics has increased in Greece, Hungary (in primary education) and Sweden (⁴⁵).

^{(&}lt;sup>43</sup>) Only the education systems for which the minimum instruction time is centrally defined for this subject area have been taken into account in the calculations. Poland is not included since the instruction time for this subject is only set for grades 4-6. Language 2 is a compulsory subject with time flexibility in grades 1-3. At secondary level, only the *Realschule* has been taken into account for Liechtenstein.

⁽⁴⁴⁾ The standard deviation from the average is 218 hours at primary level and 159 hours at secondary level. In reading, writing and literature, the standard deviation is 308 and 218 respectively.

⁽⁴⁵⁾ European Commission/EACEA/Eurydice, 2016. Recommended Annual Instruction Time in Full-time Compulsory Education in Europe 2015/16. Eurydice – Facts and Figures. Luxembourg: Publications Office of the European Union.

8.1. TIMSS data confirm the special attention given to maths in terms of instruction time at primary level

In the international surveys TIMSS and PISA, teachers and students are asked about instruction time on subjects such as mathematics and science. In countries where there is no minimum instruction time specifically allocated by the education authorities to these subjects (for instance, when there is horizontal or vertical flexibility), data from these surveys can provide information on how schools use their autonomy to allocate the minimum instruction time across subjects or through grades. In the other countries, the instruction time reported by teachers and students can give an indication of how much actual instruction time students get, as compared to the minimum recommended. The data from the surveys can also show the differences in instruction time between students in the same country. Data from TIMSS and PISA, however, must be interpreted with caution given the questions on which they are based and other characteristics of the surveys (see explanatory notes below the figures).

Figure 8b shows the minimum instruction time recommended for maths in grade 4 in 2016/17, and the distribution of the student population (percentiles 25, 50 and 75) according to the number of hours per week that their teachers reported spending on teaching mathematics in TIMSS 2015.

Teachers from 25 of the 42 countries covered by this report participated in TIMSS 2015 and answered the question on instruction time for maths. For 11 of these countries, it is not possible to indicate the minimum instruction time recommended by the education authorities for grade 4 because it is provided for a group of subjects and/or grades.

In the other 14 countries, the minimum number of hours centrally allocated to maths in this grade can be compared with the number of hours a week that teachers reported teaching in TIMSS and the proportion of students concerned:

- In six countries (Bulgaria, Ireland, Spain, Hungary, Slovakia and Serbia), the 50th percentile is
 higher than the minimum instruction time, that is, at least half of the students in grade 4 appear to
 receive more instruction time in mathematics than the minimum recommended.
- In Portugal and Slovenia, three quarters of the students receive more than the recommended minimum instruction time (i.e. the 25th percentile is higher than the minimum).
- In the other six countries, most students receive approximately the instruction time defined by the education authorities.

Of these 14 countries, according to TIMSS teacher data, students in grade 4 in France and Portugal receive the largest number of hours per week. In France, half receive between five and five-and-a-half hours and a quarter receive five-and-a-half hours or more. In Portugal, three quarters of students receive seven-and-a-half hours or more.

In countries where there is no minimum instruction time specifically defined for this subject area, namely, the Flemish Community of Belgium, Italy and the United Kingdom (England and Northern Ireland), teacher data suggest that three quarters of the students receive five hours or more a week. In the Netherlands, half of the students receive between four and five hours a week. This appears to confirm the special attention that schools give to this subject area at primary level. In the countries where the minimum instruction time is given for a group of grades (vertical flexibility), the values are not as high.

The difference between the 25th and the 75th percentiles can be considered a proxy for the variations between students and schools in a certain country. This difference is one hour a week or more in Spain, Italy, Cyprus, the United Kingdom (Northern Ireland) and Turkey. In the Czech Republic, Germany, Poland and Slovenia, the 25th and the 75th percentiles are the same, and, therefore, there might not be significant differences in the instruction time received by students.

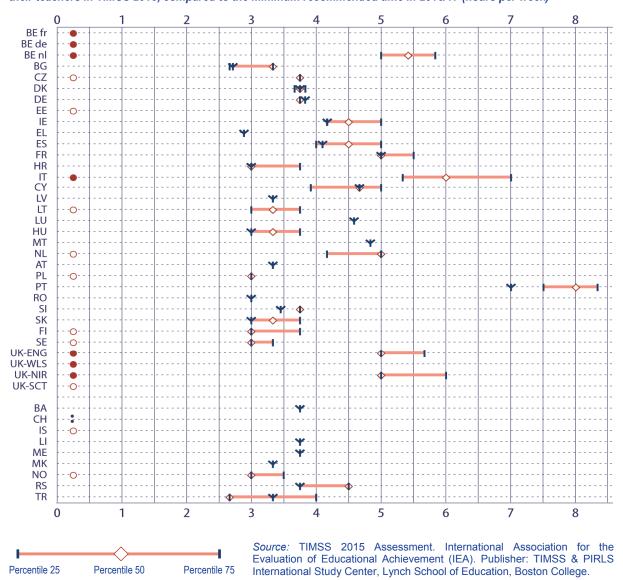


Figure 8b: Distribution of students in grade 4 according to the number of instruction hours for MATHS reported by their teachers in TIMSS 2015, compared to the minimum recommended time in 2016/17 (hours per week)

Horizontal flexible timetable

Source: Eurydice.

O Vertical flexible timetable

Recommended minimum instruction time

Explanatory note

For each country, this figure shows:

- a) The minimum instruction time (in hours per week) recommended for maths in grade 4 in 2016/17 (in countries with no vertical or horizontal flexibility). Source: Eurydice.
- b) The distribution of the student population (percentiles 25, 50 and 75) according to the number of hours per week that their teachers reported teaching this subject in TIMSS 2015. If the 25th percentile is 5 hours, it means that 25 % of the students have a teacher that reported spending less than 5 hours per week on this subject. If the 75th percentile is 10 hours, then, it means that 25 % of the students have a teacher that reported spending 10 hours or more on this subject. By comparing p25 and p75, one can state that about 50 % of the students have between 5 hours and 10 hours a week. If the 50th percentile is 7, it means that 50 % receive less than 7 hours and 50 % 7 hours or more. Source: TIMSS 2015.

Comparison between both sets of data must be made with caution for several reasons. First, the recommended minimum instruction time (Eurydice) refers to public schools, while both public and private schools participate in TIMSS. Second, the TIMSS survey was conducted one year before. Third, in TIMSS teachers are asked how much time they spend teaching mathematics in a typical week.

8.2. PISA data confirm that time spent on maths and differences between countries decrease at secondary level

This section examines the number of hours per week of mathematics that 15-year-old students in general programmes in the modal grade (the grade which accommodates the majority of students of this age) reported receiving in PISA 2015 and compares the data with the minimum instruction time recommended for this subject in this grade (see figure 8c).

PISA 2015 has data available on instruction time in maths for 35 Eurydice countries. In 23 cases, it is not possible to indicate the minimum instruction time provided for 15-year-old students in the modal grade in general programmes for various reasons: a) the official recommendations on instruction time are defined for several grades or for several subjects, b) maths is an elective subject for students, or c) the PISA modal grade does not belong to full-time compulsory general education, and, therefore, this information is not available.

In the other 12 countries, the minimum number of hours that the education authorities provide for maths in this grade (which varies between countries) can be compared with the number of instruction hours a week that students reported receiving in PISA:

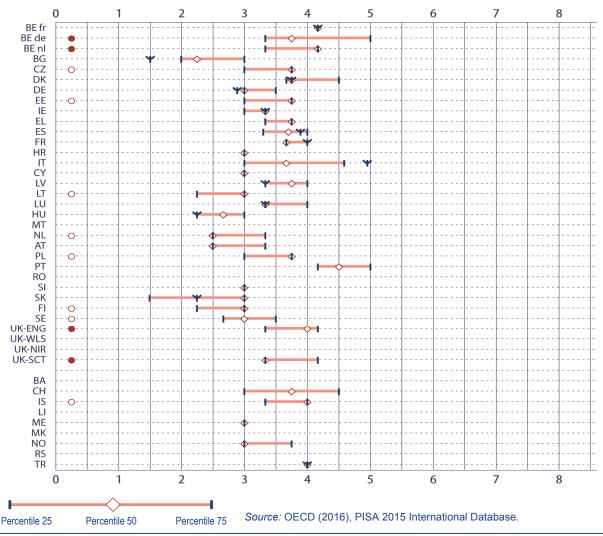
- In Bulgaria and Germany, the 25th percentile exceeds the minimum recommended, which means
 that three quarters of the students reported receiving more instruction time in mathematics than
 the recommended minimum instruction time.
- In Latvia, Hungary and Slovakia, at least half of the students reported receiving more than the minimum recommended. In Denmark, at least half of the students reported receiving the recommended minimum instruction time or more.
- In the French Community of Belgium, Ireland and Turkey, most students said they received the number of hours officially recommended.
- In Spain and France, half of the students said they received slightly less instruction time than that defined by the education authorities. In Italy, three quarters of the students reported receiving less. In Spain, the data represent the weighted average of the Autonomous Communities' recommendations, and, in Italy, data refer to the *Liceo Scientifico* (followed by less than 30 % of the students), which could partly explain the inconsistency. However, the discrepancies, especially in the case of France, suggest that comparison with PISA data on instruction time must be interpreted with caution (see explanatory note below Figure 8c).

Of all the 35 countries, students in the French and Flemish Communities of Belgium, Portugal (where mathematics is an optional subject for students), the United Kingdom (England), Iceland and Turkey reported the largest number of instruction hours per week in mathematics in the modal grade. In these countries, the 50th percentile is four hours a week or more, which means that half of the students receive at least that amount of instruction time. In contrast, the 50th percentile is two-and-a-half hours or less in Bulgaria, the Netherlands and Austria. The 25th percentile is also particularly low in Slovakia and Finland (one-and-a-quarter, and two-and-a-quarter respectively).

The difference between the 25th and the 75th percentiles is one hour a week or more in the German-speaking Community of Belgium, Bulgaria, Italy, Slovakia and Switzerland. In contrast, PISA data suggest that, in the French Community of Belgium, Croatia, Cyprus, Slovenia, Montenegro and Turkey, the instruction time in maths received by all students of this age is more similar.

The analysis above must be taken cautiously given the methodological differences between Eurydice data collection and TIMSS and PISA surveys. Nevertheless, it appears to corroborate (as was pointed out in the previous section) that the importance of mathematics in the curriculum and differences between countries decrease at secondary level.

Figure 8c: Distribution of students in the modal grade in general programmes according to the number of hours of instruction they reported receiving in MATHS in PISA 2015, compared to the minimum recommended time in 2016/17 (hours per week)



Horizontal flexible timetable

Source: Eurydice.

Vertical flexible timetable

Recommended minimum instruction time

Explanatory note

This figure shows for countries participating in PISA 2015:

a) The minimum instruction time (in hours per week) recommended for maths in the modal grade in 2016/17 when there is no vertical or horizontal flexibility (Eurydice).

b) The distribution of the student population (percentiles 25, 50 and 75) according to the number of hours per week that they reported receiving in the subject in PISA 2015. If the 25th percentile is 5 hours, it means that 25 % of the students reported spending less than 5 hours per week on this subject. If the 75th percentile is 10 hours, then, it means that 25 % of the students reported spending 10 hours or more on this subject. By comparing p25 and p75, one can state that about 50 % of the students have between 5 hours and 10 hours a week. If the 50th percentile is 7, it means that 50 % receive less than 7 hours and 50 % 7 hours or more. Source: PISA 2015.

Data only refer to students in the modal grade and in general programmes. The modal grade is the grade which accommodates the majority of 15-year-old students in a country. The proportion of 15-year-olds in other than the modal grade and in vocational programmes differs across countries and cross-country comparison should be made with caution. Grade 9 is the modal grade in Bulgaria, the Czech Republic, Denmark, Germany, Estonia, Ireland, Croatia, Latvia, Lithuania, Luxembourg, Hungary, Poland, Romania, Finland, Sweden and Montenegro. Grade 11 is the modal grade in the Malta and the United Kingdom. In the other countries, it is grade 10.

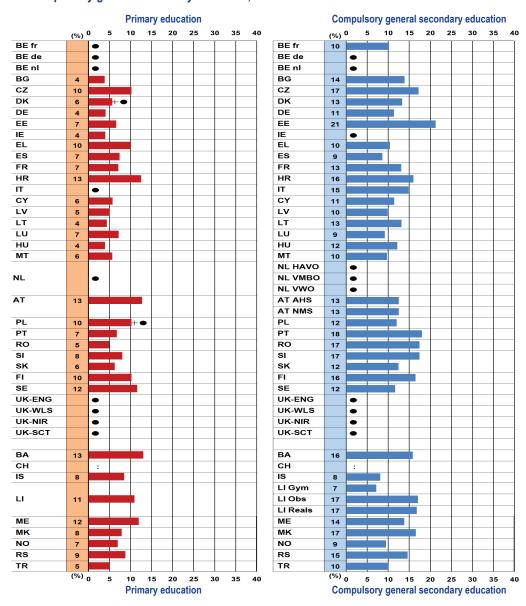
Comparison between data from Eurydice and PISA should be made with caution for several reasons. First, the recommended minimum instruction time in Eurydice refers to public schools, while both public and private schools participate in PISA. Second, the PISA survey was conducted one year before. Third, PISA results come from merging students' answers to two different questions: a) How many lessons a week do they have to follow in the indicated subjects; and, b) How many minutes on average does a lesson last; consequently, a comparison with the centrally recommended minimum instruction time may be problematic.

Natural sciences represent a small proportion of the curriculum in primary education but become more important at secondary level

The emphasis of the curriculum on reading, writing and literature and mathematics decreases with the education level. In contrast, the teaching of natural sciences – as with other languages – becomes more important in compulsory general secondary education. On average, less than 8 % of the minimum instruction time provided for primary education is allocated to this subject area, while the percentage goes up to 13 % at secondary level (the same as mathematics).

In the majority of the countries, natural sciences represent 7 % or less of the curriculum in primary education. In contrast, it takes up 12 or 13 % in Croatia, Austria, Sweden, Bosnia and Herzegovina and Montenegro. On average, 284 hours are provided for natural sciences for the duration of primary education, which is not even one third of the average time spent in reading, writing and literature, and less than a half of the average for mathematics. In 15 countries, the number of hours is less than 300 for the whole of primary education.

Figure 9a: Percentage of the recommended minimum instruction time allocated to NATURAL SCIENCES in primary and full-time compulsory general secondary education, 2016/17



Compulsory subject area with time flexibility

Source: Eurydice.

Data (Figure 9a)

Minimum instruction time in hours as defined centrally for natural sciences, per education level, 2016/17

	BE fr	BE de	BE nl	BG	CZ	DK	DE	EE	ΙE	EL	ES	FR	HR	IT	CY	LV
Primary	•	•	•	72	349	360	115	263	218	455	350	306	236	•	272	181
Secondary	537	•	•	545	611	480	622	525	•	246	363	630	407	264	291	235
	LT	LU	HU	MT		NL		AT		PL	PT	RO	SI	SK	FI	SE
Primary	96	396	109	278		•		360)	218	338	115	323	169	399	533
Secondary	584	310	626	376	HAVO	VMBO	VWO	450 AHS	450 NMS	293	482	841	401	620	399	267
	UK- ENG	UK- WLS	UK- NIR	UK- SCT		ВА	СН	IS		LI		ME	MK	NO	RS	TR
Primary	•	•	•	•		351	•	431		416		351	240	366	216	144
Secondary	•	•	•	•		477	•	204	278 Gym	638 Obs	638 Reals	432	870	249	477	720

Source: Eurydice.

Explanatory note

This figure only concerns general education. The percentage for each subject is obtained by dividing the total time allocated to this subject in primary and full-time compulsory general secondary education by the minimum total instruction time provided for the respective education level (and multiplying by 100).

Country-specific notes

Denmark: Grade 1 has been excluded since natural sciences is a compulsory subject area with time flexibility in this grade.

Germany: The data represent the weighted average instruction time in compulsory core curriculum subjects, calculated by the Secretariat of the Ministers of Education and Cultural Affairs of the *Länder* on the basis of the number of students enrolled in the different types of school (reference year 2015/16).

Ireland: At secondary level, the instruction time for natural sciences is captured in the 'compulsory options chosen by the students'

Spain: The data on intended instruction time are based on national and regional regulations on curriculum and school calendars (reference year 2016/17). To calculate the weighted averages, statistics were used on the number of students per grade and Autonomous Community, as reported by the statistics office of the Ministry of Education, Culture and Sport (reference year 2014/15).

Italy: Instruction time for natural sciences is included in the figure for maths in grades 6-8 (lower secondary education). Only grades 9-10 are considered in this figure.

Austria: Data are not available for grade 9, but this grade is part of full-time compulsory general education.

Poland: In grades 1-3 of primary education, natural sciences is a compulsory subject area with time flexibility, and the instruction time for these grades is therefore not included. The percentage shown in the figure only refers to grades 4-6.

Portugal: Grades 10-12 have been excluded since mathematics is a compulsory option that students may choose.

Sweden: The recommended minimum instruction time is a total for the nine years of compulsory education. It has been artificially allocated to ISCED level 1 and 24 proportionally to the number of years at each education level (6 and 3 respectively). In reality, the number of hours devoted to natural sciences in primary education is much lower.

Moreover, natural sciences include the instruction time for social studies in nine countries (Bulgaria (grade 2), the Czech Republic, France (grades 1-3), Croatia, Austria, Bosnia and Herzegovina Liechtenstein, Montenegro (grades 1-3) and Serbia); and for technology in six (Ireland, France, Cyprus, Malta, Austria and Montenegro (grades 1-4)).

The share of the instruction time for natural sciences at secondary level ranges from 8 % in Iceland and 9 % in Spain, Luxembourg and Norway, to 18 % in Portugal and 21 % in Estonia. On average, 475 hours are allocated to natural sciences for full-time compulsory general secondary education overall, two thirds more than in primary education. The lowest number of hours is usually observed in countries where this education level spans fewer grades, that is, Greece, Latvia, Cyprus, Poland, Sweden, Iceland and Norway (see Figure 2b).

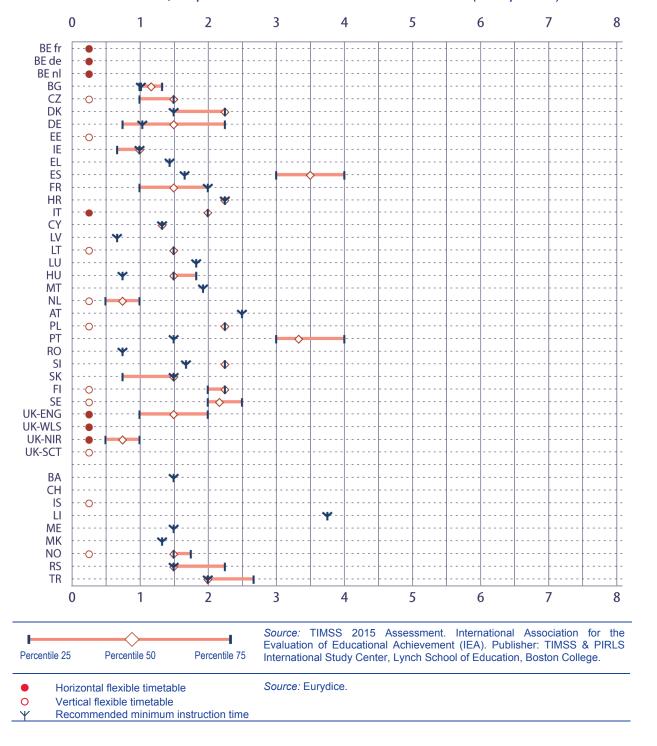
Over the last year, Norway has increased the minimum instruction time allocated to natural sciences while Hungary has decreased it. In Greece and France, it has diminished at primary level but increased at secondary level (⁴⁶).

⁽⁴⁶⁾ European Commission/EACEA/Eurydice, 2016. Recommended annual instruction time in full-time compulsory education in Europe 2015/16. Eurydice – Facts and figures. Luxembourg: Publications Office of the European Union.

9.1. TIMSS data show that most students in grade 4 spend just over two hours per week or less on science

This section examines TIMSS data on instruction time in science and compares it with the minimum instruction time recommended by the education authorities for this subject area. Figure 9b shows the minimum instruction time recommended for natural sciences in grade 4 in 2016/17, and the distribution of the student population (percentiles 25, 50 and 75) according to the number of hours per week that their teachers reported spending teaching science in TIMSS 2015.

Figure 9b: Distribution of students in grade 4 according to the number of instruction hours for SCIENCE reported by their teachers in TIMSS 2015, compared to the minimum recommended time in 2016/17 (hours per week)



Explanatory note (Figure 9b)

For each country, this figure shows:

a) The minimum instruction time (in hours per week) recommended for natural sciences in grade 4 in 2016/17 (in countries with no vertical or horizontal flexibility). Source: Eurydice.

b) The distribution of the student population (percentiles 25, 50 and 75) according to the number of hours per week that their teachers reported teaching this subject in TIMSS 2015. If the 25th percentile is 5 hours, it means that 25 % of the students have a teacher that reported spending less than 5 hours per week on this subject. If the 75th percentile is 10 hours, then, it means that 25 % of the students have a teacher that reported spending 10 hours or more on this subject. By comparing p25 and p75, one can state that about 50 % of the students have between 5 hours and 10 hours a week. If the 50th percentile is 7, it means that 50 % receive less than 7 hours and 50 % 7 hours or more. Source: TIMSS 2015.

Comparison between both sets of data must be made with caution for several reasons. First, the recommended minimum instruction time (Eurydice) refers to public schools, while both public and private schools participate in TIMSS. Second, the TIMSS survey was conducted one year before. Third, in TIMSS teachers are asked how much time they spend teaching mathematics in a typical week.

Teachers from 24 of the 42 countries covered by this report participated in TIMSS 2015 and answered the question on instruction time for science. For 10 of these countries, it is not possible to indicate the minimum instruction time recommended by the education authorities for grade 4 because it is provided for a group of subjects and/or grades.

In the other 14 countries, the minimum number of hours centrally allocated to the area natural sciences in this grade can be compared with the number of hours a week that teachers reported teaching science in TIMSS and the proportion of students concerned:

- In four countries (Spain, Hungary, Portugal and Slovenia), three quarters of the students in grade 4 appear to receive more than the minimum instruction time defined by the competent authorities (i.e. the 25th percentile is higher than the minimum recommended).
- In Denmark and Germany, half of the students in this grade receive more (i.e. the 50th percentile is higher than the minimum recommended).
- In Serbia and Turkey, the proportion of students that receive more is around a quarter (i.e. the 75th percentile is higher than the minimum recommended).
- In Ireland, Croatia, Cyprus and Slovakia, most students receive the minimum recommended.

According to TIMSS teacher data, the number of hours available to students in grade 4 tends to be significantly lower for science than for maths, even if in some countries it is higher than the minimum recommended. Countries with horizontal flexibility do not show a special emphasis on science in this grade as they do on mathematics. Most students appear to receive just over two hours per week or less in all countries except Spain and Portugal, where half of the students receive between three and four hours (the minimum recommended is around one-and-a-half hours in both countries) (⁴⁷). Half of the students receive at least two hours a week also in Denmark, Croatia, Poland, Slovenia, Finland and Sweden.

The difference between the 25th and the 75th percentiles is one hour or more in Germany, Spain, France, Portugal and the United Kingdom (England). In Croatia, Italy, Cyprus, Lithuania and Poland, most students receive a similar amount of instruction in science in grade 4 according to the survey.

⁽⁴⁷⁾ In Spain, the recommended minimum instruction time represents the weighted average of the regions' recommendations.

9.2. PISA data suggest significant differences in the instruction time in science received by 15year-old students in the same country

This section examines PISA data on instruction time in science and compares it with the minimum instruction time recommended by the education authorities for this subject area. Figure 9c shows the number of hours per week of instruction in science that 15-year-old students in the modal grade in general programmes reported receiving in PISA 2015, and the minimum instruction time recommended for this subject in this grade.

PISA 2015 has data available on instruction time on science for 34 Eurydice countries. In 23 of these, it is not possible to indicate the minimum instruction time provided for 15-year-old students in the modal grade in general programmes for various reasons: a) the official recommendations on instruction time are provided for several grades or for several subjects, b) science is an elective subject for students, or c) the PISA modal grade does not belong to full-time compulsory general education.

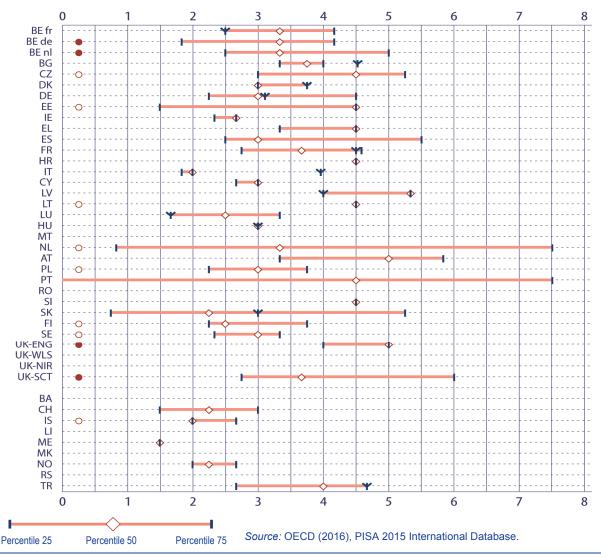
In the other 11 countries, the recommended minimum instruction time can be compared with the number of instruction hours per week that students reported receiving in PISA survey. In the case of natural sciences, discrepancies between the minimum recommended and that reported by students are much more significant (than in TIMSS and for mathematics). A larger number of students in more countries report receiving less time than the minimum recommended (see figure 9c). In some cases, this may be explained by the fact that not all students are enrolled in the same educational pathway or programme presented in this report. For instance, data on recommended minimum instruction time in grade 10 only refers to enseignement général de transition in the French Community of Belgium, to the Liceo Scientifico in Italy, and to Anatolia Highs Schools in Turkey. In general, however, the discrepancies suggest that comparison with PISA data on instruction time must be made with caution (see explanatory note below figure 9c).

Of all the 34 countries, students from Croatia, Lithuania and Slovenia report receiving the largest number of hours of instruction per week on science – four-and-a-half hours per week. In Latvia, half of the students receive between four and just over five-and-a-quarter hours; in the United Kingdom (England), between four and five. In the Netherlands and Portugal, a quarter of the students reported receiving seven-and-a-half hours or more, but a quarter of the students said they received less than one hour in the Netherlands, and none at all in Portugal. These differences are due to the fact that students follow different programmes where science is taught to different extents. Half of the students reported receiving between just over one-and-three-quarters and two hours in Italy, between two and just less than two-and-three-quarter hours in Iceland, and one-and-a-half hours in Montenegro.

The variations in the weekly amount of science instruction time received by students in the same country are much higher than in mathematics. In two-thirds of the countries, the difference between the 25th and 75th percentiles is one hour per week or more. In Portugal and the Netherlands, the difference is around seven hours. In contrast, in Croatia, Lithuania, Hungary, Slovenia and Montenegro, there are hardly any differences between students.

TIMSS and PISA data on science instruction time corroborate the main conclusion of the previous analysis on the recommended minimum instruction time, that is, the amount of instruction in natural sciences and the differences between countries both increase with the education level. PISA data also reveal that there are significant differences between students in the modal grade in some countries, often depending on the general programme and the elective subjects they choose.

Figure 9c: Distribution of students in the modal grade in general programmes according to the number of hours of instruction they reported receiving in SCIENCE in PISA 2015, compared to the minimum recommended time in 2016/17 (hours per week)



- Horizontal flexible timetable
- Source: Eurydice.
- Vertical flexible timetable
 - Recommended minimum instruction time

Explanatory note

This figure shows for countries participating in PISA 2015:

- a) The minimum instruction time (in hours per week) recommended for natural sciences in the modal grade in 2016/17 when there is no vertical or horizontal flexibility. Source: Eurydice.
- b) The distribution of the student population (percentiles 25, 50 and 75) according to the number of hours per week that they reported receiving in the subject in PISA 2015. If the 25th percentile is 5 hours, it means that 25 % of the students reported spending less than 5 hours per week on this subject. If the 75th percentile is 10 hours, then, it means that 25 % of the students reported spending 10 hours or more on this subject. By comparing p25 and p75, one can state that about 50 % of the students have between 5 hours and 10 hours a week. If the 50th percentile is 7, it means that 50 % receive less than 7 hours and 50 % 7 hours or more. Source: PISA 2015.

Data only refer to students in the modal grade and in general programmes. The modal grade is the most frequent grade among 15-year-old students in a country. The proportion of 15-year-olds in other than the modal grade and in vocational programmes differs across countries and cross-country comparison should be made with caution. Grade 9 is the modal grade in Bulgaria, the Czech Republic, Denmark, Germany, Estonia, Ireland, Croatia, Latvia, Lithuania, Luxembourg, Hungary, Poland, Romania, Finland, Sweden and Montenegro. Grade 11 is the modal grade in the United Kingdom and Malta. In the other countries, it is grade 10.

Comparison between data from Eurydice and PISA should be made with caution for several reasons. First, the recommended minimum instruction time in Eurydice refers to public schools, while both public and private schools participate in PISA. Second, the PISA survey was conducted one year before. Third, PISA results come from merging students' answers to two different questions: a) How many lessons a week do they have to follow in the indicated subjects; and, b) How many minutes on average does a lesson last; consequently, a comparison with the centrally recommended minimum instruction time may be problematic.

Section 1. Reading guide to national data sheets and acronyms and abbreviations

National data sheets present data on recommended minimum instruction time in two ways: by countries (Part III, Section 2) and by curriculum categories (Part III, Section 3). With Section 2, the reader is able to compare annual instruction time in hours of 60 minutes between curriculum categories in each country and for each grade. Section 3 allows a comparison between all countries for each curriculum category and for each grade.

Grades are shown on the vertical axis of each diagram. Those in **red** are part of full-time compulsory general education. The horizontal axis indicates the number of hours (in hours, i.e. 60 minutes) per year devoted to curriculum subjects or curriculum categories.

The diagrams also show specific features of instruction time allocation:

- Responsible education authorities do not specify instruction time for each subject, but only
 indicate instruction time schools have to provide for a group of subjects or for the whole
 curriculum. Hence, schools have the autonomy to decide how to allocate instruction time between
 curriculum subjects. This 'horizontal' flexibility enjoyed by schools is indicated by a black bullet.
- Responsible education authorities specify instruction time for curriculum subjects for several
 grades together, one education level or the whole of full time compulsory education. Schools are
 thus free to decide how to allocate instruction time across the grades. This 'vertical' flexibility given
 to schools is represented by a vertical black bar.
- One single value for instruction time is provided for two curriculum subjects together. This is the case when two subjects (social studies and natural sciences for example) are integrated into one single subject in the national curriculum. It might also be the case that one particular subject, ICT for example, is taught when teaching another subject, natural sciences for instance. The value for instruction time for these two subjects is allocated to the subject area for which the biggest value is expected, and a reference to this subject (following an arrow symbol) is made in the other subject concerned.

