



## Information and Communications Technologies (ICTs) in Schools

# Hungary: key findings

Almost all Hungarian schools now use computers for teaching and have internet access. 77% use the internet via a broadband connection. With this figure Hungary ranks at number 11 of the 27 countries participating in the survey. There is some variation between school types: while 74% of primary schools have a broadband internet connection, the penetration is highest among upper secondary schools, with 86% and vocational schools (88%).

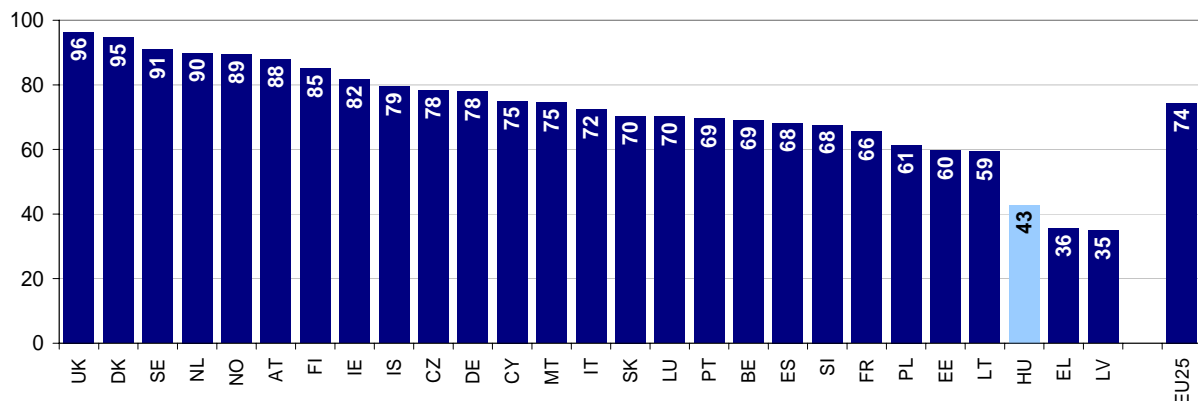
Also, only a very low 43% of Hungarian classroom teachers had used computers in class in the 12 months prior to the survey, with some substantial variation across school types but hardly any between urban and rural areas. While almost two thirds of the vocational school teachers have used ICT in class, the figure is at around one third in primary schools. The motivation to use ICT in class seems to be very low among Hungarian teachers. The situation is poorer only in Latvia and Greece.

When asked for the most important barrier, 49% state a lack of computers in their schools as the key barrier. Other factors receive a much lower mention. Lack of computers is mostly stated by teachers in primary schools (51%).

“Lack of skills”, “no or unclear benefits in using ICT” and “lack of interest” do not seem to constitute major barriers since these are only mentioned rarely as a constraint to wider ICT use by Hungarian teachers.

A very high 81% wish there were better support and maintenance actions taken. In only four other European countries does ICT maintenance and support for teachers seem to be worse. Over 90% of Hungarian teachers see significant learning benefits for pupils using computers in class and say that pupils are more motivated and attentive when computers and the internet are used in class. Two thirds of the teachers express the opinion that using ICT in class also results in significant learning benefits for pupils.

### Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: LearnInd CTS 2006; Base: All teachers; Question: Q7. See questionnaire for exact wording

## ICT equipment in Hungarian schools 2006

				Educational Level (HU)				Type of locality (HU)			Internet Access (HU)	
	Total HU	Total EU25	Total NMS10	Primary	Lower secondary	Upper secondary	Vocational	Densely populated	Intermediate	Thinly populated	Narrow-band	Broadband
Computers per 100 pupils <sup>a</sup>	9.6	11.3	7.1	6.8	7.8	11.6	16.4	10.4	9.3	8.9	9.3	9.7
... of which internet connected	8.6	9.9	6.4	5.9	7.1	11.0	14.8	9.4	8.2	7.9	8.1	8.8
<b>Percentage of schools having...</b>												
Computers for teaching <sup>b</sup>	97.3	98.7	96.7	96.7	99.9	99.6	99.0	98.4	100.0	95.8	100.0	100.0
Internet access <sup>c</sup>	96.1	96.2	94.7	95.0	98.8	99.2	99.0	96.0	100.0	94.7	100.0	100.0
Broadband internet access <sup>d</sup>	77.4	66.9	43.4	74.3	78.6	86.3	87.7	81.4	83.0	73.3	0.0	100.0
A website <sup>e</sup>	55.6	63.0	66.7	44.4	56.5	89.5	93.2	80.2	65.0	40.0	48.3	60.2
An e-mail address for the majority of teachers <sup>f</sup>	42.8	65.2	48.1	34.9	43.3	64.7	72.2	51.8	41.4	38.9	49.5	43.4
An e-mail address for the majority of pupils <sup>g</sup>	26.3	23.5	24.4	20.5	26.2	42.7	47.2	34.0	40.1	17.5	31.7	26.3
A LAN <sup>h</sup>	55.6	55.2	60.4	46.4	57.0	81.5	87.0	64.1	64.0	48.4	47.5	60.5
An intranet <sup>i</sup>	23.3	40.8	26.9	18.2	23.0	38.6	37.1	33.7	28.7	16.2	18.2	25.7
An external support or maintenance contract <sup>j</sup>	40.2	47.1	44.3	40.4	41.6	40.4	39.9	42.3	35.9	40.7	34.8	43.6
<b>Percentage of schools using computers for education in...</b>												
Computer labs <sup>k</sup>	95.9	80.5	94.6	95.1	97.8	99.1	97.3	99.1	95.6	94.3	95.8	96.5
Classrooms <sup>l</sup>	18.5	61.4	29.5	19.3	17.6	18.5	17.5	24.2	15.8	16.6	19.6	17.8
School library <sup>m</sup>	37.3	33.4	36.8	32.1	38.5	55.6	45.5	45.1	44.7	30.6	30.4	39.6
Other locations accessible for pupils <sup>n</sup>	14.3	27.0	20.2	10.0	13.4	25.4	28.4	18.0	14.5	12.4	10.8	15.4

*Source: LearnInd HTS 2006; Base: a: all pupils; b-j: all schools, k-n: schools using computers for educational purposes for pupils (cf. index b); Question: a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording.*

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## Information and Communications Technologies (ICTs) in Schools

# Greece: Key findings

Basically all Greek schools are equipped with computers and the internet and their use is steadily improving. However, the level of equipment leaves substantial room for improvement. Only 13% use the internet via a broadband connection. With this figure Greece ranks at the very bottom of the 27 countries participating in the survey.

Only 36% of Greek classroom teachers had used computers in class in the 12 months prior to the survey, with some variation across school types and between urban and rural areas. With this very low figure, Greece finds itself at the tail end in Europe.

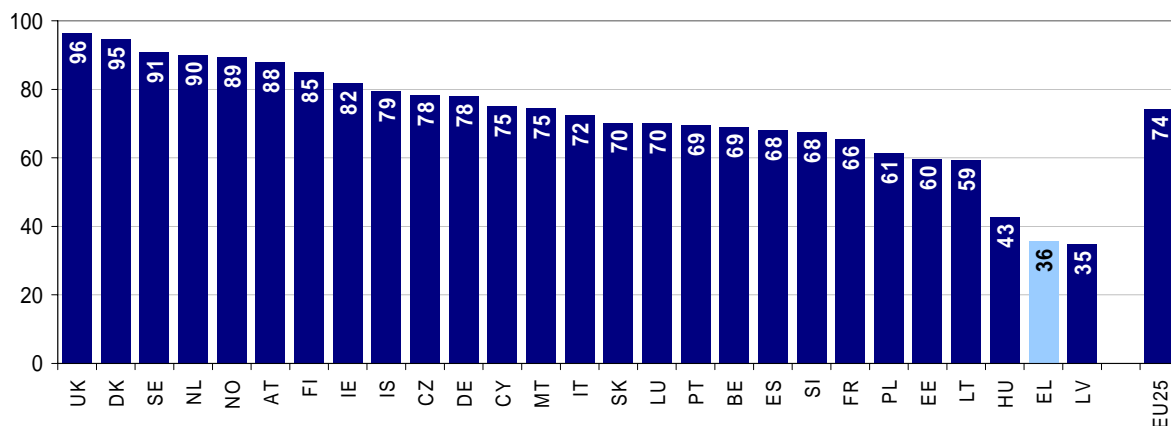
The survey results show that once Greek teachers have started to use ICT in class they do not seem to differ from other European teachers in their ICT usage behaviour in schools

However, a very high 64% of teachers in Greece still do not use computers in class. When asked for the most important barrier, three issues gain the highest ratings among this group of teachers: 50% state a lack of computers in their schools as an important barrier, 32% express the opinion that teachers lack the necessary skills to utilise computers in their teaching and 22% argue that their subject is not suitable for being taught via computers.

This results in a situation where the statement “lack of equipment in school” is expressed by a very high 32% of all Greek teachers.

However, the vast majority of teachers are convinced of the benefits of ICT use in class. Only 2% are not convinced of any benefits of using computers in class. Only in a few other countries are teachers even more in favour of ICT use in schools. ICT equipment in Greek schools 2006.

### Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: LearnInd CTS 2006; Base: All teachers; Question: Q7. See questionnaire for exact wording

## ICT equipment in Greek schools 2006

	Educational Level (EL)					Type of locality (EL)			Internet Access (EL)		
	Total EL	Total EU25	Primary	Lower secondary	Upper secondary	Vocational	Densely populated	Intermediate	Thinly populated	Narrow band	Broadband
Computers per 100 pupils <sup>a</sup>	6.5	11.3	4.8	6.6	9.0	19.9*	5.9	6.7	8.3	5.8	9.5
... of which internet connected	5.9	9.9	4.2	6.1	8.3	19.1	5.3	6.4	7.3	5.2	9.1
<b>Percentage of schools having...</b>											
Computers for teaching <sup>b</sup>	100.0	98.7	100.0	100.0	100.0	100.0*	100.0	100.0	100.0	100.0	100.0
Internet access <sup>c</sup>	96.6	96.2	95.0	99.1	99.1	100.0*	98.6	100.0	92.9	100.0	100.0
Broadband internet access <sup>d</sup>	13.2	66.9	7.8	19.8	26.6	66.3*	15.9	22.2	6.7	0.0	100.0
A website <sup>e</sup>	36.8	63.0	28.1	51.0	53.6	63.8*	42.7	48.1	25.5	36.2	50.2
An e-mail address for the majority of teachers <sup>f</sup>	44.2	65.2	46.5	37.0	46.3	35.5*	37.7	58.4	47.6	45.5	47.4
An e-mail address for the majority of pupils <sup>g</sup>	6.1	23.5	5.0	9.2	11.0	23.1*	7.1	5.6	5.1	5.5	11.9
A LAN <sup>h</sup>	50.3	55.2	36.8	69.3	72.0	88.6*	59.3	50.8	38.6	48.3	75.8
An intranet <sup>i</sup>	10.4	40.8	5.8	21.3	15.2	30.1*	14.5	7.1	6.3	8.9	22.6
An external support or maintenance contract <sup>j</sup>	43.9	47.1	39.9	58.7	46.4	43.5*	49.6	40.4	37.8	44.0	54.4
<b>Percentage of schools using computers for education in...</b>											
Computer labs <sup>k</sup>	84.0	80.5	74.1	99.0	100.0	100.0*	93.5	98.0	67.2	83.9	94.6
Classrooms <sup>l</sup>	17.8	61.4	24.5	5.9	8.1	0.0*	11.1	12.2	28.2	17.9	9.6
School library <sup>m</sup>	7.1	33.4	4.5	8.9	16.7	13.5*	8.1	4.6	6.7	6.4	13.8
Other locations accessible for pupils <sup>n</sup>	8.2	27.0	9.2	2.9	10.8	6.8*	6.1	5.1	12.0	7.5	13.1

**Source:** LearnInd HTS 2006; **Base:** a: all pupils; b-j: all schools; k-n: schools using computers for educational purposes for pupils (cf. index b); **Question:** a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording.

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## Information and Communications Technologies (ICTs) in Schools

# Belgium: Key findings

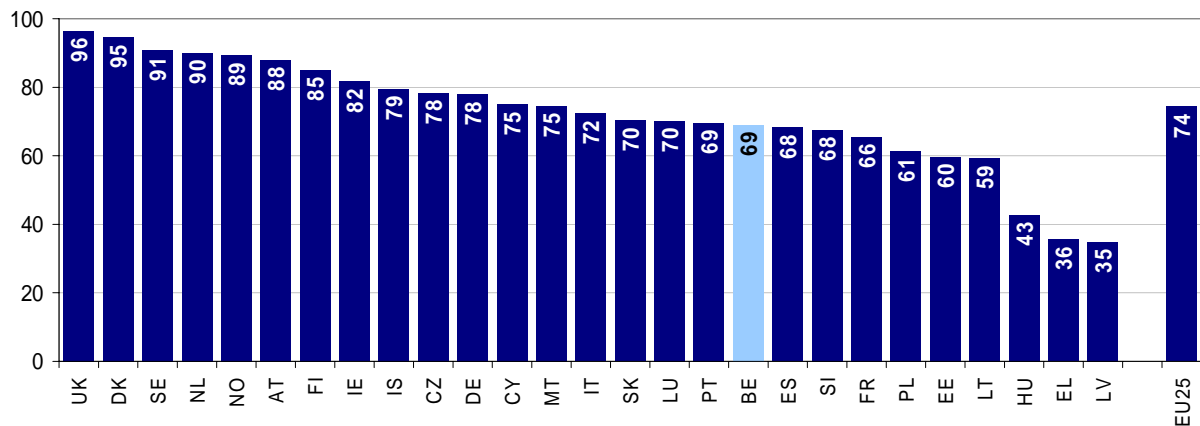
(Almost) all Belgian schools are equipped with computers and internet connection. 74% use the internet via a broadband connection. With this figure Belgium ranks at number 15 of the 27 countries participating in the survey. There is a large variation between school types: while 63% of primary schools have a broadband internet connection, the penetration is highest among upper secondary schools, with 88%.

63% of Belgian classroom teachers use computers in class, with some variation across school types and between urban (71%) and rural areas (51%). Surprisingly little variation can be found in this respect according to the subjects of teaching.

43% of the teachers using computers use them in less than 10% of all lessons. Almost 20% state that they use computers in more than half of their lessons. Teachers in vocational schools use computers in class much more frequently than their colleagues in general education in Belgium and well above the EU25 average.

Almost a third of teachers in Belgium do not use computers in class 37% state a lack of computers in their schools as an important barrier. Unlike many other countries “lack of teacher ICT skills” and “no or unclear benefits in using ICT” are not seen as key barriers by Belgian teachers.

### Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: LearnInd CTS 2006; Base: All teachers; Question: Q7. See questionnaire for exact wording

## ICT equipment in Belgian schools 2006

	Educational Level (BE)						Type of locality (BE)		Internet Access (BE)	
	Total BE	Total EU25	Primary	Lower secondary	Upper secondary	Vocational	Densely populated	Intermediate and thinly populated <sup>1</sup>	Narrow band	Broadband
Computers per 100 pupils <sup>a</sup>	9.7	11.3	7.7	13.3	11.9	13.6	9.3	10.5	7.4	10.6
... of which internet connected	7.7	9.9	5.2	12.0	10.6	12.0	7.6	8.0	5.5	8.6
<b>Percentage of schools having...</b>										
Computers for teaching <sup>b</sup>	97.7	98.7	97.5	99.1	98.6	98.0	97.5	98.0	100.0	100.0
Internet access <sup>c</sup>	96.9	96.2	96.4	99.1	98.6	98.0	97.5	96.2	100.0	100.0
Broadband internet access <sup>d</sup>	73.8	66.9	69.3	83.7	87.5	86.8	79.6	67.2	0.0	100.0
A website <sup>e</sup>	69.2	63.0	61.0	92.0	93.1	94.4	76.0	61.4	65.1	73.3
An e-mail address for the majority of teachers <sup>f</sup>	57.8	65.2	57.5	61.1	54.2	54.6	57.5	58.2	60.7	59.3
An e-mail address for the majority of pupils <sup>g</sup>	19.6	23.5	15.7	33.2	28.1	27.9	18.4	20.9	15.5	21.7
A LAN <sup>h</sup>	57.5	55.2	50.1	81.2	79.2	83.0	61.5	52.9	48.0	62.8
An intranet <sup>i</sup>	28.1	40.8	20.5	50.6	51.5	54.0	31.2	24.6	20.1	31.8
An external support or maintenance contract <sup>j</sup>	28.9	47.1	24.6	39.0	42.7	38.0	30.7	26.8	20.5	32.7
<b>Percentage of schools using computers for education in...</b>										
Computer labs <sup>k</sup>	74.7	80.5	65.7	96.7	98.6	98.0	78.4	70.5	64.8	78.7
Classrooms <sup>l</sup>	78.8	61.4	83.5	70.9	64.8	69.9	75.9	82.1	79.0	78.5
School library <sup>m</sup>	22.5	33.4	16.3	40.9	46.0	42.7	22.4	22.7	14.9	25.2
Other locations accessible for pupils <sup>n</sup>	21.1	27.0	16.2	33.2	38.3	37.7	20.7	21.6	16.7	22.8

*Source: LearnInd HTS 2006; Base: a: all pupils; b-j: all schools, k-n: schools using computers for educational purposes for pupils (cf. index b); Question: a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording.*

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<sup>1</sup> For Belgium, no separate breakdowns of the HTS data according to Intermediate regions and thinly populated regions are reported due to insufficient numbers of observations.



## Information and Communications Technologies (ICTs) in Schools

# France: Key findings

Almost all French schools now use computers for teaching and 90% have internet access. 75% use the internet via a broadband connection. With this figure France ranks at number 14 of the 27 countries participating in the survey. Schools have moved over to broadband. 72% (EU25: 45%) of the schools in France are connected to the internet via a DSL connection in 2006.

