



The first two issues of *Eurydice in Brief* each contained a summary of a full study already published by Eurydice. The present issue sets out some new and original information that has not previously appeared.

In 2004, Eurydice produced a subject-based report bringing together over 30 indicators on information and communication technology in schools. The main sources for the report were the Eurydice National Units and Eurostat, as well as the PISA 2000 (Programme for International Student Assessment) and PIRLS international surveys. Since the appearance of the report, the results of PISA 2003 have been made public. We felt it would be instructive to analyse some of these data, in particular to compare the situation of 15-year-old boys and girls confronted with ICT. Around ten indicators and Figures on this topic are accordingly set out here.

If you wish to let us have any comments or observations, please do not hesitate to e-mail us at:

comments@eurydice.org.

We hope you find this third bulletin of interest.

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HOW BOYS AND GIRLS IN EUROPE ARE FINDING THEIR WAY WITH INFORMATION AND COMMUNICATION TECHNOLOGY?

Virtually all students aged 15 (99.31 %) say that they have already used a computer. The majority (81 %) say that they have a computer at home.

Over 50 % say they regularly use a computer to perform three main activities: to play games, to look for information on the Internet and to communicate via e-mail or 'chat-rooms'.

Boys say that they learn on their own or with friends, while girls do so at school or with their family.

While boys are more attracted to ICT and use it more freely, girls learn to use computers mainly at school, which doubtless redresses the balance in their favour.

Developing the skills of young students by expanding school computer facilities and incorporating ICT (information and communication technology) into the curriculum is one of the current priorities of national policies. This is a consequence of the breakthrough of ICT both at the workplace and in the home.

Furthermore, differences between boys and girls in enrolment and qualification rates in mathematical, scientific and technological subjects are a cause for concern at the European Commission. Under these circumstances, it is helpful to analyse by sex the reactions of young people in Europe facing up to this new environment, and the ways in which they become fully conversant with the special technologies comprising ICT.

The replies of young students aged 15 to the PISA 2003 survey questionnaire provide an opportunity to analyse the attitudes of boys and girls confronted with ICT. Differences between them are apparent in the frequency with which they use ICT, the context in which they learn to do so, the types of activity carried out and self-assessment by students of their own abilities. However, it should be borne in mind that the information here corresponds to data as reported, and that the real situation of young 15-year-olds may differ significantly from what they say about it.

The total sample consists of 91 091 students from all countries that took part in PISA except Spain, France, Luxembourg, the Netherlands, the United Kingdom (England, Wales and Northern Ireland) and Norway, which all decided not to circulate the optional questionnaire on ICT. Annexes to the present document, including the calculation of standard errors, may be consulted in its electronic version on the Eurydice website: www.eurydice.org. Details concerning the PISA survey are contained in the general introduction and glossary of the general report *Key Data on Education in Europe 2005* which is also available on the Eurydice website.

Almost all young people aged 15 have already used a computer. But boys have done so for longer and more frequently than girls

Considered as a whole, virtually all students aged 15 (99.31 %) say that they have already used a computer, whether at home, school, or in another setting. The percentages are slightly lower in Slovakia (around 96 %) and Greece (98 %). In all countries, differences between girls and boys in this respect are insignificant.

For a great many students, the use of a computer is nothing new. While a minority (9 %) say they have used one for less than a year, a third have done so for over five years. The proportions of students who report using computers for less than a year are higher (around 20 %) in Greece and Latvia, as well as in Slovakia (a little under 30 %). By contrast, in the Nordic countries, the majority of students have used them for over five years. In general, boys report that they have done so for longer than girls. In all cases, this difference is statistically significant except in Ireland.

The home computer is used almost every day by half of the young people (49.5 %), to whom may be added the 25 % who say they use it a few times each week. Only 13 % of young people never use a computer at home, a proportion somewhat lower than the proportion of families without a computer, which stands at some 20 % (see Figure 8 for further details). While 60 % of boys claim to use one virtually every day, this applies solely to 37 % of girls.

Figure 1: Proportions of young people aged 15 who say they have used computers for over 5 years, by sex and by country, 2002/03

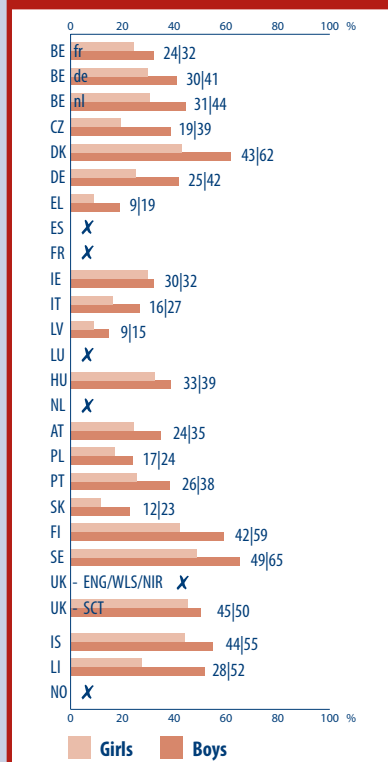


Figure 2: Proportions of young people aged 15 who say they use the computer at home at least a few times each week, by sex and by country, 2002/03

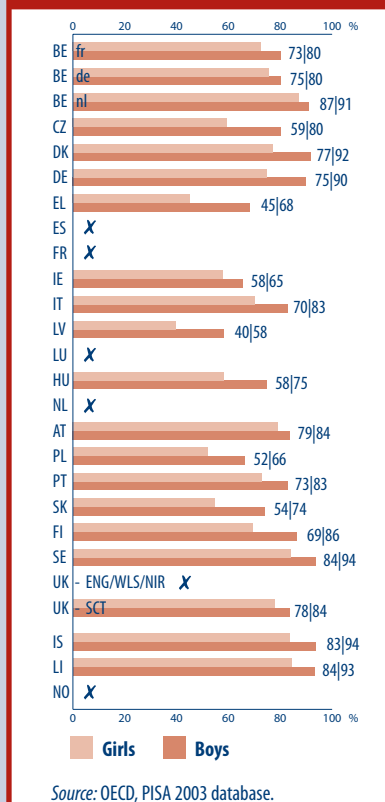
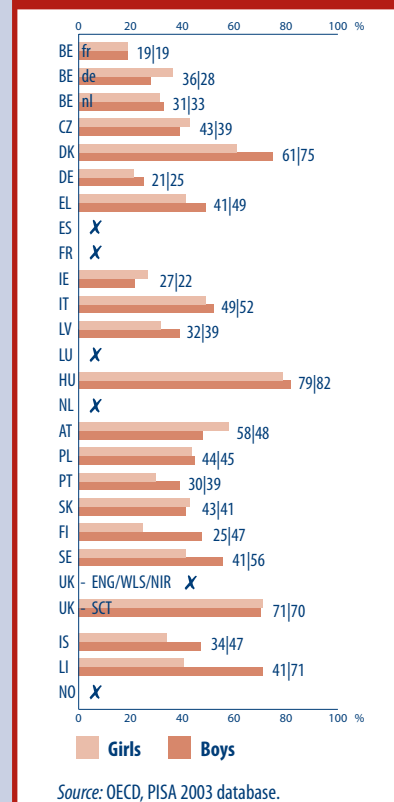


Figure 3: Proportions of young people aged 15 who say they use a computer at school at least a few times each week, by sex and by country, 2002/03



NB: The X shown in the Figures indicates the countries that took part in PISA and decided not to circulate the optional questionnaire on ICT.