For three countries, instruction time is provided for different education programmes.

- The Netherlands: a) Primary school + Voorbereidend Wetenschappelijk Onderwijs; b) Primary school + Hoger Algemeen Voortgezet Onderwijs; c) Primary school + Voorbereidend Middelbaar Beroepsonderwijs.
- Austria: a) Volkschule (primary school grades 1-4) + Allgemeinbildende h\u00f6here Schule (AHS; academic secondary school science branch: Realgymnasium grades 5-8); b) Volkschule (primary school grades 1-4) + Neue Mittelschule (new secondary school grades 5-8).
- **Liechtenstein**: a) Primary school + *Gymnasium*; b) Primary school + *Realschule*; c) Primary school + *Oberschule*.

Acronyms, abbreviations and symbols

The following table contains all the **acronyms and abbreviations** used in the National Data Sheets.

Codes	Subjects
RWL	Reading, Writing and Literature (L1)
Math	Mathematics
NatSc	Natural Sciences
SocSt	Social Studies
Lg (+ number)	Languages (L 2-5)
PhysEd_H	Physical Education and Health
ArtsEd	Arts Education
Rel_ethics	Religion/ethics/moral education
ICT	Information and Communication Technologies (ICT)
Tech	Technology
P_Vs	Practical and Vocational skills
Others	Other subjects
TMinCCurr	Total Minimum Compulsory Curriculum
COcbS	Compulsory Options chosen by the Students
CFScbSch	Compulsory Flexible Subject chosen by the Schools
CSwFT	Compulsory Subjects with Flexible Timetable

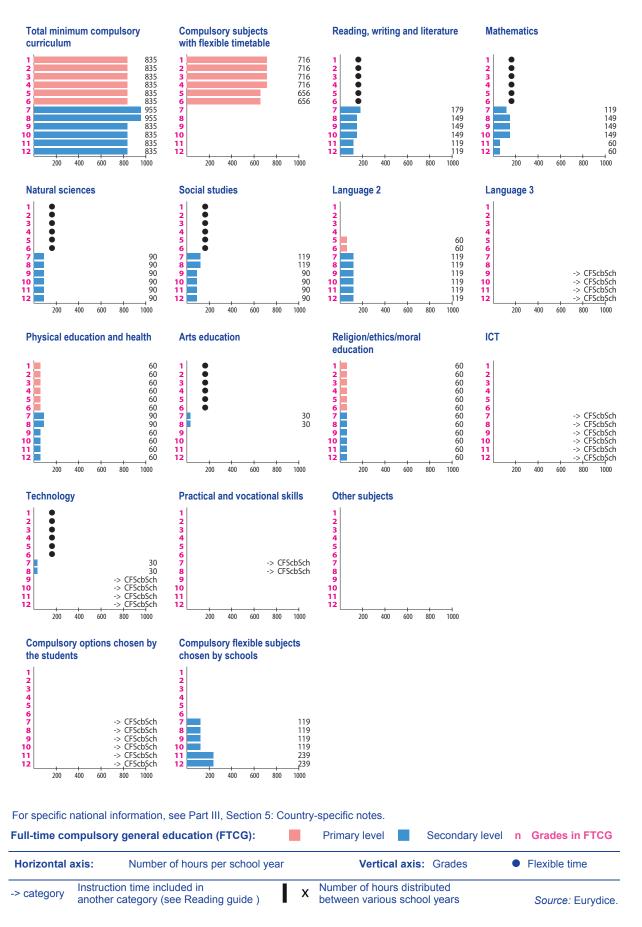
Abbreviations and symbols					
VWO	Voorbereidend Wetenschappelijk Onderwijs				
HAVO	Hoger Algemeen Voortgezet Onderwjis				
VMBO	Voorbereidend Middelbaar Beroepsonderwijs				
Volkschule +AHS	Volkschule (primary school – grades 1-4) + Allgemeinbildende höhere Schule (academic secondary school – science branch: Realgymnasium – grades 5-8)				
Volkschule + NMS	Volkschule (primary school – grades 1-4) + Neue Mittelschule (new secondary school – grades 5-8)				

Complementary information to the diagrams is provided in Section 3. This information is structured by country. It focuses on the scope and methodology used if they differ from those set for the data collection, and the subjects included in some curriculum categories.

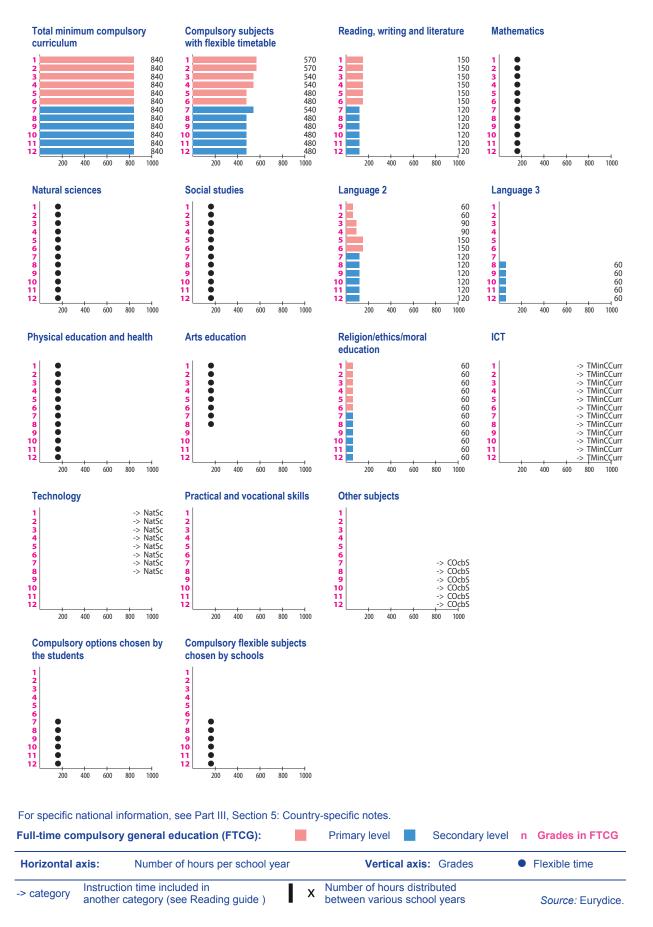
Section 2. Instruction time by country

Belgium – French Community	48	Austria – Volksschule and AHS (Realgymnasium)	/1	
Belgium – German-speaking Community	49	Austria – Volksschule and Neue Mittelschule		
Belgium – Flemish Community	50	Poland	73	
Bulgaria	51	Portugal	74	
Czech Republic	52	Romania	75	
Denmark	53	Slovenia	76	
Germany	54	Slovakia	77	
Estonia	55	Finland	78	
Ireland	56	Sweden	79	
Greece	57	United Kingdom – England	80	
Spain	58	United Kingdom – Wales	81	
France	59	United Kingdom – Northern Ireland	82	
Croatia	60	United Kingdom – Scotland	83	
Italy	61	Bosnia and Herzegovina	84	
Cyprus	62	Switzerland	85	
Latvia	63	Iceland	86	
Lithuania	64	Liechtenstein – Primary and Gymnasium	87	
Luxembourg	65	Liechtenstein – Primary and Oberschule	88	
Hungary	66	Liechtenstein – Primary and Realschule	89	
Malta	67	Montenegro	90	
Netherlands – Primary and HAVO	68	Former Yugoslav Republic of Macedonia	91	
Netherlands – Primary and VMBO	69	Norway	92	
Netherlands – Primary and VWO	70	Serbia	93	
		Turkey	94	

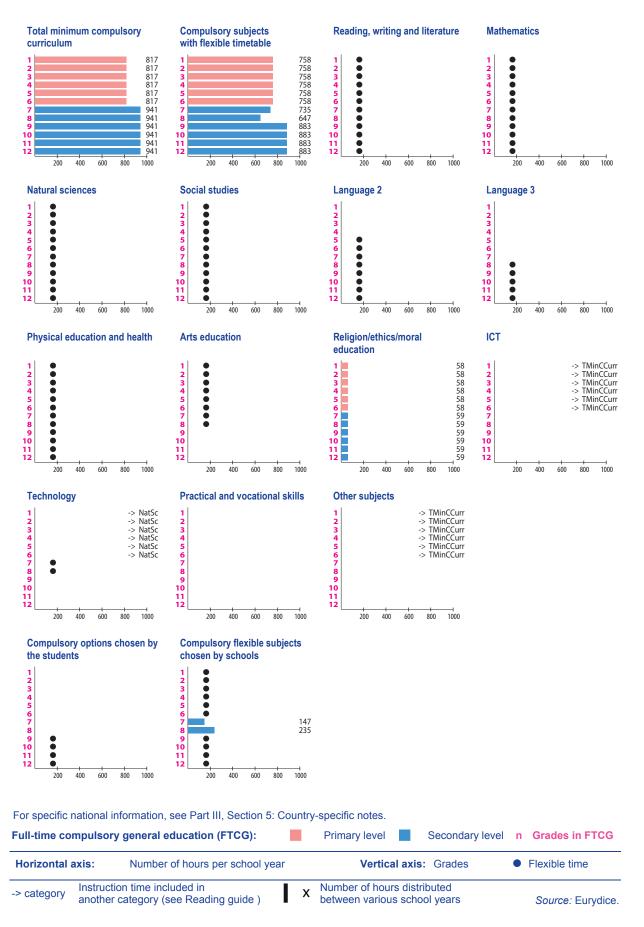
BELGIUM – FRENCH COMMUNITY



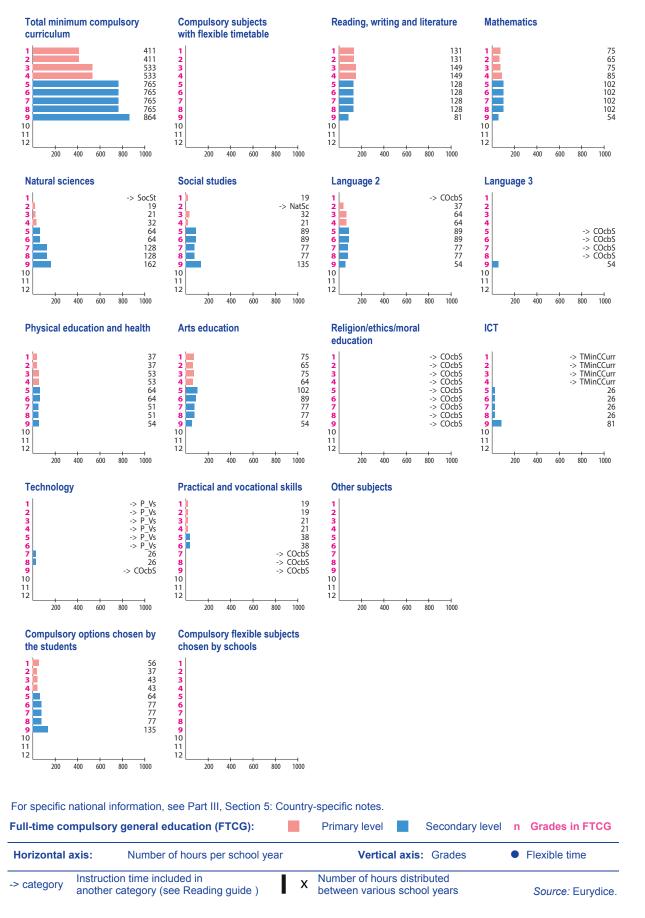
BELGIUM – GERMAN-SPEAKING COMMUNITY



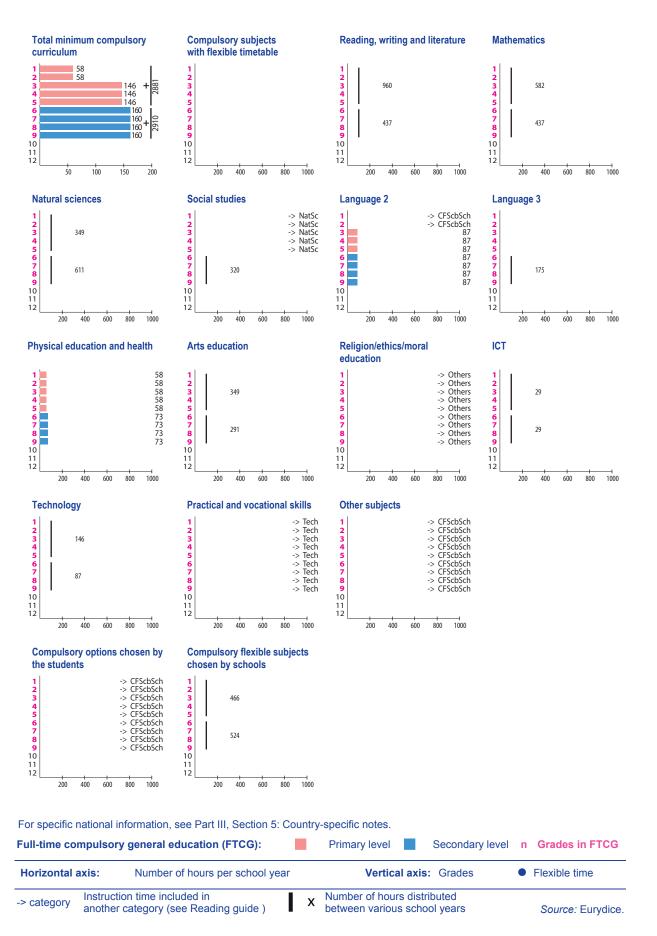
BELGIUM - FLEMISH COMMUNITY



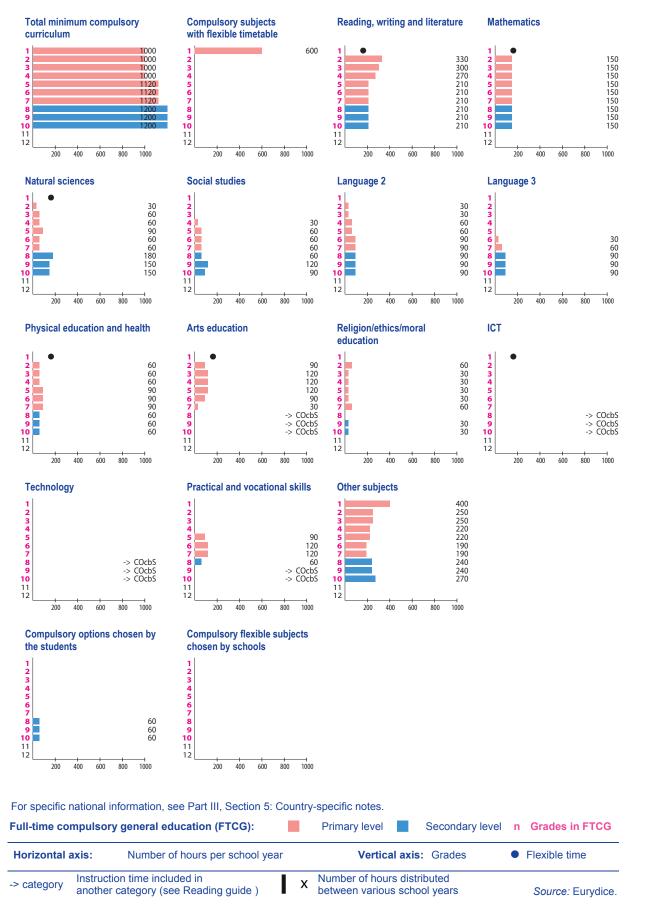
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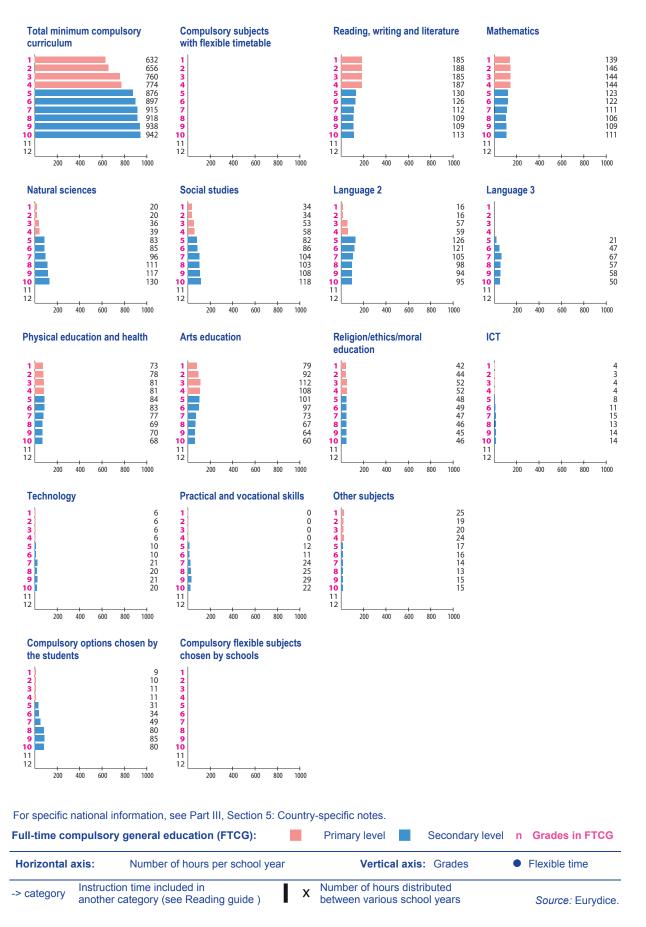
CZECH REPUBLIC



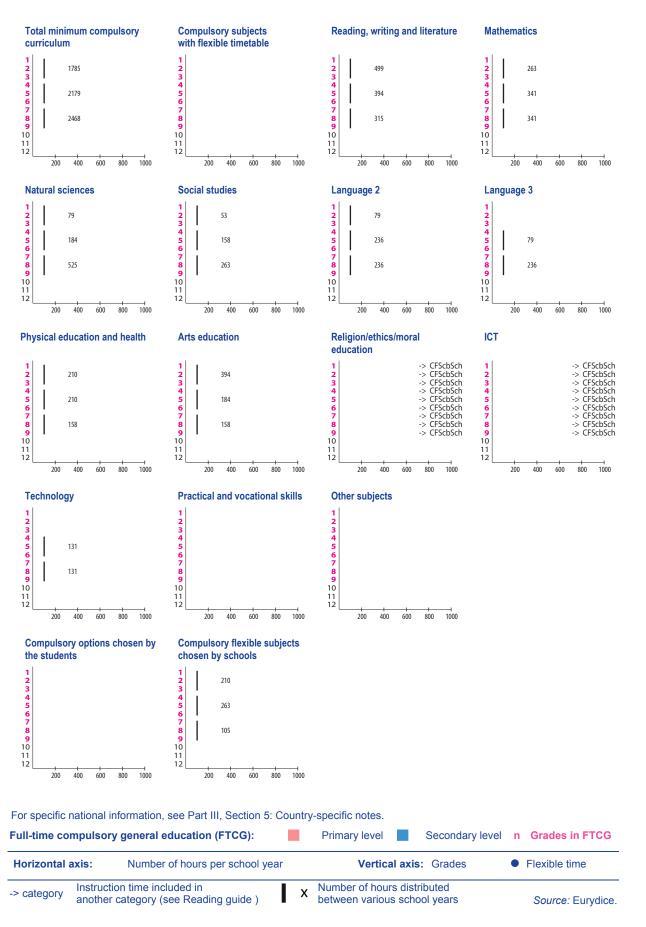
DENMARK



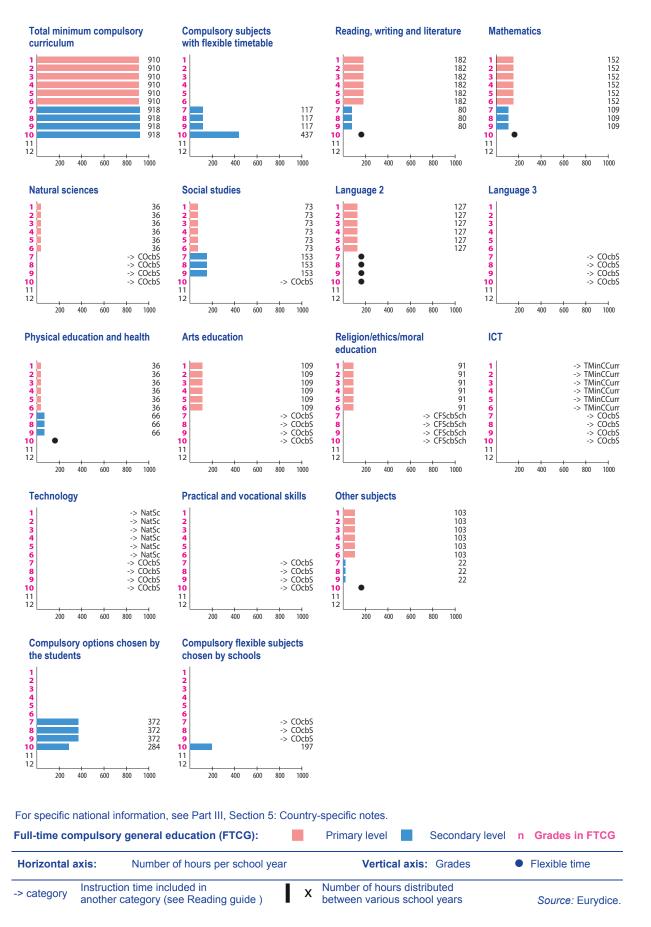
GERMANY



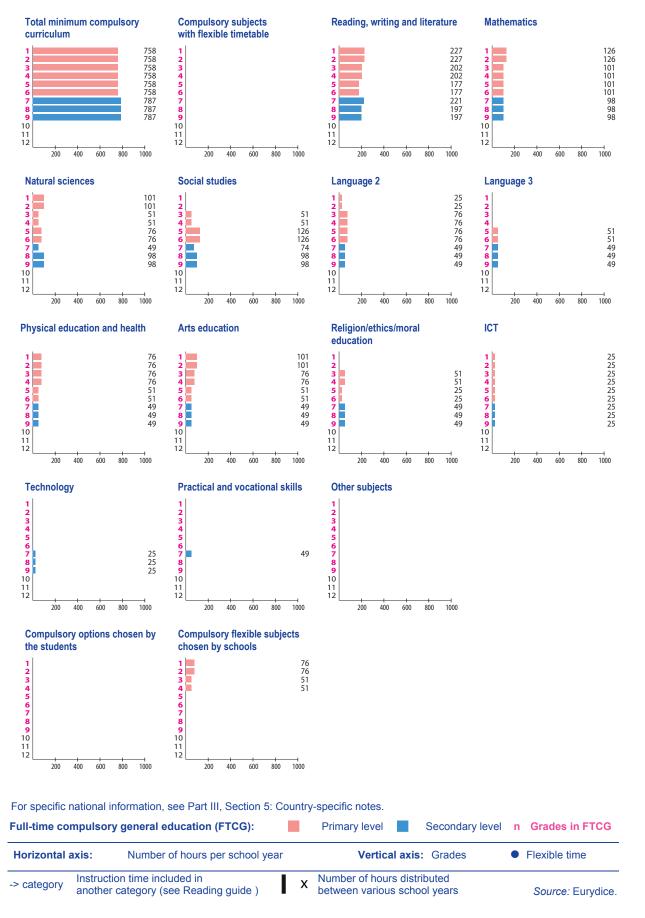
ESTONIA



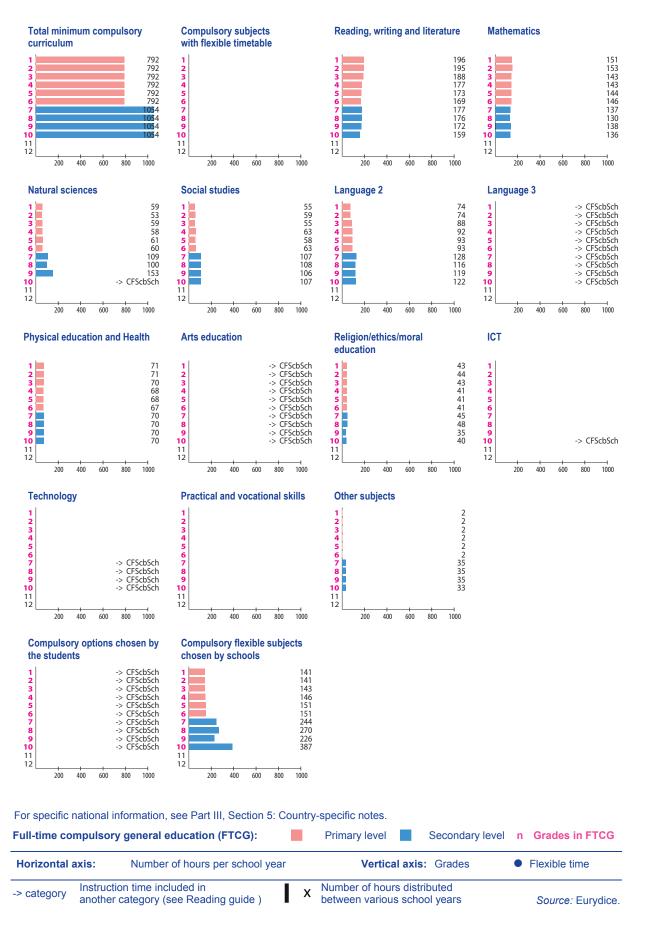
IRELAND



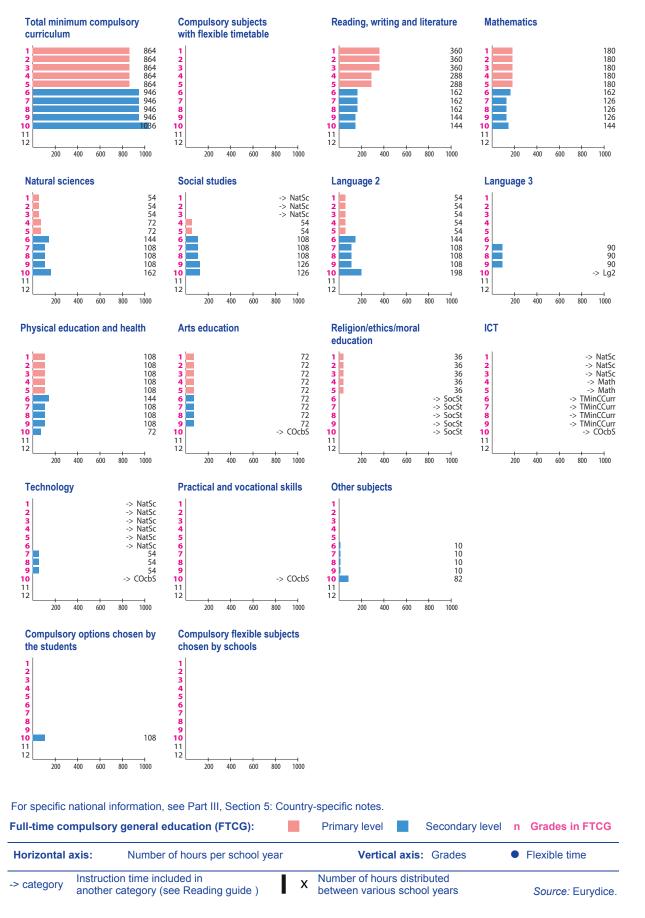
GREECE



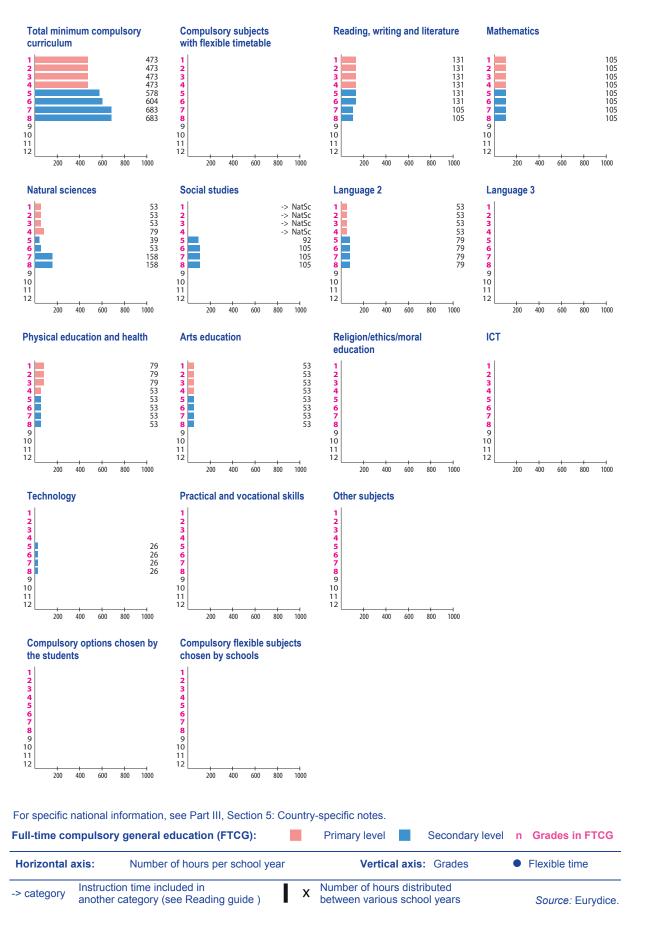
SPAIN



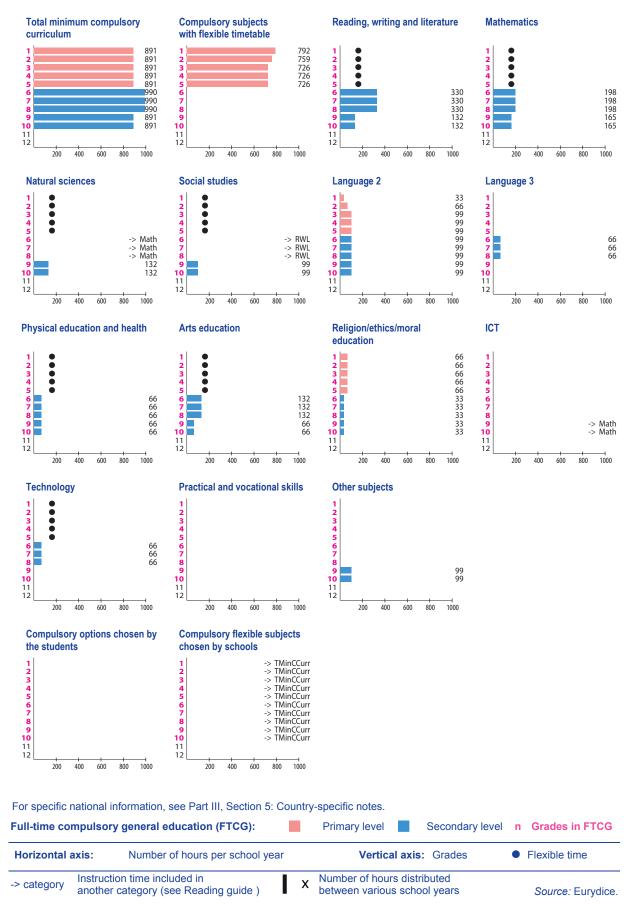
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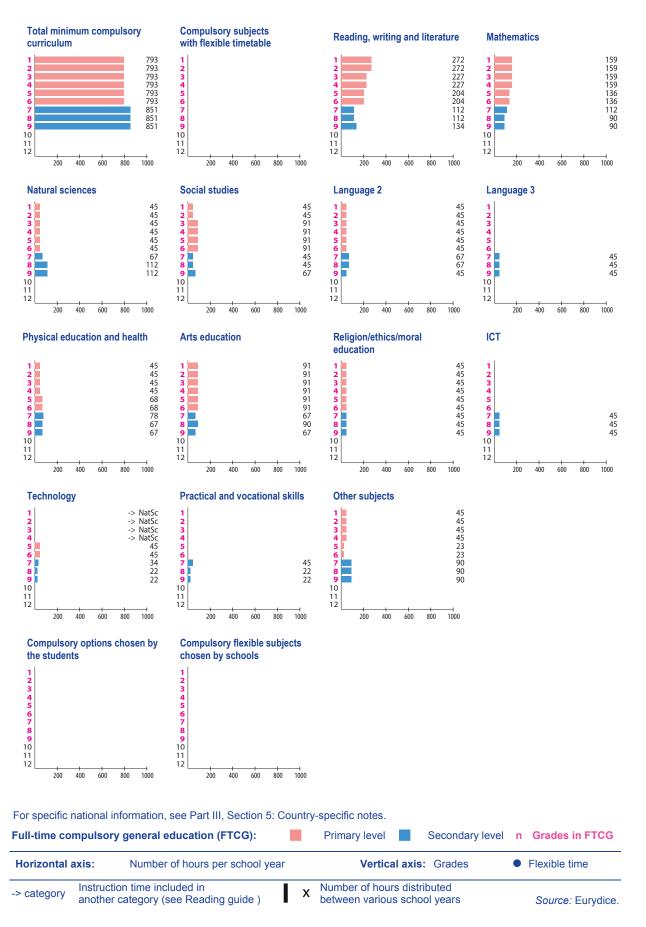
CROATIA