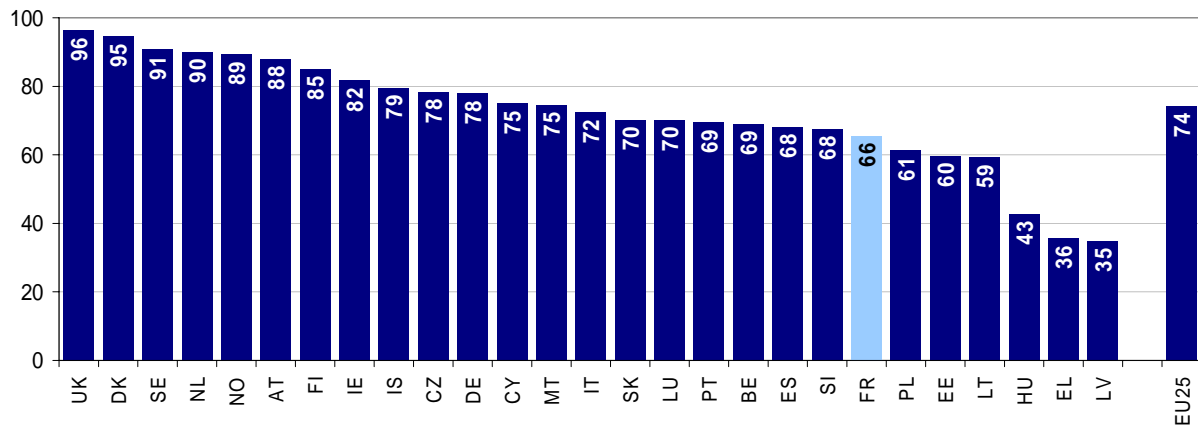
Only 66% of French classroom teachers have used computers in class in the 12 months prior to the survey, with some variation across school types but hardly any variation between urban and rural areas. With this figure France belongs to the bottom half of European countries.

Computers and the internet are not used very frequently and intensively in French schools. A large majority (64%) of teachers using computers use them in less than 10% of all lessons. Only 3% state that they use computers in more than half of their lessons, while 12% use ICT in more than 25% of their lessons.

The higher the school level, the more use of computers – especially in terms of frequency and intensity – is made by teachers and pupils. Only 8% of the teachers using computers in class in primary school and 28% of the teachers in lower secondary but 40% in upper secondary and 44% in vocational schools use these in more than 25% of their lessons.

A substantial 34% of teachers in France still do not use computers in class. When asked for the most important barrier, four issues gain the highest ratings among this group of teachers: a very large number, 63% state a lack of computers in their schools as an important barrier; 33% express the opinion that teachers lack the necessary skills to utilise computers in their teaching; 26% lack adequate material; and 22% are not convinced of any benefits of using computers in class. In total, “lack of equipment in school” is expressed by a substantial 21%.

### Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: LearnInd CTS 2006; Base: All teachers; Question: Q7. See questionnaire for exact wording

## ICT equipment in French schools 2006

			Educational Level (FR)				Type of locality (FR)			Internet Access (FR)	
	Total FR	Total EU25	Primary	Lower secondary	Upper secondary	Vocational	Densely populated	Intermediate	Thinly populated	Narrow-band	Broadband
Computers per 100 pupils <sup>a</sup>	12.5	11.3	8.1	11.4	19.7	25.1	14.0	9.7	12.3	15.8	12.4
... of which internet connected	8.9	9.9	4.8	10.0	14.0	18.2	10.0	7.6	8.2	8.7	9.5
<b>Percentage of schools having...</b>											
Computers for teaching <sup>b</sup>	99.3	98.7	99.2	100.0	100.0	98.8	98.9	98.0	100.0	100.0	100.0
Internet access <sup>c</sup>	90.3	96.2	88.4	99.4	100.0	97.5	84.9	91.4	92.8	100.0	100.0
Broadband internet access <sup>d</sup>	74.8	66.9	70.3	96.2	87.6	90.2	81.0	82.4	68.5	0.0	100.0
A website <sup>e</sup>	29.0	63.0	20.6	64.8	86.5	82.6	37.8	25.5	25.6	20.7	34.5
An e-mail address for the majority of teachers <sup>f</sup>	67.8	65.2	65.4	76.6	67.4	77.4	54.5	74.0	72.7	74.9	75.1
An e-mail address for the majority of pupils <sup>g</sup>	19.0	23.5	15.4	29.6	26.0	41.3	18.7	21.7	18.0	18.5	21.5
A LAN <sup>h</sup>	21.7	55.2	16.9	42.5	64.2	56.7	28.6	19.4	18.9	14.8	26.0
An intranet <sup>i</sup>	24.9	40.8	16.7	59.7	60.5	70.2	37.6	22.8	18.7	13.3	30.5
An external support or maintenance contract <sup>j</sup>	30.1	47.1	27.7	43.4	36.7	53.1	41.2	29.6	24.2	12.7	37.6
<b>Percentage of schools using computers for education in...</b>											
Computer labs <sup>k</sup>	66.2	80.5	59.5	95.6	100.0	96.3	80.4	69.5	57.3	34.1	74.4
Classrooms <sup>l</sup>	76.7	61.4	76.9	74.8	69.3	72.9	74.3	76.5	78.0	91.6	73.5
School library <sup>m</sup>	36.5	33.4	23.9	86.9	93.9	89.6	48.8	34.4	30.6	16.1	43.6
Other locations accessible for pupils <sup>n</sup>	11.7	27.0	7.4	27.9	41.9	45.5	14.3	11.5	10.2	9.8	12.5

**Source:** LearnInd HTS 2006; **Base:** a: all pupils; b-j: all schools, k-n: schools using computers for educational purposes for pupils (cf. index b); **Question:** a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording

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## Information and Communications Technologies (ICTs) in Schools

# Finland: Key findings

All Finnish schools use computers for teaching and have internet access. A very high 90% use the internet via a broadband connection. With this figure Finland ranks at number 6 of the 27 countries participating in the survey.

87% of primary schools have a broadband internet connection. The penetration is highest among upper secondary schools, with 99%.

77% of the Finnish schools using computers for teaching use them in classrooms with the highest percentage of 80% being achieved in lower level schools.

In a very high 85% of schools, ICT is fully integrated into the teaching of most subjects.

A high 85% of Finnish classroom teachers have used computers in class in the 12 months prior to the survey with highest usage figures in primary schools (88%).

Finnish teachers do not seem to be the most frequent and intensive ICT users in class in Europe. A substantial majority (69%) of these teachers using computers use them in less than 10% of all lessons. Only 7% state that they use computers in more than half of their lessons. This puts Finland only at rank 24 of the most intensive ICT users in class among the European countries.

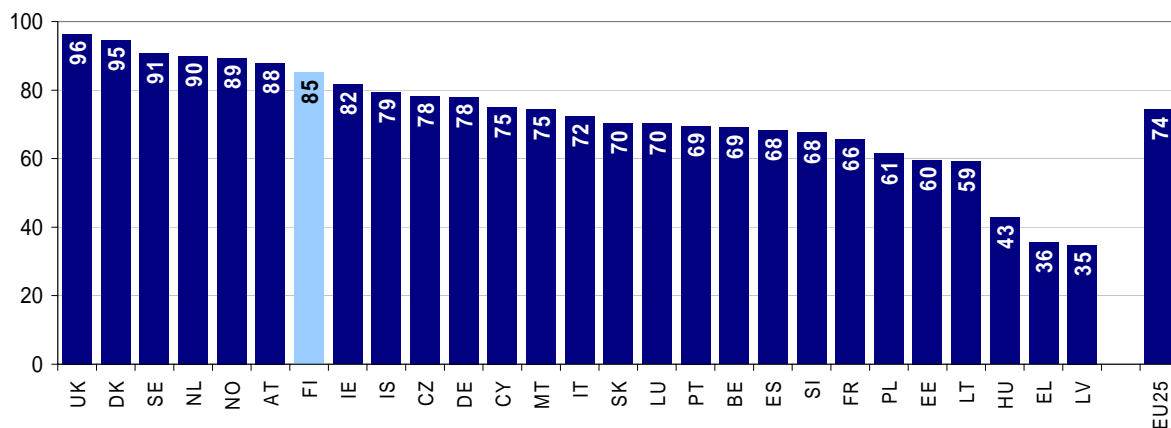
Teachers in vocational schools use computers in class much more frequently than their colleagues in general education.

Younger and older teachers (indicator used here: years of teaching experience) use ICT in class to a rather similar extent.

With 85% of teachers using ICT in class and also the more experienced, i.e. older teachers using ICT intensively, Finland ranks among the top-performers in Europe. Also, only 15% of teachers do not use computers in class in Finland.

Surprisingly, a substantial 24% also express the opinion that teachers lack the necessary skills to utilise computers in their teaching, the fifth highest figure in Europe.

### Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: LearnInd CTS 2006; Base: All teachers; Question: Q7. See questionnaire for exact wording

## ICT equipment in Finnish schools 2006

	Educational Level (FI)						Type of locality (FI)		Internet Access (FI)	
	Total FI	Total EU25	Primary	Lower secondary	Upper secondary	Vocational	Densely populated and Intermediate	Thinly populated	Narrow band	Broadband
Computers per 100 pupils <sup>a</sup>	16.8	11.3	12.2	12.3	17.5*	22.2*	16.9	16.7	16.8*	16.8
... of which internet connected	16.2	9.9	11.3	11.9	17.2*	21.7*	16.8	15.5	14.2*	16.5
<b>Percentage of schools having...</b>										
Computers for teaching <sup>b</sup>	100.0	98.7	100.0	100.0	100.0*	100.0*	100.0	100.0	100.0*	100.0
Internet access <sup>c</sup>	99.7	96.2	100.0	100.0	100.0*	97.0*	100.0	99.6	100.0*	100.0
Broadband internet access <sup>d</sup>	89.9	66.9	87.0	94.0	98.5*	94.8*	95.7	87.9	0.0*	100.0
A website <sup>e</sup>	86.1	63.0	81.6	95.9	100.0*	97.0*	97.2	82.3	62.3*	89.0
An e-mail address for the majority of teachers <sup>f</sup>	95.0	65.2	93.5	99.1	99.9*	97.0*	95.6	94.8	89.2*	96.0
An e-mail address for the majority of pupils <sup>g</sup>	33.2	23.5	26.5	31.1	47.1*	75.5*	60.8	23.7	26.7*	34.0
A LAN <sup>h</sup>	50.4	55.2	44.2	55.7	54.6*	79.7*	50.8	50.3	37.2*	52.0
An intranet <sup>i</sup>	35.7	40.8	29.5	47.2	33.8*	68.5*	51.8	30.2	19.7*	37.6
An external support or maintenance contract <sup>j</sup>	35.5	47.1	33.4	41.9	36.1*	47.8*	44.1	32.6	37.4*	35.5
<b>Percentage of schools using computers for education in...</b>										
Computer labs <sup>k</sup>	73.7	80.5	64.3	95.1	96.7*	90.9*	91.5	67.7	43.8*	76.9
Classrooms <sup>l</sup>	76.9	61.4	79.8	80.4	76.4*	58.2*	78.0	76.5	77.0*	76.8
School library <sup>m</sup>	14.3	33.4	8.6	17.4	35.3*	41.4*	24.4	10.8	8.8*	14.9
Other locations accessible for pupils <sup>n</sup>	16.3	27.0	9.4	12.4	44.7*	45.8*	18.6	15.5	10.4*	17.0

**Source:** LearnInd HTS 2006; **Base:** a: all pupils; b-j: all schools, k-n: schools using computers for educational purposes for pupils (cf. index b); **Question:** a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording. **Notes:** "xx.x\*": based on at least 10 and less than 50 cases.

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## Estonia: Key findings

(Almost) all Estonian schools are equipped with computers and internet connection. A very high 95% use the internet via a broadband connection. With this figure Estonia ranks at the top in Europe together with Denmark and Malta. There is hardly any variation between school types since it is close to the 100% in all school types, with the exception of vocational schools remaining at 87%.

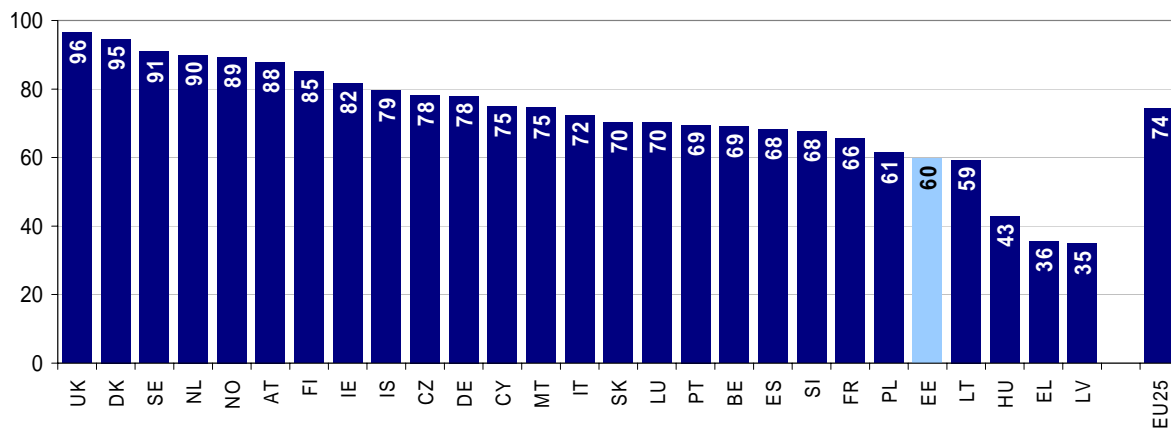
A rather low 60% of Estonian classroom teachers (the EU25 average is 74%) had used computers in class in the 12 months prior to the survey, with some variation across school types. Teachers in vocational schools use computers in class much more frequently than their colleagues in general education with a very high (almost 70%) of teachers using computers in more than a quarter of their lessons, of which 58% use ICT in more than 50% of the lessons.

While a third of the teachers with up to 5 years teaching experience use ICT in half and more of their lessons, this figure is down to just 6% among those with more than 20 years of teaching experience.

A very high 40% of teachers do not use computers in class in Estonia. Asked for the most important barrier, 53% state a lack of computers in their schools as an important barrier.

Interestingly, not being convinced of any benefits of using computers in class and the opinion that teachers lack the necessary skills to utilise computers in their teaching only receive few responses. This shows that the overall attitude towards the use of ICT in class is positive and that the majority of teachers are sufficiently competent in its use as part of the teaching process.

### Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: LearnInd CTS 2006; Base: All teachers; Question: Q7. See questionnaire for exact wording

## ICT equipment in Estonian schools 2006

	Educational Level (EE)			Type of locality (EE)				Internet Access (EE)			
	Total EE	Total EU25	Total NMS10	Primary	Lower secondary	Upper secondary	Vocational	Densely populated and intermediate	Thinly populated	Narrowband	Broadband
Computers per 100 pupils <sup>a</sup>	7.3	11.3	7.1	6.1	6.0	6.4	14.1*	6.7	7.8	8.6*	7.3
... of which internet connected	7.2	9.9	6.4	6.1	5.9	6.4	13.8*	6.7	7.7	8.5*	7.2
<b>Percentage of schools having...</b>											
Computers for teaching <sup>b</sup>	98.6	98.7	96.7	99.4	99.3	99.0	89.6*	95.8	99.7	100.0*	100.0
Internet access <sup>c</sup>	98.1	96.2	94.7	99.1	98.9	99.0	87.0*	94.0	99.7	100.0*	100.0
Broadband internet access <sup>d</sup>	95.0	66.9	43.4	95.6	95.7	96.7	87.0*	94.0	95.5	0.0*	100.0
A website <sup>e</sup>	87.1	63.0	66.7	87.3	93.9	96.9	80.7*	90.4	85.8	82.3*	89.0
An e-mail address for the majority of teachers <sup>f</sup>	69.8	65.2	48.1	68.8	72.8	80.5	72.6*	72.7	68.6	75.3*	71.0
An e-mail address for the majority of pupils <sup>g</sup>	17.5	23.5	24.4	15.2	16.8	23.1	42.2*	26.2	14.0	16.0*	17.9
A LAN <sup>h</sup>	72.0	55.2	60.4	73.9	75.6	66.2	61.5*	57.8	77.7	73.3*	73.5
An intranet <sup>i</sup>	17.1	40.8	26.9	13.2	15.3	28.9	44.1*	31.3	11.5	7.8*	17.7
An external support or maintenance contract <sup>j</sup>	32.3	47.1	44.3	34.8	29.1	20.2	17.2*	28.7	33.6	33.3*	32.9
<b>Percentage of schools using computers for education in...</b>											
Computer labs <sup>k</sup>	91.4	80.5	94.6	91.3	96.8	98.5	93.0*	95.4	89.9	82.3*	91.9
Classrooms <sup>l</sup>	27.9	61.4	29.5	27.6	25.3	28.2	40.5*	31.2	26.7	41.5*	27.4
School library <sup>m</sup>	34.4	33.4	36.8	31.7	35.5	57.3	65.1*	51.7	27.9	41.6*	34.4
Other locations accessible for pupils <sup>n</sup>	24.7	27.0	20.2	22.3	22.6	29.6	51.7*	27.2	23.8	41.9*	24.3

**Source:** LearnInd HTS 2006; **Base:** a: all pupils; b-j: all schools, k-n: schools using computers for educational purposes for pupils (cf. index b); **Question:** a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording. **Notes:** "xx.x\*": based on at least 10 and less than 50 cases.

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## Information and Communications Technologies (ICTs) in Schools

# Cyprus: Key findings

Almost all schools in Cyprus now use computers for teaching and have internet access. However, only 31% use the internet via a broadband connection. With this figure Cyprus ranks at number 25 of the 27 countries participating in the survey, leaving behind only Poland and Greece. There is a large variation between school types: while only 14% of primary schools have a broadband internet connection, the penetration is highest among upper secondary schools, with 73%.