When the two reply options 'almost every day' and 'a few times each week' are bracketed together, the difference is smaller with 80 % of boys and 68 % of girls. This finding is the same for all countries, although the proportions vary from one to the next.

The use of computers at school is a little less frequent: 45 % of students say they use them at least a few times each week and 13 % that they never do so.

In Denmark, Hungary and the United Kingdom (Scotland), the majority of students use school computers at least a few times each week. In 10 countries, the girl/boy differences are insignificant. More frequent use of computers at school by boys is apparent in all the Nordic countries, Portugal and Liechtenstein. In Austria, the opposite trend is observed.

The most popular activities are games and looking up information, while the least frequent are programming and mathematical calculation

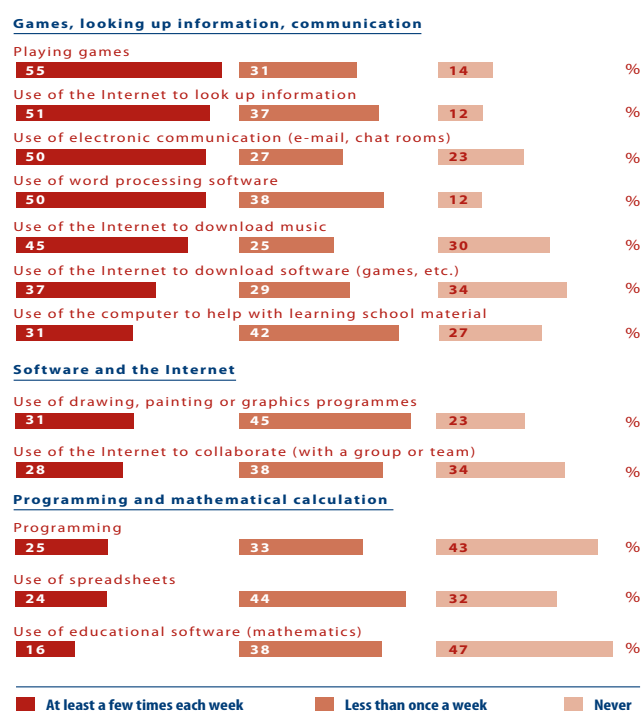
The main activities for which young 15-year-olds use computers are games, Internet access to look up information, and electronic communication via e-mail or 'chat rooms'. Over 50 % of students say they perform these three activities a few times each week if not almost every day. Next come the use of software and other Internet applications. Finally, the complex activities of programming and mathematical calculation are far less frequent.

No difference between boys and girls as regards communication and word processing but significant differences in the case of games and programming

The data for all students from all countries combined belie a certain number of differences. In general, boys use computers more often than girls to play games, but also to look up information (these differences are significant in all cases except the German-speaking Community of Belgium, Hungary, Austria and Liechtenstein). As regards use of the computer for communication, however, differences between girls and boys are less clear-cut. The same observation is valid for the use of word processing (at least once a month). The use of spreadsheets is slightly more popular among boys although this does not apply to all countries without exception. Finally, programming activities are far more frequent among boys than girls.

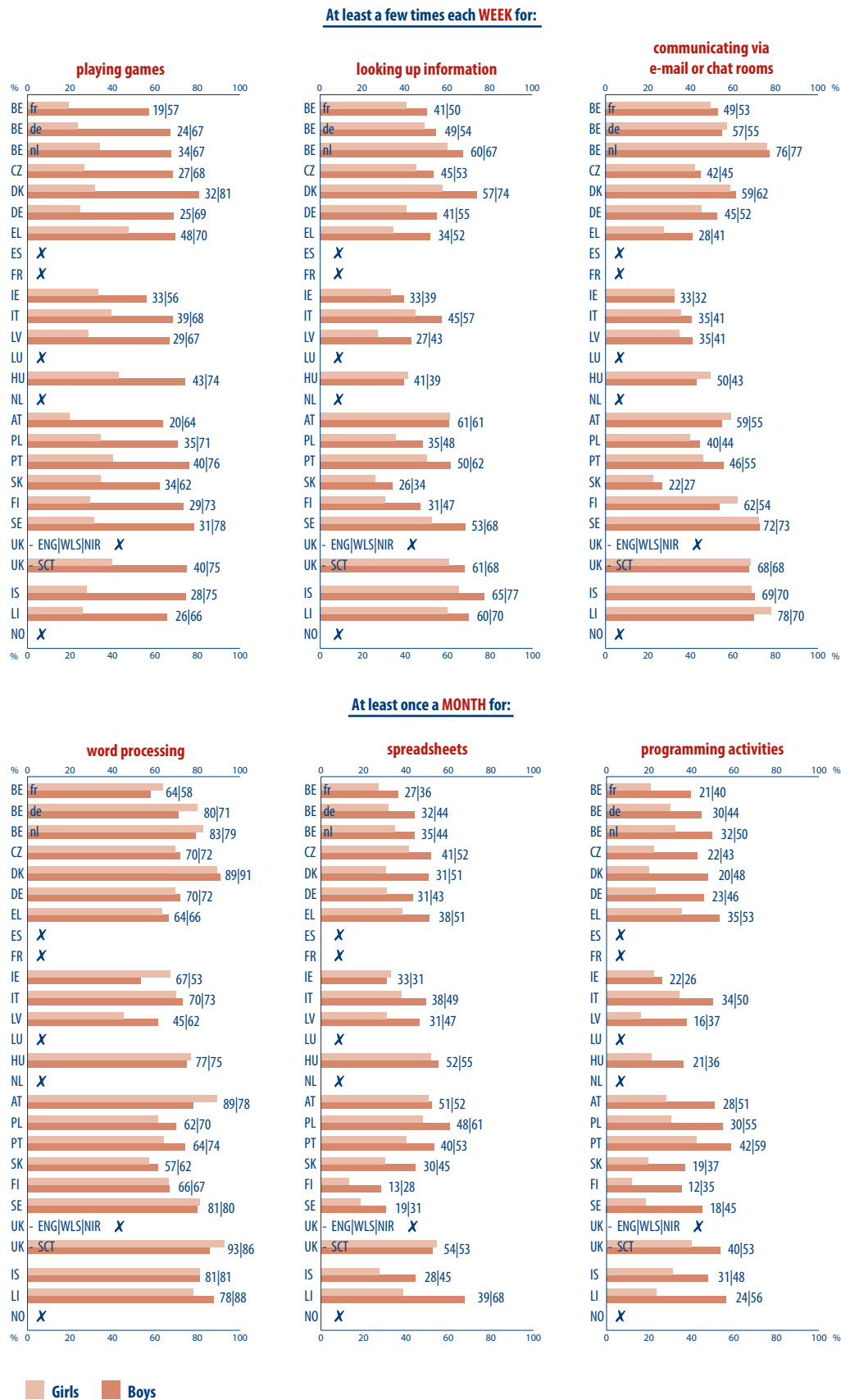
Besides the results shown in the Figure, use of the Internet for downloading music or software is far more frequent among boys in all countries. Similarly, boys more often use graphics programmes or the Internet to collaborate with a group, although not in all countries

Figure 4: Proportions of young 15-year-olds who use computers for a series of 12 activities, by frequency of use, 2002/03



Source: OECD, PISA 2003 database.