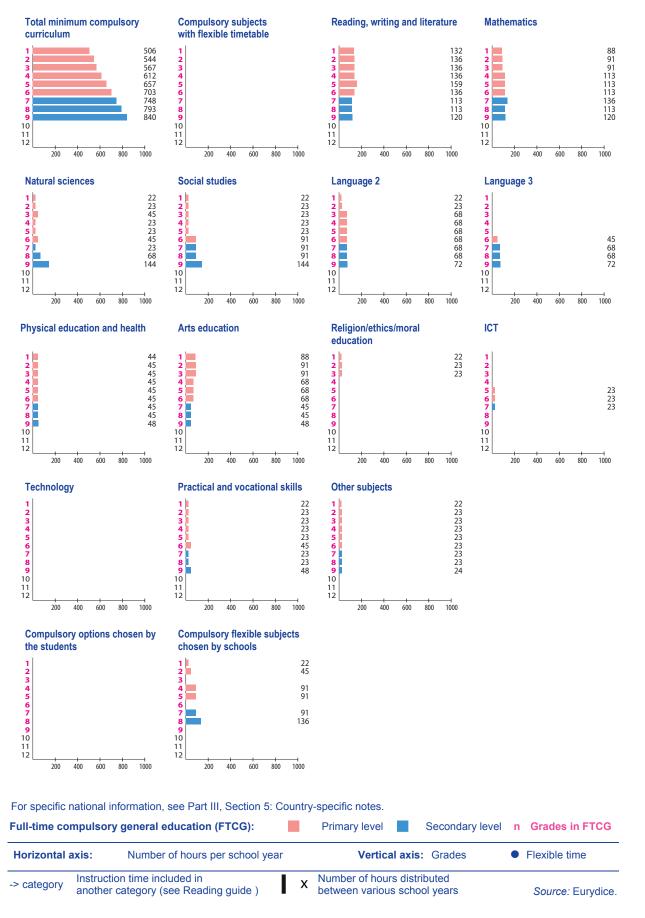
ITALY



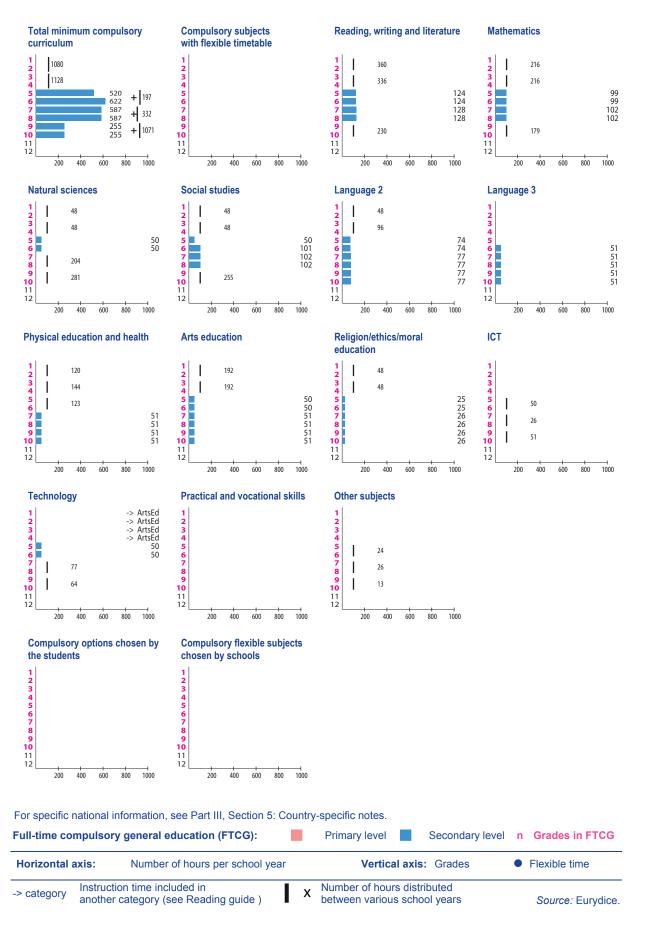
CYPRUS



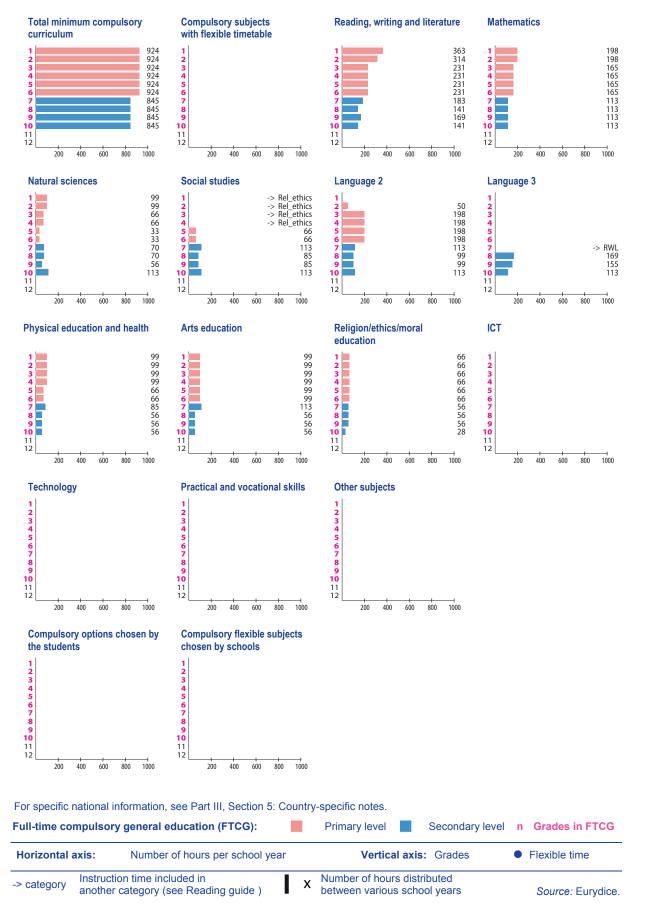
LATVIA



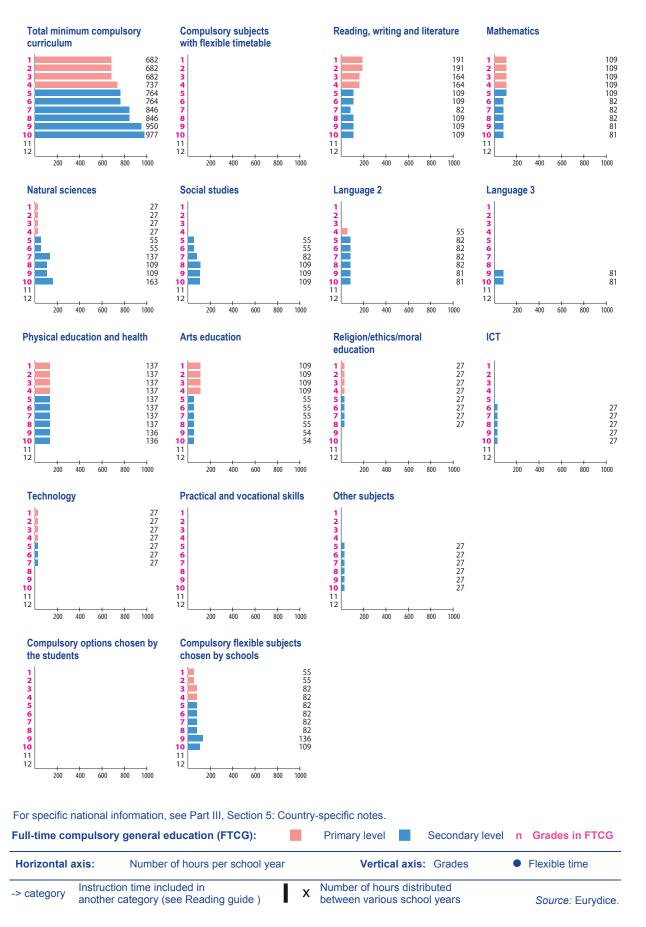
LITHUANIA



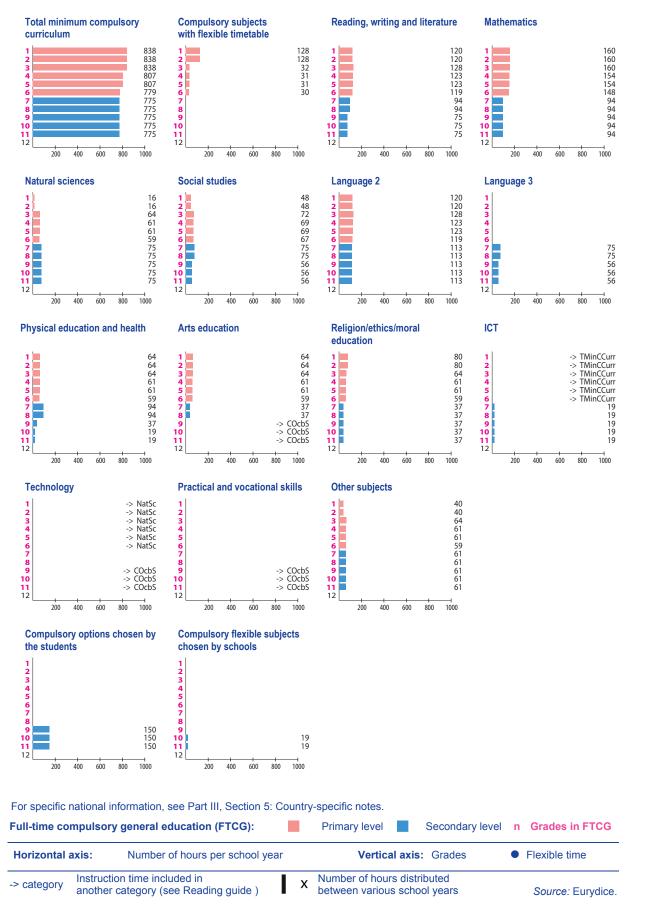
LUXEMBOURG



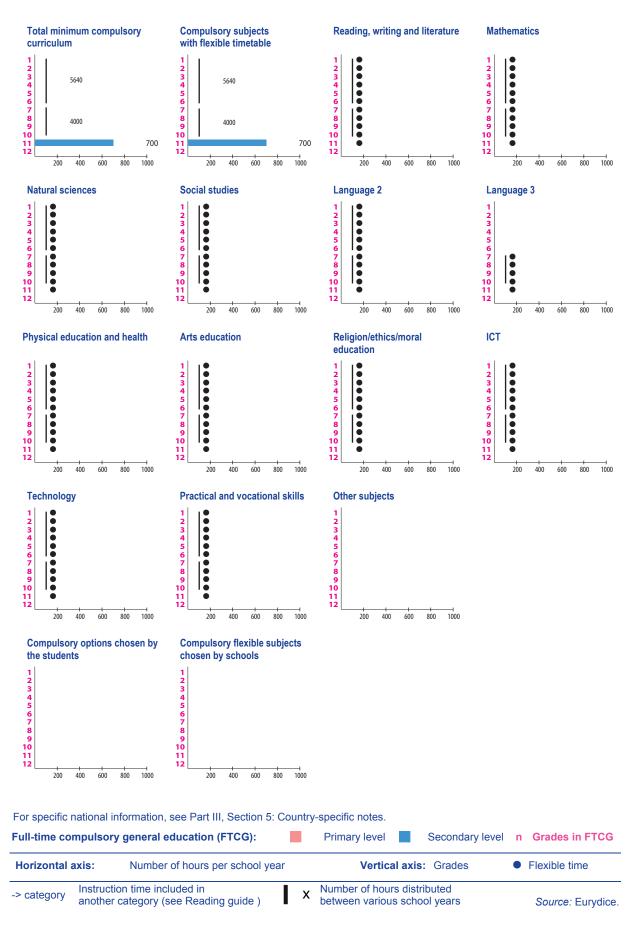
HUNGARY



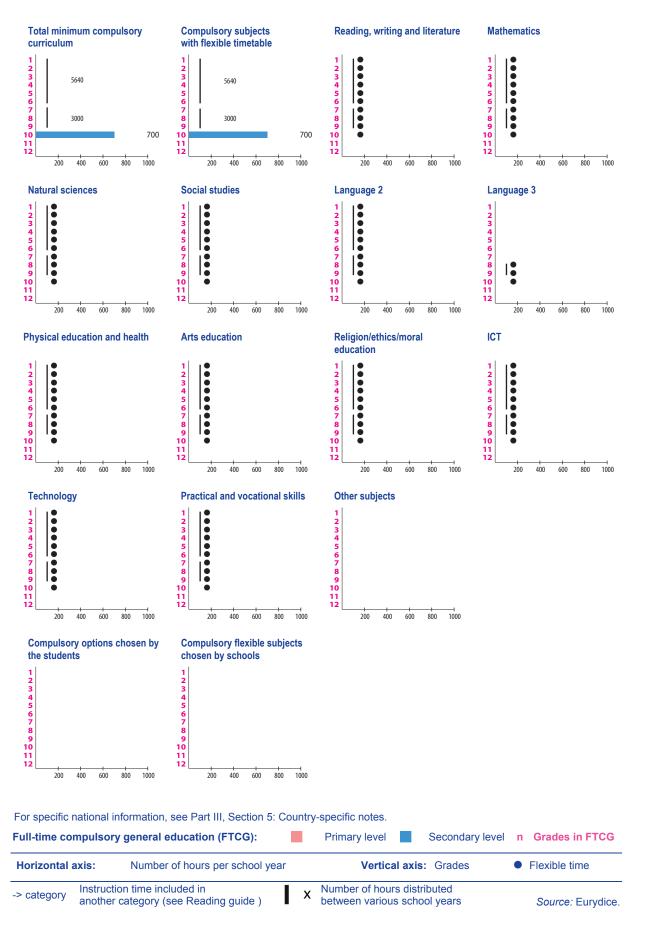
MALTA



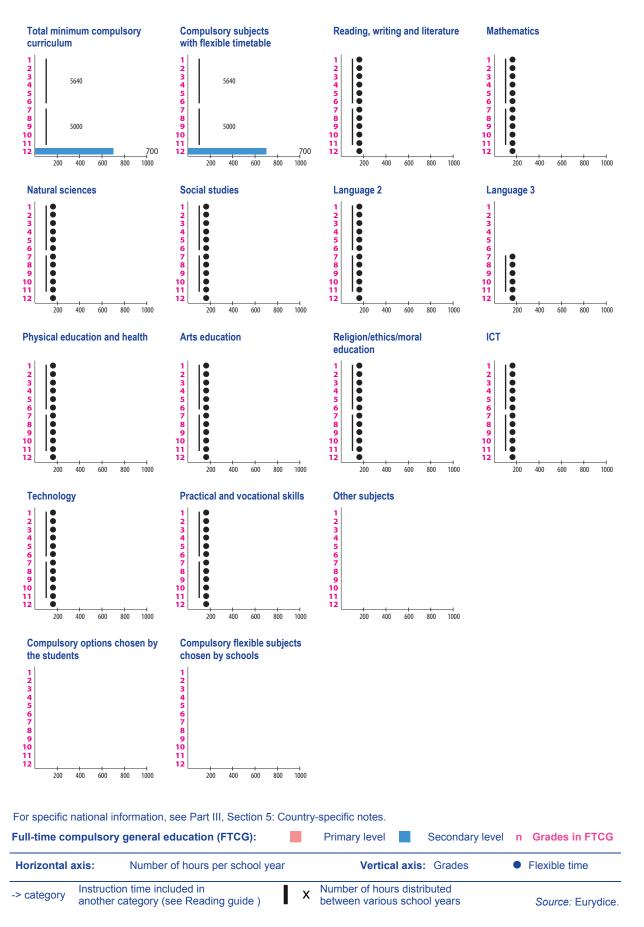
NETHERLANDS – PRIMARY AND HAVO



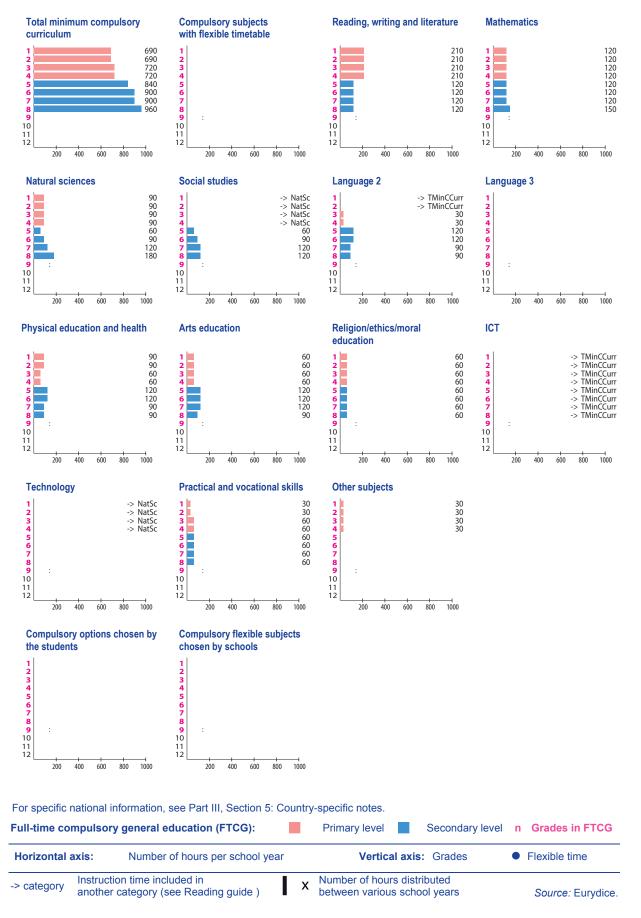
NETHERLANDS - PRIMARY AND VMBO



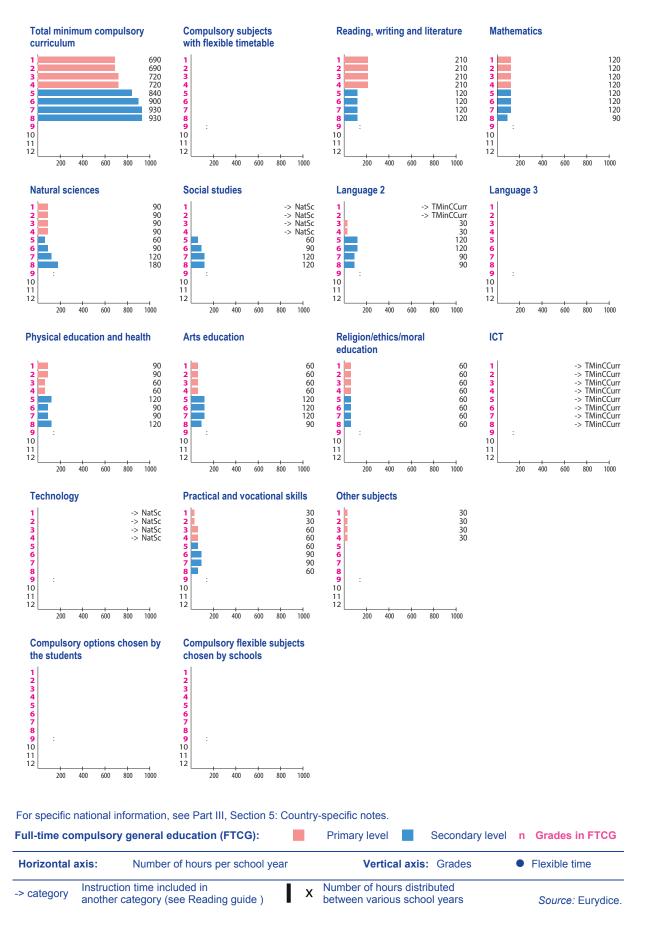
NETHERLANDS – PRIMARY AND VWO



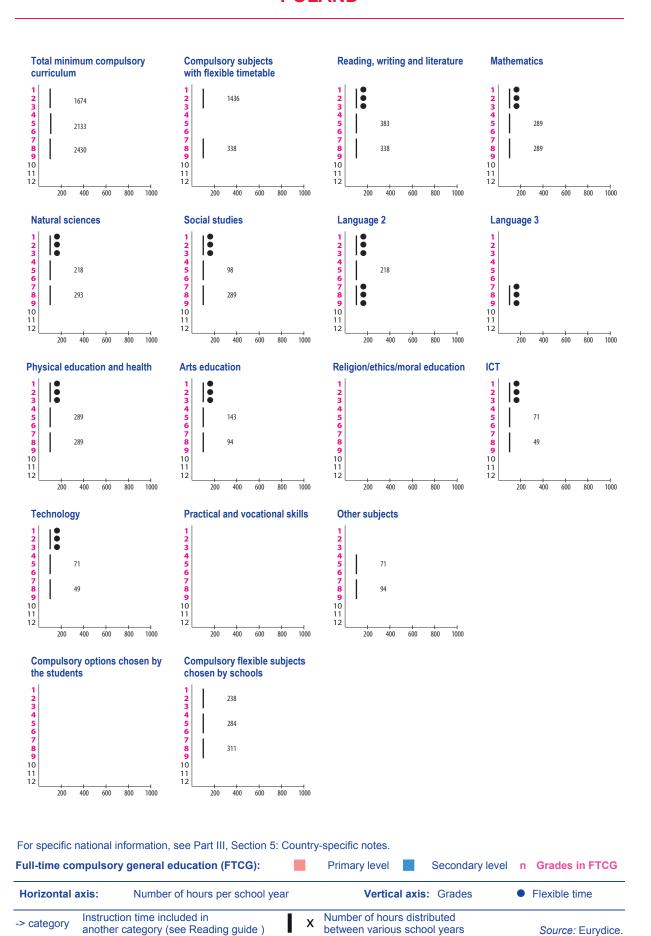
AUSTRIA - VOLKSSCHULE AND AHS (REALGYMNASIUM)



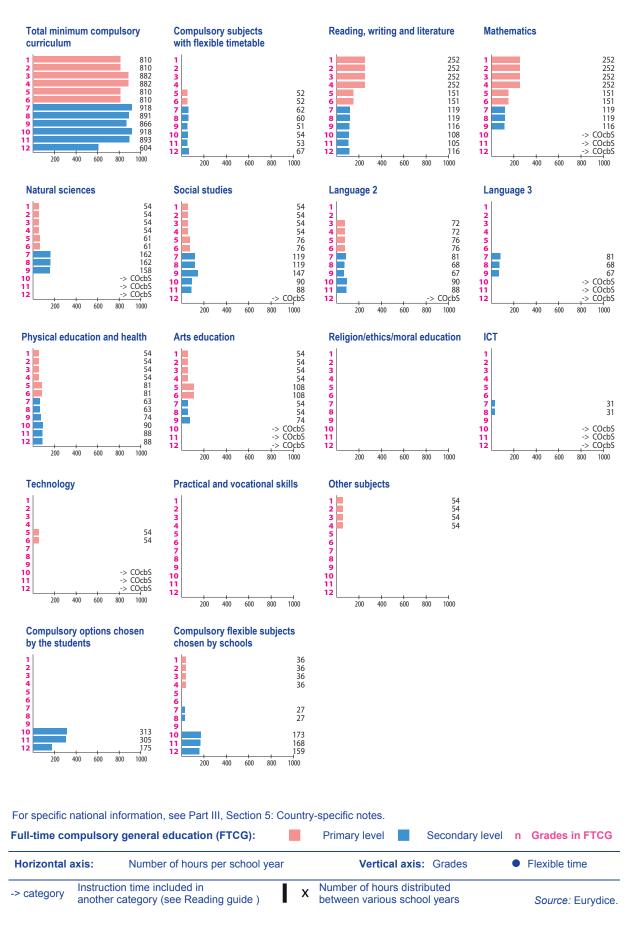
AUSTRIA - VOLKSSCHULE AND NEUE MITTELSCHULE



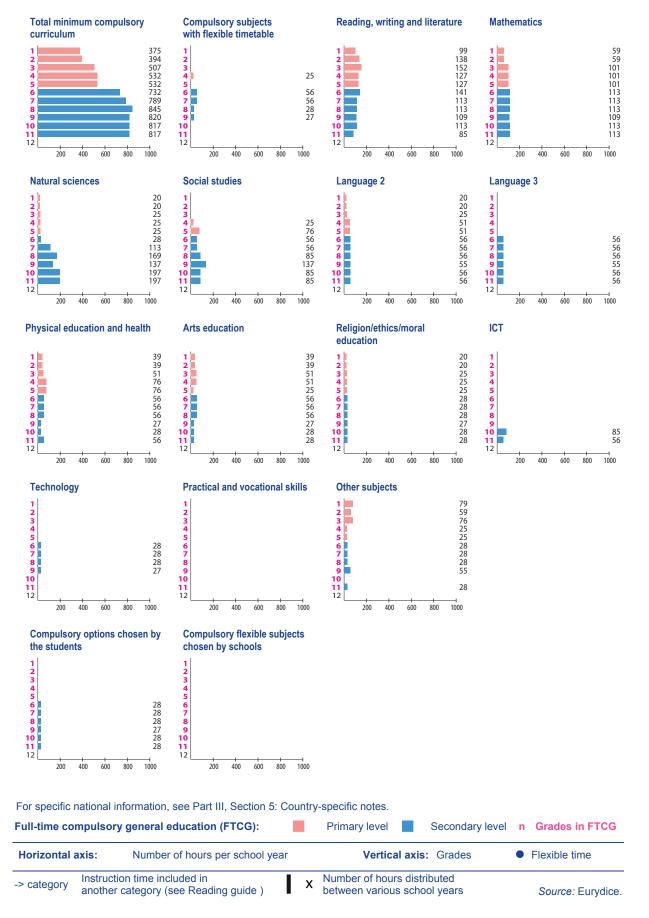
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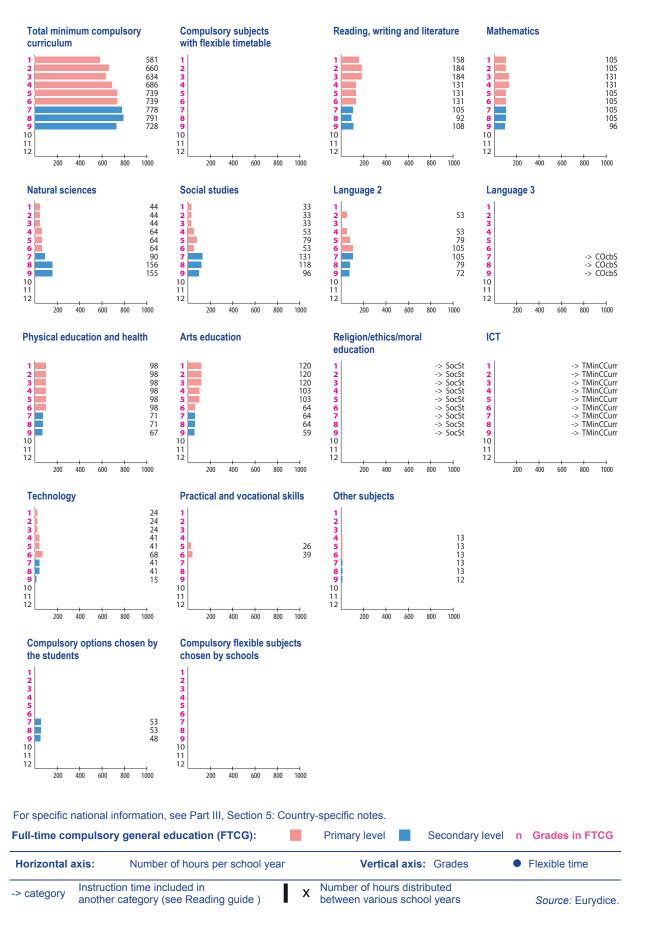
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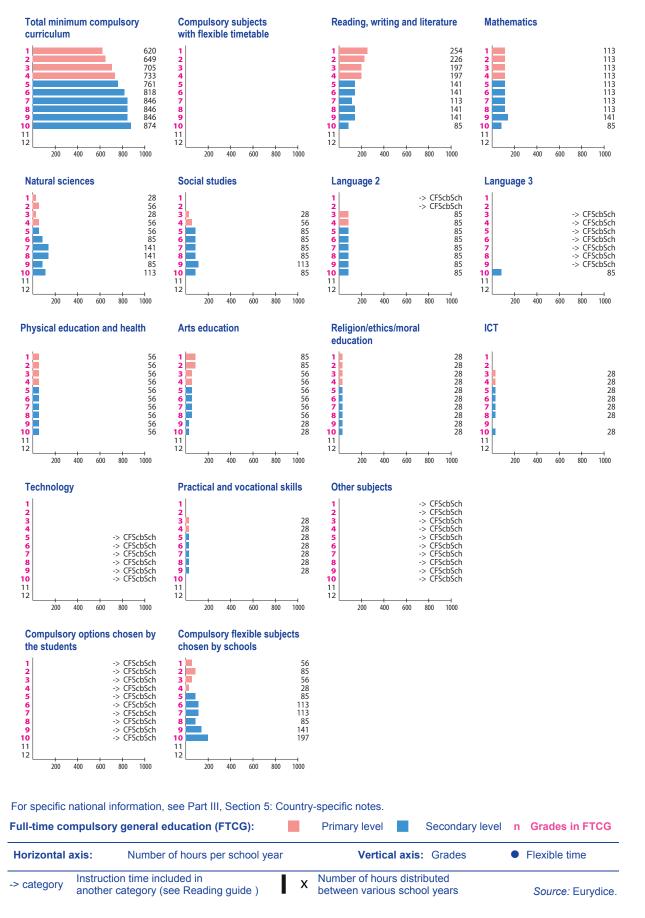
ROMANIA