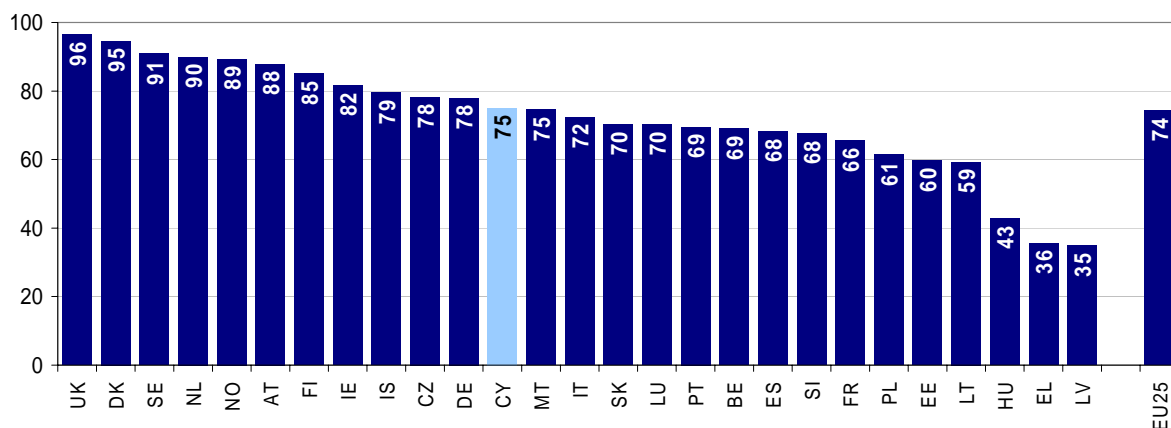
75% of the classroom teachers in Cyprus have used computers in class in the 12 months prior to the survey, with little variation across school types and between urban and rural areas. Most frequent and intensive use is made by teachers in primary schools (87%).

Not surprisingly, the older the teachers (indicator used here: years of teaching experience), the lesser they make use of computers and the internet in schools. 25% of teachers in Cyprus still do not use computers in class. When asked for the most important barrier, by far the most important issue is “lack of computers” in their schools stated by 57%. Only in Lithuania, Latvia, France and Slovenia higher figures are achieved.

At 36%, the percentage of teachers with insufficient access to ICT and the internet in Cyprus is significantly above the European average of 20%. A very high 88% also wish there were better support and maintenance actions taken.

Teachers in Cyprus are very much in favour of ICT use in class and clearly see the benefits. Less than 1% state that there are “no or unclear benefits in using ICT”.

### Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: LearnInd CTS 2006; Base: All teachers; Question: Q7. See questionnaire for exact wording

## ICT equipment in Cypriot schools 2006

				Educational Level (CY)				Type of locality (CY)		Internet Access (CY)	
	Total CY	Total EU25	Total NMS10	Primary	Lower secondary	Upper secondary	Vocational	Densely populated	Intermediate and thinly populated	Narrow band	Broadband
Computers per 100 pupils <sup>a</sup>	12.4	11.3	7.1	7.3	12.1*	18.6*	19.8**	12.9	11.3	9.5	15.1
... of which internet connected	8.9	9.9	6.4	6.1	9.9*	12.1*	9.6**	9.0	8.9	7.4	10.7
<b>Percentage of schools having...</b>											
Computers for teaching <sup>b</sup>	98.9	98.7	96.7	98.5	100.0*	100.0*	100.0**	97.9	100.0	100.0	100.0
Internet access <sup>c</sup>	95.0	96.2	94.7	93.9	94.4*	100.0*	100.0**	90.3	100.0	100.0	100.0
Broadband internet access <sup>d</sup>	31.0	66.9	43.4	14.3	64.4*	73.4*	84.7**	40.7	20.6	0.0	100.0
A website <sup>e</sup>	50.9	63.0	66.7	34.0	87.5*	93.6*	100.0**	61.8	39.3	41.3	79.1
An e-mail address for the majority of teachers <sup>f</sup>	49.1	65.2	48.1	45.1	57.5*	61.0*	57.6**	38.3	60.5	55.5	43.6
An e-mail address for the majority of pupils <sup>g</sup>	6.9	23.5	24.4	2.5	14.7*	18.5*	15.3**	3.8	10.2	7.2	7.5
A LAN <sup>h</sup>	22.8	55.2	60.4	16.8	42.6*	33.4*	42.4**	22.2	23.5	17.5	37.6
An intranet <sup>i</sup>	17.3	40.8	26.9	18.7	21.5*	8.3*	42.4**	15.1	19.7	20.2	14.2
An external support or maintenance contract <sup>j</sup>	33.3	47.1	44.3	30.1	47.0*	36.9*	42.4**	27.7	39.4	36.0	33.2
<b>Percentage of schools using computers for education in...</b>											
Computer labs <sup>k</sup>	73.4	80.5	94.6	62.0	100.0*	100.0*	100.0**	78.7	67.8	65.5	93.4
Classrooms <sup>l</sup>	89.5	61.4	29.5	95.3	74.1*	77.4*	84.7**	82.1	97.2	93.4	80.1
School library <sup>m</sup>	41.2	33.4	36.8	22.7	75.8*	90.3*	100.0**	42.5	39.8	30.5	68.5
Other locations accessible for pupils <sup>n</sup>	38.3	27.0	20.2	27.1	56.1*	72.8*	15.3**	38.5	38.1	31.8	56.4

**Source:** LearnInd HTS 2006; **Base:** a: all pupils; b-j: all schools, k-n: schools using computers for educational purposes for pupils (cf. index b); **Question:** a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording. **Notes:** "xx.x\*": based on at least 10 and less than 50 cases; "xx.x\*\*": based on less than 10 cases.

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## Information and Communications Technologies (ICTs) in Schools

# United Kingdom: Key findings

All British schools use computers for teaching and have internet access. 75% use the internet via a broadband connection. With this figure the United Kingdom ranks at number 13 of the 27 countries participating in the survey. There is very little variation between school types.

However, there is some variation with regard to broadband access between urban and rural areas: 81% of schools in densely populated areas have broadband access compared to 69% of schools in thinly populated areas.

A very high 95%, i.e. basically all British schools using computers for teaching use them in classrooms, with the highest percentage being achieved in primary schools (80%). The United Kingdom takes the first position in Europe on this indicator.

Computers in the school library are also popular in Britain. Almost 50% of the schools offer them as additional internet access points and for learning purposes with upper secondary and vocational schools exceeding the 80%.

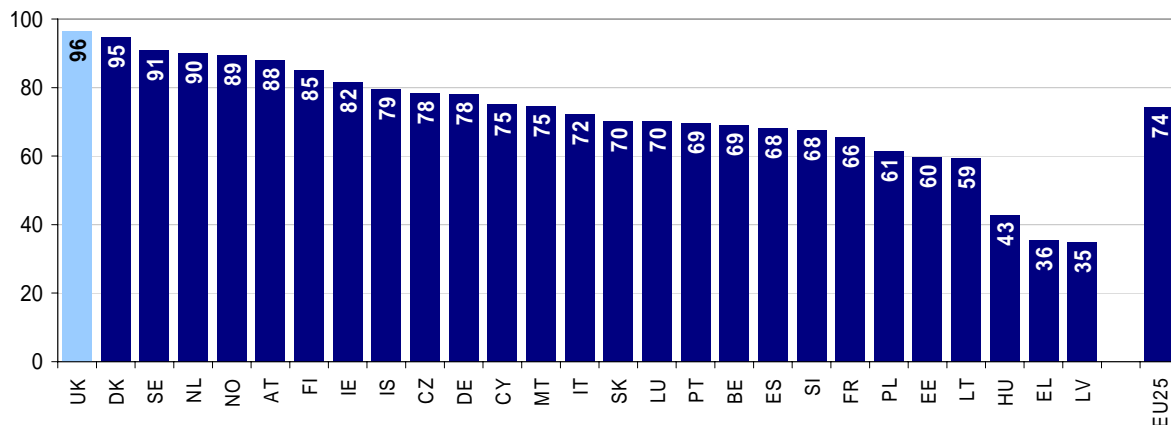
A very high 96% of British classroom teachers have used computers in class in the 12 months prior to the survey, with little variation across school types and between urban and rural areas. This is the top score in Europe.

British teachers are very frequent and intensive ICT users. A majority (65%) of teachers using computers use them in more than a quarter of their lessons, of which there are 21% using it in more than half of their lessons. Again, this is the top score in Europe.

Teachers in vocational schools use computers in class more frequently than their colleagues in general education, with 66% using computers in more than a quarter of their lessons. However their colleagues in general education are not much behind.

The older the teachers (indicator used here: years of teaching experience), the lesser use they make of computers and the internet in schools. However, ICT usage levels by teachers in class are generally very high in schools in the United Kingdom irrespective of length of teaching experience.

### Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: LearnInd CTS 2006; Base: All teachers; Question: Q7. See questionnaire for exact wording

## ICT equipment in British schools 2006

	Educational Level (UK)						Type of locality (UK)			Internet Access (UK)	
	Total UK	Total EU25	Primary	Lower secondary	Upper secondary	Vocational	Densely populated	Intermediate	Thinly populated	Narrow band	Broadband
Computers per 100 pupils <sup>a</sup>	19.8	11.3	15.9	25.0	26.4	28.5*	19.1	18.3	20.8	18.3	20.3
... of which internet connected	18.5	9.9	14.6	23.4	24.9	28.4	17.6	17.3	19.3	16.5	19.1
<b>Percentage of schools having...</b>											
Computers for teaching <sup>b</sup>	99.8	98.7	100.0	99.5	98.7	96.0*	100.0	99.5	100.0	100.0	100.0
Internet access <sup>c</sup>	99.8	96.2	100.0	99.5	98.7	96.0*	100.0	99.5	100.0	100.0	100.0
Broadband internet access <sup>d</sup>	75.1	66.9	74.1	80.4	81.0	70.9*	81.4	69.7	69.2	0.0	100.0
A website <sup>e</sup>	73.4	63.0	71.2	86.2	87.8	87.3*	77.5	72.7	67.6	68.7	75.0
An e-mail address for the majority of teachers <sup>f</sup>	85.3	65.2	84.6	90.5	87.9	79.7*	84.3	86.8	85.1	79.0	87.5
An e-mail address for the majority of pupils <sup>g</sup>	40.5	23.5	37.1	58.0	59.6	58.7*	43.2	42.0	35.1	31.3	43.6
A LAN <sup>h</sup>	65.3	55.2	63.2	75.0	76.0	83.6*	66.6	56.3	67.1	63.3	66.1
An intranet <sup>i</sup>	63.7	40.8	61.5	72.0	74.7	71.5*	65.9	62.4	60.9	65.0	63.4
An external support or maintenance contract <sup>j</sup>	82.3	47.1	84.6	67.3	68.7	62.8*	83.3	89.9	78.3	81.6	82.7
<b>Percentage of schools using computers for education in...</b>											
Computer labs <sup>k</sup>	79.3	80.5	75.9	98.9	99.3	95.3*	86.1	88.0	65.8	75.6	80.6
Classrooms <sup>l</sup>	95.2	61.4	96.4	88.4	88.1	74.9*	94.0	96.8	97.2	91.5	96.5
School library <sup>m</sup>	49.4	33.4	42.9	77.9	87.6	81.6*	61.2	44.0	35.1	52.4	48.3
Other locations accessible for pupils <sup>n</sup>	31.5	27.0	29.0	47.1	46.5	49.9*	34.2	29.5	27.4	26.4	33.3

**Source:** LearnInd HTS 2006; **Base:** a: all pupils; b-j: all schools; k-n: schools using computers for educational purposes for pupils (cf. index b); **Question:** a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording. **Notes:** "xx.x\*": based on at least 10 and less than 50 cases.

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## Information and Communications Technologies (ICTs) in Schools

# Sweden: Key findings

All Swedish schools use computers for teaching and have internet access. Almost all of them use the internet via a broadband connection (89%). With this figure Sweden ranks at number 3 of the 27 countries participating in the survey. There is little variation between school types: while 86% of primary schools have a broadband internet connection, the penetration is highest among lower and upper secondary schools, with 95%. A very high 86% of the Swedish schools using computers for teaching use them in classrooms, with the highest percentage being achieved in primary schools (89%).

In a very high more than 90% the use of ICT has become an integral part of teaching most subjects with hardly any variation across school types. Only schools in the United Kingdom achieve a higher figure.

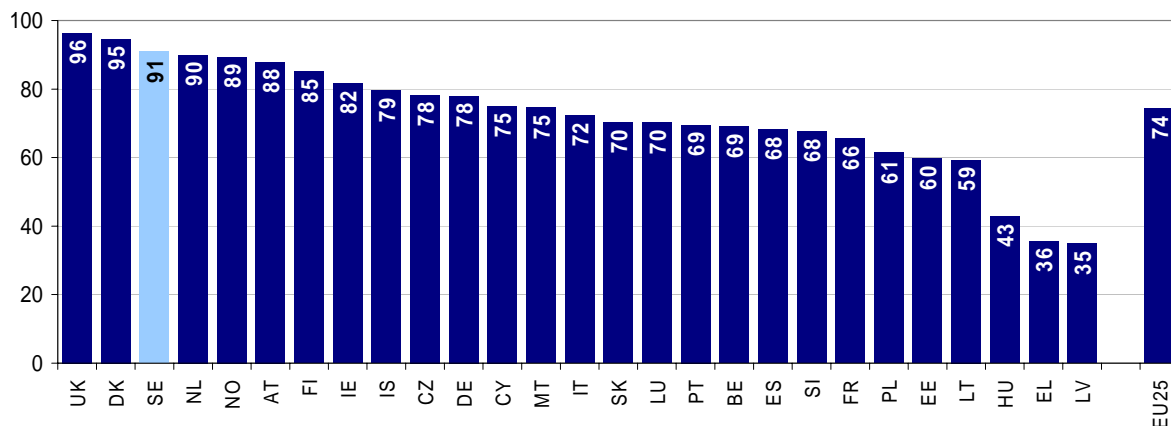
An extraordinarily high 91% of Swedish classroom teachers had used computers in class in the 12 months prior to the survey, with little variation across school types and between urban and rural areas. Only Denmark and the United Kingdom show even better performances.

Comparable to Finland, for instance, ICT use by teachers in class in Sweden is not the most frequent and intensive in Europe. A majority (54%) of teachers using computers use them in less than 10% of all lessons. Only 9% state that they use computers in more than half of their lessons.

Only 11% of teachers in Sweden do not use computers in class. When asked for the most important barrier, 43% state a lack of computers in their schools as the most important barrier. Though a large majority of Swedish teachers are satisfied with the technical access means at their schools

In terms of content a majority states problems with respect to finding adequate learning materials (62%) and argue that existing material are of poor quality (54%). In no other European country are such high figures reached. Further research is needed to identify the underlying reasons for this phenomenon.

### Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: LearnInd CTS 2006; Base: All teachers; Question: Q7. See questionnaire for exact wording

## ICT equipment in Swedish schools 2006

	Total SE	Total EU25	Educational Level (SE)				Type of locality (SE)			Internet Access (SE)	
			Primary	Lower secondary	Upper secondary	Vocational	Densely populated and intermediate	Thinly populated	Narrow band	Broadband	
Computers per 100 pupils <sup>a</sup>	17.4	11.3	14.6	13.2*	29.2	17.2	16.4	18.0	21.5*	17.1	
... of which internet connected	16.5	9.9	13.8	12.7*	27.5	17.0	15.7	17.0	20.6*	16.2	
<b>Percentage of schools having...</b>											
Computers for teaching <sup>b</sup>	99.9	98.7	100.0	100.0*	100.0	96.4	99.8	100.0	100.0*	100.0	
Internet access <sup>c</sup>	99.9	96.2	100.0	100.0*	100.0	96.4	99.8	100.0	100.0*	100.0	
Broadband internet access <sup>d</sup>	89.0	66.9	86.8	95.4*	94.9	88.2	95.5	86.2	0.0*	100.0	
A website <sup>e</sup>	83.8	63.0	80.2	96.3*	92.4	90.9	79.6	85.6	79.3*	84.4	
An e-mail address for the majority of teachers <sup>f</sup>	95.9	65.2	95.3	97.6*	97.9	85.9	95.4	96.1	91.9*	96.4	
An e-mail address for the majority of pupils <sup>g</sup>	69.6	23.5	65.5	71.7*	80.5	65.0	66.0	71.2	50.2*	72.1	
A LAN <sup>h</sup>	69.0	55.2	65.8	75.8*	85.7	70.8	80.9	63.9	65.4*	69.5	
An intranet <sup>i</sup>	68.8	40.8	68.9	62.8*	68.9	55.3	61.5	71.9	74.9*	68.1	
An external support or maintenance contract <sup>j</sup>	59.1	47.1	58.7	62.2*	58.7	58.7	66.6	55.8	60.8*	58.9	
<b>Percentage of schools using computers for education in...</b>											
Computer labs <sup>k</sup>	47.8	80.5	39.2	69.5*	67.0	79.4	61.4	42.0	22.3*	50.9	
Classrooms <sup>l</sup>	85.5	61.4	89.2	84.5*	76.3	73.3	80.2	87.8	77.7*	86.5	
School library <sup>m</sup>	23.7	33.4	21.1	20.2*	50.8	39.7	17.3	26.4	22.1*	23.9	
Other locations accessible for pupils <sup>n</sup>	46.6	27.0	47.7	35.5*	60.0	52.5	30.4	53.1	44.3*	46.9	

**Source:** LearnInd HTS 2006; **Base:** a: all pupils; b-j: all schools; k-n: schools using computers for educational purposes for pupils (cf. index b); **Question:** a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording. **Notes:** "xx.x\*": based on at least 10 and less than 50 cases.

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## Information and Communications Technologies (ICTs) in Schools

# Spain: Key findings

Almost all Spanish schools now use computers for teaching and have internet access. 81% use the internet via a broadband connection. With this figure Spain ranks at number 10 of the 27 countries participating in the survey.

However, just 48% of Spanish classroom teachers had used computers in class in the 12 months prior to the survey, with some variation across school types and between urban and rural areas.

The learning material that used most by Spanish teachers includes offline learning materials such as CD-ROMs. This applies to 87% of teachers.

A significant 32% of teachers in Spain still do not use computers in class. When asked for the most important barrier, 48% state a lack of computers in their schools as the most important barrier followed by “lack of adequate content/material” (23%).