Figure 5: Proportions of young people aged 15 who say they use a computer for six activities at least once a week/month, by sex and by country, 2002/03



without exception. Finally, in the case of activities such as use of the computer to help with learning school material or the use of educational software, no general trend is apparent across countries, probably because these activities are mainly carried out at school (see *Key Data on Information and Communication Technology in Schools in Europe, 2004*), with variations between countries but the same frequency for boys and girls.

Boys say that they learn on their own or with friends, while girls do so at school or with their family

Overall, one young person in every three states that (s)he has learnt to use a computer unaided. The remainder say that they have above all learnt to do so at school, or with friends or their family. Boys say that they have mainly learnt how to use computers with friends or on their own, whereas girls report that they have mainly done so at school or with their family. The same observation applies to use of the Internet although the differences are less marked.

This trend is apparent in all countries, which means that neither the culture nor the level of school computerisation appear to influence replies. In some countries, the difference between girls and boys is a little less marked in the case of one or other component. Thus in Ireland, Poland and Portugal, for example, differences between the proportions of girls and boys who say that they have mainly learnt to use computers at school are slightly less marked, although they remain significant.

Figure 6: Proportions of young people aged 15 in terms of the person or place they identify as having been most instrumental in teaching them to use computers or the Internet, by sex, 2002/03

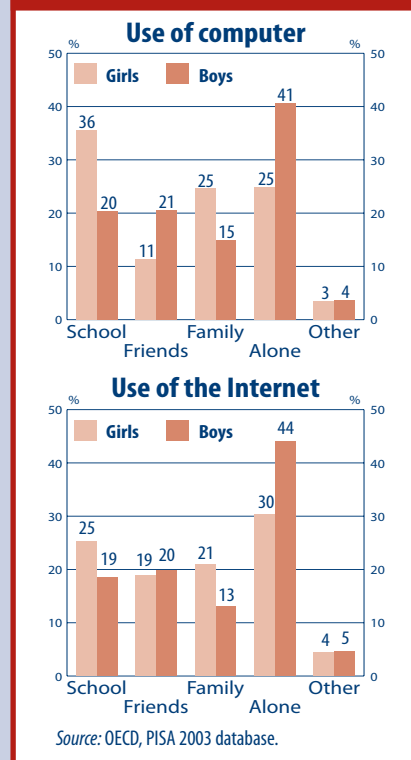
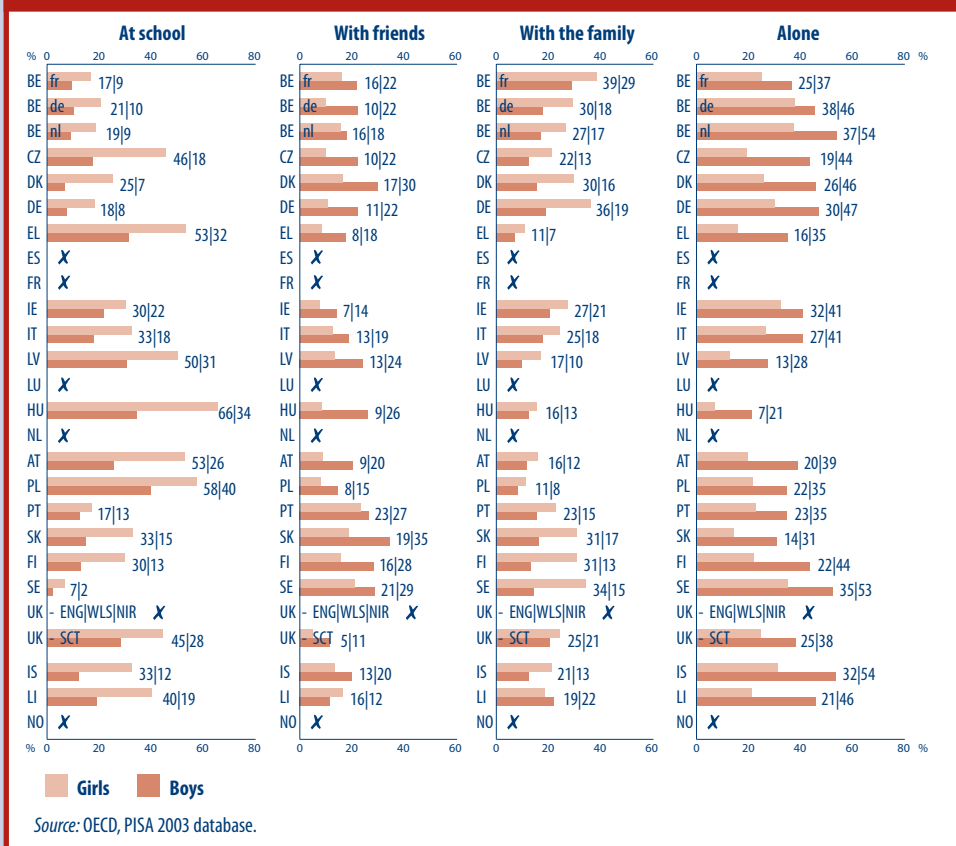


Figure 7: Proportions of young people aged 15 in terms of the person or place they identify as having been most instrumental in teaching them to use computers, by sex and by country, 2002/03



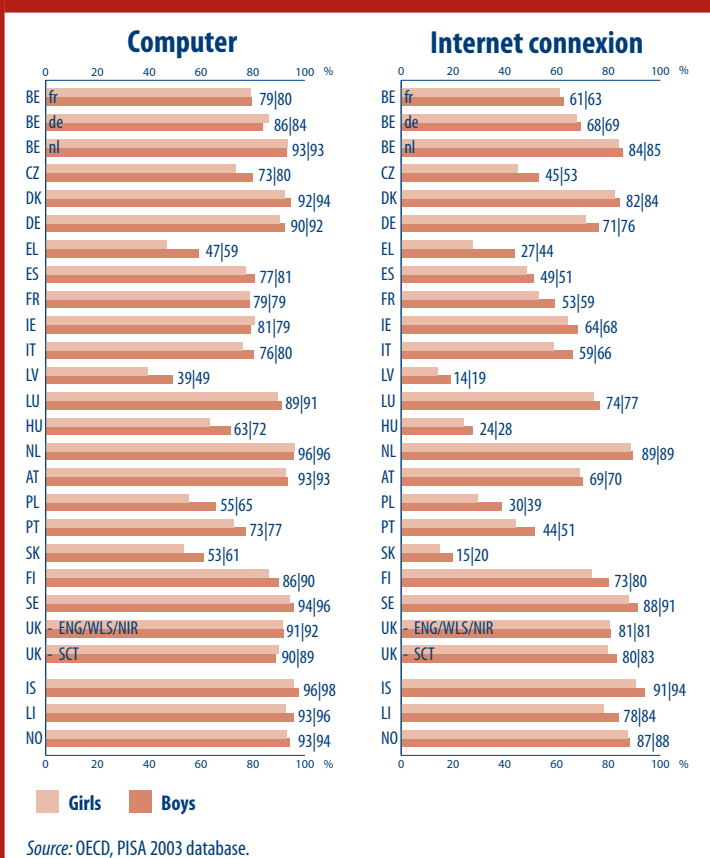
In other countries, the difference between girls and boys is very great in the case of certain components. In the Czech Republic, Germany and the Nordic countries, two to three times as many girls as boys say that they have mainly learnt to use computers at school. In the Czech Republic, Hungary and Slovakia, two to three times as many boys as girls say that they have learnt on their own.