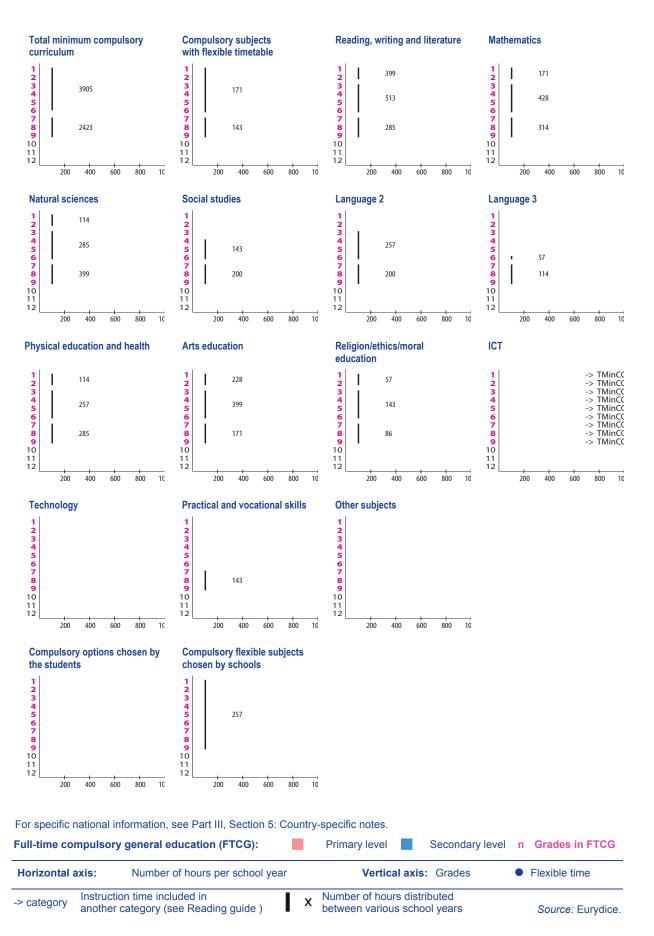
SLOVENIA



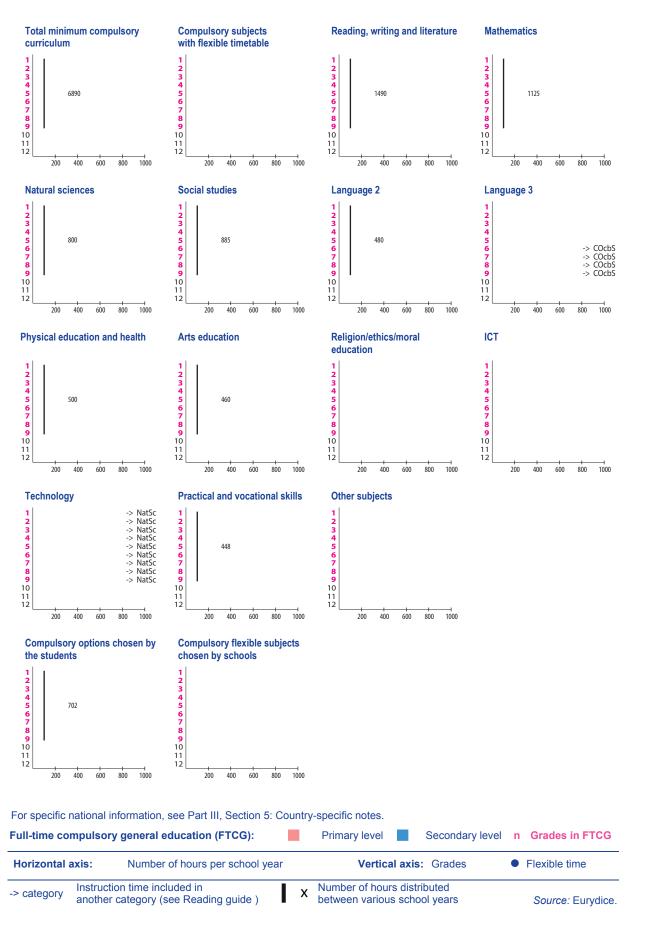
SLOVAKIA



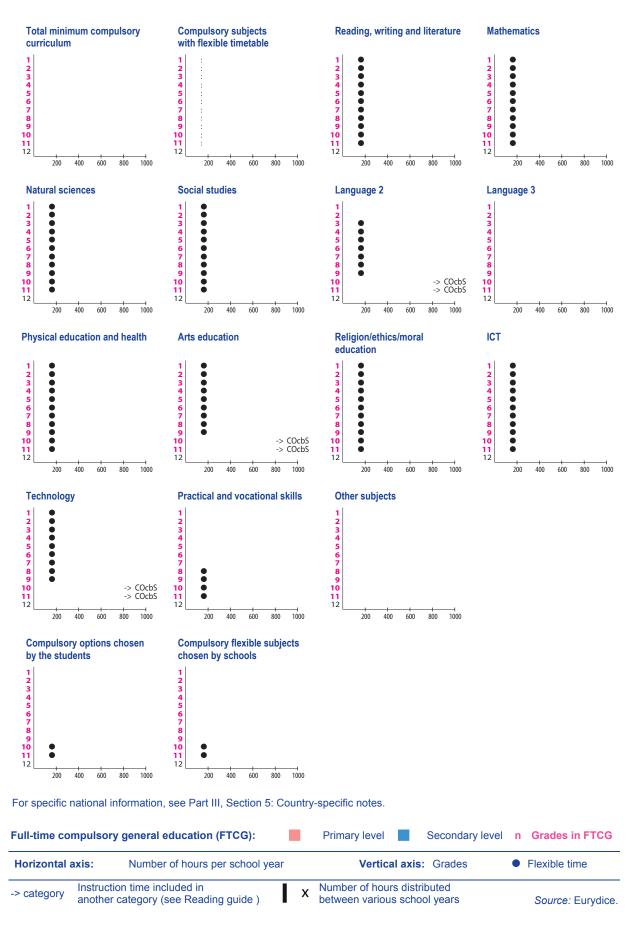
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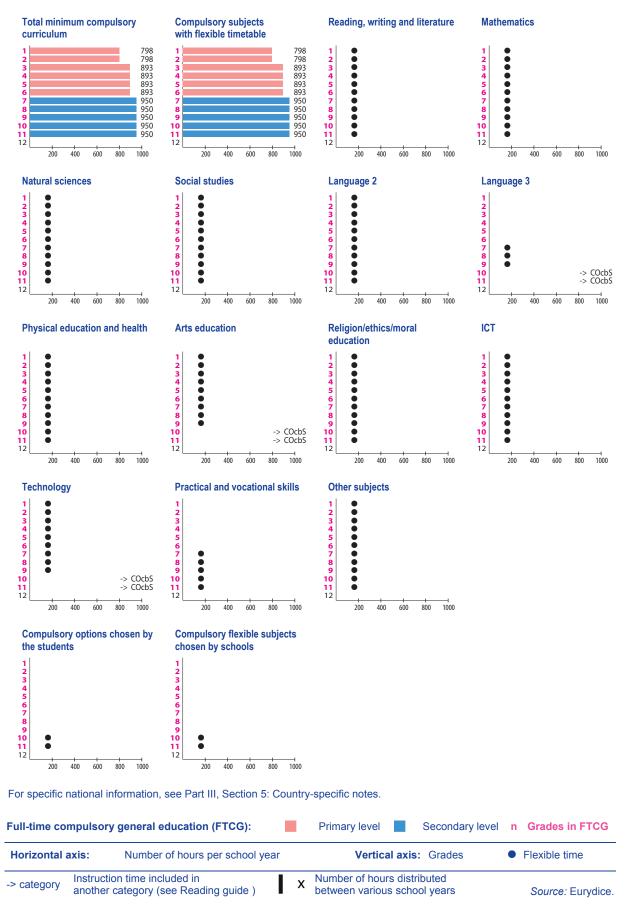
SWEDEN



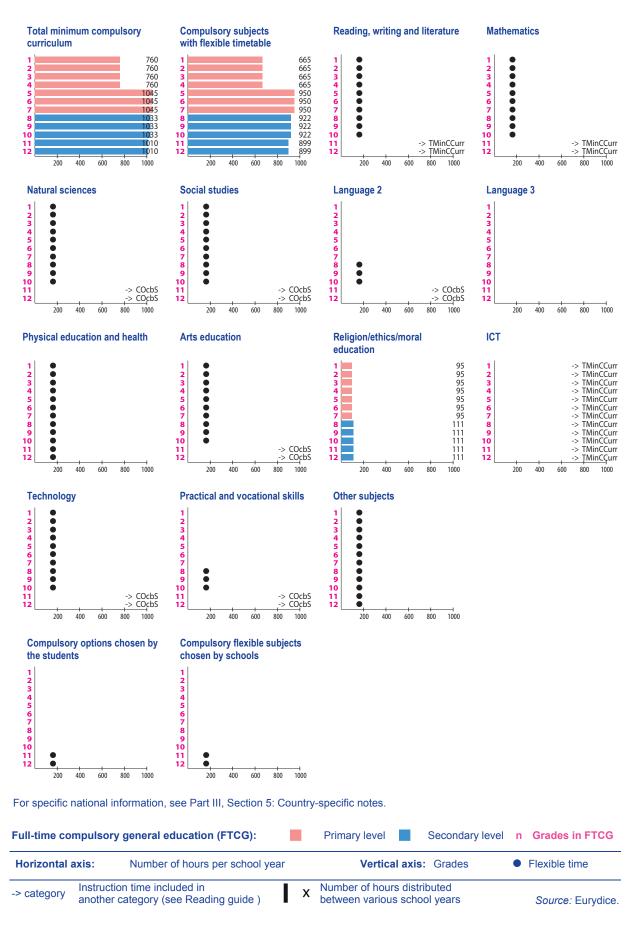
UNITED KINGDOM - ENGLAND



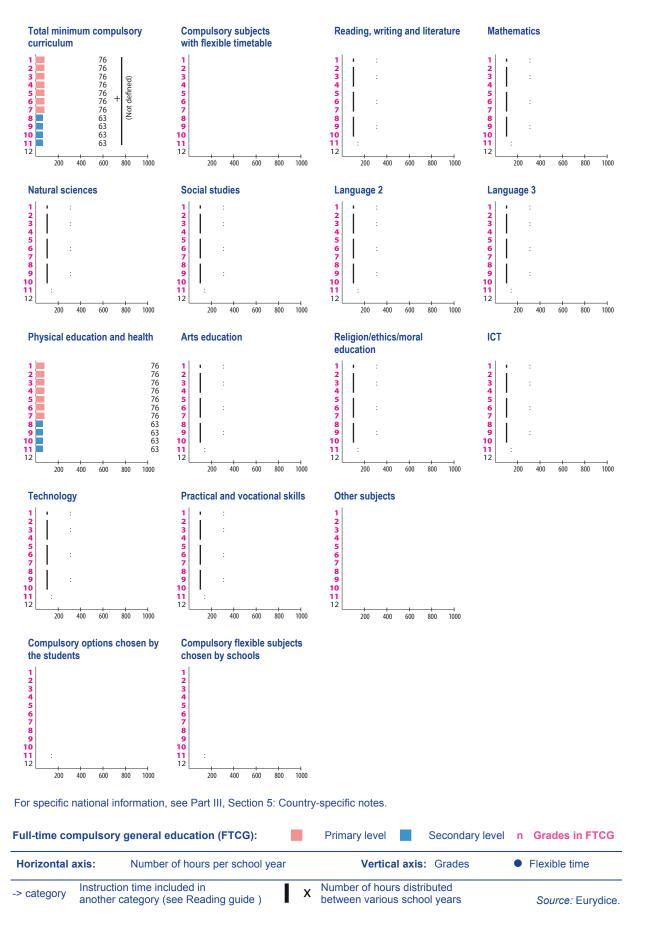
UNITED KINGDOM - WALES



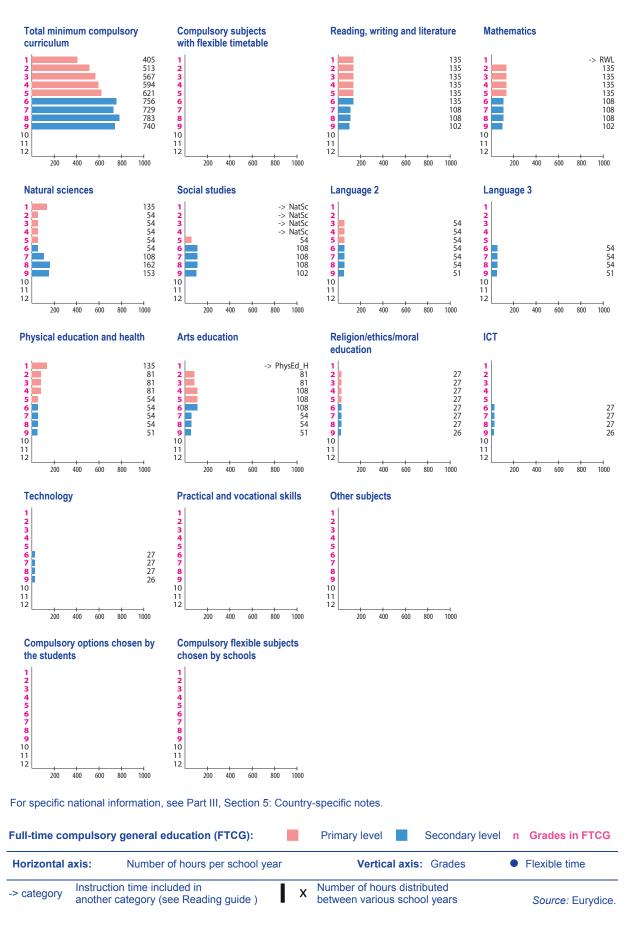
UNITED KINGDOM - NORTHERN IRELAND



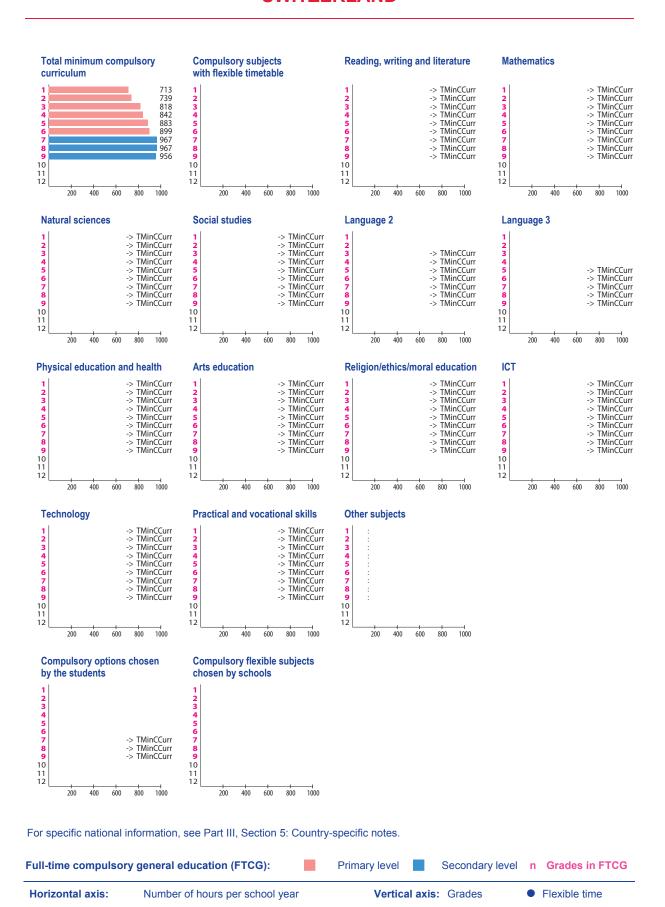
UNITED KINGDOM - SCOTLAND



BOSNIA AND HERZEGOVINA



SWITZERLAND



Number of hours distributed

between various school years

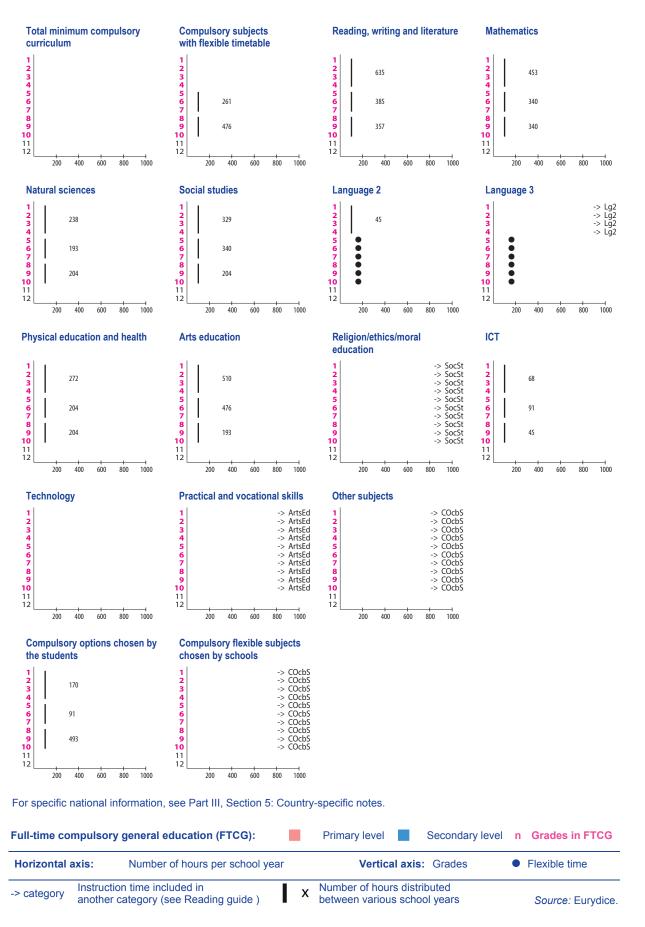
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Instruction time included in

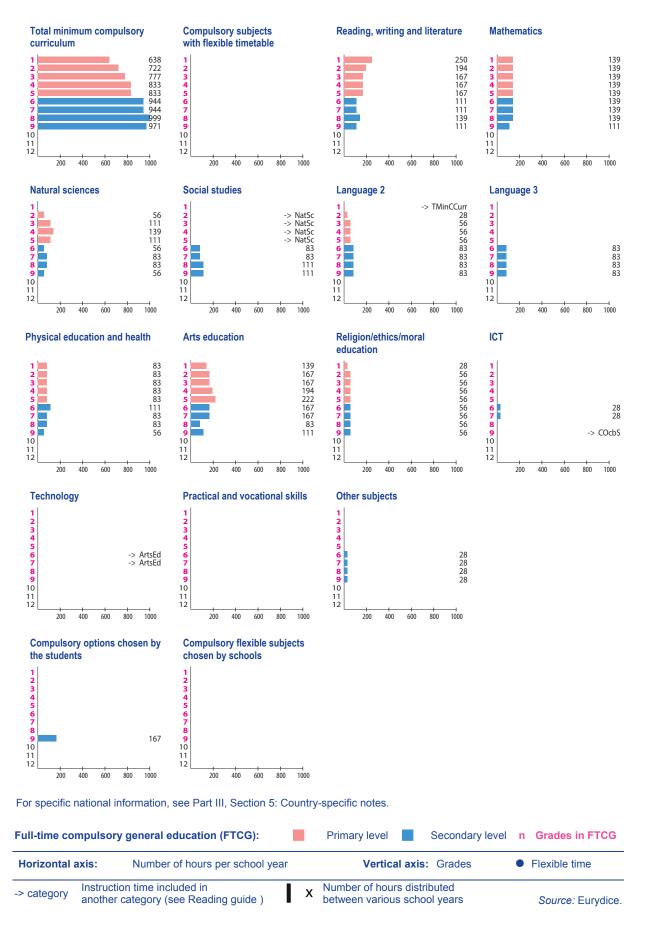
another category (see Reading guide)