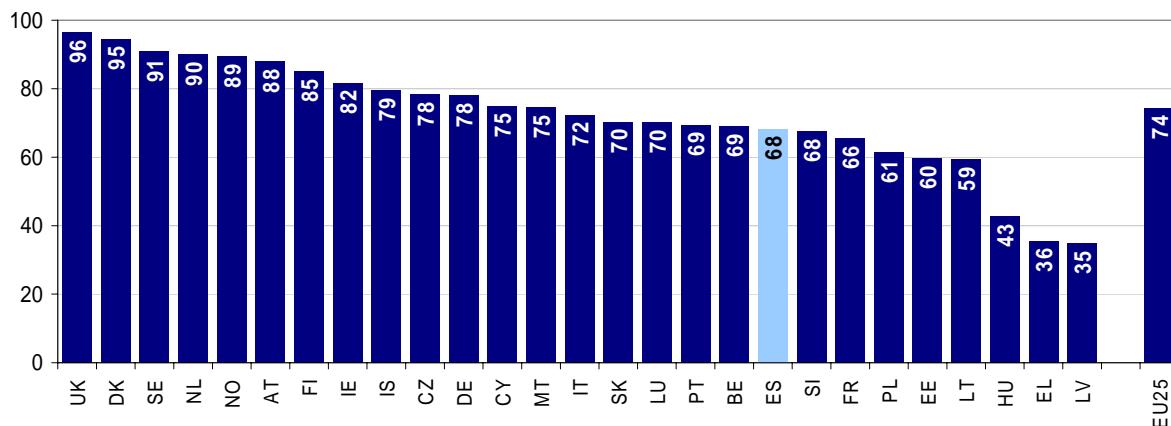
Only a minority of 12% of teachers not using computers in class state that there are no or unclear benefits of using computers in class.

The lack of necessary skills to utilise computers in teaching (15%) and “lack of interest” of teachers (6%) both do not constitute a major barrier to a wider ICT uptake in Spanish schools as is the case in other countries.

Basically almost all schools are equipped with at least some computers in Spain, but it appears there is some room for improvement of the ICT equipment since there are still less than 10 computers available per 100 pupils in Spain and only 68% of the Spanish teachers use ICT in class.

Spanish teachers are positive towards the different purposes for ICT use in teaching. Almost all teachers (93%) believe that teaching about office tools should be an integral part of the teaching process.

### Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: LearnInd CTS 2006; Base: All teachers; Question: Q7. See questionnaire for exact wording

## ICT equipment in Spanish schools 2006

	Educational Level (ES)					Type of locality (ES)			Internet Access (ES)		
	Total ES	Total EU25	Primary	Lower secondary	Upper secondary	Vocational	Densely populated	Intermediate	Thinly populated	Narrow band	Broadband
Computers per 100 pupils <sup>a</sup>	9.5	11.3	8.6	10.0	11.3	11.8	7.5	11.8	16.6	11.3	9.7
... of which internet connected	8.5	9.9	7.4	9.2	10.6	11.2	6.8	10.5	15.0	8.8	8.8
<b>Percentage of schools having...</b>											
Computers for teaching <sup>b</sup>	95.8	98.7	97.1	99.4	99.2	86.7	93.7	97.3	98.3	100.0	100.0
Internet access <sup>c</sup>	94.7	96.2	95.7	99.1	98.6	86.7	93.0	95.7	96.9	100.0	100.0
Broadband internet access <sup>d</sup>	80.7	66.9	79.0	92.8	95.9	81.6	86.7	82.5	67.6	0.0	100.0
A website <sup>e</sup>	53.2	63.0	51.6	62.8	75.8	60.4	53.3	51.5	54.7	53.4	56.7
An e-mail address for the majority of teachers <sup>f</sup>	65.1	65.2	66.4	66.3	69.3	58.1	62.9	64.6	69.7	73.5	67.9
An e-mail address for the majority of pupils <sup>g</sup>	14.2	23.5	14.0	17.4	15.0	18.4	11.6	11.6	21.3	11.7	15.5
A LAN <sup>h</sup>	80.1	55.2	79.5	87.2	89.9	80.9	78.5	79.8	83.1	80.8	85.2
An intranet <sup>i</sup>	35.0	40.8	32.1	39.4	57.8	40.3	35.9	32.3	35.6	39.1	36.6
An external support or maintenance contract <sup>j</sup>	49.0	47.1	50.4	56.8	53.7	45.7	51.0	46.7	47.6	37.1	54.4
<b>Percentage of schools using computers for education in...</b>											
Computer labs <sup>k</sup>	81.0	80.5	78.6	96.1	97.7	84.6	87.9	83.1	66.5	53.4	86.2
Classrooms <sup>l</sup>	47.6	61.4	49.9	35.9	38.8	48.4	43.0	46.7	56.7	61.0	45.0
School library <sup>m</sup>	40.0	33.4	31.7	50.3	65.0	65.7	41.4	45.0	32.8	35.1	41.3
Other locations accessible for pupils <sup>n</sup>	27.6	27.0	25.2	29.3	35.4	37.8	25.2	30.8	29.1	35.7	26.4

*Source: LearnInd HTS 2006; Base: a: all pupils; b-j: all schools, k-n: schools using computers for educational purposes for pupils (cf. index b); Question: a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording.*

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## Information and Communications Technologies (ICTs) in Schools

# Slovenia: Key findings

All Slovenian schools now use computers for teaching and have internet access. A high 85% use the internet via a broadband connection. With this figure Slovenia ranks at number 9 of the 27 countries participating in the survey.

There is some variation between school types: while 84% of primary schools have a broadband internet connection, the penetration is highest among upper secondary schools with 89%, and vocational schools with 91%.

There is also some variation with regard to broadband access between urban and rural areas: 93% of schools in densely populated areas have broadband access compared to 81% of schools in thinly populated areas.

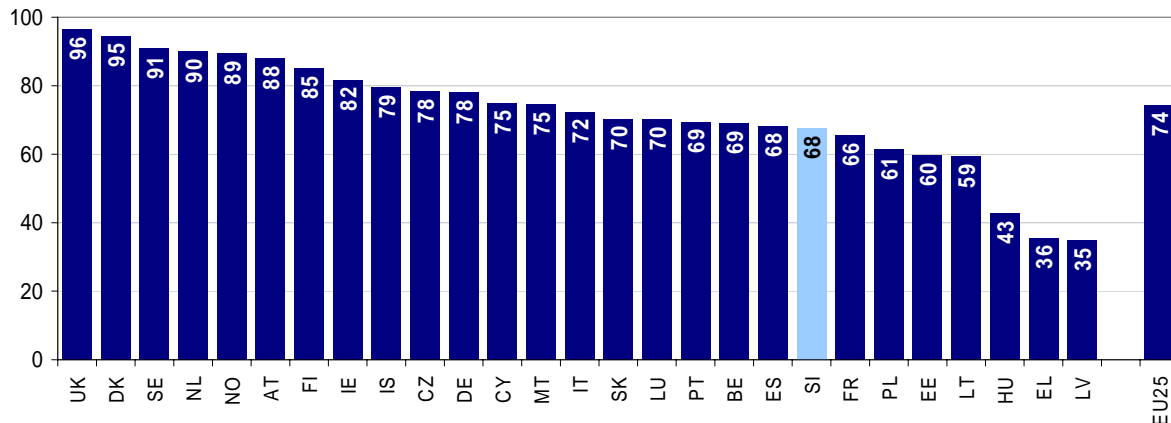
A very high 93% of the Slovenian schools using computers for teaching use them in classrooms, with the highest percentage being achieved in primary and lower secondary schools (96%). All schools offer computers in computer labs and 89% in school libraries while vocational schools reach a figure of 96%.

Despite all these very positive figures, the quantity of ICT equipment and the number of computers per 100 pupils still leaves substantial room for improvement, since on average there are only 8 computers per 100 pupils, a figure still below the European average of 11.

In 81% of schools ICT is used as an integral part of teaching most subjects with little variation across school types.

68% of Slovenian classroom teachers had used computers in class in the 12 months prior to the survey, with some variation across school types, i.e. the lower level school teachers are the more frequent ICT users (72% as opposed to slightly more than 50% in the upper level schools). 32% of teachers in Slovenia still do not use computers in class. Asked for the most important barrier, a very high 61% state a lack of computers in their schools as an important barrier.

### Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: LearnInd CTS 2006; Base: All teachers; Question: Q7. See questionnaire for exact wording.

## ICT equipment in Slovenian schools 2006

				Educational Level (SI)				Type of locality (SI)			Internet Access (SI)	
	Total SI	Total EU25	Total NMS10	Primary	Lower secondary	Upper secondary	Vocational	Densely populated	Intermediate	Thinly populated	Narrow band	Broadband
Computers per 100 pupils <sup>a</sup>	8.0	11.3	7.1	8.0	8.0	8.1	9.0	7.0	7.4	9.2	9.2*	7.9
	7.5	9.9	6.4	7.4	7.5	7.8	8.5	6.8	7.1	8.5	8.7*	7.4
<b>Percentage of schools having...</b>												
Computers for teaching <sup>b</sup>	99.8	98.7	96.7	100.0	100.0	98.5	100.0	98.9	100.0	100.0	100.0*	100.0
Internet access <sup>c</sup>	99.8	96.2	94.7	100.0	100.0	98.5	100.0	98.9	100.0	100.0	100.0*	100.0
Broadband internet access <sup>d</sup>	84.8	66.9	43.4	83.6	83.6	89.3	91.0	93.4	85.1	81.0	0.0*	100.0
A website <sup>e</sup>	95.5	63.0	66.7	94.4	94.4	98.5	100.0	98.9	98.0	92.4	89.6*	96.8
An e-mail address for the majority of teachers <sup>f</sup>	93.4	65.2	48.1	93.4	93.4	91.2	96.4	91.0	95.6	93.0	100.0*	92.5
An e-mail address for the majority of pupils <sup>g</sup>	37.5	23.5	24.4	33.5	33.4	58.4	48.3	28.2	45.1	36.1	32.6*	38.4
A LAN <sup>h</sup>	88.1	55.2	60.4	87.4	87.4	95.4	88.4	89.8	88.5	87.2	76.5*	90.4
An intranet <sup>i</sup>	31.5	40.8	26.9	25.9	26.1	43.5	55.2	30.1	31.6	32.1	34.4*	31.1
An external support or maintenance contract <sup>j</sup>	50.8	47.1	44.3	51.0	50.9	44.7	53.1	48.5	51.9	51.0	39.1*	53.0
<b>Percentage of schools using computers for education in...</b>												
Computer labs <sup>k</sup>	100.0	80.5	94.6	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0*	100.0
Classrooms <sup>l</sup>	93.1	61.4	29.5	96.4	96.4	84.6	83.4	93.4	91.2	94.3	92.6*	93.2
School library <sup>m</sup>	88.6	33.4	36.8	86.5	86.6	94.2	96.2	85.5	86.2	91.6	77.6*	90.6
Other locations accessible for pupils <sup>n</sup>	24.1	27.0	20.2	18.4	18.6	46.9	40.5	24.9	22.1	25.1	28.4*	23.3

**Source:** LearnInd HTS 2006; **Base:** a: all pupils; b-j: all schools, k-n: schools using computers for educational purposes for pupils (cf. index b); **Question:** a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording. **Notes:** "xx.x\*": based on at least 10 and less than 50 cases.

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## Information and Communications Technologies (ICTs) in Schools

# Slovakia: Key findings

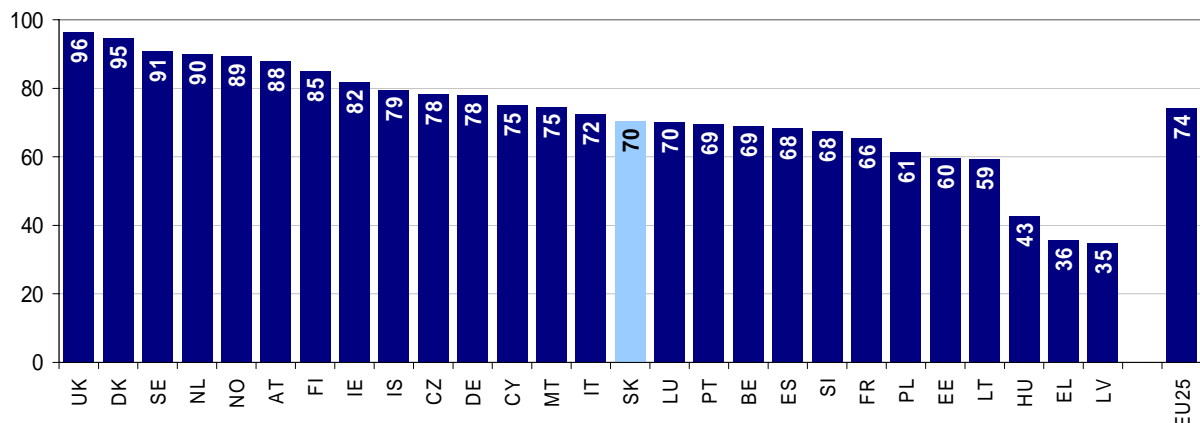
Almost all Slovakian schools now use computers for teaching (99%) and have internet access (98%). However, only 40% use the internet via a broadband connection. With this figure Slovakia ranks at a low number 23 of the 27 countries participating in the survey. There is a large variation between school types: while only 31% of primary schools have a broadband internet connection, the penetration is highest among upper secondary schools, with 63% and vocational schools with 58%. There is also some variation with regard to broadband access between urban and rural areas: 62% of schools in densely populated areas have broadband access compared to only 32% of schools in thinly populated areas.

Only a very low 19% of the Slovakian schools using computers for teaching use them in classrooms, with the highest – but still very low – percentage being achieved in vocational schools (22%). Only Hungary and Greece show even lower ICT usage figures in classrooms.

Those using them are also very active (90%) in searching for material themselves on the internet. This applies to teachers of all school types and shows a very proactive behaviour.

A high 30% of teachers in Slovakia still do not use computers in class. When asked for the most important barrier, 49% state a lack of computers in their schools as the most important barrier followed by lack of adequate content and material which is stated by a high 32% of teachers and a high 21% stating lack of content in the national language as a problem.

### Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: LearnInd CTS 2006; Base: All teachers; Question: Q7. See questionnaire for exact wording

## ICT equipment in Slovakian schools 2006

	Educational Level (SK)			Type of locality (SK)				Internet Access (SK)				
	Total SK	Total EU25	Total NMS10	Primary	Lower secondary	Upper secondary	Vocational	Densely populated	Intermediate	Thinly populated	Narrow band	Broadband
Computers per 100 pupils <sup>a</sup>	6.7	11.3	7.1	5.4	5.0	8.3	9.2	6.2	6.3	7.4	6.8	6.7
... of which internet connected	5.8	9.9	6.4	4.9	4.5	6.9	7.4	5.2	5.5	6.5	6.1	5.8
<b>Percentage of schools having...</b>												
Computers for teaching <sup>b</sup>	98.9	98.7	96.7	98.9	99.7	98.6	98.0	97.8	99.2	99.0	100.0	100.0
Internet access <sup>c</sup>	97.5	96.2	94.7	96.9	98.8	98.6	98.0	96.7	98.6	97.4	100.0	100.0
Broadband internet access <sup>d</sup>	39.6	66.9	43.4	31.3	35.9	62.9	57.5	60.1	43.8	31.9	0.0	100.0
A website <sup>e</sup>	65.3	63.0	66.7	55.3	68.3	90.7	90.2	92.0	69.9	55.5	60.5	76.5
An e-mail address for the majority of teachers <sup>f</sup>	73.1	65.2	48.1	72.9	74.3	73.8	70.8	80.5	68.0	73.0	76.1	73.4
An e-mail address for the majority of pupils <sup>g</sup>	24.3	23.5	24.4	21.2	27.8	28.7	26.6	32.6	23.7	22.1	23.6	26.8
A LAN <sup>h</sup>	71.9	55.2	60.4	68.6	71.1	80.1	78.5	77.6	73.4	69.6	70.2	78.9
An intranet <sup>i</sup>	24.8	40.8	26.9	20.7	21.7	35.0	30.7	25.3	24.8	24.7	23.7	28.0
An external support or maintenance contract <sup>j</sup>	64.6	47.1	44.3	69.5	66.6	50.0	53.3	50.6	59.9	70.7	71.3	58.9
<b>Percentage of schools using computers for education in...</b>												
Computer labs <sup>k</sup>	89.1	80.5	94.6	87.6	89.3	92.4	90.3	94.3	86.7	88.5	87.5	91.4
Classrooms <sup>l</sup>	19.2	61.4	29.5	17.8	17.1	19.9	21.5	18.3	21.9	18.4	20.8	16.7
School library <sup>m</sup>	4.4	33.4	36.8	2.4	3.6	8.6	10.0	7.0	4.5	3.5	3.1	6.3
Other locations accessible for pupils <sup>n</sup>	14.9	27.0	20.2	14.1	16.2	18.9	16.8	19.0	15.3	13.5	13.9	16.4

*Source: LearnInd HTS 2006; Base: a: all pupils; b-j: all schools, k-n: schools using computers for educational purposes for pupils (cf. index b); Question: a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording.*

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## Information and Communications Technologies (ICTs) in Schools

# Portugal: Key findings

Almost all Portuguese schools now use computers for teaching (97%) and have internet access (92%). 73% use the internet via a broadband connection. With this figure Portugal ranks at number 16 of the 27 countries participating in the survey.