Beyond these girl/boy differences, variations may be observed between countries. The proportions of students who have mainly learnt to use computers at school are higher than the European average in Greece, Latvia, Hungary, Austria and Poland. They are far lower in Sweden. The proportions of students who have mainly learnt to use a computer with their families are far higher than average in Belgium (the French Community).

Variations attributable to levels of computerisation at home and at school

Data on the learning context are partly attributable to the levels of computerisation at home and school in the different countries. In all, the majority of students (81 %) say they have a computer at home that they can use for school work, while 60 % say they have an Internet connection at home. However, the percentages are far lower in Greece (53 % and 36 % respectively), Latvia (44 % and 16 %), Hungary (67 % and 26 %) and Poland (60 % and 34 %), which explains why the proportion of students in these countries who say their learn with their families is lower. By contrast, while the level of school computerisation is not as great in three of these countries (Greece, Latvia and Poland), it is sufficient to provide for learning activity, as Figures 7 and 10 indicate.

Figure 8: Proportions of students aged 15 who say they have a home computer and Internet connection, by sex and by country, 2002/03



Average number of students per computer in schools attended by students aged 15

BE fr	BE de	BE nl	CZ	DK	DE	EL	ES	FR	IE	IT	LV	LU	HU	NL	AT	PL	PT	SK	FI	SE	UK-ENG/WLS/NIR	UK-SCT	IS	LI	NO
16	7	6	13	7	17	22	14	(:)	8	13	21	7	8	8	7	22	16	36	7	8	(:)	4	6	4	7

Average proportions of computers connected to the Internet in schools attended by students aged 15

BE fr	BE de	BE nl	CZ	DK	DE	EL	ES	FR	IE	IT	LV	LU	HU	NL	AT	PL	PT	SK	FI	SE	UK-ENG/WLS/NIR	UK-SCT	IS	LI	NO
65	72	80	77	88	71	69	79	(:)	67	71	61	96	79	85	87	83	60	51	92	92	(:)	91	96	97	81

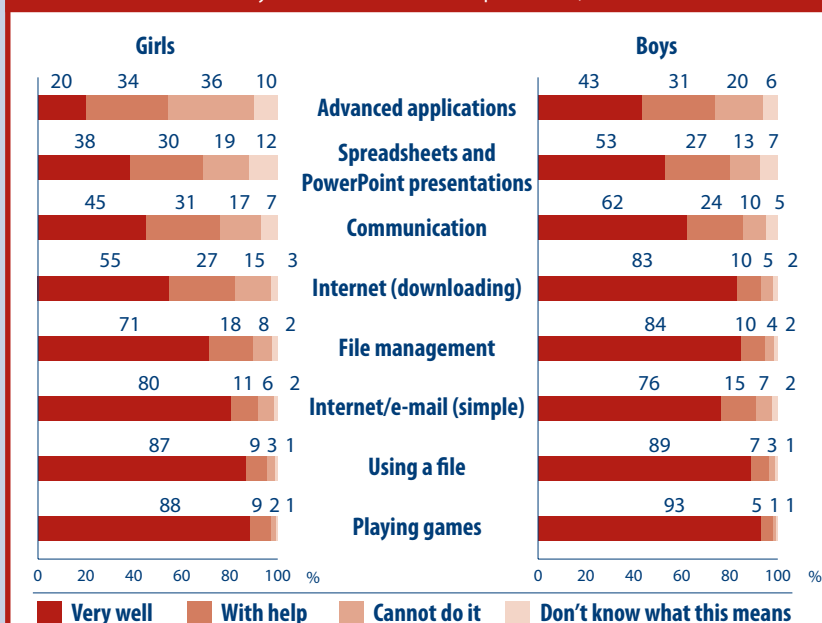
The majority of students say they are capable of performing a set of simple activities

Questioned about their ability to carry out certain activities (23 in all ⁽¹⁾), students generally say they are very familiar with how to **play** computer games. It may be assumed that students are also thoroughly proficient in other tasks, such as opening a file, deleting a document or file, saving a document or file, scrolling a document up and down a screen, drawing pictures with a mouse or printing a file or document (all shown in Figure 9 under the heading **using a file**), since the great majority (girls and boys) report that they perform them very well.

Activities such as consulting the **Internet** or writing or sending **e-mails**, which are not very complex, are performed by over 80 % of young people and the differences between boys and girls are not very great.

⁽¹⁾ The question 'How well can you do each of these tasks on a computer?' was asked for a list of 23 tasks. These have been grouped together for illustrative purposes.

Figure 9: Breakdown by sex of young people aged 15 in accordance with how they assessed their own computer skills, 2002/03



Source: OECD, PISA 2003 database.

Boys claim to be more competent when performing complex activities

Differences between girls and boys become more clear-cut in the case of complex activities grouped together under the heading **file management**. Creating or editing a document, moving files from one place to another on a computer, or copying a file from a floppy disk are tasks that three quarters of students are able to perform, but more boys than girls report that they do them very well. Tasks such as copying or **downloading** files from the Internet and downloading music are proficiently executed by a smaller percentage of students, the majority of them boys. A significant proportion of girls say that they can perform these activities with help. Next come tasks such as attaching a file to an e-mail message or using a database to produce a list of addresses, which have been grouped in the Figure under the heading **communication**, for which the differences between girls and boys are more marked. Activities such as using a spreadsheet to plot a graph or creating a presentation (for example, using PowerPoint) are familiar to less than half of the students, with a greater degree of facility among boys. Finally, students appear far less experienced in **advanced applications** such as using software to find and get rid of computer viruses, constructing a web page, using a multimedia programme or creating a programme (in Logo, Pascal or Basic). Almost half of the girls say that they are incapable of performing these operations or even totally unfamiliar with them.

Figure 10: Proportion of young people aged 15, by sex and by country, who say they perform four particular activities very satisfactorily, 2002/03



In the case of four of these activities, the trend is general for all countries. However, Austria and Ireland are noteworthy for the fact that girls and boys perform any one of them to the same extent.

Summary

Whatever the country or level of school computerisation, the attitudes of girls and boys vis-à-vis the use of ICT seem to differ in the same way: boys are more attracted to ICT and use it more freely. They say they use computers more frequently (except in the case of communication and word processing activities). They also more often claim that they can perform complex operations and that they have learnt on their own or with friends. It would appear that the education system to some extent redresses the balance in favour of girls, a greater proportion of whom say they learnt to use computers mainly at school and that they perform activities included in the subjects taught there (see *Key Data on ICT*, Eurydice, 2004) just as well as boys.

This bulletin, together with its annexes, may be consulted on the Eurydice website at: www.eurydice.org.

ANNEXES

The X shown in the figures indicates countries that took part in PISA and decided not to circulate the optional questionnaire on TIC.

Figure1. Proportions of young people aged 15 who say they have used computers for over 5 years, by sex and by country. School year 2002/03.