-> category

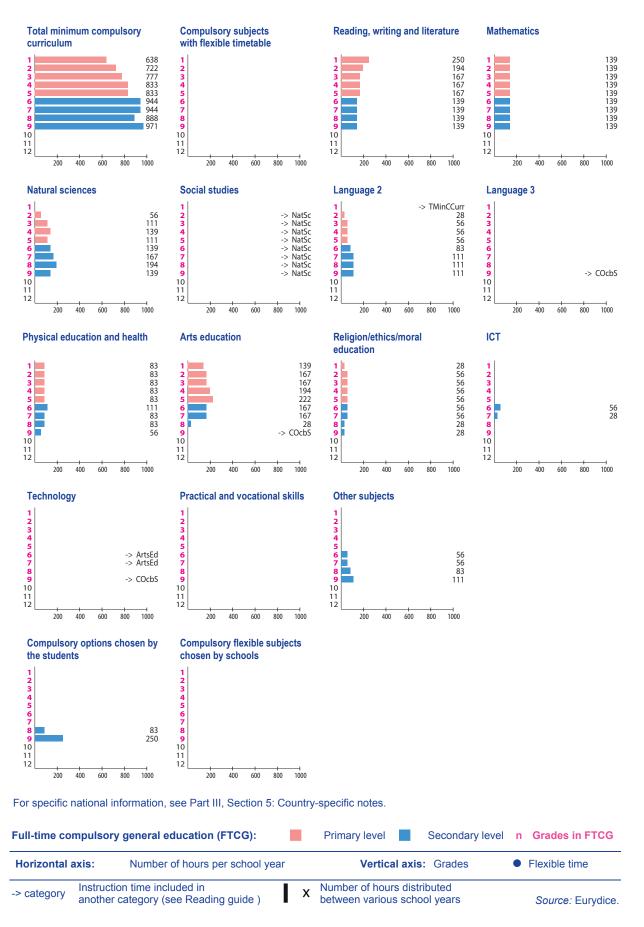
ICELAND



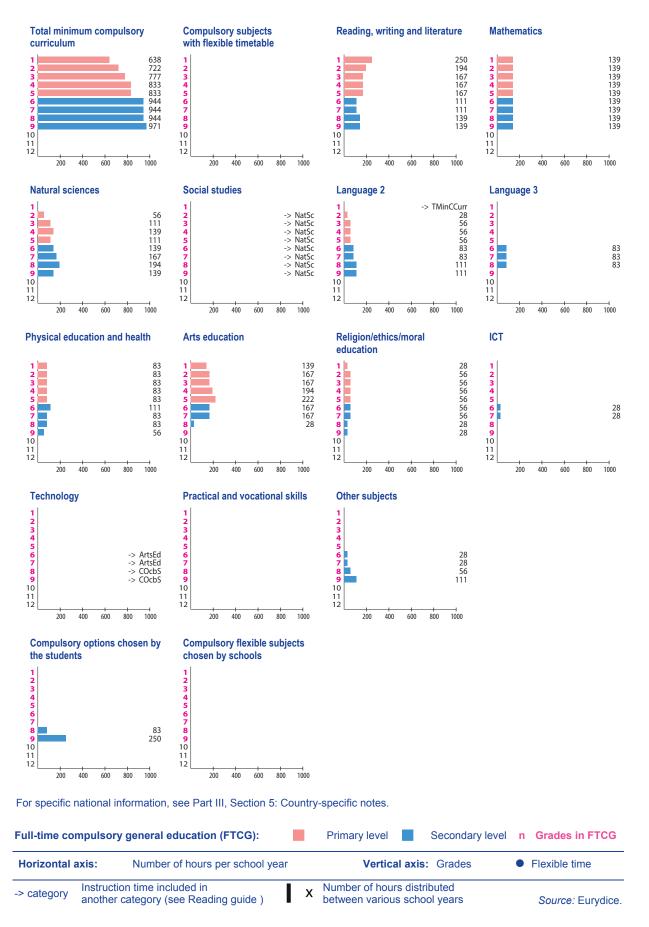
LIECHTENSTEIN - PRIMARY AND GYMNASIUM



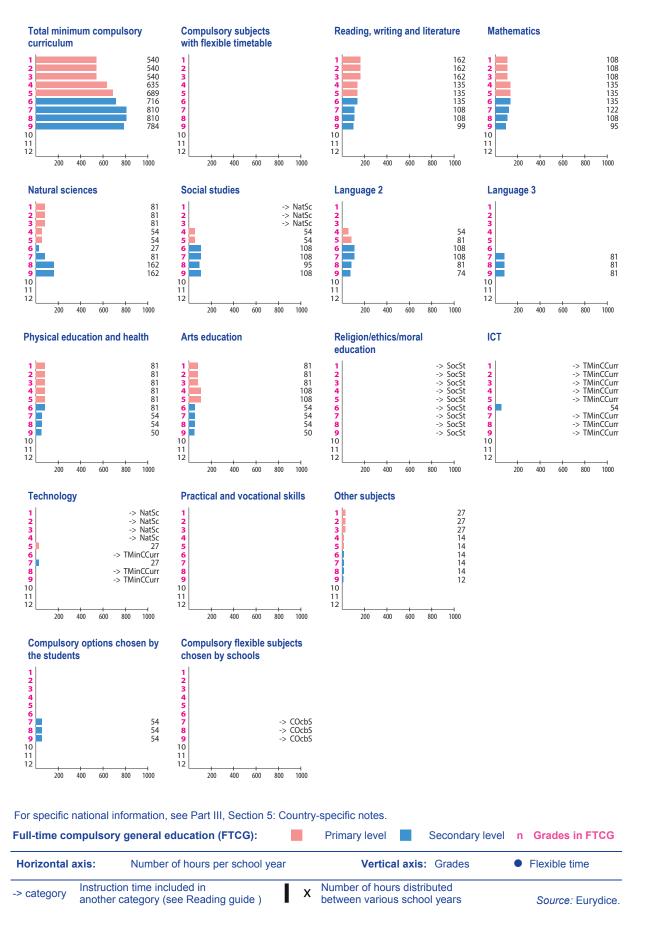
LIECHTENSTEIN - PRIMARY AND OBERSCHULE



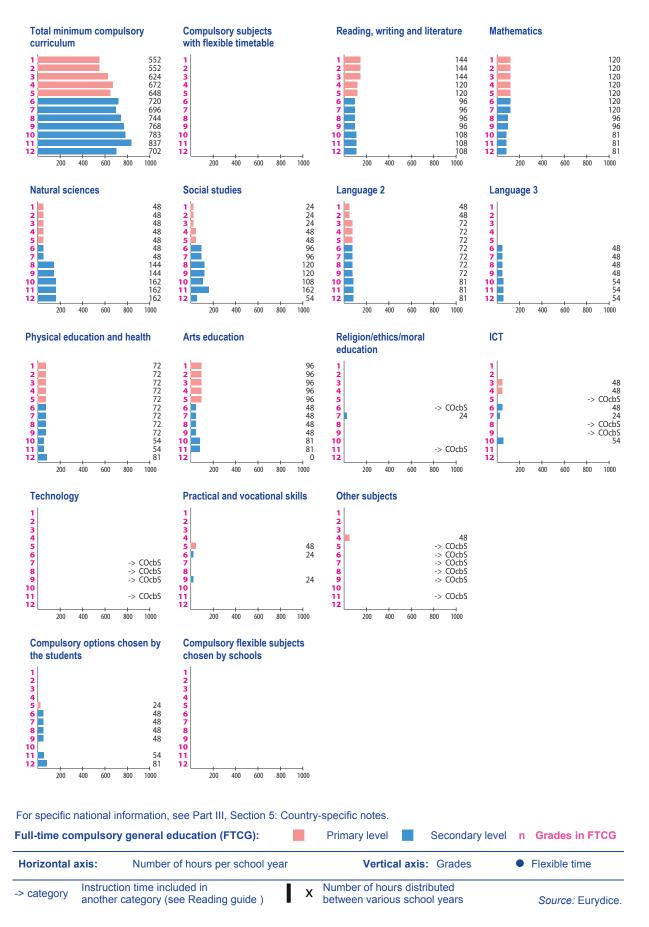
LIECHTENSTEIN - PRIMARY AND REALSCHULE



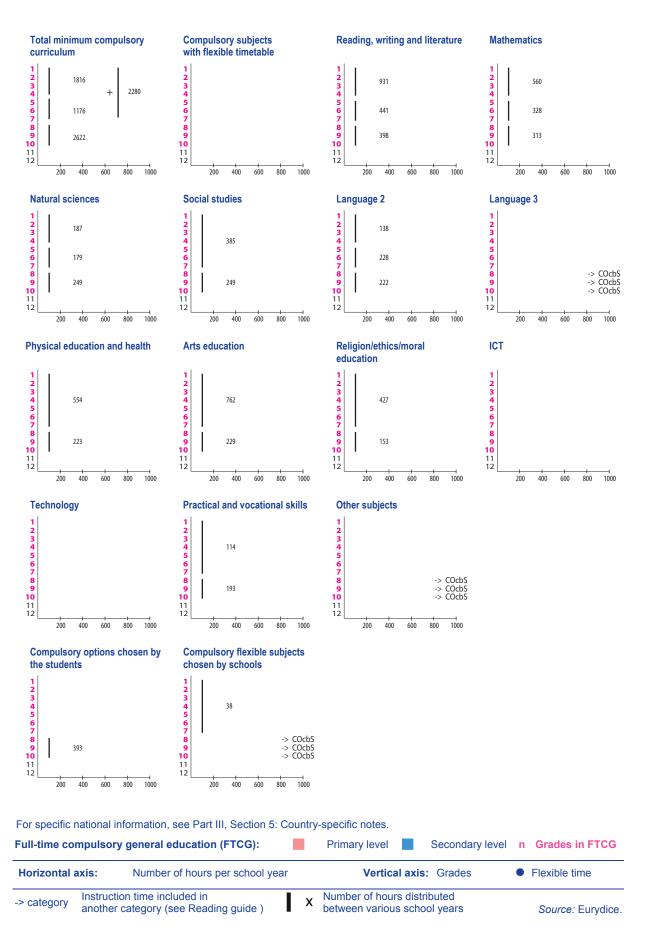
MONTENEGRO



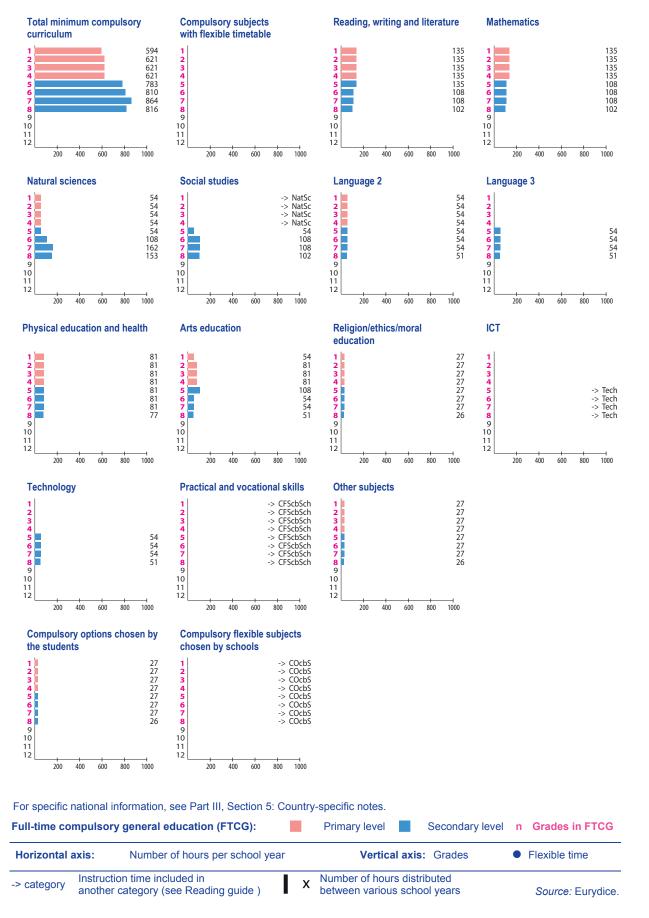
FORMER YUGOSLAV REPUBLIC OF MACEDONIA



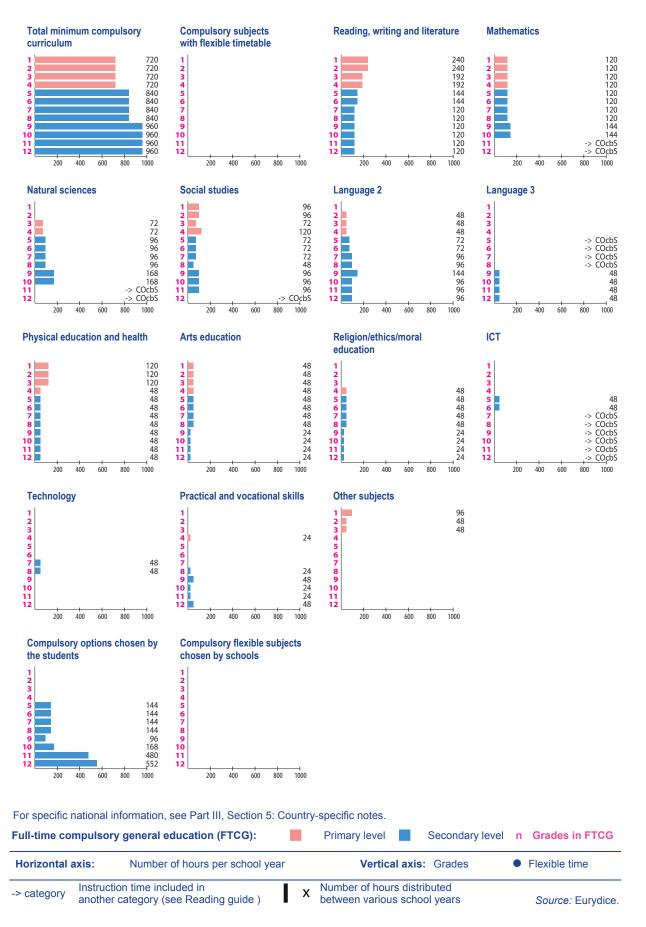
NORWAY



SERBIA



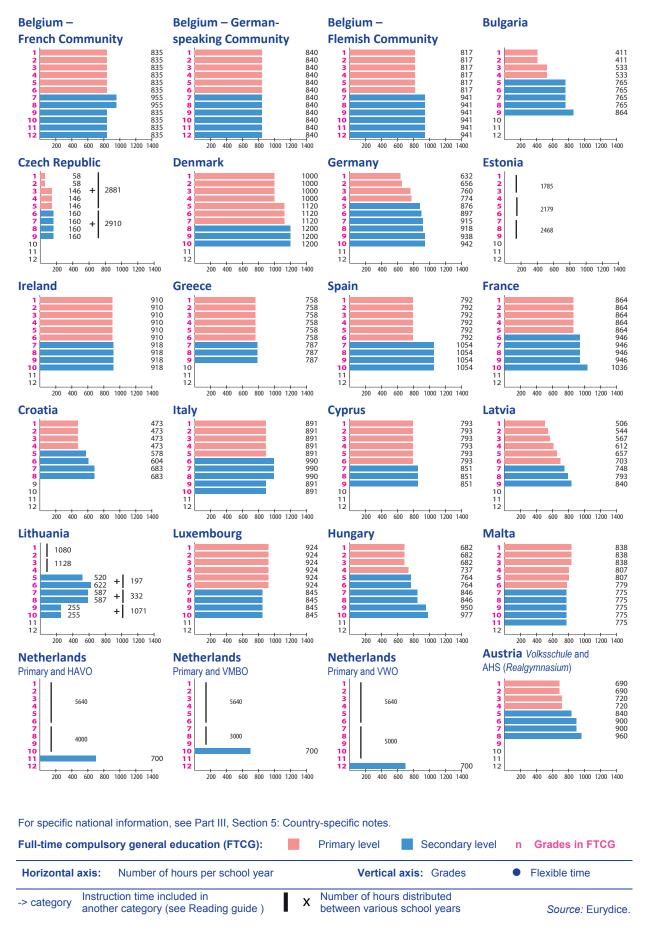
TURKEY

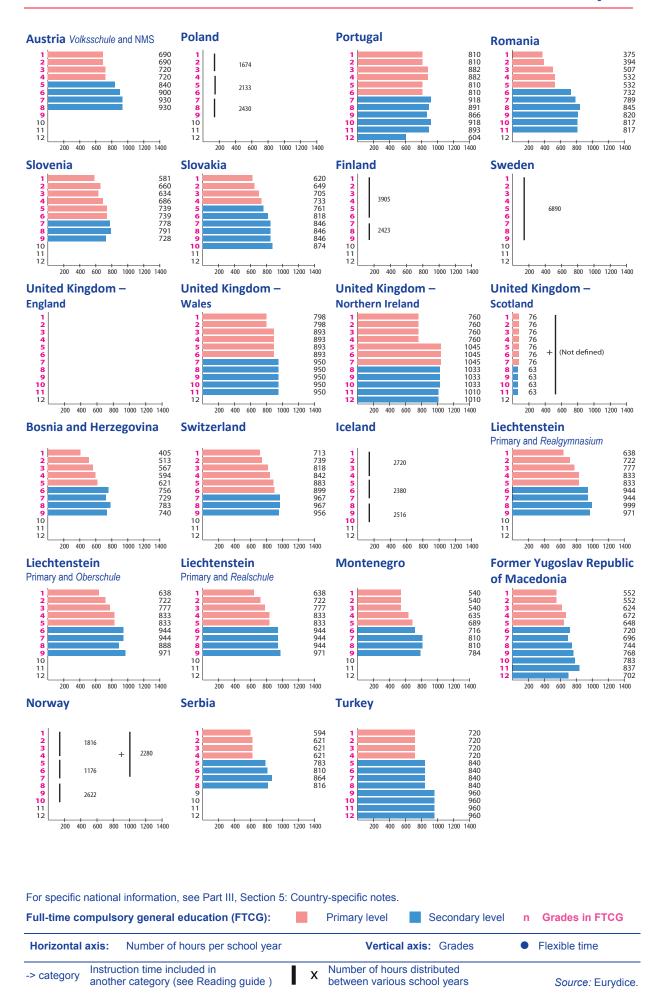


Section 3. Instruction time by subject

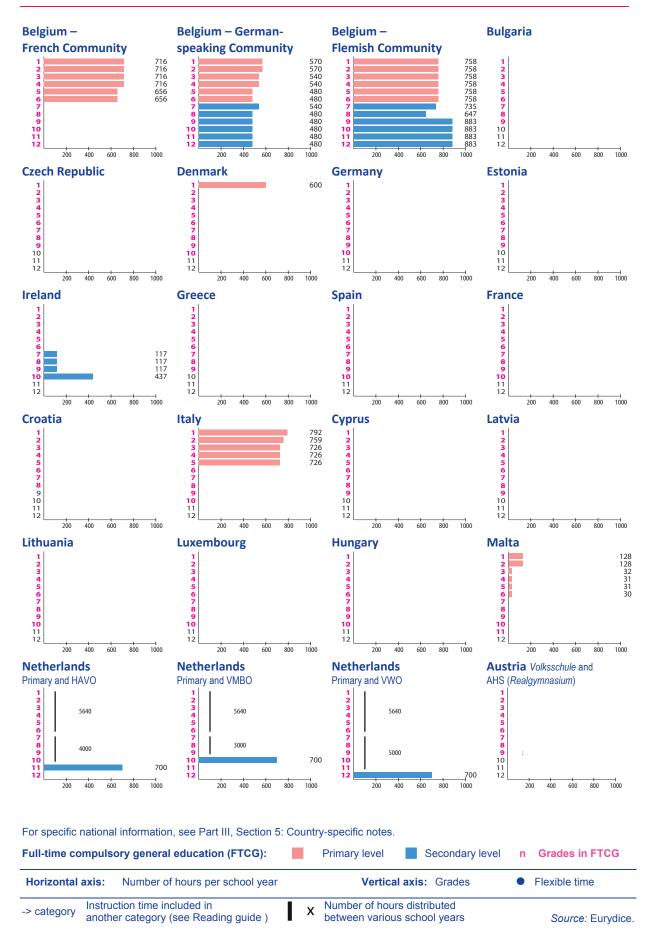
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Compulsory subjects with flexible timetable	98
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Natural sciences	104
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Language 2	108
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Physical education and health	112
Arts education	114
Religion/ethics/moral education	116
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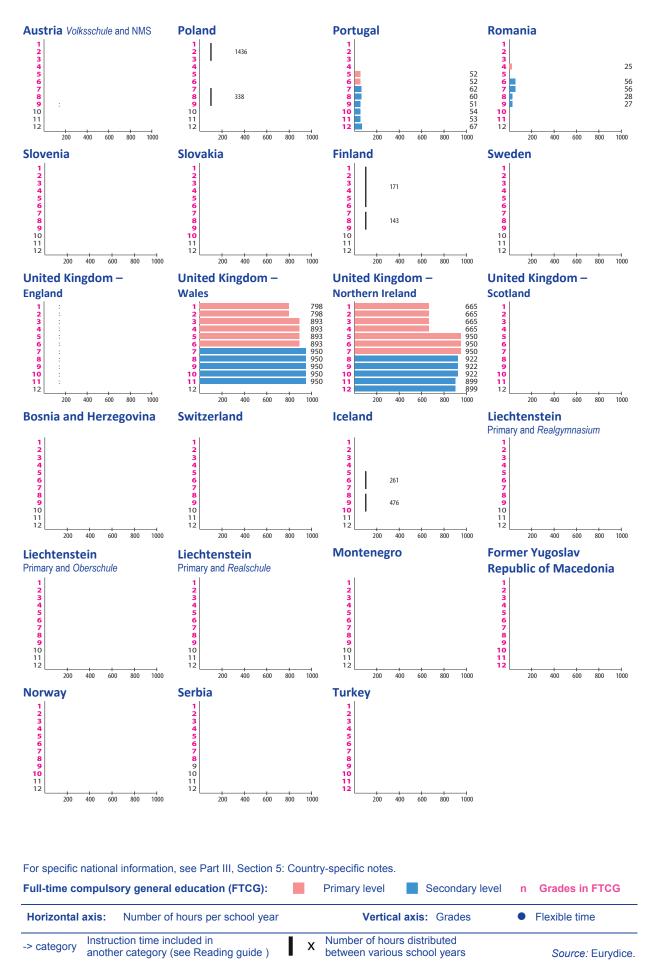
TOTAL MINIMUM COMPULSORY CURRICULUM



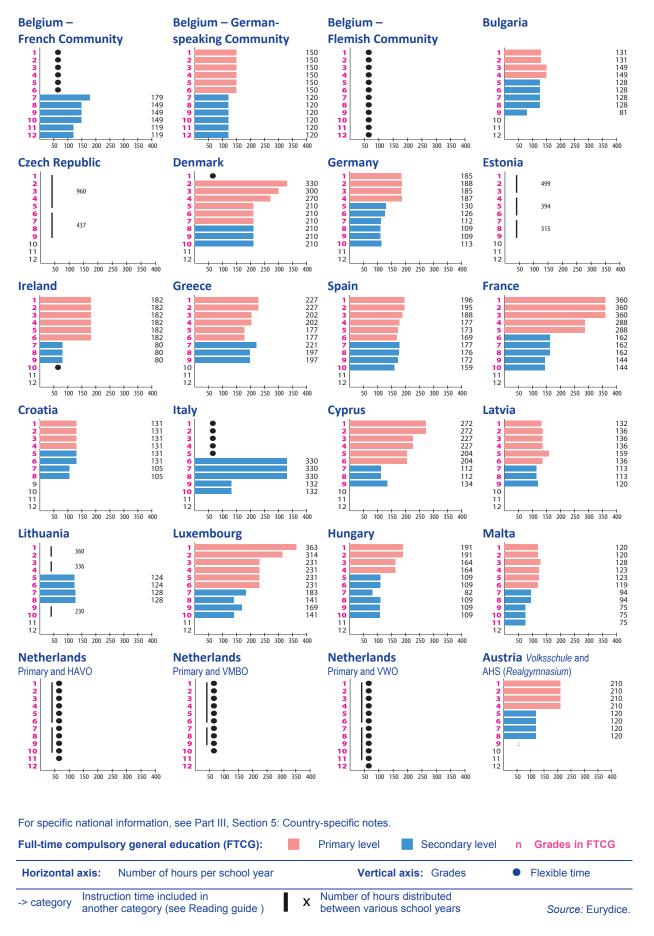


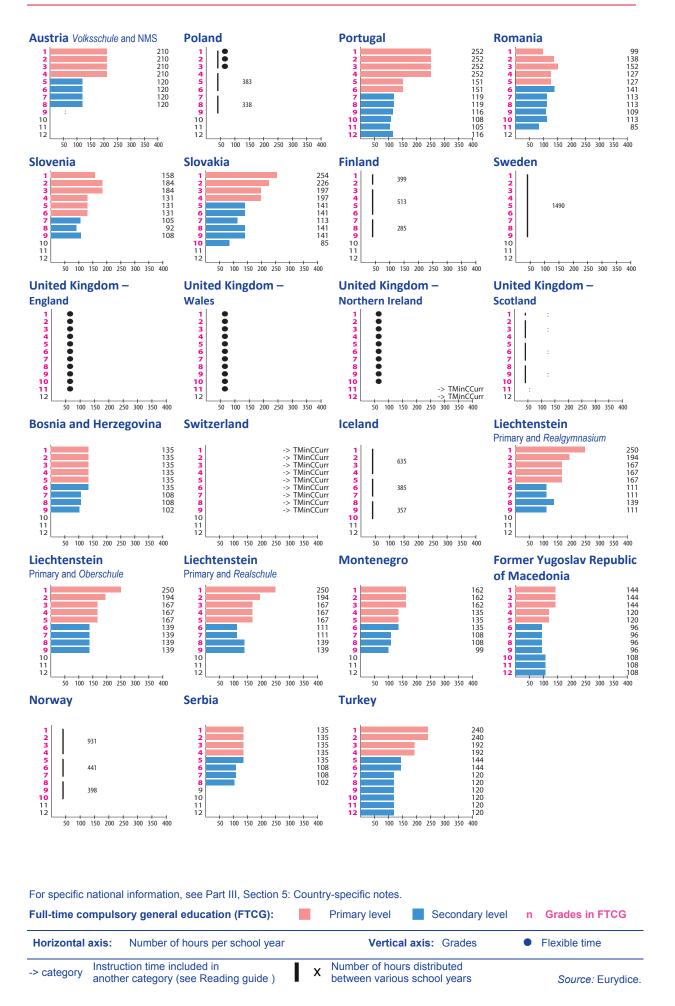
COMPULSORY SUBJECTS WITH FLEXIBLE TIMETABLE



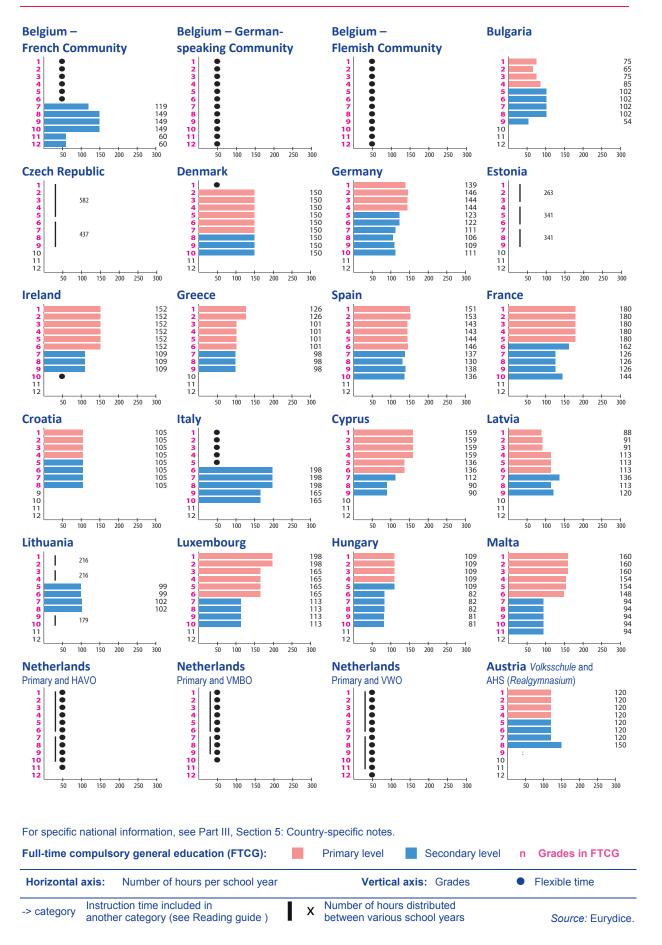


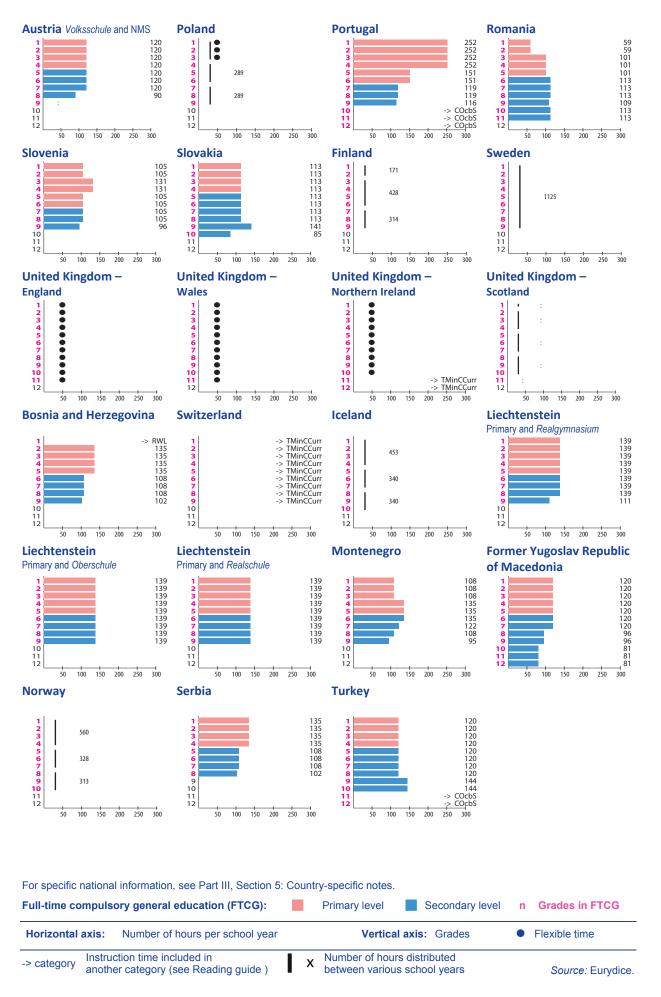
READING, WRITING AND LITERATURE



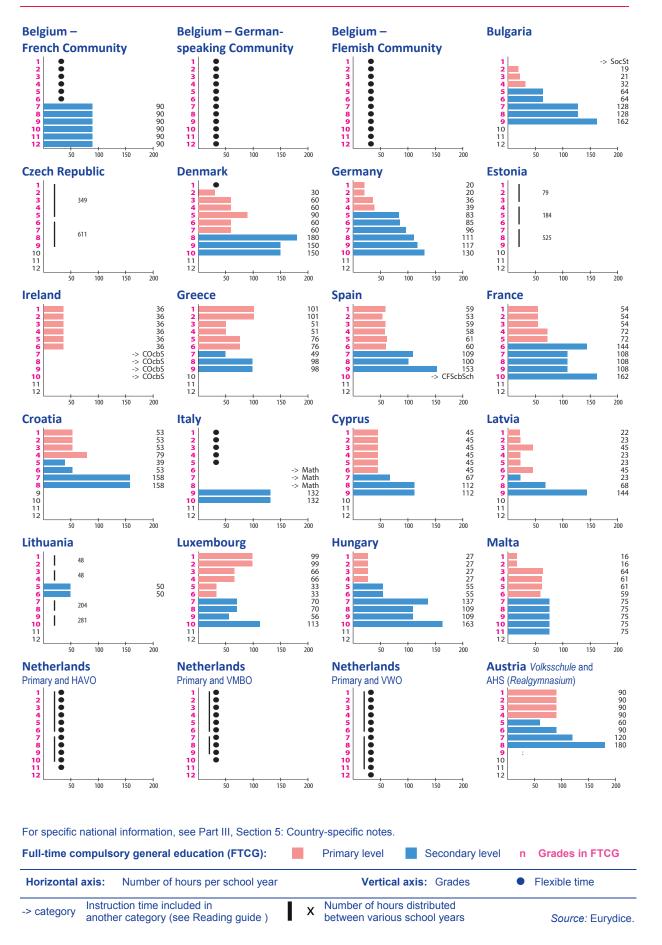


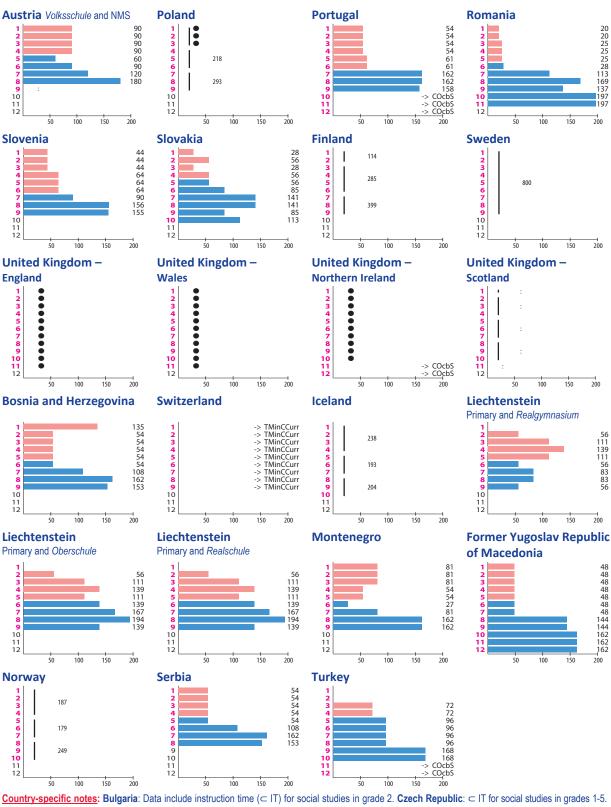
MATHEMATICS





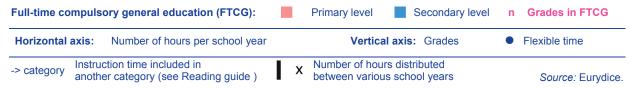
NATURAL SCIENCES



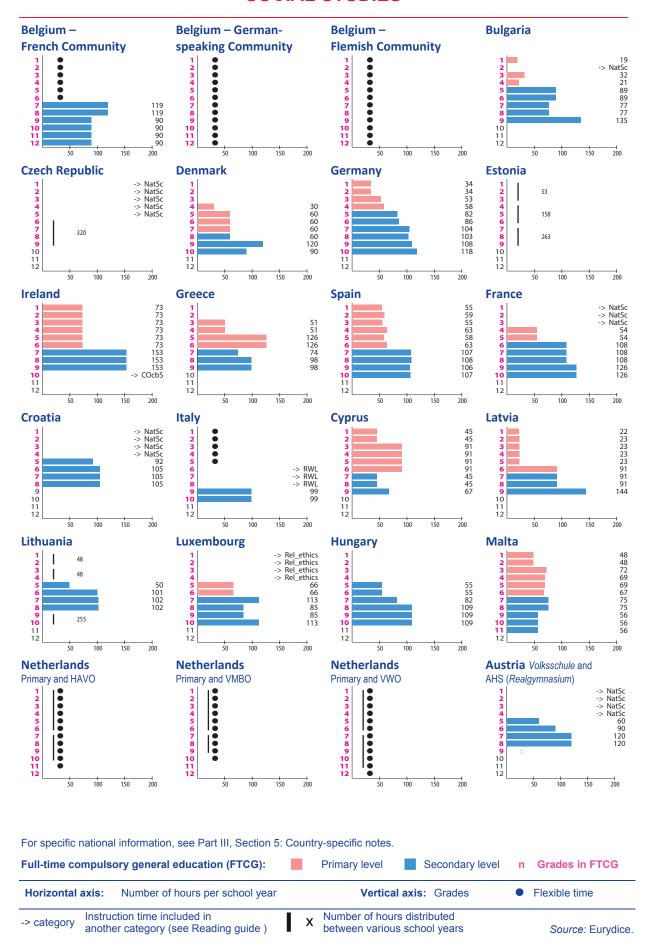


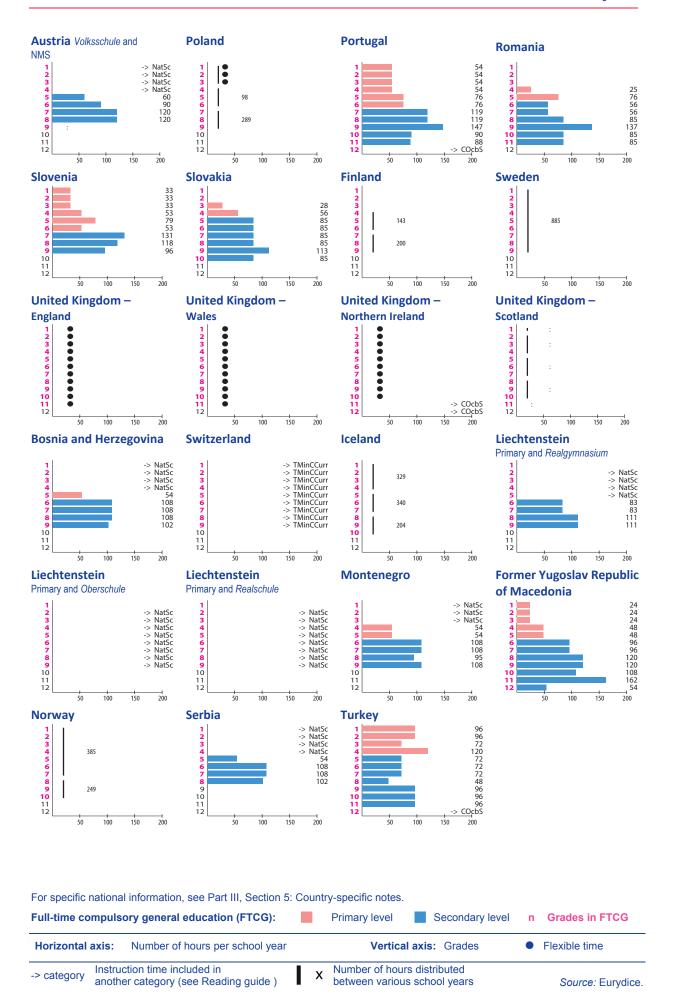
Country-specific notes: Bulgaria: Data include instruction time (⊂ IT) for social studies in grade 2. Czech Republic: ⊂ IT for social studies in grades 1-5. Ireland: ⊂ IT for Technology in grades 1-6. France: ⊂ IT for social studies and ICT in grades 1-3 and for technology in grades 1-6. Croatia: ⊂ IT for social studies in grades 1-4. Cyprus: ⊂ IT for technology in grades 1-4. Malta: ⊂ IT for technology in grades 1-6. Austria: ⊂ IT for social studies and technology in grades 1-4. Bosnia and Herzegovina: ⊂ IT for social studies in grades 1-4. Liechtenstein: ⊂ IT for social studies. Montenegro: ⊂ IT for social studies (grades 1-3) and technology (grades 1-4). Serbia: ⊂ IT for social studies in grades 1-4.

For specific national information, see Part III, Section 5: Country-specific notes.