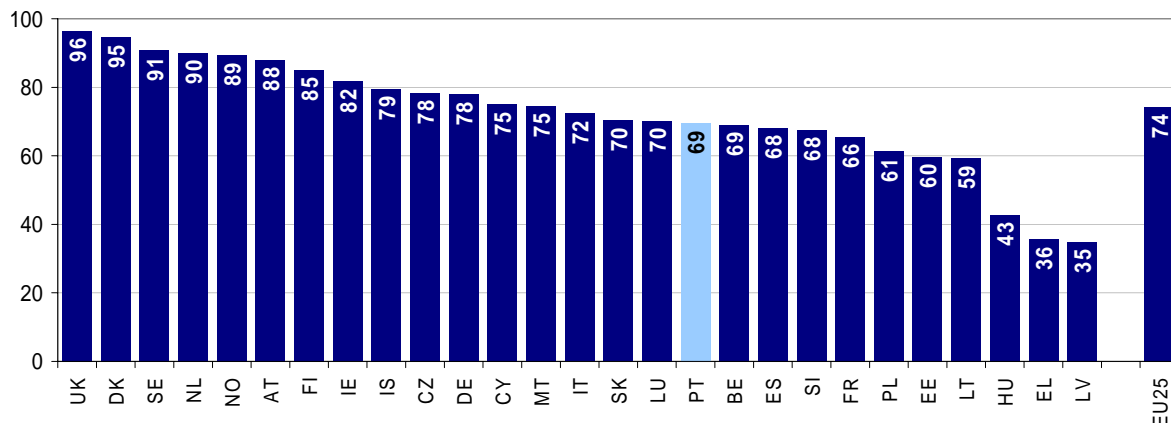
There is a large variation between school types: while 70% of primary schools have a broadband internet connection, the penetration is highest among upper secondary schools, with 87%, and vocational schools which reach 91%. There is only minor variation with regard to broadband access between urban and rural areas.

70% of Portuguese classroom teachers have used computers in class in the 12 months prior to the survey, with little variation across school types and between urban and rural areas. A majority (54%) of the teachers using computers use them in more than 25% of all lessons.

Teachers in vocational schools use computers in class much more frequently than their colleagues in general education with 41% using computers in more than half of their lessons compared to just 16% of teacher in primary schools. 30% of teachers in Portugal still do not use computers in class. When asked for the most important barrier 48% state a lack of computers in their schools as an important barrier, while some 24% believe that the lack of adequate material is an important constraint.

A very high 95% of Portuguese teachers see significant learning benefits for pupils using computers in class. Only 9% argue that the use of ICT does not reveal significant benefits for pupils.

### Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: LearnInd CTS 2006; Base: All teachers; Question: Q7. See questionnaire for exact wording

## ICT equipment in Portuguese schools 2006

			Educational Level (PT)				Type of locality (PT)			Internet Access (PT)	
	Total PT	Total EU25	Primary	Lower secondary	Upper secondary	Vocational	Densely populated	Intermediate	Thinly populated	Narrow band	Broadband
Computers per 100 pupils <sup>a</sup>	6.4	11.3	5.8	5.8	7.1	15.5*	6.1	6.6	7.6	6.1	6.6
... of which internet connected	5.4	9.9	4.4	5.2	6.2	15.3*	5.3	5.4	6.0	4.4	5.8
<b>Percentage of schools having...</b>											
Computers for teaching <sup>b</sup>	97.0	98.7	96.4	99.3	100.0	98.6*	98.3	93.7	99.0	100.0	100.0
Internet access <sup>c</sup>	92.1	96.2	90.4	98.6	100.0	98.6*	98.3	87.5	92.2	100.0	100.0
Broadband internet access <sup>d</sup>	72.8	66.9	69.8	83.9	87.4	91.0*	79.8	66.2	74.1	0.0	100.0
A website <sup>e</sup>	61.2	63.0	56.3	74.4	85.7	75.4*	70.6	59.1	57.2	65.4	66.7
An e-mail address for the majority of teachers <sup>f</sup>	31.6	65.2	28.9	43.3	41.2	53.0*	37.7	34.8	25.1	36.0	33.8
An e-mail address for the majority of pupils <sup>g</sup>	12.1	23.5	10.3	22.1	19.5	27.3*	14.3	12.5	10.5	12.8	13.3
A LAN <sup>h</sup>	14.0	55.2	6.3	39.4	49.9	40.4*	30.0	9.9	7.7	7.1	17.4
An intranet <sup>i</sup>	9.4	40.8	4.7	26.3	34.1	36.6*	17.3	9.0	4.8	2.3	12.3
An external support or maintenance contract <sup>j</sup>	13.4	47.1	10.5	30.3	24.0	27.3*	21.9	11.1	10.0	15.2	14.3
<b>Percentage of schools using computers for education in...</b>											
Computer labs <sup>k</sup>	69.6	80.5	62.4	97.9	99.0	89.3*	86.8	71.2	57.7	70.6	68.8
Classrooms <sup>l</sup>	81.4	61.4	88.9	54.5	50.1	46.1*	58.6	87.1	90.9	86.9	78.7
School library <sup>m</sup>	61.4	33.4	53.6	95.6	92.5	55.4*	80.9	62.1	48.8	61.6	60.3
Other locations accessible for pupils <sup>n</sup>	50.8	27.0	47.7	63.7	64.6	46.9*	54.2	54.6	45.6	47.7	50.4

*Source: LearnInd HTS 2006; Base: a: all pupils; b-j: all schools, k-n: schools using computers for educational purposes for pupils (cf. index b); Question: a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording.*

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## Information and Communications Technologies (ICTs) in Schools

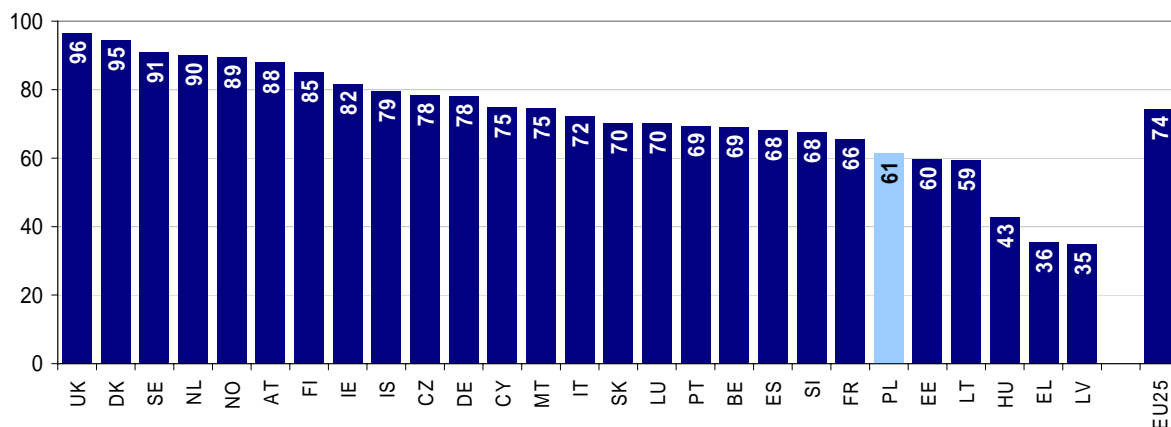
# Poland: Key findings

Almost all Polish schools now use computers for teaching (95%) and have internet access (93%). However, only 28% use the internet via a broadband connection. With this figure Poland ranks second last among the 27 countries participating in the survey. As a consequence the majority of Polish schools (46%) are still connected to the internet through a narrowband dial-up connection which is five times higher than the European average and by far the highest figure in Europe.

There is a large variation between school types: while only 20% of primary schools have a broadband internet connection, the penetration is highest among upper secondary schools, with 40% and vocational schools reaching 42%. There is also some variation with regard to broadband access between urban and rural areas: 40% of schools in densely populated areas have broadband access compared to 21% of schools in thinly populated areas.

Only 61% of Polish classroom teachers had used computers in class in the 12 months prior to the survey, with very little variation across school types and between urban and rural areas. This puts Poland at a low rank 22 out of the 27 countries participating in the survey. A high 39% of teachers in Poland still do not use computers in class. When asked for the most important barrier, 45% state a lack of computers in their schools as an important barrier.

### Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: LearnInd CTS 2006; Base: All teachers; Question: Q7. See questionnaire for exact wording

## ICT equipment in Polish schools 2006

	Total PL	Total EU25	Total NMS10	Educational Level (PL)				Type of locality (PL)			Internet Access (PL)	
				Primary	Lower secondary	Upper secondary	Vocational	Densely populated	Inter-mediate	Thinly populated	Narrow band	Broadband
Computers per 100 pupils <sup>a</sup>	6.1	11.3	7.1	5.6	5.7	7.3	7.2	5.8	5.8	7.2	6.4	5.8
... of which internet connected	5.6	9.9	6.4	4.7	5.2	7.0	6.8	5.5	5.3	6.1	5.7	5.6
<b>Percentage of schools having...</b>												
Computers for teaching <sup>b</sup>	95.3	98.7	96.7	97.0	98.7	92.4	95.3	97.0	95.1	94.1	100.0	100.0
Internet access <sup>c</sup>	92.7	96.2	94.7	92.4	98.7	92.4	95.3	97.0	92.2	89.6	100.0	100.0
Broadband internet access <sup>d</sup>	27.9	66.9	43.4	20.1	29.3	40.2	42.3	40.1	24.7	20.8	0.0	100.0
A website <sup>e</sup>	68.0	63.0	66.7	54.7	82.2	85.6	89.1	89.7	71.2	48.7	69.6	82.2
An e-mail address for the majority of teachers <sup>f</sup>	33.3	65.2	48.1	30.6	37.9	38.0	33.7	35.5	32.8	32.0	37.8	31.7
An e-mail address for the majority of pupils <sup>g</sup>	18.9	23.5	24.4	16.1	24.5	21.8	17.5	24.5	17.0	15.9	21.0	18.9
A LAN <sup>h</sup>	55.9	55.2	60.4	49.6	63.3	66.5	72.3	70.4	53.0	46.8	52.6	78.2
An intranet <sup>i</sup>	25.5	40.8	26.9	24.3	26.3	26.9	36.2	33.6	23.1	20.9	23.5	36.8
An external support or maintenance contract <sup>j</sup>	35.6	47.1	44.3	31.9	41.0	40.5	34.8	39.6	34.0	33.7	39.4	36.2
<b>Percentage of schools using computers for education in...</b>												
Computer labs <sup>k</sup>	97.1	80.5	94.6	96.0	99.4	98.8	100.0	98.9	96.9	95.7	98.6	97.9
Classrooms <sup>l</sup>	22.7	61.4	29.5	18.7	23.9	30.4	28.8	26.6	19.4	22.1	21.8	23.0
School library <sup>m</sup>	39.2	33.4	36.8	30.6	48.2	53.1	52.9	54.9	36.3	28.7	36.3	49.6
Other locations accessible for pupils <sup>n</sup>	20.6	27.0	20.2	18.3	17.8	29.5	24.4	22.7	21.9	18.0	21.1	20.2

**Source:** LearnInd HTS 2006; **Base:** a: all pupils; b-j: all schools, k-n: schools using computers for educational purposes for pupils (cf. index b); **Question:** a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording.

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## Information and Communications Technologies (ICTs) in Schools

# Norway: Key findings

All Norwegian schools now use computers for teaching and have internet access. A very high 89% use the internet via a broadband connection. With this figure Norway ranks at number 7 of the 27 countries participating in the survey.

There is some variation between school types: while an already remarkable and very high 87% of primary schools have a broadband internet connection, the penetration is highest among upper secondary schools, with 97% and vocational schools (95%). There is also some variation with regard to broadband access between urban and rural areas: 94% of schools in densely populated areas have broadband access compared to 88% of schools in thinly populated areas.

In Norway there are 24 computers per 100 pupils with the upper level schools providing around 40 computers per 100 pupils resulting in almost one computer for two pupils which again compares to one computer for 20 pupils in the European countries at the tail end.

84% of the Norwegian schools using computers for teaching use them in classrooms with the highest percentage being achieved in primary schools (89%).

Computer labs are also popular and provided in 82% of Norwegian schools. The 100% figure is reached in upper secondary schools and in almost 100% of vocational schools.

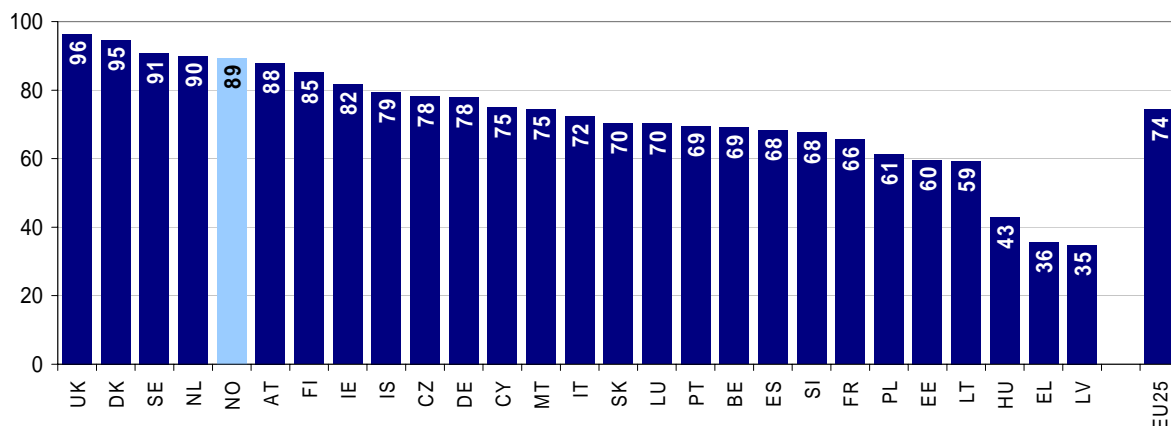
83% of teachers have integrated the use of ICT into the teaching of most of their subjects, placing Norway at rank 7 in Europe.

A very high 89% of Norwegian classroom teachers had used computers in class in the 12 months prior to the survey,

Only 11% of teachers do not use computers in class in Norway. Asked for the most important barrier, three issues gain the highest ratings among this group of teachers: 50% state a lack of computers in their schools as an important barrier, 33% give lack of adequate material as a reason and 22% of those not using ICT are not convinced of any benefits of using computers in class

Despite the high levels of ICT availability in schools, a very high number of teachers (73%) demand better ICT maintenance and support in their schools, pointing to an area where there is some need for improvement in Norwegian schools, especially in primary schools.

### Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: LearnInd CTS 2006; Base: All teachers; Question: Q7. See questionnaire for exact wording

### ICT equipment in Norwegian schools 2006

			Educational Level (NO)				Type of locality (NO)			Internet Access (NO)	
	Total NO	Total EU25	Primary	Lower secondary	Upper secondary	Vocational	Densely populated	Intermediate	Thinly populated	Narrow band	Broadband
Computers per 100 pupils <sup>a</sup>	24.2	11.3	18.1	21.9	40.9	38.8	22.8	26.2	24.0	23.5	24.3
... of which internet connected	22.7	9.9	16.0	20.5	39.9	38.6	21.7	24.4	22.4	21.0	22.8
<b>Percentage of schools having...</b>											
Computers for teaching <sup>b</sup>	99.8	98.7	99.7	100.0	100.0	100.0	100.0	100.0	99.7	100.0	100.0
Internet access <sup>c</sup>	99.8	96.2	99.7	100.0	100.0	100.0	100.0	100.0	99.7	100.0	100.0
Broadband internet access <sup>d</sup>	89.4	66.9	87.0	91.1	96.5	94.7	93.6	90.7	88.4	0.0	100.0
A website <sup>e</sup>	81.6	63.0	77.2	76.6	100.0	100.0	96.8	94.6	76.2	66.5	83.6
An e-mail address for the majority of teachers <sup>f</sup>	79.3	65.2	75.4	76.1	95.0	94.3	98.5	87.7	74.0	49.8	82.9
An e-mail address for the majority of pupils <sup>g</sup>	31.0	23.5	26.9	33.2	40.1	42.1	57.1	29.3	26.6	16.4	32.7
A LAN <sup>h</sup>	59.3	55.2	55.0	60.0	90.1	85.5	67.0	54.0	59.1	57.1	59.7
An intranet <sup>i</sup>	46.0	40.8	42.4	50.0	60.1	61.1	43.4	56.0	44.4	31.9	47.8
An external support or maintenance contract <sup>j</sup>	32.4	47.1	30.2	39.7	35.9	36.0	43.5	32.8	30.3	33.5	32.3
<b>Percentage of schools using computers for education in...</b>											
Computer labs <sup>k</sup>	81.7	80.5	76.7	84.1	100.0	94.7	90.3	88.8	78.6	73.5	82.7
Classrooms <sup>l</sup>	84.0	61.4	89.0	79.4	72.6	68.7	88.8	87.2	82.4	84.6	83.9
School library <sup>m</sup>	54.4	33.4	52.0	52.5	68.4	73.4	71.3	61.3	49.8	44.1	55.6
Other locations accessible for pupils <sup>n</sup>	56.5	27.0	50.4	68.7	70.0	69.9	59.0	60.3	55.2	56.5	56.5

*Source: LearnInd HTS 2006; Base: a: all pupils; b-j: all schools, k-n: schools using computers for educational purposes for pupils (cf. index b); Question: a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording.*

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September 2006



Information and Communications Technologies (ICTs) in Schools

# The Netherlands: Key findings

All Dutch schools now use computers for teaching and have internet access. 92% use the internet via a broadband connection. With this figure the Netherlands ranks at number 4 of the 27 countries participating in the survey. There is hardly any variation between school types and with regard to broadband access there is no major difference between urban and rural areas.

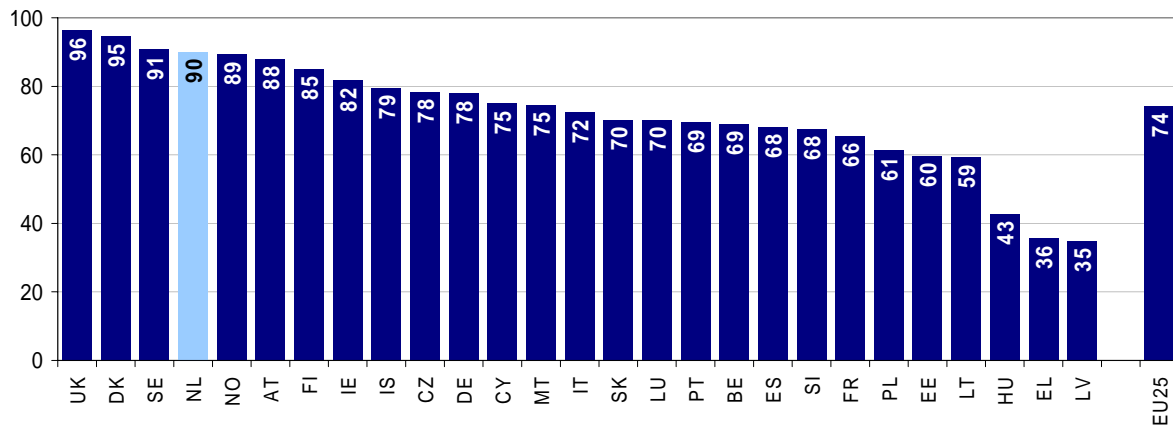
A majority (51%) of the teachers using computers use them in between 10% and 50% of all lessons. A rather low 12% state, that they use computers in more than half of their lessons. Teachers in vocational schools use computers in class more frequently than their colleagues in general education.