	BE fr	BE de	BE nl	CZ	DK	DE	EL	ES	FR	IE	IT	LV	LU	HU	NL	AT	PL	PT	SK	FI	ES	UK-ENG/ WLS/NIR	UK- SCT	IS	LI	NO
Girls	24.3	29.9	30.7	19.4	42.9	25.1	9.2	X	X	29.9	16.2	8.9	X	32.7	X	24.2	17.2	25.6	11.8	42.2	48.9	X	45.1	44.0	27.6	X
se	1.44	2.17	1.20	0.90	1.22	1.07	0.94			1.57	0.65	0.80		1.01		0.74	1.20	1.37	0.71	1.13	1.43		1.71	1.20	4.03	
Boys	32.1	40.9	44.5	38.7	62.0	41.8	19.0	X	X	32.2	26.8	15.0	X	38.6	X	34.9	24.2	38.5	23.1	59.0	65.4	X	50.5	54.7	51.6	X
se	1.74	2.81	1.09	1.21	1.20	1.18	1.39			1.28	0.99	1.00		0.96		1.19	1.15	1.17	0.98	1.03	1.15		1.60	1.19	3.94	

Source: OECD, PISA 2003 database.

se : standard error

Figure2. Proportions of young people aged 15 who say they use the computer at home at least a few times each week, by sex and by country. School year 2002/03.

	BE fr	BE de	BE nl	CZ	DK	DE	EL	ES	FR	IE	IT	LV	LU	HU	NL	AT	PL	PT	SK	FI	ES	UK-ENG/ WLS/NIR	UK- SCT	IS	LI	NO	
Girls	Nearly every day	42.7	41.9	62.5	27.8	44.4	43.7	22.2	X	X	20.3	33.8	22.6	X	28.0	X	45.8	36.1	41.4	25.1	40.6	55.4	X	45.2	52.6	51.1	X
	se	2.15	2.69	1.14	1.03	1.35	1.13	0.95			1.26	0.99	1.25		1.22		1.53	1.13	1.34	1.09	1.00	1.06		1.60	1.29	4.02	
	Few times a week	29.8	33.4	24.5	31.7	32.5	31.1	23.0	X	X	37.3	36.1	16.9	X	30.1	X	33.3	15.7	31.3	29.4	28.7	28.5	X	32.4	30.9	33.3	X
se	1.53	2.38	0.96	1.07	1.18	1.05	1.08			1.18	1.05	1.23		1.26		1.08	0.91	1.02	1.08	0.92	1.01		1.31	1.18	3.79		
Boys	Nearly every day	56.1	59.5	71.6	60.2	74.1	71.6	48.0	X	X	31.2	59.0	45.1	X	52.8	X	57.3	55.2	62.8	55.1	69.4	79.3	X	58.9	81.4	73.2	X
	se	1.69	2.55	1.25	1.25	1.09	1.01	1.29			1.20	1.18	1.85		1.20		1.79	1.32	1.20	1.38	0.88	0.97		1.58	1.00	3.80	
	Few times a week	24.0	20.6	19.2	20.0	17.6	18.3	20.3	X	X	34.1	23.7	13.1	X	21.9	X	26.5	11.0	19.9	18.9	16.8	14.9	X	24.7	13.0	20.1	X
se	1.41	2.03	0.98	0.79	0.89	0.97	1.08			1.11	0.79	0.96		0.91		1.23	0.69	0.95	1.05	0.85	0.86		1.07	0.78	2.98		

Source: OECD, PISA 2003 database.

se : standard error

Figure3. Proportions of young people aged 15 who say they use a computer at school at least a few times each week, by sex and by country. School year 2002/03.

	BE fr	BE de	BE nl	CZ	DK	DE	EL	ES	FR	IE	IT	LV	LU	HU	NL	AT	PL	PT	SK	FI	ES	UK-ENG/ WLS/NIR	UK- SCT	IS	LI	NO	
Girls	Nearly every day	2.2	6.4	1.4	3.9	19.1	0.7	3.3	X	X	2.3	3.9	2.7	X	5.5	X	12.8	1.5	3.1	3.5	2.0	11.4	X	22.6	3.6	5.7	X
	se	0.60	1.12	0.30	0.64	1.37	0.19	0.59			0.48	0.69	0.62		0.83		1.52	0.32	0.52	0.52	0.40	0.96		2.39	0.50	1.81	
	Few times a week	17.0	29.9	29.8	39.0	41.9	20.7	37.9	X	X	24.5	45.3	28.8	X	73.2	X	45.1	42.0	26.7	39.4	22.9	29.9	X	48.2	30.4	35.1	X
se	1.80	2.00	1.75	2.12	1.38	1.44	2.29			1.94	2.44	2.43		1.47		1.81	1.97	1.65	1.84	1.27	1.25		1.99	1.11	3.62		
Boys	Nearly every day	2.6	4.8	1.4	5.4	26.1	2.0	5.7	X	X	2.1	3.4	4.6	X	7.3	X	9.0	3.1	7.4	4.5	5.8	19.0	X	22.7	6.5	13.5	X
	se	0.62	1.28	0.27	0.61	1.40	0.35	0.76			0.42	0.45	1.12		1.07		1.12	0.45	0.73	0.77	0.77	1.28		1.52	0.66	2.22	
	Few times a week	16.2	22.9	31.3	33.5	48.8	23.1	43.4	X	X	19.6	48.7	34.5	X	74.5	X	38.9	41.8	31.6	36.9	41.6	36.5	X	47.6	40.5	57.5	X
se	1.44	1.97	1.65	1.68	1.34	1.55	2.63			1.32	2.10	2.00		1.57		1.76	1.97	1.47	1.55	1.56	1.25		1.65	1.19	3.53		

Source: OECD, PISA 2003 database.

se : standard error

Figure 4. Proportions of young 15-year-olds who use computers for a series of 12 activities, by frequency of use School year 2002/03.

	A	se	B	se	C	se	D	se
Nearly every day	26.6	0.28	18.9	0.27	26.9	0.29	14.2	0.21
Few times a week	27.8	0.26	32.4	0.32	23.2	0.27	36.0	0.31
Between once a week and once a month	16.7	0.22	24.2	0.32	15.7	0.22	25.7	0.27
Less than once a month	14.5	0.20	12.8	0.21	11.7	0.23	12.5	0.22
Never	14.4	0.23	11.7	0.27	22.5	0.31	11.5	0.23

	E	se	F	se	G	se	H	se
Nearly every day	24.6	0.27	17.4	0.22	8.3	0.22	10.1	0.20
Few times a week	20.7	0.28	19.4	0.25	22.4	0.25	21.2	0.25
Between once a week and once a month	14.0	0.23	15.7	0.23	22.6	0.23	22.6	0.26
Less than once a month	11.1	0.17	13.7	0.19	19.5	0.25	22.8	0.27
Never	29.5	0.28	33.9	0.33	27.2	0.31	23.3	0.34

	I	se	J	se	K	se	L	se
Nearly every day	10.2	0.18	10.0	0.19	6.1	0.16	4.1	0.17
Few times a week	17.9	0.28	14.7	0.21	18.1	0.27	11.5	0.22
Between once a week and once a month	19.7	0.30	15.8	0.24	21.9	0.25	16.3	0.24
Less than once a month	18.3	0.22	16.9	0.24	22.1	0.24	21.3	0.28
Never	33.9	0.36	42.6	0.36	31.8	0.35	46.7	0.38

A	Playing games	G	Use of the computer to help with learning school material
B	Use of the Internet to look up information	H	Use of drawing, painting or graphics programmes
C	Use of electronic communication (e-mail, chat rooms)	I	Use of the Internet to collaborate (with a group or team)
D	Use of word processing software	J	Programming
E	Use of the Internet to download music	K	Use of spreadsheets
F	Use of the Internet to download software (games, etc.)	L	Use of educational software (mathematics)
se	standard error		

Source: OECD, PISA 2003 database.