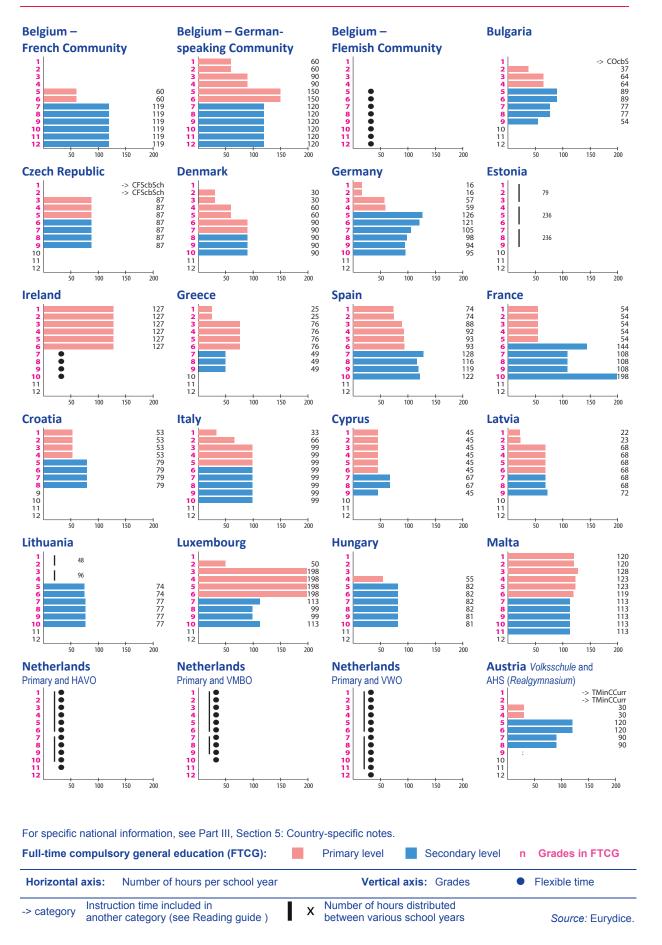


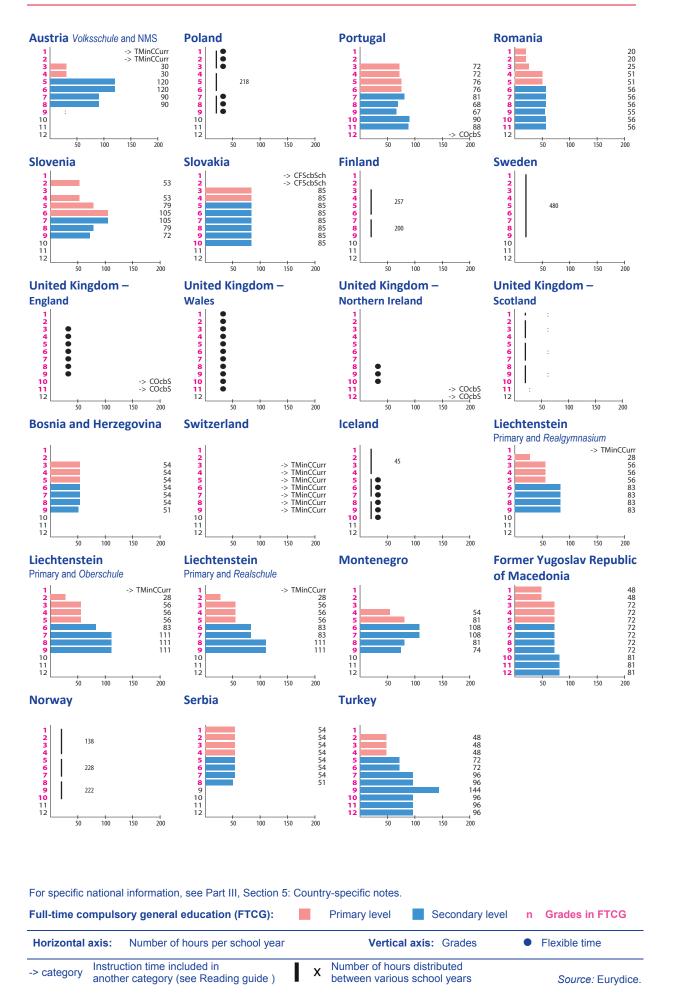
SOCIAL STUDIES



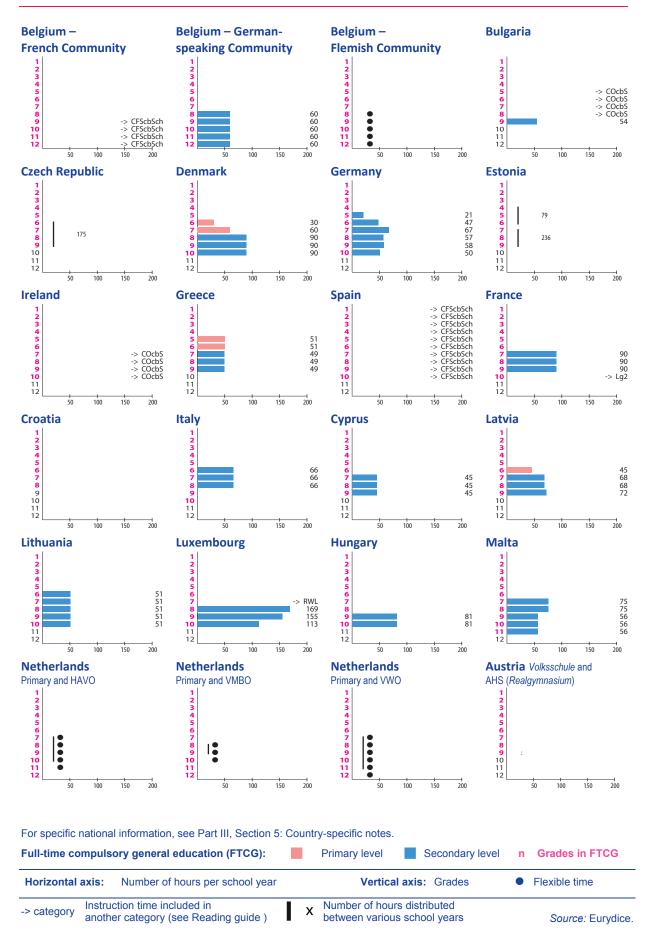


LANGUAGE 2





LANGUAGE 3





For specific national information, see Part III, Section 5: Country-specific notes.

Full-time compulsory general education (FTCG):

Primary level
Secondary level
n Grades in FTCG

Horizontal axis: Number of hours per school year

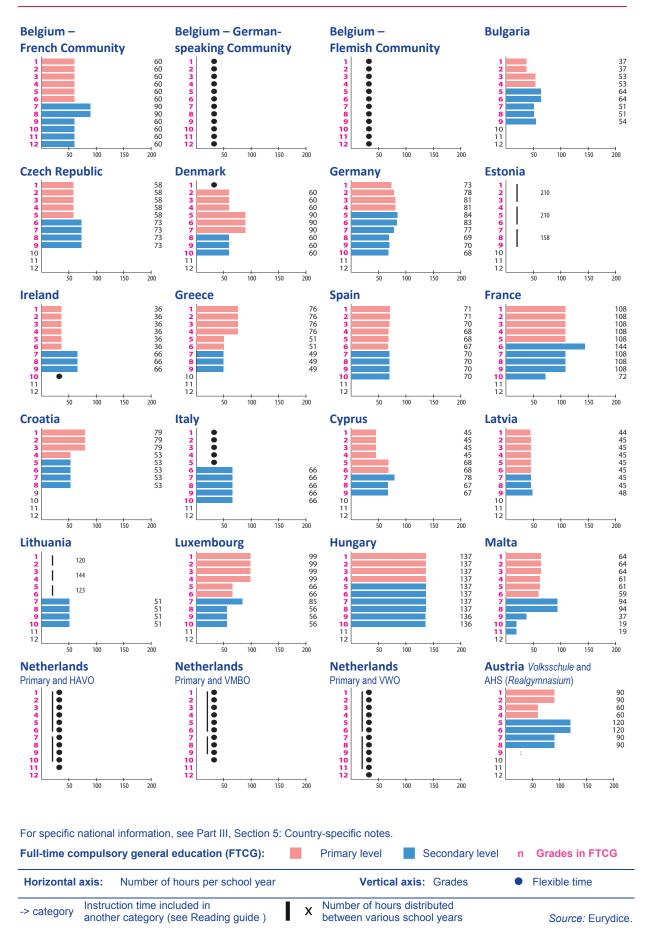
Vertical axis: Grades
Flexible time

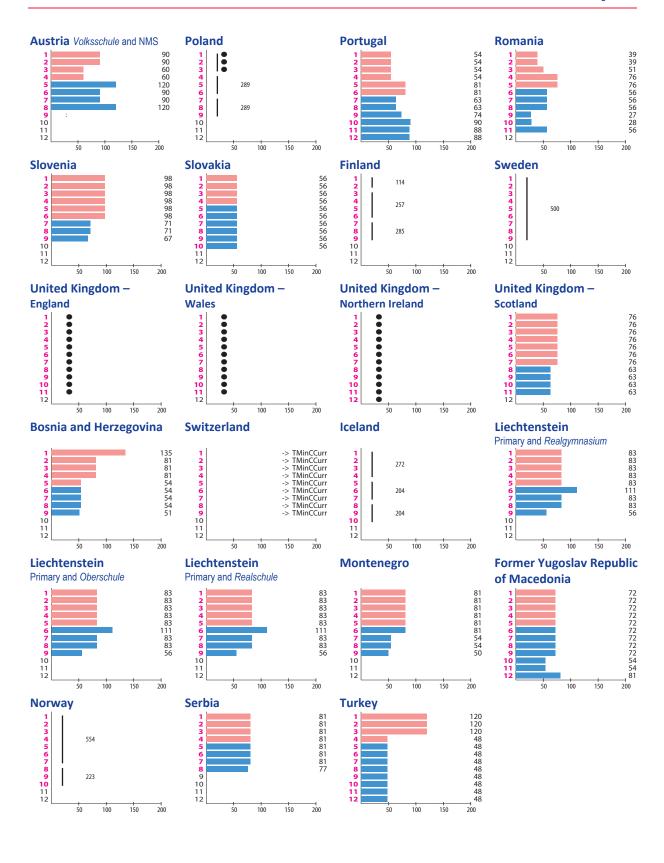
-> category
Instruction time included in another category (see Reading guide)

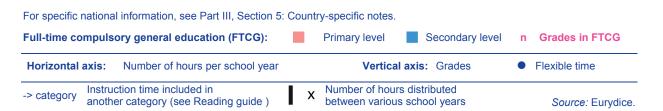
X Number of hours distributed between various school years

Source: Eurydice.

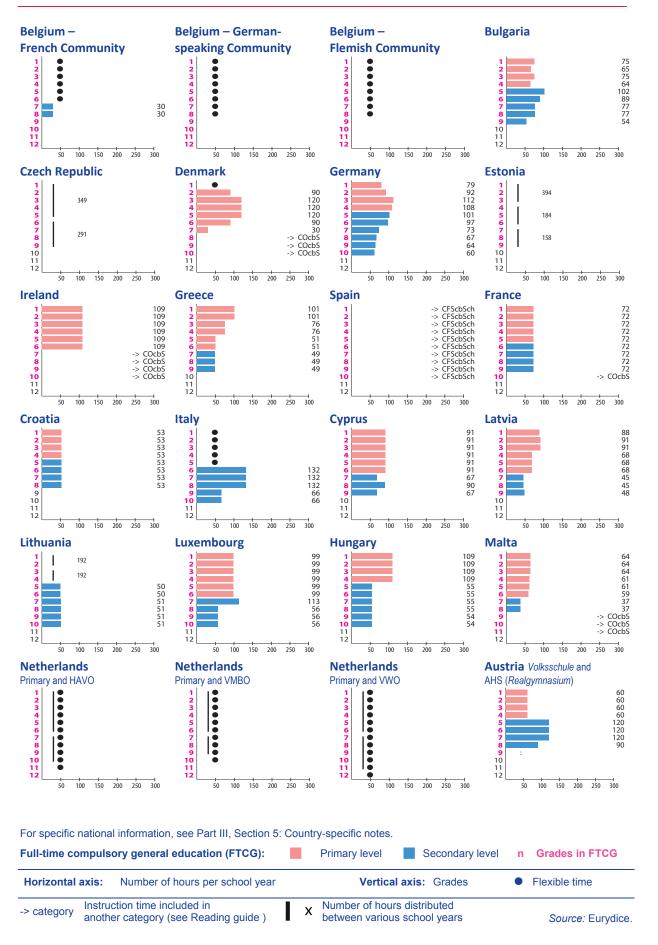
PHYSICAL EDUCATION AND HEALTH

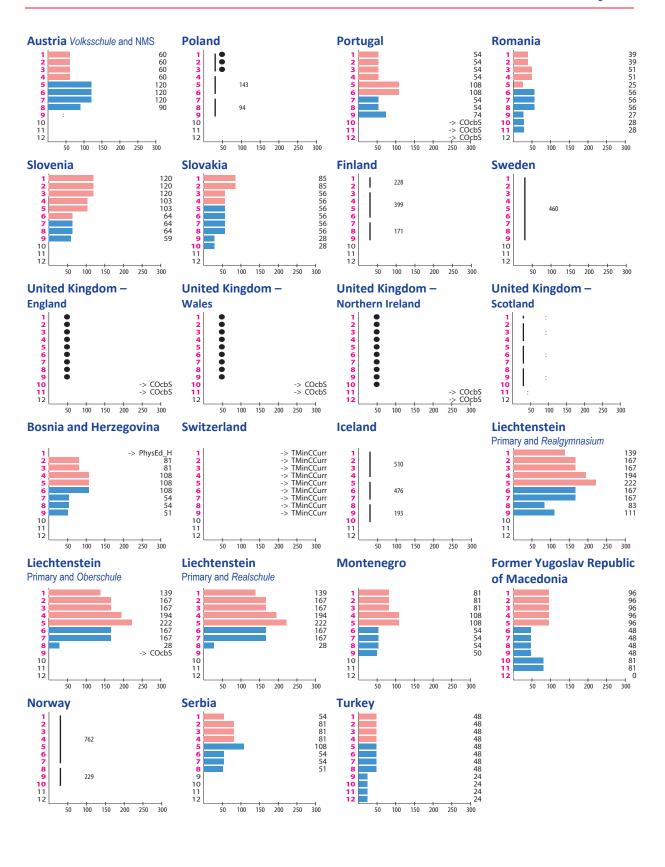






ARTS EDUCATION





For specific national information, see Part III, Section 5: Country-specific notes.

Full-time compulsory general education (FTCG):

Primary level
Secondary level
n Grades in FTCG

Horizontal axis: Number of hours per school year

Vertical axis: Grades
Flexible time

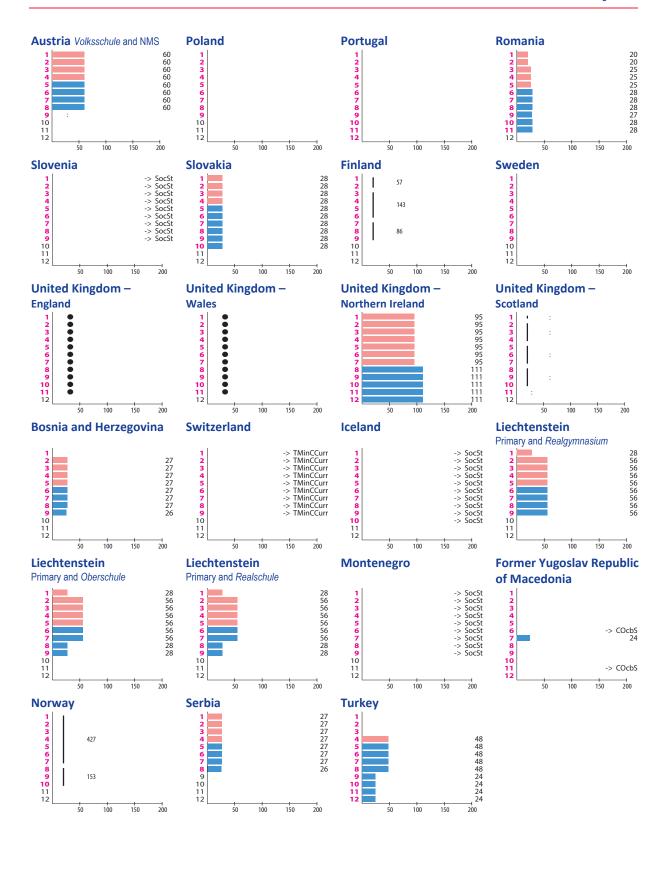
-> category
Instruction time included in another category (see Reading guide)

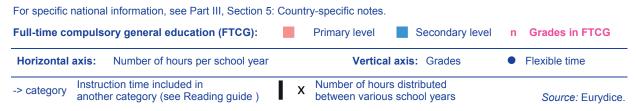
X Number of hours distributed between various school years

Source: Eurydice.

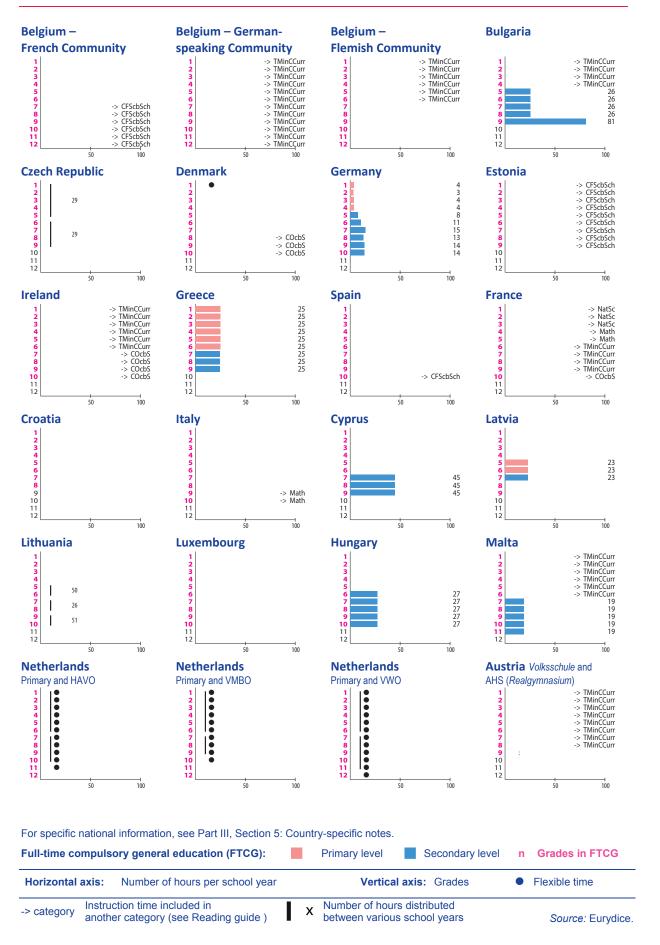
RELIGION/ETHICS/MORAL EDUCATION

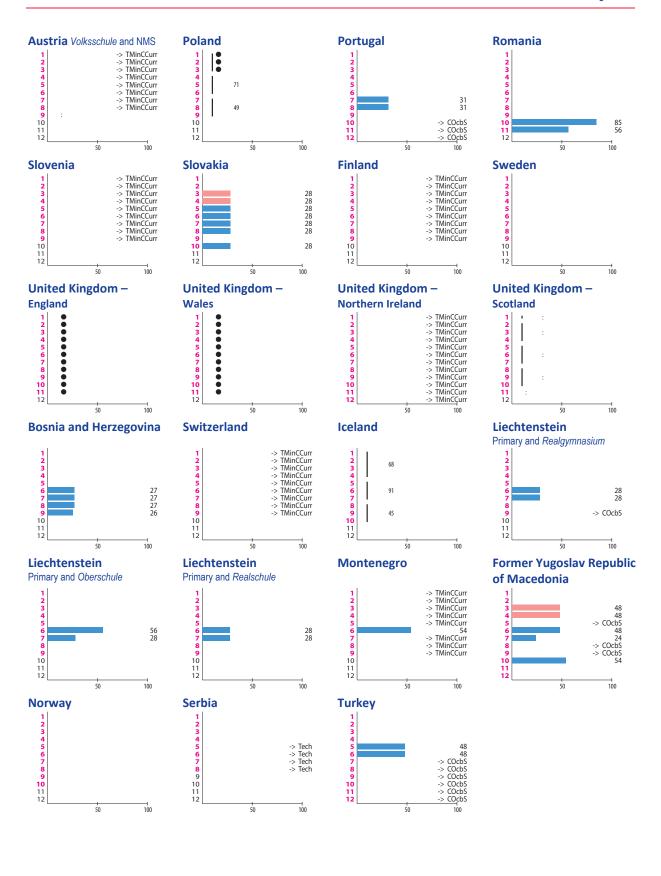






ICT





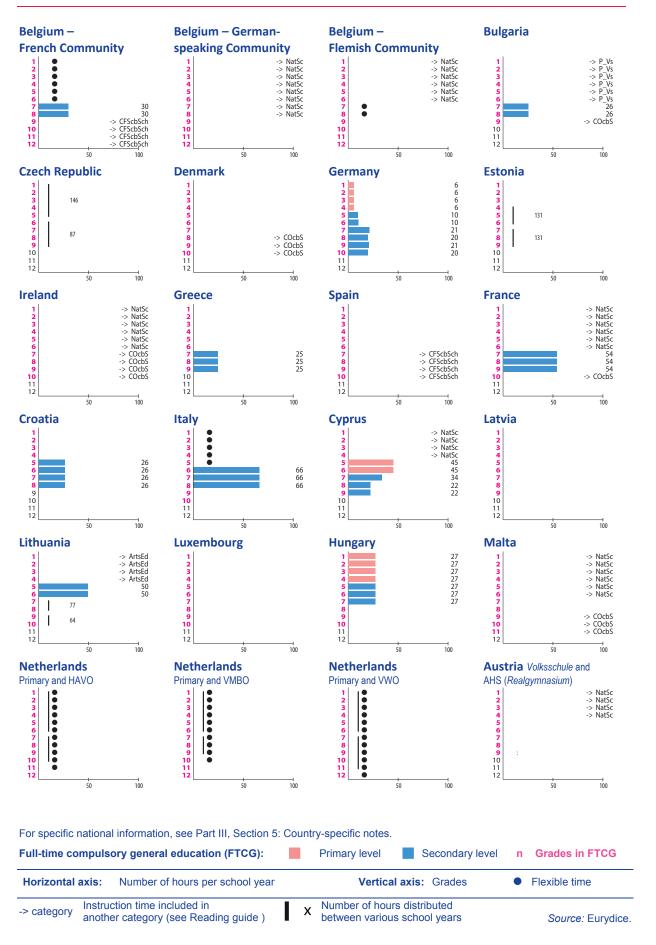
For specific national information, see Part III, Section 5: Country-specific notes. Full-time compulsory general education (FTCG): Secondary level **Grades in FTCG** Primary level **Horizontal axis:** Number of hours per school year Vertical axis: Grades Flexible time Instruction time included in

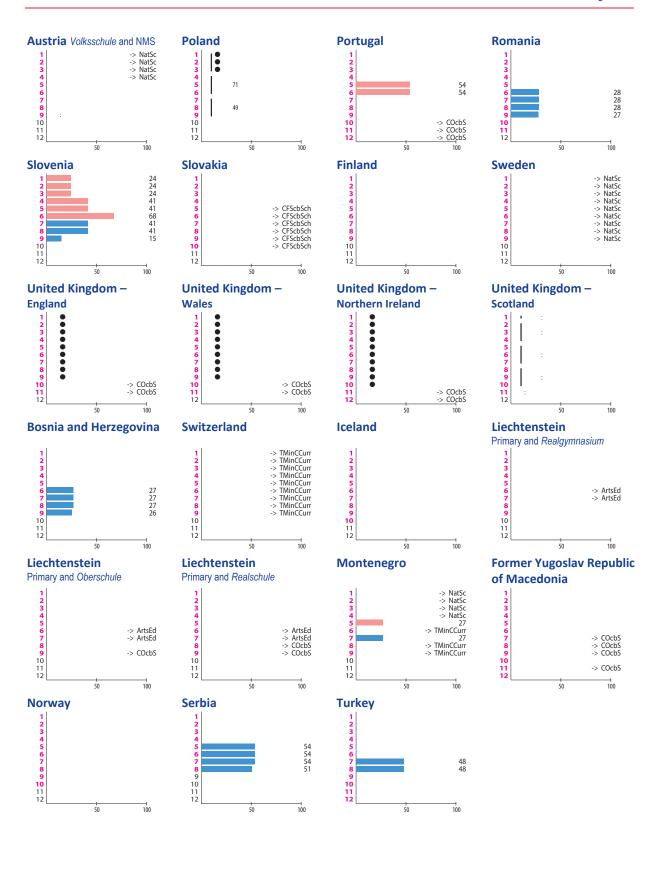
-> category another category (see Reading guide)

Number of hours distributed between various school years

Source: Eurydice.

TECHNOLOGY





For specific national information, see Part III, Section 5: Country-specific notes.

Full-time compulsory general education (FTCG):

Primary level

Secondary level

n Grades in FTCG

Wertical axis: Grades

Flexible time

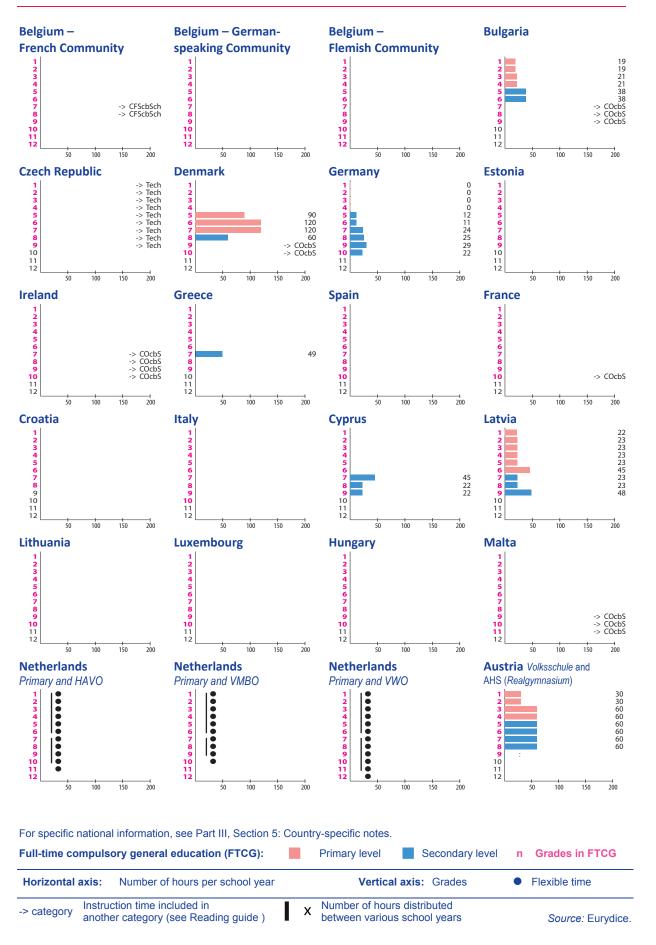
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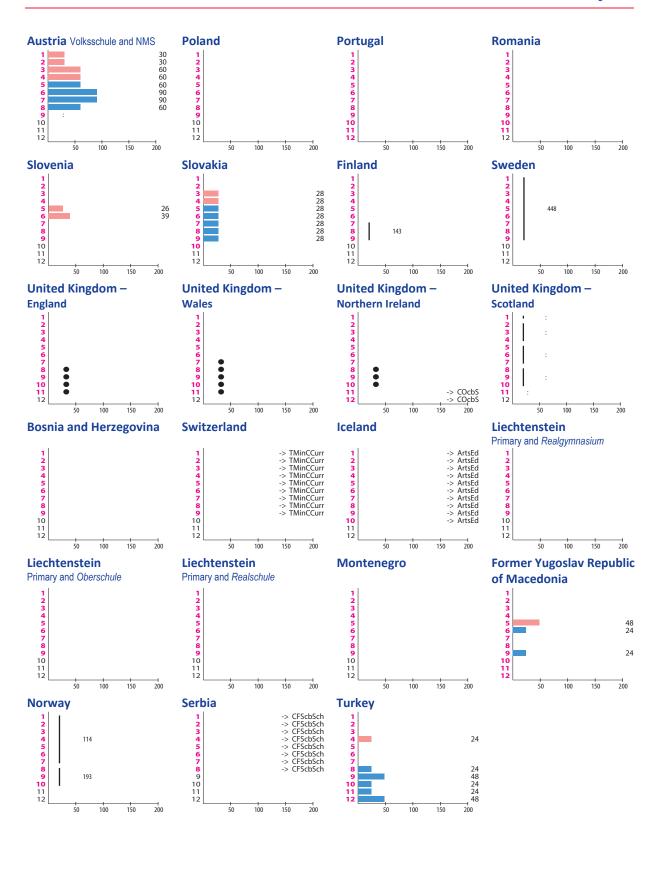
Instruction time included in another category (see Reading guide)

X Number of hours distributed between various school years

Source: Eurydice.

PRACTICAL AND VOCATIONAL SKILLS





For specific national information, see Part III, Section 5: Country-specific notes.

Full-time compulsory general education (FTCG):

Primary level

Secondary level

n Grades in FTCG

Horizontal axis: Number of hours per school year

Vertical axis: Grades

Flexible time

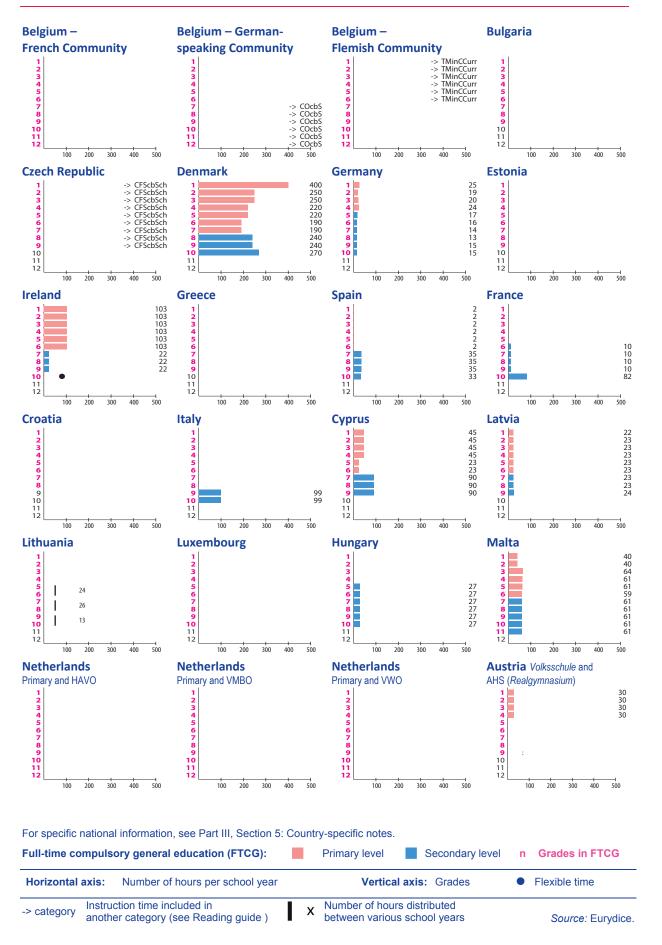
-> category

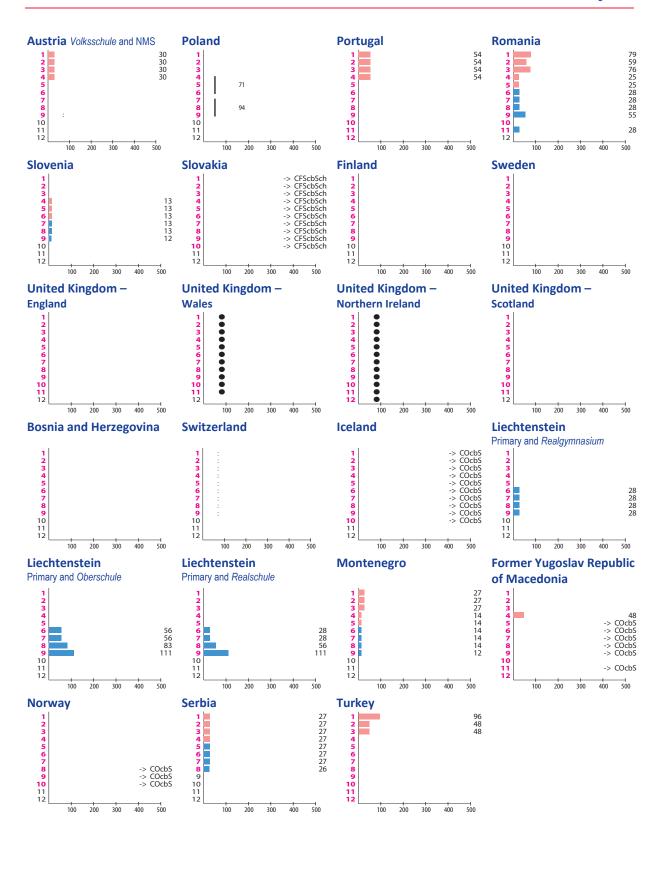
Instruction time included in another category (see Reading guide)

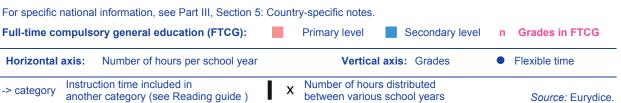
X Number of hours distributed between various school years

Source: Eurydice.