Older and younger teachers (indicator used here: years of teaching experience) make use of computers and the internet in class rather equally, with – depending on age group – between 26% and 32% using ICT in more than half of the lessons.

Only 10% of teachers do not use computers in class in the Netherlands. When asked for the most important barrier a rather low 27% state a lack of computers in their schools as an important barrier, 22% see the lack of adequate material as a constraint. Only 1% of all and 10% of those not using ICT are not convinced of any benefits of using computers in class and just 11% express the opinion that teachers lack the necessary skills to utilise computers in their teaching.

Virtually all schools are equipped with some computers in the Netherlands and the number of computers in total and per pupil is high with an average of 21. Vocational schools are best equipped and reach 28 computers per 100 pupils. With these figures the Netherlands ranks at the top in Europe. Only Denmark achieves a higher figure.

Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: LearnInd CTS 2006; Base: All teachers; Question: Q7. See questionnaire for exact wording

## ICT equipment in Dutch schools 2006

			Educational Level (NL)				Type of locality (NL)			Internet Access (NL)	
	Total NL	Total EU25	Primary	Lower secondary	Upper secondary	Vocational	Densely populated	Intermediate	Thinly populated	Narrow band	Broadband
Computers per 100 pupils <sup>a</sup>	21.0	11.3	15.4	19.7	22.4	27.5	23.8	19.9	17.1	16.9*	21.2
... of which internet connected	20.0	9.9	14.2	18.4	20.4	26.8	22.4	19.2	16.4	16.3*	20.3
<b>Percentage of schools having...</b>											
Computers for teaching <sup>b</sup>	100.0	98.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0*	100.0
Internet access <sup>c</sup>	100.0	96.2	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0*	100.0
Broadband internet access <sup>d</sup>	91.6	66.9	91.4	93.8	95.9	92.7	88.9	93.7	91.3	0.0*	100.0
A website <sup>e</sup>	87.3	63.0	85.4	92.9	100.0	96.5	96.9	89.6	72.8	85.0*	87.6
An e-mail address for the majority of teachers <sup>f</sup>	90.6	65.2	89.3	94.4	96.2	97.0	90.8	93.4	85.9	83.8*	91.2
An e-mail address for the majority of pupils <sup>g</sup>	27.9	23.5	23.8	36.1	41.2	56.6	27.1	29.3	26.6	21.2*	28.5
A LAN <sup>h</sup>	87.0	55.2	85.2	92.8	96.5	93.6	90.5	87.3	82.3	81.7*	87.4
An intranet <sup>i</sup>	41.4	40.8	32.2	69.9	84.2	92.6	51.9	37.0	36.1	38.9*	41.6
An external support or maintenance contract <sup>j</sup>	69.4	47.1	71.3	56.8	66.6	60.7	66.5	73.3	66.7	78.2*	68.6
<b>Percentage of schools using computers for education in...</b>											
Computer labs <sup>k</sup>	48.6	80.5	43.0	74.5	78.9	68.3	47.5	51.4	45.5	35.6*	49.8
Classrooms <sup>l</sup>	92.1	61.4	95.4	83.7	83.0	74.2	91.0	92.0	93.5	79.6*	93.3
School library <sup>m</sup>	27.1	33.4	23.7	51.7	68.3	32.8	35.2	23.3	23.3	24.9*	27.3
Other locations accessible for pupils <sup>n</sup>	44.7	27.0	45.2	54.2	53.3	31.6	44.9	44.3	44.9	45.1*	44.6

**Source:** LearnInd HTS 2006; **Base:** a: all pupils; b-j: all schools, k-n: schools using computers for educational purposes for pupils (cf. index b); **Question:** a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording. **Notes:** "xx.x\*": based on at least 10 and less than 50 cases.

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## Information and Communications Technologies (ICTs) in Schools

# Malta: Key findings

All Maltese schools now use computers for teaching and have internet access. A very high 95% use the internet via a broadband connection. With this figure Malta ranks top in Europe together with Denmark and Estonia out of the 27 countries participating in the survey. There is very little variation between school types with broadband access ranging from 93% in primary schools to 100% in vocational schools:

In 77% computers and the internet are integrated into the teaching of most subjects – which is slightly higher than the European average – with very little differences across the school types.

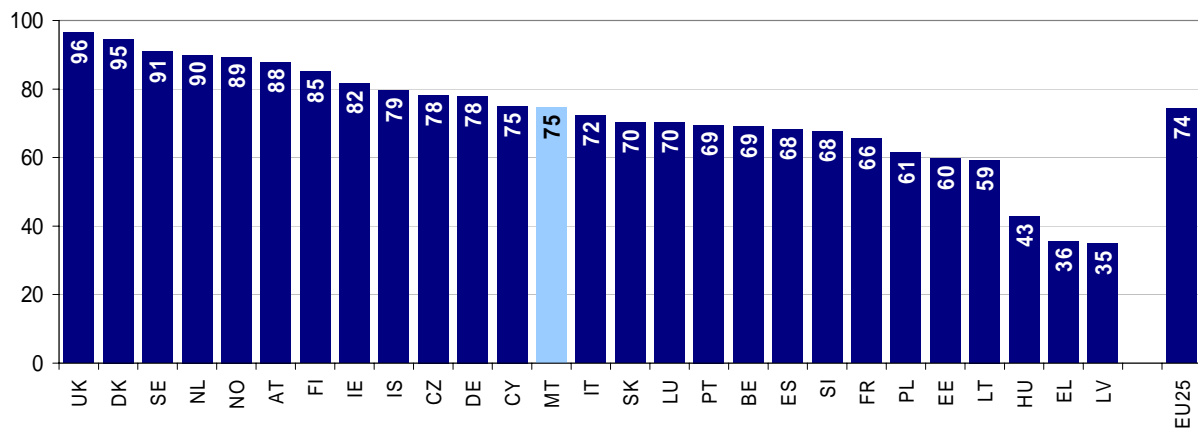
Maltese teachers are very active users of ICT in class. Only a minority of 23% of the teachers using computers use them in less than 10% of all lessons, more than half make use of ICT in more than 25% of their lessons and almost a fifth state that they use computers in more than half of their lessons.

The learning material that is used least is material available on the school's computer network; which may be an indication of the rather poor quality of electronic teaching material made available by schools in Malta. Teachers have to become active in finding material elsewhere.

25% of teachers in Malta (around the European average) still do not use computers in class. When asked for the most important barrier, 39% state a lack of computers in their schools as an important barrier followed by 25% expressing lack of adequate material as a problem

Almost all of the Maltese teachers (97%) see significant learning benefits for pupils when using ICT. Here Malta takes the first rank in Europe.

### Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: LearnInd CTS 2006; Base: All teachers; Question: Q7. See questionnaire for exact wording

## ICT equipment in Maltese schools 2006

	Educational Level (MT)			Type of locality (MT)				Internet Access (MT)				
	Total MT	Total EU25	Total NMS10	Primary	Lower secondary	Upper secondary	Vocational	Densely populated	Intermediate	Thinly populated	Narrow band	Broadband
Computers per 100 pupils <sup>a</sup>	11.0	11.3	7.1	12.8	8.9*	8.9*	12.2**	N/A	N/A	N/A	12.6**	10.9
... of which internet connected	10.2	9.9	6.4	12.2	8.6*	8.6*	10.2**	N/A	N/A	N/A	10.6**	10.2
<b>Percentage of schools having...</b>												
Computers for teaching <sup>b</sup>	100.0	98.7	96.7	100.0	100.0*	100.0*	100.0**	N/A	N/A	N/A	100.0**	100.0
Internet access <sup>c</sup>	100.0	96.2	94.7	100.0	100.0*	100.0*	100.0**	N/A	N/A	N/A	100.0**	100.0
Broadband internet access <sup>d</sup>	94.5	66.9	43.4	92.6	97.8*	97.8*	100.0**	N/A	N/A	N/A	0.0**	100.0
A website <sup>e</sup>	62.7	63.0	66.7	56.3	69.6*	69.6*	100.0**	N/A	N/A	N/A	80.4**	61.7
An e-mail address for the majority of teachers <sup>f</sup>	78.9	65.2	48.1	82.3	68.6*	68.6*	83.2**	N/A	N/A	N/A	100.0**	77.6
An e-mail address for the majority of pupils <sup>g</sup>	66.4	23.5	24.4	69.6	62.7*	62.7*	49.5**	N/A	N/A	N/A	80.4**	65.5
A LAN <sup>h</sup>	59.9	55.2	60.4	52.8	69.6*	69.6*	83.2**	N/A	N/A	N/A	22.0**	62.1
An intranet <sup>i</sup>	29.1	40.8	26.9	26.9	26.8*	26.8*	83.2**	N/A	N/A	N/A	22.0**	29.6
An external support or maintenance contract <sup>j</sup>	67.7	47.1	44.3	75.0	53.7*	53.7*	33.6**	N/A	N/A	N/A	65.5**	67.8
<b>Percentage of schools using computers for education in...</b>												
Computer labs <sup>k</sup>	55.5	80.5	94.6	29.3	100.0*	100.0*	100.0**	N/A	N/A	N/A	34.5**	56.7
Classrooms <sup>l</sup>	51.7	61.4	29.5	77.3	12.8*	12.8*	16.4**	N/A	N/A	N/A	65.5**	50.9
School library <sup>m</sup>	21.4	33.4	36.8	8.3	47.8*	47.8*	16.4**	N/A	N/A	N/A	19.6**	21.5
Other locations accessible for pupils <sup>n</sup>	16.0	27.0	20.2	17.3	13.0*	13.0*	49.5**	N/A	N/A	N/A	0.0**	16.9

**Source:** LearnInd HTS 2006; **Base:** a: all pupils; b-j: all schools; k-n: schools using computers for educational purposes for pupils (cf. index b); **Question:** a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording. **Notes:** "xx.x\*": based on at least 10 and less than 50 cases; "xx.x\*\*" based on less than 10 cases. No type of locality breakdown possible due to small sample size.

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## Information and Communications Technologies (ICTs) in Schools

# Luxembourg: Key findings

Almost all schools in Luxembourg now use computers for teaching and have internet access. 77% use the internet via a broadband connection. With this figure Luxembourg ranks at number 12 of the 27 countries participating in the survey. There is some variation between school types: upper secondary schools, with 100% and vocational schools (91%) being the best equipped with broadband access.

A high 88% of the Luxembourgian schools using computers for teaching use them in classrooms with the highest percentage being achieved in primary schools (99%).

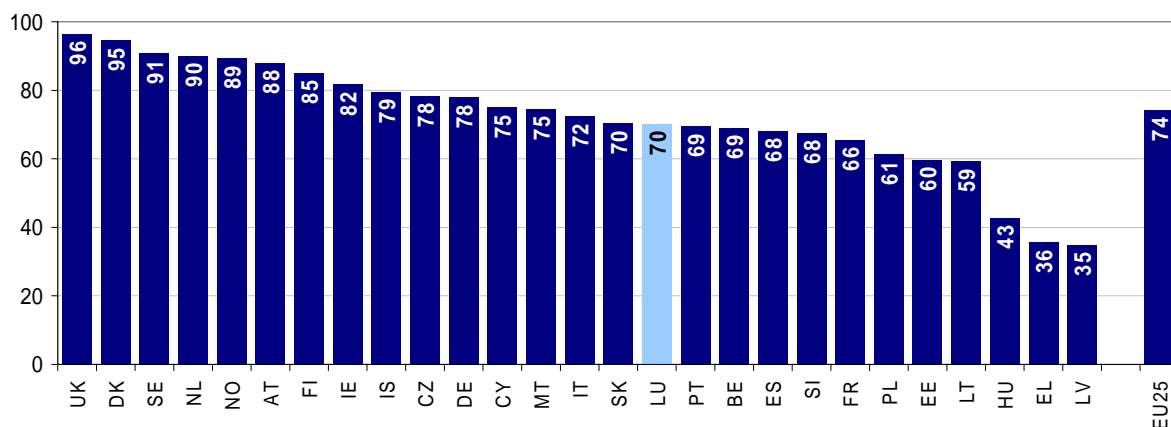
70% of Luxembourgian classroom teachers had used computers in class in the 12 months prior to the survey, with some variation across school types

Teachers in vocational schools use computers in class much more frequently than their colleagues in general education with a very high 87% of vocational school teachers using computers in more than half of their lessons.

Only 4% of all and 14% of those teachers not using ICT are not convinced of any benefits of using computers in class, which is a positive sign.

Virtually all schools in Luxembourg are equipped with computers, and with an average of 20 computers per 100 pupils, Luxembourg ranks at a very good 4th in Europe. Primary schools are best equipped (23 computer per 100 pupils), vocational schools significantly less (8 computer per 100 pupils).

### Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: LearnInd CTS 2006; Base: All teachers; Question: Q7. See questionnaire for exact wording

### ICT equipment in Luxembourgian schools 2006

			Educational Level (LU)				Type of locality (LU)			Internet Access (LU)	
	Total LU	Total EU25	Primary	Lower secondary	Upper secondary	Vocational	Densely populated	Intermediate	Thinly populated	Narrowband	Broadband
Computers per 100 pupils <sup>a</sup>	19.8	11.3	22.6	21.3**	20.9**	7.9**	N/A	N/A	N/A	21.7	19.0
... of which internet connected	18.3	9.9	20.9	21.3**	18.9**	7.9**	N/A	N/A	N/A	20.2	17.7
<b>Percentage of schools having...</b>											
Computers for teaching <sup>b</sup>	99.0	98.7	98.7	100.0**	100.0**	100.0**	N/A	N/A	N/A	100.0*	100.0
Internet access <sup>c</sup>	95.5	96.2	94.5	100.0**	100.0**	100.0**	N/A	N/A	N/A	100.0*	100.0
Broadband internet access <sup>d</sup>	76.5	66.9	73.3	87.4**	100.0**	91.1**	N/A	N/A	N/A	0.0*	100.0
A website <sup>e</sup>	64.4	63.0	56.9	100.0**	100.0**	100.0**	N/A	N/A	N/A	57.8*	69.9
An e-mail address for the majority of teachers <sup>f</sup>	78.0	65.2	74.1	100.0**	91.3**	100.0**	N/A	N/A	N/A	61.9*	86.6
An e-mail address for the majority of pupils <sup>g</sup>	22.6	23.5	20.2	87.4**	68.9**	8.9**	N/A	N/A	N/A	11.2*	26.7
A LAN <sup>h</sup>	58.9	55.2	50.1	100.0**	100.0**	100.0**	N/A	N/A	N/A	28.3*	69.9
An intranet <sup>i</sup>	54.7	40.8	46.9	100.0**	91.3**	91.1**	N/A	N/A	N/A	3.0*	70.8
An external support or maintenance contract <sup>j</sup>	28.8	47.1	33.8	0.0**	0.0**	8.9**	N/A	N/A	N/A	26.3*	31.1
<b>Percentage of schools using computers for education in...</b>											
Computer labs <sup>k</sup>	44.3	80.5	32.3	100.0**	100.0**	100.0**	N/A	N/A	N/A	33.8*	47.6
Classrooms <sup>l</sup>	88.2	61.4	98.7	80.1**	82.6**	14.6**	N/A	N/A	N/A	100.0*	86.3
School library <sup>m</sup>	33.5	33.4	26.5	100.0**	72.6**	57.3**	N/A	N/A	N/A	26.2*	36.8
Other locations accessible for pupils <sup>n</sup>	26.4	27.0	23.3	67.5**	50.2**	42.7**	N/A	N/A	N/A	26.1*	27.6

**Source:** LearnInd HTS 2006; **Base:** a: all pupils; b-j: all schools, k-n: schools using computers for educational purposes for pupils (cf. index b); **Question:** a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording. **Notes:** "xx.x\*": based on at least 10 and less than 50 cases; "xx.x\*\*" based on less than 10 cases. No type of locality breakdown possible due to small sample size.

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## Information and Communications Technologies (ICTs) in Schools

# Lithuania: Key findings

Almost all Lithuanian schools now use computers for teaching (97%) and have internet access (95%). However, only 33% use the internet via a broadband connection. With this figure Lithuania ranks at number 24 of the 27 countries participating in the survey. There is not much variation between school types, with vocational schools being somewhat better equipped than other schools.

There is some variation with regard to broadband access between urban and rural areas: 45% of schools in densely populated areas and intermediate regions have broadband access compared to only 28% of schools in thinly populated areas.

Only 48% of the Lithuanian schools using computers for teaching use them in classrooms.

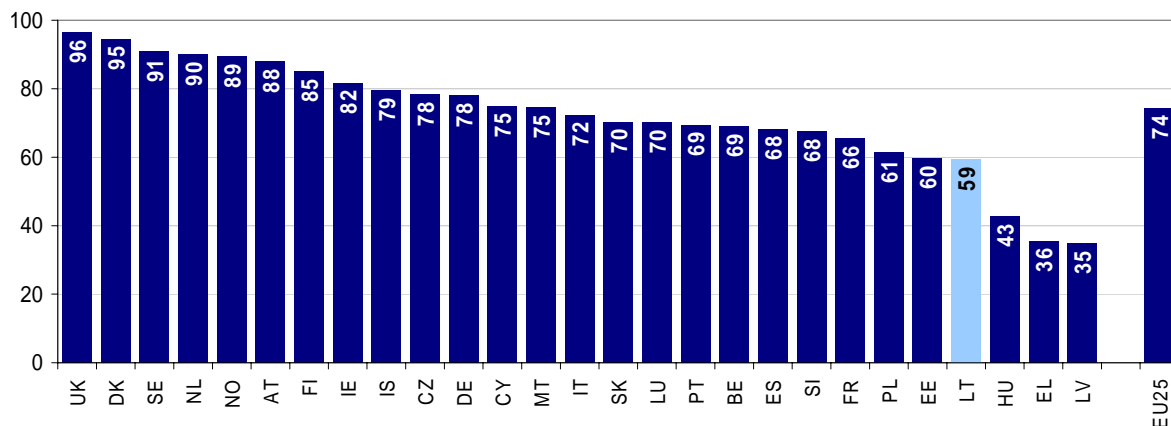
Computers are widely used in the school library (62% compared to a EU25 average of just 33%) which might be an indication of a very early stage of computer use in schools, where – as a result of lack of ICT equipment – computers are firstly installed in an area accessible to all pupils and teachers.