Figure 5. Proportions of young people aged 15 who say they use a computer for six activities at least once a week/month, by sex and by country. School year 2002/03.

A least a few times each week for :																										
Playing games																										
	BE fr	BE de	BE nl	CZ	DK	DE	EL	ES	FR	IE	IT	LV	LU	HU	NL	AT	PL	PT	SK	FI	ES	UK-ENG/ WLS/NIR	UK- SCT	IS	LI	NO
Girls	19.3	23.7	34.0	26.7	31.7	24.8	47.7	X	X	33.2	39.4	28.6	X	42.8	X	19.7	34.6	40.1	34.5	29.4	31.2	X	39.9	28.0	26.1	X
se	0.93	2.09	1.00	1.16	1.00	1.08	1.30			1.21	1.16	1.35		1.22		1.01	0.95	1.21	1.27	1.06	1.39		1.59	1.13	3.44	
Boys	57.4	67.1	67.5	68.3	80.9	68.7	69.6	X	X	56.0	68.4	66.7	X	74.3	X	63.9	70.8	76.1	62.1	73.5	78.3	X	75.0	74.7	65.8	X
se	1.78	2.39	1.01	1.38	0.90	1.08	1.12			1.16	0.89	1.44		1.03		1.29	1.05	0.99	1.20	0.93	0.84		1.28	1.01	3.69	
Looking up information																										
	BE fr	BE de	BE nl	CZ	DK	DE	EL	ES	FR	IE	IT	LV	LU	HU	NL	AT	PL	PT	SK	FI	ES	UK-ENG/ WLS/NIR	UK- SCT	IS	LI	NO
Girls	40.7	48.9	59.9	45.2	57.4	40.7	34.5	X	X	33.2	44.8	27.0	X	41.3	X	61.0	35.4	50.2	26.0	30.7	52.7	X	60.7	65.3	59.9	X
se	1.67	2.37	1.32	1.64	1.23	0.99	1.44			1.77	1.20	1.37		1.54		1.31	1.47	1.57	1.41	0.93	1.21		1.59	1.18	4.26	
Boys	50.1	54.4	67.3	53.2	73.6	55.0	51.6	X	X	39.5	57.0	42.9	X	39.4	X	60.8	48.2	61.5	34.0	47.2	68.4	X	68.1	77.1	70.0	X
se	1.60	2.58	1.18	1.52	0.97	1.00	1.30			1.21	1.15	1.65		1.30		1.37	1.40	1.21	1.37	0.99	1.29		1.37	1.11	3.47	
Communicating via e-mails or chat-rooms																										
	BE fr	BE de	BE nl	CZ	DK	DE	EL	ES	FR	IE	IT	LV	LU	HU	NL	AT	PL	PT	SK	FI	ES	UK-ENG/ WLS/NIR	UK- SCT	IS	LI	NO
Girls	49.2	42.2	75.9	42.2	58.6	45.1	27.6	X	X	32.6	35.3	34.6	X	49.6	X	59.1	39.9	46.1	22.2	62.0	72.0	X	68.3	68.6	77.7	X
se	1.71	2.46	1.05	1.53	1.40	1.15	0.94			1.53	1.15	1.83		1.53		1.14	1.19	1.73	1.14	1.21	1.05		1.83	1.10	3.83	
Boys	53.0	54.8	77.1	44.8	61.5	52.4	41.0	X	X	32.2	40.7	40.7	X	42.7	X	54.6	44.2	55.4	26.6	53.8	72.6	X	67.6	70.4	69.8	X
se	1.74	2.42	1.01	1.43	1.33	1.12	1.13			1.21	1.11	1.49		1.36		1.27	1.42	1.30	1.16	1.16	1.47		1.66	1.16	3.65	
At least once a month for :																										
Word processing																										
	BE fr	BE de	BE nl	CZ	DK	DE	EL	ES	FR	IE	IT	LV	LU	HU	NL	AT	PL	PT	SK	FI	ES	UK-ENG/ WLS/NIR	UK- SCT	IS	LI	NO
Girls	63.6	79.9	82.7	69.6	89.3	69.8	63.6	X	X	67.4	70.1	45.2	X	77.0	X	89.1	61.6	64.2	57.1	66.3	81.0	X	92.7	81.0	78.2	X
se	2.04	1.99	1.29	1.69	0.83	1.18	1.29			1.50	1.12	1.62		1.36		0.89	1.30	1.35	1.64	1.26	1.04		0.80	1.07	3.43	
Boys	57.9	70.9	79.2	71.8	90.7	71.8	66.4	X	X	53.3	73.0	61.6	X	75.0	X	78.1	69.8	74.1	61.5	67.0	79.8	X	85.7	81.2	87.6	X
se	1.64	2.23	1.05	1.39	0.73	1.03	1.30			1.54	1.03	1.77		1.02		1.35	1.31	1.14	1.55	1.09	0.89		1.05	1.21	2.58	
Spreadsheets																										
	BE fr	BE de	BE nl	CZ	DK	DE	EL	ES	FR	IE	IT	LV	LU	HU	NL	AT	PL	PT	SK	FI	ES	UK-ENG/ WLS/NIR	UK- SCT	IS	LI	NO
Girls	27.2	31.8	35.0	41.4	30.6	31.0	38.3	X	X	33.0	38.0	31.0	X	52.0	X	50.6	48.1	40.3	30.2	13.2	18.7	X	54.5	27.6	38.9	X
se	1.36	2.43	1.52	1.61	1.18	1.16	1.37			1.25	1.33	2.11		1.58		1.72	1.50	1.37	1.10	0.90	0.94		1.83	0.88	4.01	
Boys	36.2	44.1	44.1	51.8	50.7	43.2	50.9	X	X	31.1	49.4	46.6	X	55.2	X	52.1	60.6	53.5	44.6	28.4	30.8	X	52.7	44.7	67.7	X
se	1.41	2.33	1.33	1.27	1.33	1.11	1.19			1.25	1.07	1.69		1.43		1.42	1.25	1.30	1.09	1.11	1.01		1.88	1.18	3.94	
Programming activities																										
	BE fr	BE de	BE nl	CZ	DK	DE	EL	ES	FR	IE	IT	LV	LU	HU	NL	AT	PL	PT	SK	FI	ES	UK-ENG/ WLS/NIR	UK- SCT	IS	LI	NO
Girls	20.8	29.9	32.3	22.2	19.8	23.0	35.4	X	X	22.2	34.3	16.1	X	21.1	X	28.0	30.3	42.2	19.4	11.7	18.3	X	39.9	30.9	23.5	X
se	1.43	2.59	1.03	0.98	0.83	0.96	1.00			1.14	1.03	0.92		1.06		1.19	1.15	1.16	0.98	0.65	0.75		1.98	1.17	3.36	
Boys	39.5	44.5	49.5	42.6	47.7	45.6	53.2	X	X	26.2	49.9	37.4	X	35.9	X	50.7	54.6	58.6	36.7	35.2	45.1	X	53.4	47.8	56.0	X
se	1.54	2.89	1.00	1.48	1.31	1.09	1.18			1.07	1.10	1.30		1.19		1.68	1.22	1.26	1.05	1.10	1.15		1.61	1.16	3.11	

Source: OECD, PISA 2003 database.

se : standard error

Figure 6. Proportions of young people aged 15 in terms of the person or place they identify as having been most instrumental in teaching them to use computers or the Internet, by sex.
School year 2002/03.