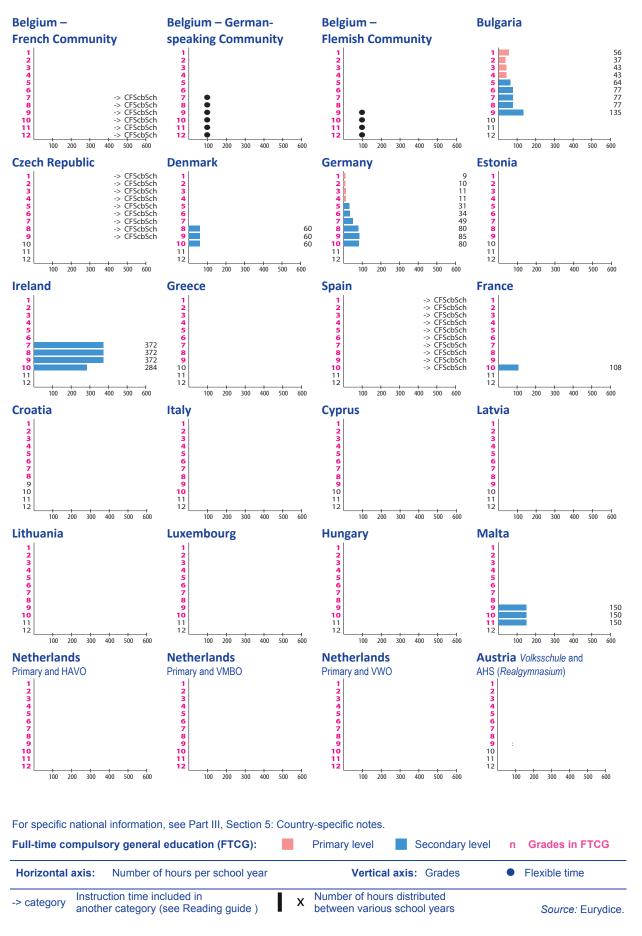
OTHER SUBJECTS

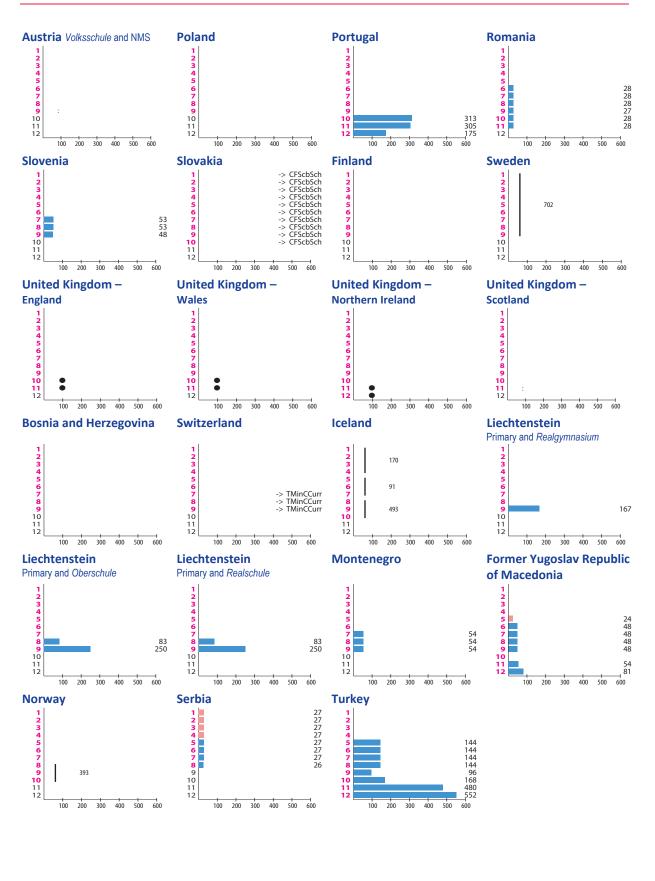






COMPULSORY OPTIONS CHOSEN BY THE STUDENTS





For specific national information, see Part III, Section 5: Country-specific notes.

Full-time compulsory general education (FTCG):

Primary level
Secondary level
n Grades in FTCG

Horizontal axis: Number of hours per school year

Vertical axis: Grades
Flexible time

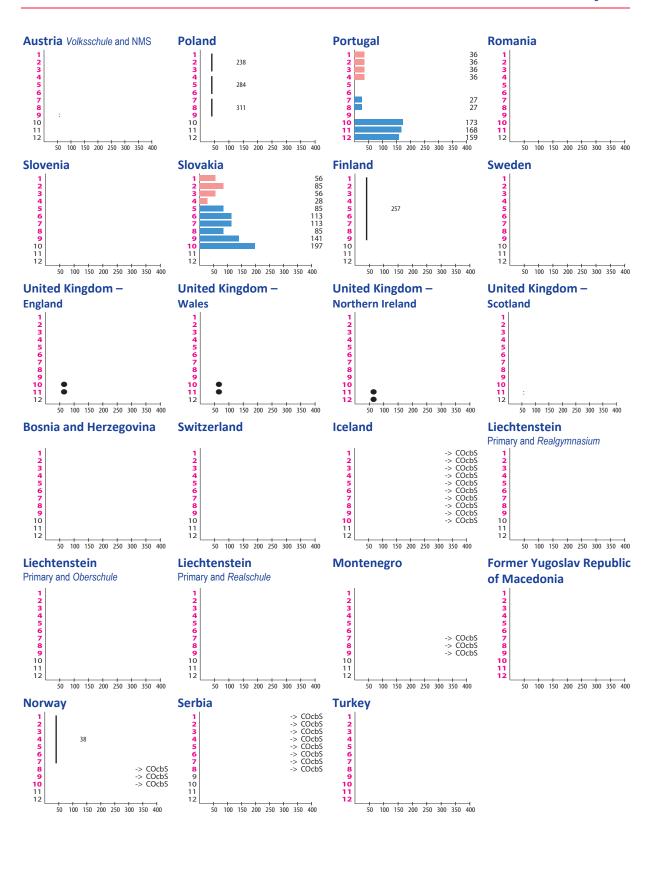
-> category
Instruction time included in another category (see Reading guide)

X Number of hours distributed between various school years

Source: Eurydice.

COMPULSORY FLEXIBLE SUBJECTS CHOSEN BY SCHOOLS





For specific national information, see Part III, Section 5: Country-specific notes.

Full-time compulsory general education (FTCG):

Primary level
Secondary level
n Grades in FTCG

Horizontal axis: Number of hours per school year

Vertical axis: Grades
Flexible time

-> category
Instruction time included in another category (see Reading guide)

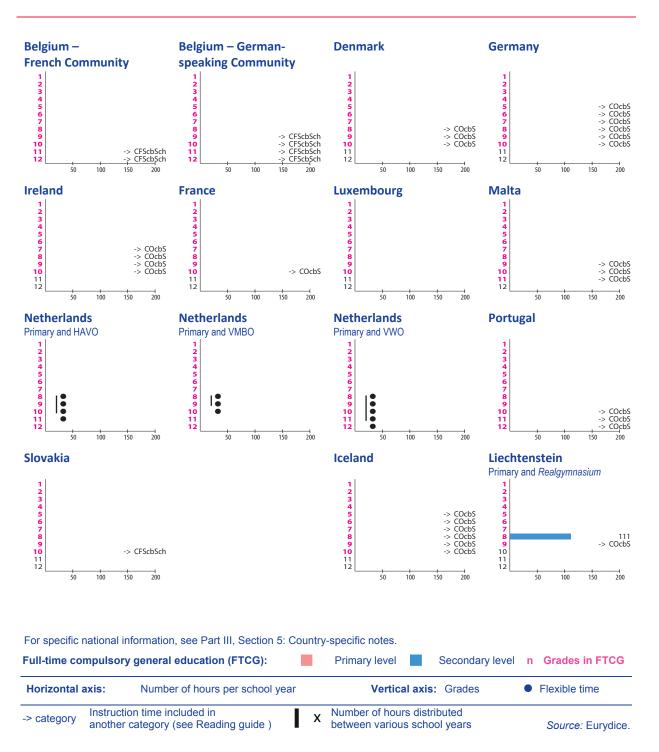
X Number of hours distributed between various school years

Source: Eurydice.

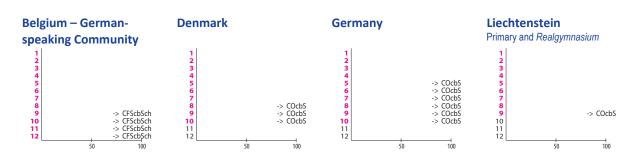
Section 4. Appendix

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Non-compulsory curriculum	132

LANGUAGE 4 (compulsory curriculum)



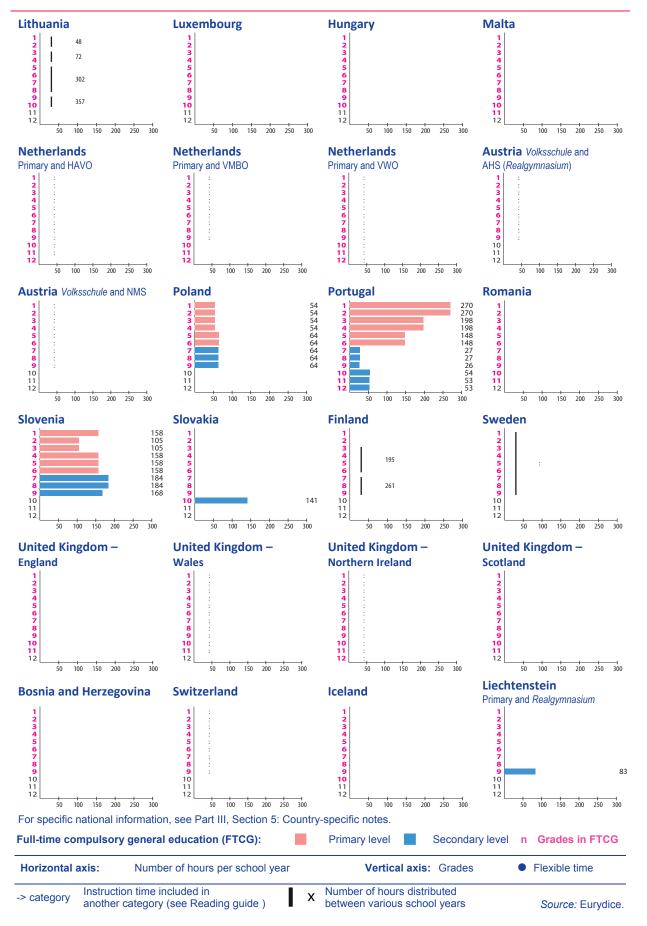
LANGUAGE 5 (compulsory curriculum)



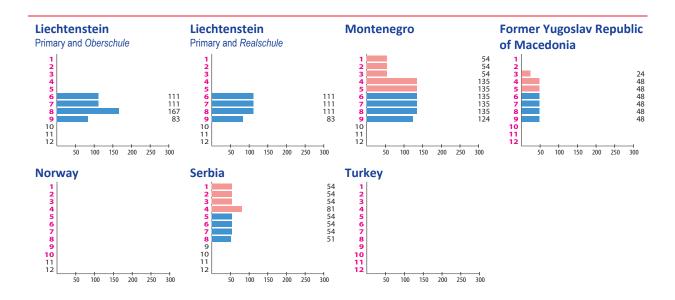
NON-COMPULSORY CURRICULUM



NON-COMPULSORY CURRICULUM



NON-COMPULSORY CURRICULUM



For specific national information, see Part III, Section 5: Country-specific notes.

Full-time compulsory general education (FTCG):

Primary level

Secondary level

n Grades in FTCG

Horizontal axis:

Number of hours per school year

Vertical axis: Grades

Flexible time

-> category

Instruction time included in another category (see Reading guide)

X Number of hours distributed between various school years

Source: Eurydice.

Section 5. Country-specific notes

Belgium (French Community)

The scope includes both public and government-dependent private institutions, whose programs only slightly differ. Therefore, data only show the minimum number of hours in public institutions. Compulsory education lasts until the age of 18 for every student. However, in vocational education, from age 15, school-based learning is compulsory only part time. Students may opt for a structured learning path which combines part-time vocational education at school with part-time training at a workplace. Education authorities prescribe three days for the professional development of teachers, which have been deducted from the number of instruction days in the school year, but the recommended minimum instruction time has not varied as compared to previous years.

In primary education, the legislation stipulates the total instruction time for 'reading, writing and literature', 'mathematics', 'natural sciences', 'social studies', 'arts education' and 'technology' altogether. It is to the discretion of the school how to allocate this time among the different subjects. In grades 5-6, in the Walloon Region, schools have to offer at least two periods (1 period = 50 minutes) per week of the second language, which can be Dutch, English or German. However, in the 19 municipalities of Brussels and the Walloon communes with special linguistic status, the first foreign language (language 2) must be taught at least for three periods per week in grades 3-4, and five periods per week in grades 5-6. In the Region Brussels-Capital, the first foreign language (language 2) must be Dutch.

In lower secondary education, grades 7-8, the compulsory options that students can choose include: French (Latin, theatre, initiation to the culture of antiquity, etc.); foreign language (conversation, culture, etc.); sciences and mathematics (informatics, sciences, mathematics, logic, etc.); social studies (economic matters, civic life, etc.); artistic activities (music, arts, etc.); technical activities (technical drawing, electricity, hairdressing, etc.); and sports (sport, physical education, body language, etc.).

In upper secondary education, there are four tracks. General education (*enseignement de transition*) concerns two tracks: *enseignement général* (de transition) and *enseignement technique et artistique* (de transition). Among the enseignement de transition, 85.20 % of the students at ISCED 34 are in the track *enseignement général*. Only this track is reported in this publication.

In grades 9-12, it is compulsory for students to choose at least one foreign language with four periods a week.

As from 1 September 2016 for primary schools, and as from 1 September 2017 for secondary schools offering a choice between religion and moral education, at least one of the two lessons per week allocated to these subjects should be devoted to 'philosophy and citizenship'. Instruction on this subject is part of compulsory education.

Belgium (German-speaking Community)

The scope includes both public and government-dependent private institutions. Compulsory education lasts until the age of 18 for every student. However, in vocational education, from age 15, school-based learning is compulsory only part time. Students may opt for a structured learning path that combines part-time vocational education at school with part-time training at a workplace.

Education authorities prescribed three days for the professional development of teachers in this school year, which have been deducted from the number of instruction days, but the recommended minimum instruction time has not varied as compared to previous years. For many subject areas, the legislation only stipulates the total instruction time ('compulsory subjects with flexible timetable'). It is to the discretion of the school how to allocate this time among the different subjects.

From grade 1 to 8, 'technology' is integrated in 'natural sciences'. ICT is taught integrated into the rest of the subjects in all the grades.

In secondary education, schools must offer from 28 to 36 hours a week. The minimum, i.e. 28 hours a week, has been reported in the compulsory curriculum, although most schools offer more instruction time. Schools can offer different programmes with different instruction times for the different subjects. The total number of hours varies across programmes. Students can decide which programme to follow. Schools can also offer 'other subjects' such as Latin and economics. The non-compulsory curriculum reflects the difference between the minimum and maximum instruction time that students can receive depending on the options that they choose.

Belgium (Flemish Community)

The scope includes both public and government-dependent private institutions. Compulsory education lasts until the age of 18 for every student. However, in vocational education, from age 15, school-based learning is compulsory only part time. Students may opt for a structured learning path that combines part-time vocational education at school with part-time training at a workplace.

For many subject areas, the legislation only stipulates the total instruction time ('compulsory subjects with flexible timetable'). It is to the discretion of the school how to allocate this time among the different subjects.

From grade 1 to 6, 'technology' is integrated in 'natural sciences'. The 'other subjects' refer to learning to learn and social skills. These subjects and ICT are taught integrated into the rest of the subjects.

Bulgaria

In grades 1-2, 'natural sciences' and 'social studies' are taught as an integrated subject. In grades 1-4, ICT is integrated in all subjects. In grades 1-6, technology is integrated in 'practical and vocational skills'.

The compulsory options that students can choose are: in grade 1, a foreign language; in grades 1-9, religion; in grades 5-8, a second foreign language (language 3); in grades 7-9, practical and vocational skills; and in grade 9, technology.

In the *Gimnazia* (starting from grade 9 – and 8 in some cases), the distribution of mandatorily elective instruction time depends on the specialisation of the school and students' choices.

Subjects in the non-compulsory curriculum are usually the same as in the compulsory curriculum, but can also be others such as folk dances, robotics, etc.

Czech Republic

Grades 1-5: Time for 'social studies' is integrated in 'natural sciences'. Instruction time is set for the curriculum area 'People and the World'. In grades 6-9, geography is integrated in natural studies (reported in the category 'natural sciences').

In grades 1-2, the first foreign language (language 2) is a 'compulsory flexible option chosen by the school'. As from grade 3, it is a compulsory subject for all students. The second foreign language (language 3) is taught from grade 8 at the latest, but it can be taught also in lower grades.

In grades 6-9, 'health education' can either be provided as a subject in its own right or integrated into other subjects such as natural sciences or physical education. For this data collection, instruction time dedicated to health education and physical education has been put together. Schools are free to allocate this time as they wish between the grades. For this data collection, this time has been distributed equally between the four grades. However, two periods must be dedicated to physical education in every grade, as a minimum.

'Practical and vocational skills' are integrated in 'technology' (grades 1-9).

The 'other subjects' include the cross-curricular subjects: Personal and social education; education for democratic citizenship; education towards thinking in the European and global context; multicultural education; environmental education; and media studies. Religion/ethics/moral education has also been included here, although it is not part of the compulsory curriculum defined at national level. Schools can decide to offer 'ethics' as a compulsory, optional or non-compulsory subject. Religion is taught as a non-compulsory subject at schools established by a municipality or a union of municipalities, if at least seven pupils of the school request so.

The 'compulsory flexible subjects chosen by schools' include the flexible periods established by the Framework Educational Programme (FEP), which must be provided by all schools to increase the time allocated to any subject. They can be used to teach the first foreign language (language 2) in grades 1-2, swimming within physical education at ISCED level 1, elective subjects and subjects belonging to the 'other subjects' category. Schools can also offer a second foreign language (language 3) at ISCED level 1 and a third and a fourth foreign languages at ISCED levels 1 and 2, although the FEP does not state it.

There are two types of vertical flexibility. Some subjects must be necessarily taught in all the related grades ('reading, writing and literature', 'mathematics', 'natural sciences', 'social studies' and 'arts education'), whereas for the other subjects (namely, 'ICT' and 'technology') this obligation does not exist.

Denmark

Grades 1-10: The 'other subjects' include 'exercise and physical activity', 'supportive learning activities' and 'free class'. Forty-five minutes of exercise and physical activity must be organized every day as part of the other compulsory subjects or of the supportive learning activities. Supportive learning activities and free class aim to develop the pupils' receptiveness to teaching by working with their social competences, diverse development, motivation and well-being, and by engaging them in developing the approach to future work.

Grades 8-10: The 'compulsory options chosen by the pupils' include the third and fourth foreign languages (German, French, Spanish and immigrant languages for pupils with appropriate prior knowledge of the language), 'arts education' (fine art, media, movies knowledge, drama, music) and 'practical and vocational skills' (crafts and design, working knowledge and 'Madkundskab' – food knowledge).

Germany

The data represent the weighted average instruction time for the compulsory core curriculum subjects, calculated by the Secretariat of the Ministers of Education and Cultural Affairs of the *Länder* on the basis of the number of students enrolled in the different types of school (reference year 2015/16).

The category 'other subjects' includes instruction time devoted to teaching skills and competences that are important to live and work in society, such as social skills. In some *Länder*, the category may also include instruction time in integrated subjects (combination of two or three subjects).

The second foreign language (language 3) is only compulsory for education courses leading to the *Allgemeine Hochschulreife* (general higher education entrance qualification). For some *Länder*, data on the instruction time in compulsory 'foreign' (or modern) languages may also include instruction time in Latin and ancient Greek.

Estonia

In schools where the language of instruction is other than Estonian, the second foreign language (language 3) is not a compulsory subject; instead, students have to study Estonian as a second language.

Reading, writing, literature: Estonian or Russian language and literature (as language of instruction); Literature begins in grades 4-6.

Religion/ethics/moral education and ICT are often compulsory flexible subjects chosen by schools.

Ireland

At ISCED 1, the tables refer to the six years of compulsory education. There are also two years of primary education for 4 and 5 year olds which are not compulsory.

At ISCED 1, technology (designing and making) is integrated in natural sciences and visual art education. At this education level, the category 'other subjects' includes Social Personal and Health Education (SPHE) and the legacy time allocated for assembly and roll call.

At ISCED 1, 24 and 34, both English and Irish as national languages are taught to all students although some students with special educational needs and students living abroad up to the age of 11 may receive an exemption from studying Irish. English is regarded as the first language (L1) and Irish as the second language in (L2) in English-medium schools whilst in Irish-medium schools, the L1 is Irish and the L2 is English. The category 'reading, writing and literature' includes time for either English or Irish depending on which is the first language of the school; the instruction time for the other is included in L2. In secondary education, L2 (English or Irish depending on the medium of instruction in the school) is compulsory but there is not a minimum instruction time recommended at central level; schools can decide how much time to allocate to this subject.

At ISCED 24, a new Junior Cycle specification has been introduced for English. The new specification provides for an intended minimum of 240 hours instruction time (at least 2.4 hours per week) over the course of the three years of junior cycle. Previously, Ireland has reported the instruction time as 3.33 hours per week for English. The additional time previously mandated for English has now been assigned to the category 'compulsory subjects with flexible timetable'. This reflects the flexibility that the Framework for Junior Cycle 2015 give schools to timetable additional time for English in recognition of the key role played by English in supporting literacy. Actual instruction time will remain unchanged from previous years (3.33 hours) as typically schools continue to offer five periods of 40 minutes per week for English to students in first year, second and third year of secondary school.

In ISCED level 24, only English, Irish, mathematics, Civic, Social and Political Education (CSPE) and Social, Personal and Health Education (SPHE) are compulsory in all schools at this level. Instruction time for CSPE has been computed in 'social studies' and for SPHE in 'other subjects'.

The number of compulsory options that students can choose varies depending on the school. Schools may draw the 'compulsory options' from the following subjects: science, social studies (history and geography), a first and second foreign language (French, German, Italian, Spanish), arts education (music, art-craft-design), religious education, technology, practical and vocational skills (home economics, materials technology (wood), metalwork, technical graphics, business studies) and 'other subjects' such as Latin, ancient Greek, classical studies, Jewish studies and environmental studies.

The first year of ISCED 34 is also the last year of compulsory education for most students. Many students take a Transition Year at this point, with less emphasis on academic subjects and more time given to practical and self-directed learning. Every school is free to develop its own transition year programme and decide on subjects. Hence, the data provided for Transition Year is indicative only.

In Ireland, schools at ISCED 1 are typically required to be open to pupils to receive instruction for a minimum of 183 days; during 2016/17, individual schools were permitted to close for one day to facilitate whole teaching staff engagement in continuing professional development in support of the introduction of a new language curriculum. At ISCED 24 and 34, schools are typically required to be open to pupils to receive instruction for a minimum of 167 days; during 2016/17, individual schools were permitted to close for three days to facilitate whole school planning and continuing professional development for teachers in support of the introduction of new curriculum and assessment arrangements at ISCED 24.

Greece

As from school year 2016/17, there is only one single type of all-day primary school. The distinction between schools implementing the regular curriculum and the unified revised curriculum has been eliminated. The new type of school has been implemented in primary schools with at least four teachers. The daily timetable and the number of instruction hours have also changed.

In primary education, the 'compulsory flexible subjects chosen by the schools' refer to the cross-thematic teacher initiated programmes, which can include activities referred to environmental education, health education, culture and arts, etc.

All-day primary schools can include an all-day schooling programme (from 13.15 to 16) as an extension of their daily compulsory timetable (from 8.10 to 13.15). The non-compulsory programme (all-day schooling) includes one hour of study-preparation and one hour of instruction on an elective subject (IT, technology, English and physical Education, art, music, drama and cultural activity clubs). Students can finish the non-compulsory programme after study-preparation or stay at school until 16. In order to follow the all-day programme, students must fulfil certain social criteria and make an application.

Spain

Data on intended instruction time are based on national and regional regulations on curriculum and school calendars (reference year 2016/17). To calculate the weighted averages, statistics were used on the number of students per grade and Autonomous Community, as reported by the statistics office of the Ministry of Education, Culture and Sport (reference year 2014/15).

The Organic Act on the Improvement of the Quality of Education (LOMCE, 2013) introduced some changes affecting instruction time, including a higher degree of autonomy at regional level in the allocation of time to different subjects. These new regulations affecting instruction time are being phased in. In 2014/15, they were introduced in grades 1, 3 and 5 (primary education), in 2015/16 they were introduced in grades 2, 4 and 6 (primary education) and in grades 7 and 9 (secondary education) and in 2016/17 they are introduced in grades 8 and 10 (secondary education).

Reading, writing and literature: this category includes the instruction time for the co-official language in the Autonomous Communities that have one.

Religion/ethics/moral education: in primary education (grades 1-6) students must choose between 'religion' or 'social and civic values'. In secondary education (grades 7-10), students must choose between 'religion' or 'ethical values'.

Other subjects: in grades 7-10, this category includes a weekly group tutorial session, which is compulsory for all the students. Tutoring is also included in grades 1-6 when it is specifically mentioned in regional regulations.

Compulsory options chosen by students: in primary education (grades 1-6), students must choose one of the 'specific subjects' offered by the education authorities in order to comply with the established total instruction time. In secondary education (grades 7-9), students must choose the number of 'specific subjects' and the 'subjects that are freely structured by the Autonomous Communities' determined by the education authorities. In grade 10, students must choose the number of 'core subjects', 'specific subjects' and the 'subjects that are freely structured by the Autonomous Communities' determined by the education authorities.

Compulsory flexible subjects chosen by schools: reported data reflect the number of hours that Autonomous Communities have allocated to the subject or subjects of their choice in order to comply with the established total instruction time. According to the LOMCE, in primary education (grades 1 to 6), arts education and a second foreign language are optional subjects. In secondary education (grades 7-9), classical culture, arts, visual and audio-visual education, music, introduction to entrepreneurial and business activity and technology are the optional subjects in the list defined by the central education authorities, which regional authorities or schools can choose from.

In grade 10, academic core subjects, (biology and geology, economics, physics and chemistry, and Latin) and applied core subjects (science applied to professional activity, introduction to entrepreneurship and business activity and technology) are optional in the list defined by the central education authorities, which regional authorities or schools can choose from.

Performing arts and dance, scientific culture, classical culture, plastic, visual and audio-visual education, philosophy, music, second foreign language, information and communication technologies, religion or ethical values are 'specific and optional subjects' in the list defined by the central education authorities, which regional authorities or schools can choose from.

All these subjects are included in the category 'compulsory flexible subjects chosen by schools'.

France

In grades 1-3, the category 'natural sciences' refers to 'questioning the world' which covers notions of science, history-geography, technology and ICT. It also integrates the subject 'civic and moral education', although this time has been captured in the category 'religion, ethics and moral education'. In grades 4-6, 'natural sciences' includes technology.

In grades 4-10, 'social studies' cover history-geography and civic and moral education (although in grades 4 and 5 this time is captured in the category 'religion, ethics and moral education'). In grade 10, it also includes legal and social studies.

In grades 1-3, 'ICT' is integrated in 'natural sciences', and, in grades 4-5, in mathematics (including notions of computer science (programming). In grades 6-9, 'ICT' is mainly integrated in 'technology' and 'mathematics', but it can be taught as part of any compulsory subject.

In grades 6-9, the category 'other subjects' includes the form time, and, in grade 10, the form time and the 'accompagnement personnalisé' (i.e. methodological support/tailored teaching, knowledge enhancement and careers guidance).

In grades 6-9, the 'accompagnement personnalisé and the interdisciplinary projects ('enseignements pratiques interdisciplinaires') are included in compulsory instruction time and taught integrated in all the subjects. In grade 9, the total compulsory curriculum also includes a week for the close observation of the professional environment.

In grade 10, 'language 3' i.e. the second foreign language and 'language 2' are reported together.

In grade 10, students have to take two options (*enseignements d'exploration*) from a list, including 'economics', a third foreign language ('language 4'), 'arts education', 'ICT', 'technology', 'practical and vocational skills'. This time is captured in the category 'compulsory options chosen by the students'. Depending on the options chosen, the instruction time can increase up to 162 hours/year.

The 'non-compulsory curriculum' includes a second foreign language (grade 6); classic languages and cultures (Latin and ancient Greek) or a regional language (grades 7-9); discovery of the world of work – which is an option only in grade 9 (specific forms). In grade 10, a third foreign language (language 4) or arts activities can be chosen if not yet taken as compulsory options. The chosen elective subject can amount up to 108 hours per year for a third foreign language or 72 hours/year if the student chooses an art workshop.

Croatia

The instruction time on religion, ethics and moral education is included in the 'non-compulsory curriculum' (grades 1-8). This category also includes the instruction time on a second foreign language (grades 3-8) and ICT (grades 5-8).

In 2014/15, the compulsory cross-curricular topic of citizenship education was introduced in school curriculum. However, it is not taught as a separate subject but its content is rather integrated in other subjects' curricula.

Italy

In grades 1-5 (ISCED 1), the reported instruction time corresponds to the weekly timetable of 27 hours for 33 weeks (891 hours), which is followed by 36.76 % of the students. The other possible timetables are 24 hours per week (0.79 % students), 28-30 hours (28.3 %) and 40 hours (34.69 %).

In grades 6-8 (ISCED 24), the reported instruction time corresponds to the 30 hours weekly timetable, which covers almost 80.6 % of the students at this ISCED level. 'Social studies' are integrated in 'reading, writing and literature', and 'natural sciences' are integrated in 'mathematics'. Instruction time for the second foreign language (language 3) can be used for teaching the first foreign language. 6.1 % of the students attend the music branch, where there is one more hour per week for each musical instrument (up to a maximum of three instruments). Therefore the weekly timetable in the music branch can go from 31 to 33 hours per week.

In grades 9-10 (ISCED 34), there are six *licei*: arts subjects, classical studies, scientific studies, foreign languages, music and dance, human sciences. Information reported for grade 9 and grade 10 concerns the *liceo scientifico* (which has the highest percentage of students enrolled in all licei, i.e. 29.7 %). In these grades, ICT is taught integrated into 'mathematics' (but it is taught as an independent subject in the applied sciences option of the *liceo scientifico*). The 'other subjects' include Latin language and literature.