A very high 90% of teachers wish there were better support and maintenance actions taken, again an indicator for the sub-optimal ICT equipment in schools.

Only 59% of Lithuanian classroom teachers had used computers in class in the 12 months prior to the survey, with significant variation across school types and between urban and rural areas. While 74% of the vocational school teachers are using ICT in class, the figure is only 59% among primary school teachers. Surprisingly ICT use in class is more widespread in thinly populated areas. Use of computers in class hardly differs according to the age of teachers, which is also somewhat surprising.

A high 41% of teachers in Lithuania still do not use computers in class. When asked for the most important barrier, a very high 78% state a lack of computers in their schools as by far the most important barrier. Other reasons are of much less importance.

### Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: LearnInd CTS 2006; Base: All teachers; Question: Q7. See questionnaire for exact wording

### ICT equipment in Lithuanian schools 2006

	Educational Level (LT)			Type of locality (LT)				Internet Access (LT)				
	Total LT	Total EU25	Total NMS10	Primary	Lower secondary	Upper secondary	Vocational	Densely populated	Intermediate	Thinly populated	Narrow band	Broadband
Computers per 100 pupils <sup>a</sup>	5.9	11.3	7.1	5.5	5.9	5.9	8.3	4.7	N/A	6.6	6.0	5.9
... of which internet connected	5.2	9.9	6.4	4.7	5.2	5.4	7.8	4.3	N/A	5.7	5.2	5.3
<b>Percentage of schools having...</b>												
Computers for teaching <sup>b</sup>	96.7	98.7	96.7	96.1	99.7	100.0	100.0	92.8	N/A	98.1	100.0	100.0
Internet access <sup>c</sup>	94.5	96.2	94.7	93.6	98.8	100.0	98.0	91.1	N/A	95.7	100.0	100.0
Broadband internet access <sup>d</sup>	32.6	66.9	43.4	32.5	32.0	30.9	39.9	44.5	N/A	28.3	0.0	100.0
A website <sup>e</sup>	60.3	63.0	66.7	53.8	63.2	84.8	98.0	73.2	N/A	55.7	62.9	65.8
An e-mail address for the majority of teachers <sup>f</sup>	57.2	65.2	48.1	55.6	58.7	53.5	64.0	49.6	N/A	60.0	60.6	60.7
An e-mail address for the majority of pupils <sup>g</sup>	18.0	23.5	24.4	16.0	21.3	23.6	12.0	17.9	N/A	18.1	19.1	19.1
A LAN <sup>h</sup>	49.6	55.2	60.4	45.8	56.1	64.3	70.0	49.8	N/A	49.6	48.2	60.8
An intranet <sup>i</sup>	24.6	40.8	26.9	21.6	25.4	36.2	36.0	30.2	N/A	22.6	23.0	31.8
An external support or maintenance contract <sup>j</sup>	52.0	47.1	44.3	50.6	55.3	56.7	56.0	44.1	N/A	54.8	53.2	58.5
<b>Percentage of schools using computers for education in...</b>												
Computer labs <sup>k</sup>	89.1	80.5	94.6	87.2	98.2	99.8	98.0	82.2	N/A	91.4	90.6	89.8
Classrooms <sup>l</sup>	48.0	61.4	29.5	47.1	47.0	55.4	54.0	53.0	N/A	46.2	48.2	48.4
School library <sup>m</sup>	61.7	33.4	36.8	56.6	65.6	93.0	84.0	70.4	N/A	58.8	63.3	61.9
Other locations accessible for pupils <sup>n</sup>	20.1	27.0	20.2	18.9	19.2	25.4	22.0	26.6	N/A	17.8	20.1	18.1

**Source:** LearnInd HTS 2006; **Base:** a: all pupils; b-j: all schools; k-n: schools using computers for educational purposes for pupils (cf. index b); **Question:** a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording. **Notes:** No interviews in intermediate regions were carried out in Lithuania.

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September 2006



## Information and Communications Technologies (ICTs) in Schools

# Latvia: Key findings

Almost all Latvian schools now use computers for teaching (98%) and have internet access (94%). 67% use the internet via a broadband connection

Only 41% of the Latvian schools using computers for teaching use them in classrooms with the highest percentage being achieved in vocational schools (56%). Computers in the school library are very widespread in Latvian schools. 67% of the schools provide access to ICT in school libraries with the upper level school being better equipped than the lower level ones. Only in Slovenia and Denmark are schools better equipped with ICT in libraries.

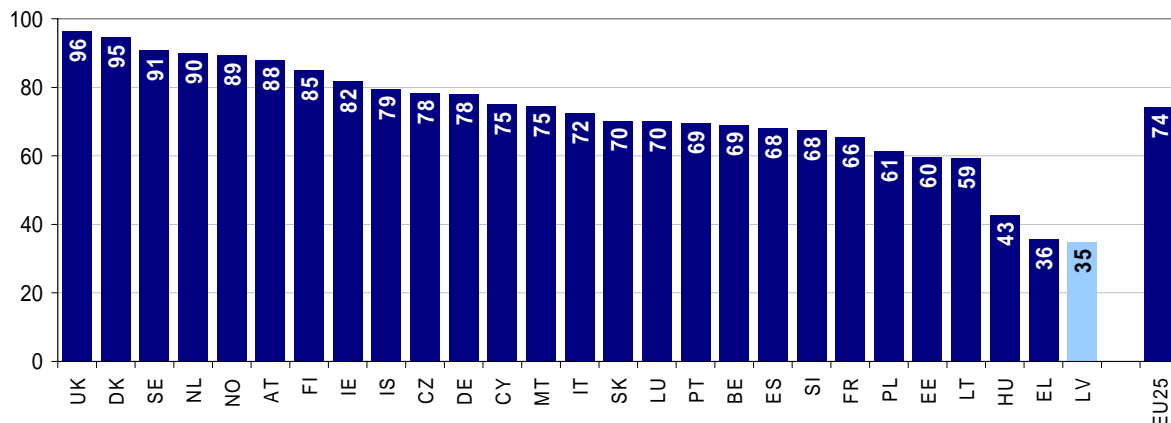
Only 35% of Latvian classroom teachers had used computers in class in the 12 months prior to the survey, with little variation across school types and between urban and rural areas. With this figure, Latvia shows the poorest performance in Europe with respect to the use of ICT in schools.

A vast majority (67%) of the teachers using computers use them in less than 10% of all lessons. Only 5% state that they use computers in more than half of their lessons. Teachers in vocational schools use computers in class much more frequently than their colleagues in general education.

A very high 65% of teachers in Latvia still do not use computers in class. This is the highest figure of non-users in Europe.

When asked for the most important barrier, three issues gain the highest ratings among this group of teachers: a very large number, 66% state a lack of computers in their schools as an important barrier, 27% lack of adequate material, and 23% express the opinion that teachers lack the necessary skills to utilise computers in their teaching.

### Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: LearnInd CTS 2006; Base: All teachers; Question: Q7. See questionnaire for exact wording

## ICT equipment in Latvian schools 2006

	Educational Level (LV)			Type of locality (LV)				Internet Access (LV)			
	Total LV	Total EU25	Total NMS10	Primary	Lower secondary	Upper secondary	Vocational	Densely populated and intermediate	Thinly populated	Narrow band	Broadband
Computers per 100 pupils <sup>a</sup>	5.9	11.3	7.1	5.5	5.6	5.4	7.0*	4.7	7.0	6.4	5.7
... of which internet connected	5.1	9.9	6.4	4.8	4.9	4.8	5.8*	3.9	6.1	5.5	5.0
<b>Percentage of schools having...</b>											
Computers for teaching <sup>b</sup>	97.6	98.7	96.7	97.7	100.0	99.6	95.6*	95.3	98.4	100.0	100.0
Internet access <sup>c</sup>	94.3	96.2	94.7	93.3	97.0	99.6	95.6*	94.8	94.1	100.0	100.0
Broadband internet access <sup>d</sup>	66.5	66.9	43.4	64.3	66.5	70.2	73.7*	72.3	64.4	0.0	100.0
A website <sup>e</sup>	40.6	63.0	66.7	36.3	40.4	61.7	62.8*	56.4	34.8	44.1	42.7
An e-mail address for the majority of teachers <sup>f</sup>	59.6	65.2	48.1	57.2	60.3	61.1	62.1*	52.2	62.3	56.9	65.8
An e-mail address for the majority of pupils <sup>g</sup>	33.9	23.5	24.4	33.2	35.3	38.3	35.3*	31.3	34.9	32.1	37.6
A LAN <sup>h</sup>	54.0	55.2	60.4	55.0	58.6	64.3	44.2*	55.2	53.6	62.0	55.4
An intranet <sup>i</sup>	33.2	40.8	26.9	31.0	31.2	39.9	50.8*	41.0	30.3	33.6	35.9
An external support or maintenance contract <sup>j</sup>	68.6	47.1	44.3	67.1	69.6	68.0	75.2*	57.3	72.8	68.4	74.6
<b>Percentage of schools using computers for education in...</b>											
Computer labs <sup>k</sup>	97.1	80.5	94.6	96.1	99.4	100.0	100.0*	96.2	97.4	98.3	97.5
Classrooms <sup>l</sup>	40.7	61.4	29.5	36.9	37.6	48.6	55.6*	47.3	38.3	41.1	40.9
School library <sup>m</sup>	66.5	33.4	36.8	64.6	65.5	75.0	76.1*	65.5	66.9	73.5	65.8
Other locations accessible for pupils <sup>n</sup>	24.5	27.0	20.2	24.0	22.7	25.4	32.9*	18.6	26.6	25.5	24.1

**Source:** LearnInd HTS 2006; **Base:** a: all pupils; b-j: all schools; k-n: schools using computers for educational purposes for pupils (cf. index b); **Question:** a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording. **Notes:** "xx.x\*": based on at least 10 and less than 50 cases.

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## Information and Communications Technologies (ICTs) in Schools

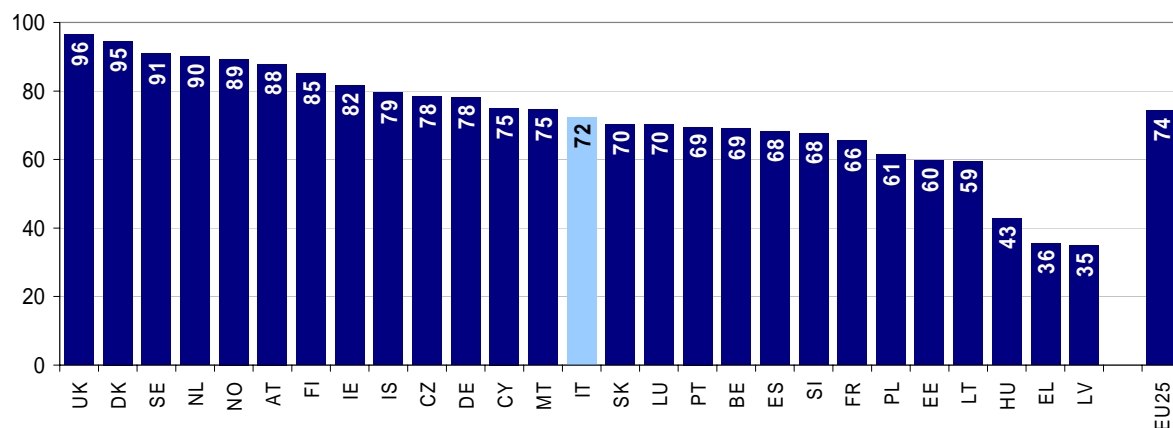
# Italy: Key findings

Almost all Italian schools now use computers for teaching and have internet access. 69% use the internet via a broadband connection. With this figure Italy ranks at number 17 of the 27 countries participating in the survey. There is a large variation between school types: while only 63% of primary schools have a broadband internet connection, the penetration is highest among upper secondary schools (78%) and vocational schools (82%). There is also some variation with regard to broadband access between urban and rural areas: 78% of schools in densely populated areas have broadband access compared to 55% of schools in thinly populated areas.

72% of Italian classroom teachers had used computers in class in the 12 months prior to the survey, with little variation across school types and between urban and rural areas. The learning material that is used most by Italian teachers includes offline learning materials such as CD-ROMs. This applies to 83% of teachers. Only 59% of teachers use prefabricated pedagogical material from existing online sources and 56% material that is made available on the schools' network and databases

Only 2% of all, and 5% of Italian teachers not using ICT, are not convinced of any benefits of using computers in class which is a very good result, significantly below the European average of 16%. It is even better in Italian primary schools with less than 3% of teachers expressing this attitude.

### Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: LearnInd CTS 2006; Base: All teachers; Question: Q7. See questionnaire for exact wording

## ICT equipment in Italian schools 2006

			Educational Level (IT)				Type of locality (IT)			Internet Access (IT)	
	Total IT	Total EU25	Primary	Lower secondary	Upper secondary	Vocational	Densely populated	Intermediate	Thinly populated	Narrow band	Broadband
Computers per 100 pupils <sup>a</sup>	8.0	11.3	5.7	6.9	10.7	12.4	8.2	7.6	8.1	7.6	8.2
... of which internet connected	6.5	9.9	4.2	5.1	9.8	10.5	6.8	6.3	6.4	6.0	6.8
<b>Percentage of schools having...</b>											
Computers for teaching <sup>b</sup>	99.6	98.7	99.4	100.0	100.0	100.0	98.9	100.0	100.0	100.0	100.0
Internet access <sup>c</sup>	97.8	96.2	96.5	96.7	100.0	100.0	96.9	98.0	98.9	100.0	100.0
Broadband internet access <sup>d</sup>	69.0	66.9	62.8	52.6	78.2	82.2	78.2	69.2	54.5	0.0	100.0
A website <sup>e</sup>	72.6	63.0	65.2	58.9	88.3	89.2	74.1	75.6	65.3	63.9	78.6
An e-mail address for the majority of teachers <sup>f</sup>	66.3	65.2	66.3	67.0	63.2	59.0	61.7	68.1	70.3	71.1	66.4
An e-mail address for the majority of pupils <sup>g</sup>	11.3	23.5	6.8	10.0	20.6	14.7	10.5	12.1	11.4	7.4	13.3
A LAN <sup>h</sup>	34.5	55.2	27.9	28.8	53.9	51.8	34.2	38.5	28.3	28.9	38.0
An intranet <sup>i</sup>	67.9	40.8	64.8	66.5	74.0	70.3	73.0	66.7	62.3	66.6	70.6
An external support or maintenance contract <sup>j</sup>	53.2	47.1	52.8	44.7	61.8	50.0	56.9	51.5	50.4	51.7	55.5
<b>Percentage of schools using computers for education in...</b>											
Computer labs <sup>k</sup>	98.8	80.5	98.4	100.0	99.0	100.0	98.9	100.0	96.6	99.1	98.6
Classrooms <sup>l</sup>	32.2	61.4	38.3	34.9	20.8	19.1	34.5	30.1	32.3	30.8	32.8
School library <sup>m</sup>	24.7	33.4	16.8	22.9	45.6	37.0	26.1	28.0	17.2	17.9	28.3
Other locations accessible for pupils <sup>n</sup>	35.6	27.0	28.5	41.9	57.8	42.4	35.4	37.9	31.9	32.3	37.1

**Source:** LearnInd HTS 2006; **Base:** a: all pupils; b-j: all schools, k-n: schools using computers for educational purposes for pupils (cf. index b); **Question:** a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording

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## Information and Communications Technologies (ICTs) in Schools

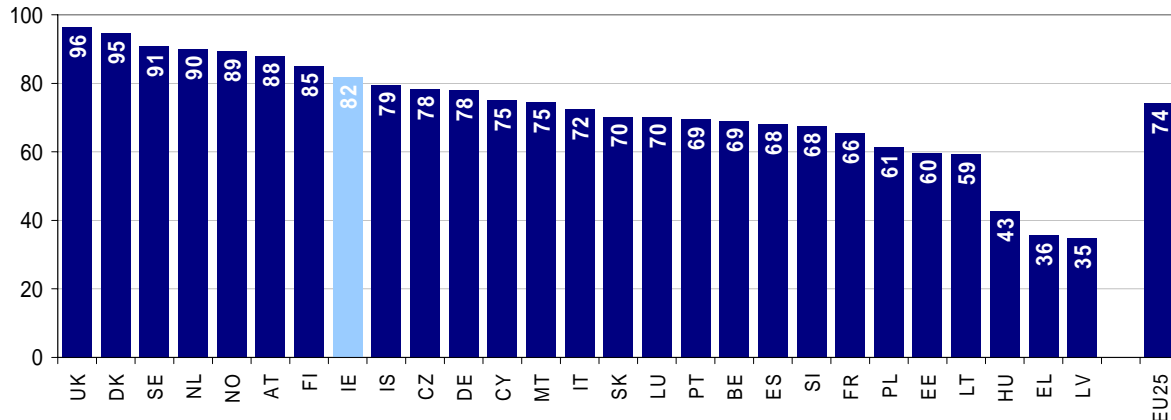
# Ireland: Key findings

Basically all Irish schools (100%) now use computers for teaching and have internet access (99%). 66% use the internet via a broadband connection. A substantial 89% of the Irish schools using computers for teaching use them in classrooms (rank 5 in Europe), with the highest percentage being achieved in primary schools where a very high 94% use them in classrooms.

In particular in primary schools in Ireland ICT is used by almost all teachers (87%) whereas in all other school types usage is by around two third of the teachers. Teachers in vocational schools in Ireland use computers in class more frequently than their colleagues in other school types with more than a third using them in more than 25% of their lessons, which compares to just 13% in primary schools.