Computer					
	School	Friends	Family	Alone	Others
Girls	35.6	11.4	24.6	24.9	3.5
<i>standard error</i>	0.50	0.29	0.42	0.45	0.18
Boys	20.3	20.5	15.0	40.6	3.6
<i>standard error</i>	0.38	0.38	0.36	0.48	0.17
Internet					
	School	Friends	Family	Alone	Others
Girls	24.0	18.0	19.9	28.9	4.2
<i>standard error</i>	0.44	0.35	0.39	0.52	0.19
Boys	17.9	19.1	12.6	42.4	4.5
<i>standard error</i>	0.42	0.37	0.34	0.47	0.18

Source: OECD, PISA 2003 database.

Figure 7. Proportions of young people aged 15 in terms of the person or place they identify as having been most instrumental in teaching them to use computers, by sex and by country.
School year 2002/03

At school																										
	BE fr	BE de	BE nl	CZ	DK	DE	EL	ES	FR	IE	IT	LV	LU	HU	NL	AT	PL	PT	SK	FI	ES	UK-ENG/ WLS/NIR	UK- SCT	IS	LI	NO
Girls	16.8	20.6	18.5	45.8	25.4	18.2	53.3	X	X	30.2	32.6	50.4	X	65.8	X	53.1	57.6	17.0	33.1	29.8	6.7	X	44.6	32.7	40.1	X
<i>se</i>	2.07	2.75	1.10	1.69	1.16	1.10	1.54			1.66	1.67	2.15		1.43		1.73	1.52	1.41	1.59	1.27	0.54		1.81	1.11	4.60	
Boys	16.1	10.1	15.7	10.0	16.5	10.8	8.3	X	X	7.5	12.6	13.3	X	8.6	X	8.9	8.1	23.3	18.6	15.7	21.1	X	5.0	13.4	16.4	X
<i>se</i>	1.17	1.83	0.90	0.81	0.95	0.87	0.73			0.80	0.75	1.09		0.72		0.88	0.67	1.21	0.98	0.69	1.10		0.58	1.03	3.55	
With friends																										
	BE fr	BE de	BE nl	CZ	DK	DE	EL	ES	FR	IE	IT	LV	LU	HU	NL	AT	PL	PT	SK	FI	ES	UK-ENG/ WLS/NIR	UK- SCT	IS	LI	NO
Girls	38.7	29.7	26.6	21.6	30.0	36.4	10.8	X	X	27.4	24.6	17.2	X	15.6	X	16.2	11.4	22.9	30.9	31.1	34.4	X	24.7	21.2	18.8	X
<i>se</i>	2.06	2.21	1.23	0.94	1.28	1.22	0.92			1.39	1.08	1.17		1.01		1.14	0.68	1.27	1.34	1.04	1.37		1.53	1.02	3.88	
Boys	25.5	38.1	37.5	19.3	26.0	30.3	16.0	X	X	32.4	26.8	12.9	X	7.0	X	20.0	21.8	22.9	14.3	22.2	35.4	X	24.8	31.6	21.4	X
<i>se</i>	1.31	2.77	1.08	1.09	1.26	1.13	1.03			1.35	1.02	0.85		0.57		0.97	1.07	1.34	0.78	0.78	1.20		1.71	1.33	3.80	
With the family																										
	BE fr	BE de	BE nl	CZ	DK	DE	EL	ES	FR	IE	IT	LV	LU	HU	NL	AT	PL	PT	SK	FI	ES	UK-ENG/ WLS/NIR	UK- SCT	IS	LI	NO
Girls	9.4	10.0	9.0	17.6	6.6	7.6	31.6	X	X	21.7	17.9	30.9	X	34.4	X	25.5	39.8	12.6	14.7	13.0	2.0	X	28.4	12.1	19.1	X
<i>se</i>	0.96	1.85	0.67	0.88	0.52	0.77	1.45			1.34	1.15	1.53		1.22		1.21	1.38	0.98	1.10	0.73	0.32		1.49	0.82	3.55	
Boys	22.0	22.3	18.2	22.2	29.9	22.2	17.5	X	X	14.1	18.7	24.3	X	26.3	X	20.3	14.8	26.7	34.6	28.3	29.0	X	11.3	20.1	11.7	X
<i>se</i>	1.62	2.24	1.04	0.96	1.21	1.26	1.15			0.91	0.86	1.28		1.01		1.27	0.83	1.37	1.33	1.04	1.13		1.08	1.08	3.20	
Alone																										
	BE fr	BE de	BE nl	CZ	DK	DE	EL	ES	FR	IE	IT	LV	LU	HU	NL	AT	PL	PT	SK	FI	ES	UK-ENG/ WLS/NIR	UK- SCT	IS	LI	NO
Girls	29.0	17.8	17.2	12.5	15.7	19.0	7.3	X	X	20.8	17.9	9.9	X	12.5	X	11.8	8.4	15.5	16.5	13.4	14.5	X	20.6	12.6	22.3	X
<i>se</i>	1.51	2.23	1.09	0.79	0.91	1.11	0.60			1.22	0.91	0.71		0.85		0.77	0.62	1.16	0.84	0.66	0.85		1.25	0.82	3.90	
Boys	37.0	45.6	54.1	43.9	45.9	47.4	35.1	X	X	41.0	41.1	27.7	X	21.4	X	39.1	35.0	35.0	31.1	43.8	52.5	X	38.2	53.9	46.0	X
<i>se</i>	1.62	2.82	1.29	1.25	1.31	1.53	1.30			1.09	1.30	1.52		0.98		1.57	1.23	1.38	1.15	1.15	1.19		1.55	1.23	4.72	

Source: OECD, PISA 2003 database.

se : standard error

Figure 8. Proportions of students aged 15 who say they have a home computer and Internet connection, by sex and by country. School year 2002/03.

Computer																										
	BE fr	BE de	BE nl																UK-ENG/ WLS/NIR	UK- SCT	IS	LI	NO			
				CZ	DK	DE	EL	ES	FR	IE	IT	LV	LU	HU	NL	AT	PL	PT						SK	FI	ES
Girls	79.0	79.0	86.2	93.3	73.3	92.2	90.2	46.8	77.3	78.7	80.5	76.1	39.5	89.4	63.2	96.2	92.7	55.1	72.6	53.3	85.9	94.1	91.5	90.0	95.8	92.5
se	1.41	1.41	1.49	0.67	1.07	0.72	0.78	1.36	1.18	1.03	1.36	1.15	1.79	0.62	1.47	0.59	0.59	1.41	1.50	1.48	0.73	0.53	0.69	0.95	0.47	2.15
Boys	79.7	79.7	83.8	93.0	79.9	94.4	92.1	59.2	80.7	78.5	79.2	80.1	48.8	90.9	71.6	95.6	93.2	65.5	77.1	60.8	89.9	95.8	91.7	88.9	97.7	95.8
se	1.72	1.72	1.70	0.74	1.20	0.51	0.68	1.69	1.04	1.38	1.19	1.33	1.88	0.59	1.31	0.61	0.76	1.31	1.36	1.55	0.62	0.50	0.67	0.87	0.37	1.54
Internet connection																										
	BE fr	BE de	BE nl																UK-ENG/ WLS/NIR	UK- SCT	IS	LI	NO			
				CZ	DK	DE	EL	ES	FR	IE	IT	LV	LU	HU	NL	AT	PL	PT						SK	FI	ES
Girls	61.0	67.5	84.1	44.9	82.3	71.0	27.5	48.5	53.0	64.4	58.9	14.0	74.2	24.1	88.7	68.8	29.7	44.1	14.9	73.5	87.9	80.5	79.5	90.5	78.3	87.2
se	2.13	2.16	0.86	1.02	0.96	1.08	1.47	1.78	1.38	1.80	1.40	1.10	0.82	1.18	1.10	1.45	1.11	1.58	0.68	1.01	0.83	0.98	1.47	0.70	3.04	0.73
Boys	62.7	69.4	85.4	53.1	84.5	76.2	43.8	51.1	59.2	68.0	66.1	18.9	76.6	27.7	89.4	70.0	38.7	51.3	19.7	79.9	91.2	80.8	83.2	93.9	84.0	88.0
se	1.96	2.26	1.08	1.33	0.96	1.00	1.69	1.64	1.71	1.38	1.31	1.14	0.98	1.09	0.93	1.13	1.12	1.52	1.02	0.86	0.67	0.88	1.20	0.54	2.75	0.98