At all ISCED levels, schools have the autonomy to modify the reported curriculum up to 20 % of the annual timetable, changing the allocation of instruction time across subjects, or introducing new subjects.

Cyprus

Geography is included in 'social studies' in grades 1-6, and in 'natural sciences' in grades 7-9.

In grades 1-4, design/technology is included in 'natural sciences'. In grades 5-6, 'design and technology' includes life education.

First aid is included in 'physical education'.

The 'other subjects' include: in grades 1-4, life education; in grades 5-6, environmental education – education for sustainable development; in grades 1-6, instruction time dedicated to consolidating skills in and knowledge of curriculum subjects; in grades 7-9, classical studies and ancient Greek.

Latvia

The reported curriculum refers to the basic education programme, which affects 71.9 % of the students in public schools. The other 28.1 % of the students follow the basic education programme for ethnic minorities, which includes the teaching of the ethnic minority language in grades 1-9. The following subjects are also taught in the minority language: 'literature' (grades 4-9), 'mathematics' (grades 1-4) and 'ethics/introduction to Christianity' (grades 1-3). The rest of the subjects are taught in Latvian.

The category 'other subjects' includes the form time, which is devoted to discuss values, communication culture, civic education, road safety, healthy lifestyle, development of personality, leadership, critical thinking, creative thinking, financial literacy, entrepreneurship skills and career guidance.

Schools must provide the additional instruction time indicated in the category 'compulsory flexible subjects chosen by the school'. The standard model recommends to devote this time to physical education (sports).

Additionally, schools must offer optional lessons for groups of pupils on a voluntary basis (e.g. choir, dance, drama, sports, foreign language), lessons for individual work with students and prolonged-day groups. This is shown in the category 'non-compulsory curriculum'.

Lithuania

The reported curriculum refers to schools where the medium of instruction is Lithuanian, which enrol over 90 % of all the students. The rest of students attend schools where instruction is provided in the language of one of the national minorities.

In grades 1-4, 'natural sciences' and 'social studies' are taught as an integrated subject. To calculate the hours of 'natural sciences' and 'social studies', the total instruction time of the general subject was divided by two. 'Technology' and 'art education' are taught as an integrated subject.

In grades 7-8, natural sciences include biology, chemistry and physics. Schools have to allocate 153 hours between physics and biology. In grade 8, 51 hours should be devoted to teaching chemistry.

In grades 9-10, social studies include history, citizenship, geography, economy and business. History must be taught a minimum of 51 hours at each grade, 102 in total. Schools have the autonomy to decide how to distribute 153 hours among the other subjects.

The 'other subjects' include health and safety.

Students have the possibility to choose additional lessons from the non-compulsory curriculum, which varies across schools. These lessons might be used for teaching support for low achievers and for personalised teaching and learning for talented students. Schools often use these lessons for extra literacy and mathematics lessons.

Luxembourg

In grades 1-6, German and Luxembourgish are both languages of instruction and both are included in 'reading, writing and literature'. French is considered 'language 2'.

In grades 7-10, French is the medium of instruction, German is 'language 2', and English 'language 3'.

Hungary

According to the Act on Public Education, students who started grade 9 in 2011/12 or earlier had to terminate their compulsory education at the end of the school year in which they would turn 18. Since this provision is no longer applicable, compulsory education ends at 16, and grades 11 and 12 are excluded from the report.

The 'other subjects' include the form time.

Schools can devote the instruction time included in the 'compulsory flexible subjects chosen by schools' to increasing the time of the prescribed subjects or to new subjects of their own choice. In addition, they have to choose one of the two following subjects: 'drama-dance' or 'homeland and peoples' in grade 5; and 'drama-dance' or 'media' in grade 9. The Ministerial Decree No 12/2016. (VI. 27.) (EMMI rendelet) stipulates the number of the school days. For ISCED 34 level, the data on this report refer to gimnázium. The Annex 14 to the ministerial decree No 51/2012 (EMMI rendelet) stipulates the compulsory number taught in grades 9 and 10 in szakgimnázium.

Malta

The scope includes both public and government-dependent private institutions. These country-specific notes apply to state schools in Malta which cater for 60 % of the student population and may not apply to government-dependent church schools which cater for around 29 % of the student population. In state schools, the five-year secondary cycle is made up of two distinct phases: during the first two years students attend middle schools while during the last three years students attend secondary schools. The secondary cycle of government-dependent church schools is made up of one single five-year phase.

During the month of June, schools are on half days and the total instruction time for each grade in compulsory education amounts to 17.5 hours per week.

In years 1-2, the four hours per week that schools have to devote to handwriting, storytelling, reading sessions, 'talk about sessions' and 'choosing time' have been included in the category 'compulsory flexible subjects chosen by schools'. In grades 3-6, this category includes one hour per week that teachers have for consolidating learning. This time is usually used for literacy, mathematics and language 2.

In years 1-6, science and technology are taught integrated into one subject with the emphasis being on science.

In years 1-6, the 'other subjects' category includes the daily 15-minute morning assembly, and in grades 3-6 the subject personal social and career development. In years 7-11, the 'other subjects' category includes the subject personal, social and career development as well as a daily 10-minute morning assembly/form period.

In grades 9-11, the 'compulsory flexible subjects chosen by schools' refer to additional time which is allocated to various subjects at the discretion of the head of school.

Students also have to choose two of the following subjects (depending on teacher availability at the school they are attending): Arabic, French, German, Italian, Russian, Spanish; biology, chemistry, geography; art, music; European studies, history, social studies; business studies, accounting, computer studies; engineering, health and care, hospitality, information technology; agribusiness, design and technology, graphical communication, home economics and textile studies and physical education. These options are included in the category 'compulsory options chosen by students'.

Netherlands

The total compulsory instruction time for pre-primary and primary education (8 years) is 7 520 hours. It is to the discretion of the school how to distribute these hours over the years. For this report, the instruction time for grades 1-6 has been calculated as follows: 7 520/8*6 = 5 640.

After grade 10 of VMBO and grade 11 of HAVO, students normally continue their education in vocational schools or universities of applied sciences. As vocational education is out of scope of this data collection, data for these grades have not been provided. As it was not possible to show vertical flexibility for grades 10-12, instruction time for this cycle has been artificially divided in three.

In grade 7 (VMBO), a second foreign language (language 3) is compulsory for students following three of the four programmes (namely in the 1. middle-management vocational programme; 2. combined programme and 3. theoretical programme). A second foreign language (language 3) is not compulsory in the basic vocational programme. This means that in the Netherlands, 80 % of the students (VMBO) do have a second foreign language (language 3) as a compulsory subject.

Austria

Compulsory schooling starts for all children on 1st September, following the child's sixth birthday and comprises nine years. Students can chose from different programmes of study for year 9. As these programmes could not be all presented, no data for that particular year were included.

In primary school (*Volksschule*), grades 1-4: 'social studies' and 'technology' are part of an integrated subject called 'Sachunterricht', which covers initial natural sciences.

In grades 1-2, modern foreign language teaching (32 periods of 50 minutes) is integrated in the other subjects and has been reported in the 'total minimum compulsory curriculum'. ICT is taught as an integrated subject in the four grades. Compulsory instruction time for remedial education has been included in the category 'other subjects'.

For secondary education, the data concerns the curricula for *Neue Mittelschule* (new secondary school, NMS) and *Allgemeinbildende höhere Schule* (academic secondary school, AHS). In the AHS, grades 5 and 6 are common, whereas in grades 7 and 8 there are three branches: scientific branch (*Realgymnasium*), Grammar school (*Gymnasium*) and economics branch (*Wirtschaftskundliches Realgymnasium*). This report shows the data corresponding to the scientific branch (*Realgymnasium*). NMS and AHS schools can opt to follow a discretionary school timetable with more autonomy to decide on the subjects that they offer. The subjects *Technisches und Textiles Werken* are included in 'practical and vocational skills' although certain aspects of these subjects refer to 'arts education'. ICT is taught integrated into all the subjects at all grades in all tracks.

Poland

Instruction time for geography is included in 'social studies', although, in Poland, this subject is considered pertaining to 'natural sciences'.

In grades 4-9, students must receive at least four periods (45 minutes) a week of physical education.

From grade 7 to 9, a minimum of 450 periods a year must be devoted to teaching two foreign languages (languages 2 and 3). One teaching period equals 45 minutes. Schools can decide how to allocate this time between the two languages and the three schools years (horizontal and vertical flexibility).

The 'other subjects' include form time in grades 4-9, and safety education in grades 7-9.

The instruction time for 'compulsory subjects with flexible timetable' indicates the additional time that schools must offer on top of the recommended instruction time for the compulsory subjects.

Public schools in Poland are obliged to provide 62 periods per week (that is, 2 232 a year) for grades 1-3; 79 periods per week (that is, 2 844 a year) for grades 4-6; and 90 periods per week (that is, 3 240 per year) for grades 7-9. The difference between this time for each education cycle and the minimum instruction time prescribed for the compulsory subjects has been included in the category 'compulsory flexible subjects chosen by schools'. Schools can use this time to teach compulsory subjects of their choice and/or to organise classes which respond to the pupils' needs and interests. The 'non-compulsory curriculum' includes the subjects religion and ethics in grades 1-9 and education for family life in grades 5-9.

Portugal

In primary education, the figures show the minimum instruction time. In grades 1, 2 and 4, the weekly instruction time may vary between 22.5 hours (minimum) and 25 hours (maximum), and in grade 3, between 24.5 hours (minimum) and 27 hours (maximum). If a school decides to offer the maximum instruction time, then the non-compulsory curriculum decreases to 5 hours a week. In grades 10-12, the minimum instruction time varies according to the different education pathways. The figure shows the lowest of all the minima. In some pathways the minimum instruction time is higher.

The instruction time for each subject has also a maximum and a minimum predefined time. Each school chooses the time to allocate to each subject within the established limits: minimum per subject and total per year (or cycle for some subjects). The difference between the minimum instruction time established for each subject (or group of subjects) and the total minimum instruction time per year is indicated in the category 'compulsory subjects with flexible timetable'. This time must be allocated among the compulsory subjects at the discretion of schools.

Public schools with autonomy agreement may manage 25 % of the curriculum in a flexible way, provided they comply with the syllabi, the curriculum learning outcomes and the curriculum guidelines, in each grade and for each subject.

The category 'other subjects' (grades 1-4) includes the compulsory time for supervised study.

The 'compulsory options' that students can choose in upper secondary education vary according to education pathways. In grades 10-12, they can include: 'mathematics', 'natural sciences', foreign languages (languages 3 and 4), 'arts education', 'reading, writing and literature', 'social studies', 'technology' and 'ICT'. In grades 10-11, language 2 is also a compulsory option.

The 'non-compulsory curriculum' includes religion and moral education, as well as curriculum enrichment activities such as English or other foreign languages, sports, arts education, sciences, information and communications technology and education for citizenship.

Romania

In Romania, general compulsory education has 11 grades. It includes primary education (the preparatory grade and grades 1-4), *gimnaziu* education (grades 5-8) and the first two years of upper secondary education (grades 9-10). Grade 1 on the diagrams corresponds to the preparatory grade in the Romanian education system, grade 2 to grade 1, etc. At ISCED 34 level, the instruction time and the subjects vary across the different tracks. Data in this report concerns the scientific track.

The Framework Plan approved in 2013 has been progressively implemented since then. In this school year, all grades in primary education are based on the Framework Plan approved in 2013. Schools can decide to provide one additional period per week.

The 'other subjects' category includes: in grades 1-5 (preparatory and grades 1-4 in the Romanian system), 'music and movement'; in grades 1-3 (preparatory and grades 1-2 in the Romanian system), 'personal development'; in grades 6-9 (5-8 in the Romanian system), 'counselling and guidance'; in grade 9 (8 in the Romanian system), Latin Language; and in grade 11 (10 in the Romanian system), 'entrepreneurship education'.

Slovenia

Compulsory education is provided in a single structure, which comprises nine years. The reported curriculum is followed by 95.4 % of pupils. In areas where Italian and Hungarian ethnic minorities live, schools implement adapted curricula, which include two more lessons per week and a slightly different allocation of the instruction time among subjects, given that students have to learn two languages – Slovenian, and Italian or Hungarian language. The adapted curriculum is followed by 3.8 % of pupils.

In 2016/17, the gradual introduction of the compulsory first foreign language (language 2) has continued in more than 30 % of the basic schools. This is not shown in the diagrams. As from 2016/17, the first foreign language (language 2) is compulsory for all students in grade 2.

In grades 1-3, the subject environmental education (3 lessons a week) concerns different subject categories: 'natural sciences' (1.25 lessons a week), 'social studies' (1.25 lessons a week) and 'technology' (0.5 lessons a week). In grades 4-5, the subject natural sciences and technics (3 lessons a week) includes the subjects 'natural sciences' (2 lessons a week) and 'technology' (1 lesson a week). In grades 7-8, the subject 'patriotic and citizenship culture and ethics' (one lesson per week) is reported in the category 'social studies'. The annual compulsory additional 15 days of activities in 'arts', 'sciences', 'physical education' and 'technology' have been included in the respective categories.

In grades 1-9, 'religion/ethics/moral education' is taught integrated into 'social studies'. In grades 6-9, it can also be a compulsory option. 'ICT' is taught integrated into all the subjects in grades 1-9. In grades 6-9, it is taught integrated into 'technology' and, in grades 7-9, it can also be a compulsory option.

The category 'other subjects' includes the form time.

The 'compulsory options' in grades 7-9 include subjects in the fields of social sciences and humanities, and natural sciences and technology such as 'ICT', 'technology', 'language 3', 'language 4', 'religion/ethics/moral education', 'social studies', 'physical education', 'practical skills', 'arts education' and 'natural sciences'. Schools have to offer at least three subjects from each field, including mandatorily a 'foreign language', 'rhetoric', and 'religions and ethics' in the field of social sciences and humanities.

Schools must provide the following non-compulsory subjects: in grade 1, first foreign language (attended by 92 % of students); in grades 4-6: second foreign language, arts, ICT, sports and techniques (attended by 86 % of students); in grades 7-9, a foreign language (attended by 8 % of students); in grades 7-9, an additional lesson of compulsory options. The 'non-compulsory curriculum' (grades 1-9) also includes interest activities, supplementary lessons and remedial education. In grade 1, 72 % of students attend as well the morning care, and, in grades 1-5, 84 % of the students are enrolled in the after-school activities, which follow official guidelines for their implementation and are taught by qualified teachers.

Slovakia

The State Education Programmes in force as from 2015/16 set the minimum instruction time for primary and lower secondary education per grade, not for a group of grades (vertical flexibility) as in previous years. Still, instruction time for ISCED 34 is prescribed for the four years of upper secondary education. Given that only the first year (grade 10) is compulsory, 1/4 of this time has been included in each subject category.

The 'compulsory flexible subjects' that schools can offer are at the same time compulsory options for the students, and include a second and third language, technology, and 'other subjects' such as transport education, sexual education and minority languages. Schools can also decide to offer additional lessons for some compulsory subjects.

Finland

Schools and education providers can start teaching any compulsory subject with vertical flexibility already in grade 1. They have the obligation to introduce the following subjects in the following grades at the latest: the first foreign language, in grade 3; the second foreign language, in grade 6; social studies, in grade 4; and home economics, guidance and counselling (practical and vocational skills), in grade 7.

The compulsory subjects with flexible timetable include music, visual arts, crafts, physical education and home economics.

The compulsory subjects chosen by schools can be any subject.

The non-compulsory curriculum refers to an optional foreign language.

Sweden

The scope includes both public and grant-aided independent schools (Sw. fristående skola).

The minimum instruction time is recommended for the nine years of compulsory education and schools decide its distribution per year. For comparability purposes, the total instruction time has been divided between ISCED levels 1 and 24 proportionally to the number of years that each education level comprises (6 and 3 respectively) but it does not correspond to reality. The number of hours for a subject or group of subjects may be reduced by at most 20 % to accommodate school options, except for English, mathematics, Swedish and Swedish as a second language.

The 'compulsory options' that students have to choose from include: deepening or broadening pupil's knowledge of one or more subjects, Swedish, Swedish as a second language (provided that pupils are already given education in this subject), English and sign language. The total number of instruction hours for the second foreign language as a compulsory option is 320, but the steering documents do not lay down the starting grade. It is common practice that schools start teaching the second foreign language in grade 6.

In grades 1-9, technology is a separate subject, as are the natural sciences subjects biology, physics, and chemistry. The total number of hours allocated to these four subjects is 800, but the number of hours for each subject is not specified in the regulations.

The 'non-compulsory curriculum' includes mother tongue tuition to children of other mother tongue than Swedish. Municipalities can decide how to organise this tuition and its duration. The regular practice is one hour per week.

United Kingdom – England

The Department for Education stopped providing guidance on minimum weekly lesson time in September 2011. However, the requirement remains for schools to allow sufficient instruction time to deliver a broad and balanced curriculum that includes all statutory requirements.

Information on subject allocation applies to maintained schools. For these schools:

- at ISCED levels 1, 24 and 34, although schools are required to provide for the teaching of religious education to all pupils, parents have the right to withdraw their children from this teaching;
- at ISCED 24 and 34, although schools are required to provide for the teaching of sex education to all pupils, parents have the right to withdraw their children from this teaching.

For academies, the minimum subject requirements are not set by legislation but by individual funding agreements with the Secretary of State. For all academies the funding agreement includes a requirement for a broad and balanced curriculum which includes English, mathematics, science and religious education.

In grades 10-11, the local curriculum must provide options in foreign languages, arts, technologies and social sciences.

United Kingdom – Wales

Minimum weekly lesson times (including religious education) are suggested in Welsh Office Management of the School Day Circular 43/90. There is a further requirement on schools to allow sufficient instruction time to deliver a broad and balanced curriculum that includes all statutory requirements. Schools may provide more than the minimum time if they wish.

At ISCED levels 1, 24 and 34, although schools are required to provide for the teaching of religious education to all pupils, parents have the right to withdraw their children from this teaching.

At ISCED 24 and 34, although schools are required to provide for the teaching of sex education to all pupils, parents have the right to withdraw their children from this teaching.

Language 2 refers to Welsh and language 3 to modern foreign languages. The category 'other subjects' includes personal and social education.

In grades 10-11, the local curriculum must provide options in foreign languages, arts education and technology.

United Kingdom – Northern Ireland

Pupils under 8 are required to be under instruction for a minimum of three hours each day. This excludes religious education, for which an additional 2.5 hours per week is allocated.

Pupils aged 8 and over must be under instruction for four and a half hours a day. This excludes religious education for which an additional 2.5 hours is allocated in grades 5-7. For pupils in grades 8-12, the minimum time for religious instruction is expressed in periods: three periods a week in grades 8-10 and two periods a week in grades 11-12. The length of a period varies across schools but for the purpose of this report is estimated as 35 minutes.

Parents have the right to withdraw their children from religious education.

There is a further requirement on schools to allow sufficient instruction time to deliver a broad and balanced curriculum that meets all legal requirements; schools may provide a longer school day than the reported minimum time.

The 'other subjects' category includes Personal Development and Mutual Understanding (PDMU) in grades 1-7; Learning for Life and Work (made up of Employability, Personal Development, Local and Global Citizenship and Home Economics) in grades 8-10; and Learning for Life and Work (made up of Employability, Personal Development and Local and Global Citizenship) in grades 11-12.

In grades 11-12, the Entitlement Framework provides greater flexibility for pupils to choose from the wider range of general and applied subjects that schools have to provide access to. It sits alongside the reduced core curriculum of Learning for Life and Work, physical education, religious education and developing skills and capabilities.

There are integrated subjects covered by each area of learning, through which pupils in grades 1 to 12 develop their cross curricular skills (communication, using mathematics and using ICT). In grades 1-10, the 'other skills' (thinking, problem solving and decision making, self-management, working with others, managing information, and being creative) and in grades 11-12 the 'other skills' (problem solving, self-management, and working with others) are also developed.

United Kingdom – Scotland

The Scottish Curriculum for Excellence does not prescribe any minimum instruction time with the exception of 2 hours per week for physical education, but it states the 'experiences and outcomes' that the five levels of the Broad General Education Phase – which span several grades each – must include across eight curriculum areas. Local authorities and schools are responsible for agreeing to the specific subjects and the time allocated to them in each grade.

Although there is no intended instruction time, the Education (Scotland) Act 1980, which reflects previous legislation dating back to 1972, imposes a statutory duty on local authorities to provide religious education in Scotlish schools. In the case of religious education in Roman Catholic Schools – all Catholic schools are expected by the Bishops' Conference of Scotland to follow guidelines established by the Catholic Education Commission on the provision of adequate time for religious education within the school curriculum.

Bosnia and Herzegovina

There are three official languages in B&H and classes are held in one of those languages.

In grade 1, 'mathematics' is integrated in 'reading, writing and literature' (and 'creation' in B&H), and 'arts education' is integrated in 'physical education and sports'.

In grades 1-4, 'social studies' are integrated in 'natural sciences'.

Switzerland

With the exception of a minimum number of lessons for physical education, there is no standard curriculum and no standard instruction time defined on national level. Curricula and intended instruction time are determined by the 26 Cantons at the regional level. The delimitation and the number of both compulsory and non-compulsory subjects, as well as the total of instruction time and its distribution between subjects, vary considerably across Cantons. Therefore, only the data for the total of instruction time per grade and ISCED level can be presented.

The scope only includes public institutions. The figures represent weighted averages of the cantonal requirements for each grade and the total of instruction time as given by the cantonal timetables

(Stundentafeln/grilles horaires). The averages are weighted by the number of students per Canton in primary education (six years) and lower secondary education (three years) in 2014/15. For the Canton Ticino with five years of primary education and four years of lower secondary education in 2016/17, calculations are based on six years of primary and three years of lower secondary education for reasons of comparability. The instruction time indicated in lower secondary education is the mean of the different tracks (basic and advanced requirements; without baccalaureate schools in grade 9).

Iceland

In grades 1-10, the subject 'practical and vocational skills' is integrated in 'arts education', and 'religion/ethics/moral education' in 'social studies'.

Languages 2 and 3 can be English or Danish indistinctively. Both languages are compulsory in grades 1-10 but schools are free to decide how to allocate the recommended minimum instruction time between English and Danish.

The 'compulsory options chosen by students' can include extra teaching time for compulsory subjects and 'school electives'. In grades 5-10, students can also choose to follow a third foreign language (in addition to Danish and English).

Liechtenstein

In grade 1, the units of non-language subjects are taught through English. It is up to teachers to decide how this is done. This integrated lesson is counted as one lesson and is reported in the total instruction time.

'Social studies' is integrated in 'natural sciences' in grades 2-5. In *Realschule* and *Oberschule*, 'social studies' is also integrated in 'natural sciences' in grades 6-9. In grades 6-7, 'technology' is integrated in 'arts education' in all the tracks.

The category 'other subjects' includes (in the three tracks) 'life science' and 'class hour' (which addresses topics such as personal development, sex education, career guidance and form time). In *Oberschule* and *Realschule*, the 'other subjects' also includes 'home economics'.

In grade 9, the compulsory options for students in *Gymnasium* depend on the track that they choose, which can be: Latin; Spanish; Italian and Latin; art, music and pedagogy; economics and law; maths and natural sciences. In *Realschule* and *Oberschule*, the compulsory options include: technical drawing, crafts and design, arts, music, physical education, second foreign language (language 3) (French), other subjects/life sciences/school projects (in *Realschule*) and vocational education (in *Oberschule*).

In *Oberschule* and *Realschule* (grades 6-9), schools offer additional non-compulsory lessons for remedial teaching (including additional lessons in German for migrants) and specific support lessons for high achievers in order to move to another type of schools. In grade 9, they are especially used to prepare students (individually) for their further general or vocational education career. In *Gymnasium*, the non-compulsory subjects aim to promote topics across different subjects (interdisciplinary) and students' individual interests.

Montenegro

'Social studies' are integrated in 'natural sciences' in grades 1-3.

'Religion/ethics/moral education' is integrated in 'social studies' in all the compulsory education.

'Technology is integrated in 'natural sciences' in grades 1-4. In grades 5 and 7, it is an independent subject; and in grades 6, 8 and 9, it is integrated in the compulsory subjects. Except in grade 6, 'ICT' is integrated in the compulsory subjects.

The 'other subjects' include form time and supervised learning.

In grades 7-9, students have to choose one or two compulsory options – two classes per week in total. Schools are obliged to offer a minimum of five subjects from a list of 35 approved by the national council for education.

The 'non-compulsory curriculum' includes students' interest activities and extra time for compulsory subjects and options.

Former Yugoslav Republic of Macedonia

Primary education is implemented by municipal and state primary schools. State schools are established by the Government for students with special educational needs. There are also international public schools implementing the curricula in English, French, and German.

The subject innovations in grade 9, which was introduced as the result of the adoption and implementation of the Strategy for Entrepreneurship Education, has been included in the category 'practical and vocational skills'.

In grades 4-5, the subject 'crafts' is included in the category 'other subjects'. In grade 5, students have to select one of the following compulsory elective subjects: 'crafts' and 'computers'. In grade 6, students have to choose one of the following compulsory options: ethics of religions, introduction to religions and classical culture of the European civilization. In grades 7-9, students have to choose one of the following compulsory options: homeland culture, environmental education, local studies, folk dances, projects in musical art, projects in painting art, technical education, projects in informatics, sport, health, skills for living and computer programming (only in grades 8-9). In grades 3-9, students can decide to follow (upon consent of their parents) one of the following non-compulsory subjects: language and culture of Aromanians, language and culture of Roma people and language and culture of Bosnians.

Although there is not a maximum age set by the Government for compulsory education, ISCED 3 is mandatory for all citizens. The general programme at this ISCED level 34 is called *Gymnasium* and consists of four compulsory years. Nevertheless, data in this report only shows the three first years (10-12), given that compulsory education for students following the vocational programmes might end at an earlier age. For the fourth year of *Gymnasium*, the minimum instruction time for the total compulsory curriculum is 540 hours a year (108 for 'reading, writing and literature'; 81 for 'mathematics', 'social studies', the first foreign language and 'physical education and health'; and 54 for the second foreign language and for the subject business and entrepreneurship, which was introduced as the result of the adoption and implementation of the Strategy for Entrepreneurship Education).

In *Gymnasium*, students have to choose one of the following options: in grade 11, classical languages (Latin, ancient Greek), information technology, basic algebra and geometry, ethics, pronunciation and writing; in grade 12, linear algebra and analytical geometry, algebra; in grade 13, programming languages, mathematical analysis, physics.

Norway

Instruction time per subject for the 10-year compulsory education is mainly established for primary schooling (ISCED 1) as a whole (grades 1-7), and for lower secondary schooling (ISCED 24) as a whole (grades 8-10).

In primary education, instruction time for the core subjects 'reading, writing and literature', 'mathematics' and the first foreign language (language 2) is prescribed for grades 1-4, and for grades 4 to 7. Schools can decide how to distribute this time among the relevant years. Schools must

provide 38 additional hours per year in compulsory subjects of their own choice, based on what is most advisable according to local needs.

The number of hours allocated to natural sciences for grades 1 to 7 has recently been increased to 366, which represents an increase of 38 hours – also in the total instruction time.

In lower secondary education (ISCED 24), students can choose between 14 subjects as compulsory options for a total number of 171 hours for grades 8 to 10. Every school must offer at least two different subjects as compulsory options. In addition, a student can choose between a second foreign language (language 3) and 'in-depth studies' or 'work-related training' for a total number of 222 hours. The 'in-depth studies' give students the opportunity to develop their competences in English, reading writing and literature, Sami, mathematics or work-related training instead of starting a new foreign language subject. Schools can decide which subjects to offer as 'in-depth studies' and how to organise them but they must offer at least one in addition to language 3. In 2015/16, 74 % of the students had language 3 while only 18 % chose in depth-studies in other languages and 8 % in-depth studies in mathematics or work-related training.

Serbia

The municipalities with an official minority language can organise classes in this language. Schools where Serbian is the language of instruction may include a minority language as an option (36 lessons a year).

In grades 1-4, 'social studies' is integrated in 'natural sciences'. In grades 5-8, 'ICT' is integrated in 'technology'. In grade 1, students have to choose between religion and civic education, and they can follow the same subject during years 2-8 or switch in grade 5.

The 'other subjects' include the form time (classroom meeting).

In grades 1-8, students have to choose one of the 'compulsory flexible subjects' offered by schools. In grades 1-4, schools have to offer at least three of the following 'compulsory flexible subjects': national tradition, hands in dough/discovering the world, nature keeper, creative writing, from toys to computers, native language/language with national culture elements and chess. In grades 5-8, schools have to offer at least three of the following 'compulsory flexible subjects': nature keepers, everyday life in the past, drawing, painting and sculpting, choir and orchestra, ICT, native language/language with national culture elements, chess and crafts.

Turkey

Instruction time for ISCED 34 in this report only concerns the Anatolia High Schools. There are four general education programmes at ISCED level 3 in Turkey: Anatolia High School (80 % of students), High School (11 %), Science High School (5 %) and Anatolia Teacher Training High School (4 %). High Schools and Anatolia Teacher Training High Schools are gradually been transformed into Anatolia High Schools. High Schools still enrol approximately 40 % of students in grade 12. Nevertheless, the curricula of High Schools and Anatolia High Schools in this grade are very similar, with the main exception of instruction time for foreign languages, which is lower in High Schools.

In grades 1-3, the 'other subjects' category includes free activities.

In grades 5-8, students have to choose three subjects per grade. Compulsory options include subjects pertaining to 'religion/ethics/moral educations', 'reading, writing and literature', 'mathematics', 'natural sciences', 'social studies', 'arts education', sports and foreign languages. 'ICT' is a compulsory option in grades 7-12. In grades 9-12, schools can offer as compulsory options: language, Turkish literature, mathematics, geometry, physics, chemistry, biology, history, geography, psychology, sociology and a foreign language.

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Recommended Annual Instruction Time in Full-time Compulsory Education in Europe – 2016/17

This report examines the recommended minimum instruction time in full-time compulsory general education in 2016/17 in 42 European education systems. It includes national diagrams illustrating the data by country and by subject.

The comparative overview examines the policy changes that have taken place over the last year regarding the recommended instruction time and its distribution across subjects. It also looks into the minimum instruction time allocated to several subjects which are currently of particular interest at European level; reading, writing and literature, maths, natural sciences, the teaching of other languages, and physical education and health. For maths and natural sciences it compares the instruction time reported by teachers and students in TIMSS and PISA surveys with the minimum recommended by education authorities.

The Eurydice Network's task is to understand and explain how Europe's different education systems are organised and how they work. The network provides descriptions of national education systems, comparative studies devoted to specific topics, indicators and statistics. All Eurydice publications are available free of charge on the Eurydice website or in print upon request. Through its work, Eurydice aims to promote understanding, cooperation, trust and mobility at European and international levels. The network consists of national units located in European countries and is co-ordinated by the EU Education, Audiovisual and Culture Executive Agency. For more information about Eurydice, see http://ec.europa.eu/eurydice.