Source: OECD, PISA 2003 database.

se : standard error

Figure 9. Breakdown by sex of young people aged 15 in accordance with how they assessed their own computer skills. School year 2002/03.

Girls								
	Playing games	Using a file	Internet/mail (simple)	File management	Internet (downloading)	Communication	Spreadsheets and PowerPoint presentations	Advanced applications
Very well	88.1	86.7	80.3	71.2	54.6	44.7	38.3	19.9
With help	8.8	8.9	11.5	18.5	27.3	31.2	30.2	34.4
Cannot do it	2.4	3.1	6.4	7.9	15.0	16.8	19.5	35.5
Don't know what it means	0.7	1.3	1.8	2.4	3.0	7.3	12.0	10.2
Boys								
	Playing games	Using a file	Internet/mail (simple)	File management	Internet (downloading)	Communication	Spreadsheets and PowerPoint presentations	Advanced applications
Very well	93.0	88.8	82.7	84.3	76.1	61.7	52.9	43.0
With help	5.0	7.3	10.1	10.0	14.9	23.5	27.1	30.8
Cannot do it	1.3	2.7	5.0	3.9	6.6	10.0	12.7	19.8
Don't know what it means	0.8	1.3	2.2	1.7	2.5	4.7	7.4	6.4

Source: OECD, PISA 2003 database.

Figure 10. Proportion of young people aged 15, by sex and by country, who say they perform four particular activities very satisfactorily. School year 2002/03.

Downloading a file																										
	BE fr	BE de	BE nl	CZ	DK	DE	EL	SE	FR	IE	IT	LV	LU	HU	NL	AT	PL	PT	SK	FI	SE	UK-ENG/ WLS/NIR	UK- SCT	IS	LI	NO
Girls	63.3	77.6	79.3	63.6	49.6	69.3	40.8	X	X	50.2	51.7	31.3	X	37.9	X	87.0	59.3	40.8	33.3	44.2	74.6	X	69.5	76.1	88.7	X
se	1.90	2.02	0.86	1.22	1.33	1.05	1.25			1.54	1.34	1.55		1.34		0.94	1.66	1.81	1.35	1.11	1.21		1.25	1.02	2.81	
Boys	77.0	84.4	88.7	83.3	88.7	86.7	63.5	X	X	63.9	70.4	61.6	X	63.1	X	86.5	73.7	68.1	58.1	89.6	93.0	X	85.6	93.1	93.4	X
se	1.34	2.10	0.77	1.04	0.81	0.78	1.26			1.06	1.11	1.58		1.35		1.04	1.32	1.19	1.51	0.62	0.56		1.12	0.69	2.09	
Attaching a file to an e-mail message																										
	BE fr	BE de	BE nl	CZ	DK	DE	EL	SE	FR	IE	IT	LV	LU	HU	NL	AT	PL	PT	SK	FI	SE	UK-ENG/ WLS/NIR	UK- SCT	IS	LI	NO
Girls	46.4	60.3	74.8	50.7	51.6	51.3	26.4	X	X	31.1	33.4	24.1	X	25.8	X	65.2	40.2	43.4	17.7	43.6	67.0	X	66.6	68.8	79.4	X
se	1.96	2.08	0.94	1.30	1.49	1.14	1.29			1.44	1.16	1.37		1.19		1.74	1.55	1.70	0.91	1.09	1.16		1.51	0.95	3.26	
Boys	61.8	70.0	82.9	70.0	76.6	73.4	45.7	X	X	40.0	49.8	44.5	X	43.6	X	69.8	61.0	61.0	35.4	72.4	81.2	X	73.2	86.6	86.0	X
se	1.72	2.49	1.05	1.11	0.98	1.01	1.36			1.32	1.23	2.24		1.48		1.27	1.40	1.35	1.40	0.92	0.85		1.62	0.81	2.64	
Using PowerPoint																										
	BE fr	BE de	BE nl	CZ	DK	DE	EL	SE	FR	IE	IT	LV	LU	HU	NL	AT	PL	PT	SK	FI	SE	UK-ENG/ WLS/NIR	UK- SCT	IS	LI	NO
Girls	44.3	32.4	39.6	21.6	36.2	26.1	30.1	X	X	41.2	43.3	20.4	X	22.2	X	64.9	42.4	52.2	13.5	28.2	43.9	X	51.1	45.5	62.9	X
se	1.55	2.21	1.48	1.48	1.45	1.34	1.38			2.09	1.37	1.89		1.36		2.05	1.86	1.55	1.32	1.31	1.31		2.09	1.19	3.67	
Boys	53.5	44.1	52.8	43.9	61.5	43.5	46.0	X	X	40.0	51.5	37.0	X	31.4	X	66.8	58.2	63.4	28.0	55.8	56.1	X	58.7	65.5	80.8	X
se	1.48	2.59	1.37	1.52	1.46	1.55	1.57			1.68	1.16	1.52		1.48		1.66	1.56	1.33	1.48	1.52	1.49		1.65	1.13	2.96	
Constructing a web page																										
	BE fr	BE de	BE nl	CZ	DK	DE	EL	SE	FR	IE	IT	LV	LU	HU	NL	AT	PL	PT	SK	FI	SE	UK-ENG/ WLS/NIR	UK- SCT	IS	LI	NO
Girls	19.4	24.4	23.6	22.7	25.4	21.4	13.6	X	X	15.1	13.1	18.0	X	9.3	X	22.1	27.5	13.5	20.5	13.5	14.8	X	27.2	25.9	22.7	X
se	0.97	2.11	1.02	0.86	1.02	1.10	0.80			0.87	0.88	1.24		0.82		1.06	1.48	0.82	1.11	0.69	1.01		1.55	1.13	3.14	
Boys	35.0	37.4	37.5	40.2	50.4	39.3	28.2	X	X	22.4	25.7	31.2	X	18.5	X	39.6	45.2	27.6	24.4	40.9	37.3	X	44.0	57.2	58.9	X
se	1.30	2.85	1.14	1.28	1.17	1.24	1.10			1.16	1.12	1.52		0.85		1.47	1.58	1.12	1.22	1.21	1.21		1.54	1.12	3.64	

Source: OECD, PISA 2003 database.

se : standard error