Irish teachers seem to mostly rely on and use existing online material from established educational sources. With 87% of teachers in this group, the figure is significantly above the European average (74%). The use of CD ROMs also plays an important role, with 88% of the Irish teachers giving this as an important source of material used in class. This is especially true for primary schools in Ireland, where this figure reaches 91%. However, Ireland ranks at the very bottom in Europe when it comes to teacher's satisfaction with the ICT infrastructure in their schools. Despite the fact that all Irish schools are equipped with some computers and have an internet access, a major problem seems to be the still insufficient ICT equipment and access to the internet in Irish schools indicated by 34%. Also, a very high 85% wish there were better support and maintenance actions taken. In particular teachers in primary and vocational schools state this as an issue. 91% of Irish teachers see significant learning benefits for pupils using computers in class and say that pupils are more motivated and attentive when computers and the internet are used in class.

### Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: LearnInd CTS 2006; Base: All teachers; Question: Q7. See questionnaire for exact wording

## ICT equipment in Irish schools 2006

	Educational Level (IE)						Type of locality (IE)		Internet Access (IE)	
	Total IE	Total EU25	Primary	Lower secondary	Upper secondary	Vocational	Densely populated and intermediate	Thinly populated	Narrow band	Broadband
Computers per 100 pupils <sup>a</sup>	10.3	11.3	9.2	9.6	10.6	14.6	10.9	9.9	9.2	10.6
... of which internet connected	8.7	9.9	7.0	8.9	9.9	14.0	10.0	8.0	5.6	9.7
<b>Percentage of schools having...</b>										
Computers for teaching <sup>b</sup>	100.0	98.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Internet access <sup>c</sup>	98.4	96.2	98.2	99.4	99.5	100.0	100.0	98.1	100.0	100.0
Broadband internet access <sup>d</sup>	66.1	66.9	62.4	79.8	81.6	82.6	84.2	61.8	0.0	100.0
A website <sup>e</sup>	36.2	63.0	27.8	72.5	71.6	70.7	53.8	32.0	25.1	42.4
An e-mail address for the majority of teachers <sup>f</sup>	56.0	65.2	56.5	52.1	51.4	62.6	53.1	56.7	66.5	52.2
An e-mail address for the majority of pupils <sup>g</sup>	9.9	23.5	9.0	13.6	12.7	15.2	9.5	10.1	7.5	11.4
A LAN <sup>h</sup>	51.7	55.2	45.7	76.0	77.2	77.1	64.0	48.8	29.9	63.6
An intranet <sup>i</sup>	18.0	40.8	14.1	31.1	32.2	43.3	22.8	16.8	17.2	18.8
An external support or maintenance contract <sup>j</sup>	36.4	47.1	33.1	53.6	51.4	45.9	42.4	35.0	28.8	41.0
<b>Percentage of schools using computers for education in...</b>										
Computer labs <sup>k</sup>	47.4	80.5	35.6	98.4	98.7	100.0	86.3	38.2	32.3	54.6
Classrooms <sup>l</sup>	89.0	61.4	94.1	67.1	67.6	64.2	80.1	91.1	90.7	88.6
School library <sup>m</sup>	10.7	33.4	4.9	33.9	35.0	38.8	23.1	7.8	3.7	14.3
Other locations accessible for pupils <sup>n</sup>	24.2	27.0	22.1	33.6	33.5	28.4	19.7	25.3	27.9	23.0

*Source: LearnInd HTS 2006; Base: a: all pupils; b-j: all schools, k-n: schools using computers for educational purposes for pupils (cf. index b); Question: a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording.*

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## Information and Communications Technologies (ICTs) in Schools

# Germany: Key findings

(Almost) all German schools are equipped with computers and internet connection. 63% use the internet via a broadband connection. With this figure Germany ranks at number 21 of the 27 countries participating in the survey.

There is a large variation between school types: while only 54% of primary schools have a broadband internet connection, the penetration is highest among upper secondary schools, with 82%.

78% of German classroom teachers use computers in class, with little variation across school types and between urban and rural areas. Surprisingly little variation can be found in this respect according to the subjects of teaching.

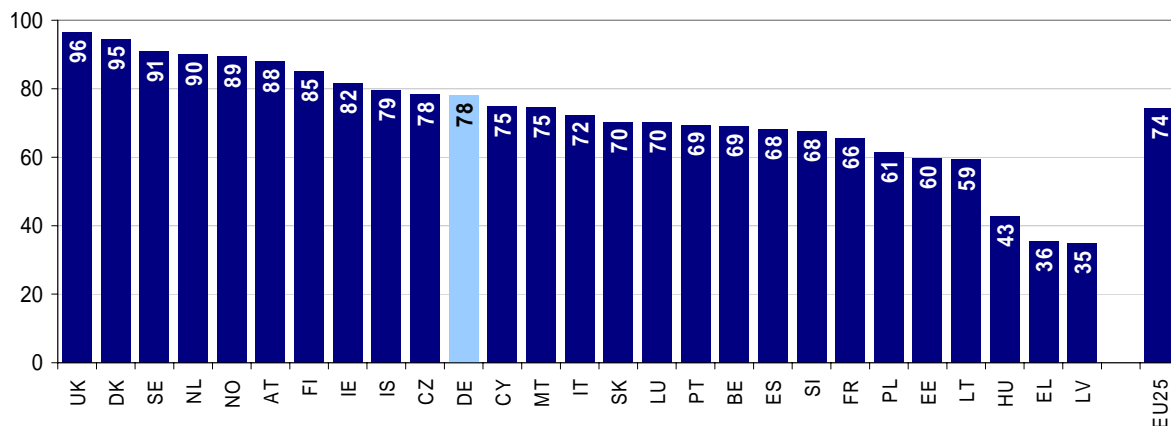
A majority (56%) of these teachers using computers use them in less than 10% of all lessons. Only 6% state that they use computers in more than half of their lessons. Teachers in vocational schools use computers in class much more frequently than their colleagues in general education.

22% of teachers in Germany still do not use computers in class. 49% state a lack of computers in their schools as an important barrier, a very high 48% of teachers not using ICT are not convinced of any benefits of using computers in class and 46% express the opinion that teachers lack the necessary skills to utilise computers in their teaching.

Here we seem to have a problem in German schools since the figures on “lack of skills”, “no or unclear benefits in using ICT” and “lack of interest” are two to three times higher than the European average. It appears that action is required in the area of motivation towards, and teacher training in, ICT use in German schools.

The still sub-optimal quality of the internet connection in many schools and very importantly the lack of motivation of teachers not using computers for using ICT are the most critical issues for a wider uptake of computers and the internet in schools in Germany.

### Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: LearnInd CTS 2006; Base: All teachers; Question: Q7. See questionnaire for exact wording

## ICT equipment in German schools 2006

			Educational Level (DE)				Type of locality (DE)			Internet Access (DE)	
	Total DE	Total EU25	Primary	Lower secondary	Upper secondary	Vocational	Densely populated	Intermediate	Thinly populated	Narrow band	Broadband
Computers per 100 pupils <sup>a</sup>	8.9	11.3	10.6	8.3	8.0	9.4	9.1	8.8	8.8	9.3	8.8
... of which internet connected	7.7	9.9	7.1	7.4	7.5	8.7	7.9	7.4	7.2	7.3	7.9
<b>Percentage of schools having...</b>											
Computers for teaching <sup>b</sup>	99.6	98.7	99.5	100.0	100.0	98.8	99.3	99.6	100.0	100.0	100.0
Internet access <sup>c</sup>	97.5	96.2	95.5	99.6	100.0	98.8	97.5	97.5	97.5	100.0	100.0
Broadband internet access <sup>d</sup>	62.9	66.9	54.1	72.0	82.5	68.1	69.8	59.0	56.0	0.0	100.0
A website <sup>e</sup>	70.2	63.0	53.5	81.8	93.9	82.8	77.6	70.1	55.1	63.0	77.0
An e-mail address for the majority of teachers <sup>f</sup>	57.6	65.2	62.2	56.8	53.0	58.8	52.5	59.4	64.6	59.5	58.8
An e-mail address for the majority of pupils <sup>g</sup>	19.7	23.5	16.9	21.9	21.5	25.1	19.2	19.4	21.3	15.9	22.6
A LAN <sup>h</sup>	66.0	55.2	58.1	77.0	83.7	68.7	69.8	63.6	62.8	53.1	75.8
An intranet <sup>i</sup>	41.2	40.8	28.6	49.8	60.5	54.6	50.5	39.0	25.8	34.3	46.6
An external support or maintenance contract <sup>j</sup>	33.7	47.1	33.8	33.5	34.4	44.8	37.4	31.9	29.4	35.3	34.2
<b>Percentage of schools using computers for education in...</b>											
Computer labs <sup>k</sup>	85.8	80.5	77.5	95.4	94.9	88.8	88.2	85.1	82.1	82.2	88.9
Classrooms <sup>l</sup>	66.1	61.4	80.1	61.2	55.2	56.5	72.3	65.2	55.1	69.8	63.8
School library <sup>m</sup>	23.0	33.4	10.6	28.5	52.7	32.5	28.1	20.2	17.6	15.8	27.7
Other locations accessible for pupils <sup>n</sup>	29.1	27.0	18.9	36.5	49.4	28.8	31.3	31.3	20.8	24.1	32.5

**Source:** LearnInd HTS 2006; **Base:** a: all pupils; b-j: all schools; k-n: schools using computers for educational purposes for pupils (cf. index b); **Question:** a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording.

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## Denmark: Key findings

Denmark is the European frontrunner in terms of ICT use in schools. All Danish schools use computers for teaching and have internet access. With 27 computers per 100 pupils, Denmark is the European country where schools are best equipped with computers. The same holds true for the internet access. There are no differences according to locality, and according to school types.

With 95% of schools connected to the internet through broadband, Denmark is about to reach the 100% saturation point. ICT and internet in general and mostly broadband internet are ubiquitously available and in use in all schools in Denmark.

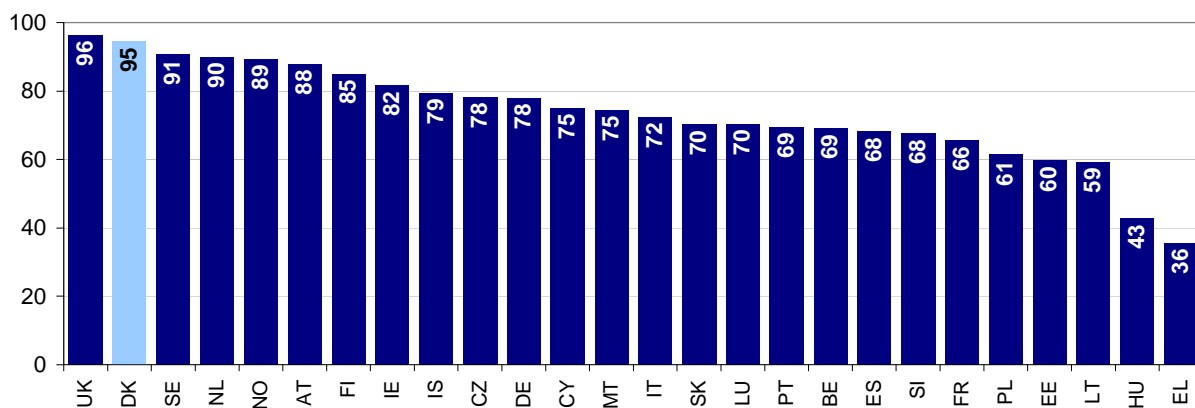
It appears as if ICT has almost entirely become an integral part of any subject without any further need of training pupils in its use as part of a dedicated subject. More than 90% of teachers use computers and the internet integrated into the teaching of most subjects, including foreign languages, as well as teaching pupils with special needs or handicaps. This holds true for all schools, whether they are located in urban or rural areas, and for all school types.

95% of Danish classroom teachers have used computers in class in the 12 months prior to the survey, with basically no variation across school types and between urban and rural areas. For most teachers, this includes not only using a computer for presentation purposes but also the use of computers by pupils in class.

Almost 50% of teachers use computers in up to 25% of their lessons, and slightly more than 50% in more than 25% of their lessons with hardly any difference according to age of teachers.

Only 5% of teachers do not use computers in class in Denmark. Asked for the most important barrier, 40% of the teachers not using computers in class state that the subject does not lend itself to being taught via computers.

### Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: LearnInd CTS 2006; Base: All teachers; Question: Q7. See questionnaire for exact wording

## ICT equipment in Danish schools 2006

	Educational Level (DK)						Type of locality (DK)			Internet Access (DK)	
	Total DK	Total EU25	Primary	Lower secondary	Upper secondary	Vocational	Densely populated	Intermediate	Thinly populated	Narrow band	Broadband
Computers per 100 pupils <sup>a</sup>	27.3	11.3	18.6	18.4	37.3	50.3	25.5	30.5	26.0	30.0*	27.3
... of which internet connected	26.3	9.9	17.9	17.9	37.2	48.0	25.2	28.6	25.2	28.0*	26.3
<b>Percentage of schools having...</b>											
Computers for teaching <sup>b</sup>	100.0	98.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0*	100.0
Internet access <sup>c</sup>	99.2	96.2	98.9	98.9	100.0	100.0	100.0	98.4	99.3	100.0*	100.0
Broadband internet access <sup>d</sup>	95.1	66.9	94.1	95.4	93.7	98.9	95.7	98.4	93.1	0.0*	100.0
A website <sup>e</sup>	98.7	63.0	98.1	98.1	100.0	100.0	100.0	96.4	99.3	100.0*	99.4
An e-mail address for the majority of teachers <sup>f</sup>	89.5	65.2	87.1	88.6	86.9	94.1	93.8	89.6	87.5	88.7*	90.2
An e-mail address for the majority of pupils <sup>g</sup>	57.5	23.5	62.3	57.8	62.6	48.0	52.4	65.5	55.5	74.0*	57.2
A LAN <sup>h</sup>	73.9	55.2	66.3	70.5	96.5	90.6	83.8	75.8	68.4	34.1*	76.2
An intranet <sup>i</sup>	73.4	40.8	70.9	73.5	86.2	74.5	82.1	67.8	72.5	66.0*	74.3
An external support or maintenance contract <sup>j</sup>	52.6	47.1	53.5	52.6	49.7	55.6	56.0	61.6	46.3	43.7*	53.4
<b>Percentage of schools using computers for education in...</b>											
Computer labs <sup>k</sup>	90.6	80.5	91.0	94.2	96.2	84.7	93.1	89.9	89.9	84.9*	90.8
Classrooms <sup>l</sup>	71.5	61.4	72.1	69.9	67.2	80.1	73.9	63.9	74.6	86.2*	71.5
School library <sup>m</sup>	71.0	33.4	81.3	75.0	76.9	37.3	81.5	69.6	67.1	84.9*	71.0
Other locations accessible for pupils <sup>n</sup>	78.1	27.0	82.0	78.3	80.4	67.2	87.2	83.7	71.1	80.1*	78.3

**Source:** LearnInd HTS 2006; **Base:** a: all pupils; b-j: all schools, k-n: schools using computers for educational purposes for pupils (cf. index b); **Question:** a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording. **Notes:** "xx.x\*": based on at least 10 and less than 50 cases.

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## Information and Communications Technologies (ICTs) in Schools

# Austria: Key findings

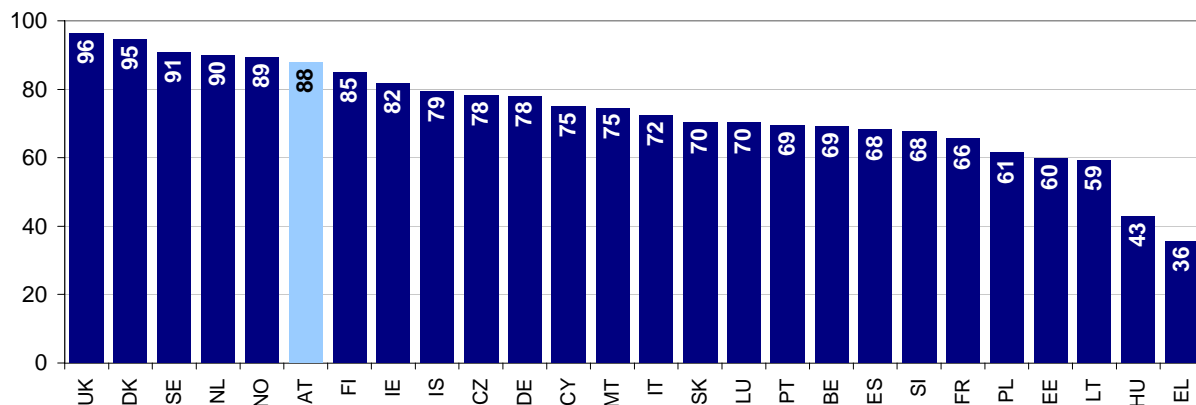
Almost all Austrian schools now use computers for teaching and have internet access. 68% use the internet via a broadband connection. With this figure Austria ranks at number 18 of the 27 countries participating in the survey. There is a large variation between school types: while only 59% of primary schools have a broadband internet connection, the penetration is highest among upper secondary schools, with 83% and vocational schools reaching 86%. There is hardly any variation with regard to broadband access between urban and rural areas.

A very high 88% of Austrian classroom teachers have used computers in class in the 12 months prior to the survey, with little variation across school types and between urban and rural areas. For most teachers, this includes not only using a computer for presentation purposes but also and predominantly the use computers by pupils in class (85% compared to 66% in the EU25).

Only 12% of teachers do not use computers in class in Austria. Asked for the most important barrier, a rather high 55% state a lack of computers in their schools as an important barrier.

Only 14% are not convinced of any benefits of using computers in class and a very low 8% express the opinion that teachers lack the necessary skills to utilise computers in their teaching. With these figures, Austria ranks among the best performers on perceived ICT competence in Europe. However, the problem in Austria seems to be the lower levels of motivation for ICT use in class by teachers.

Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: LearnInd CTS 2006; Base: All teachers; Question: Q7. See questionnaire for exact wording

### ICT equipment in Austrian schools 2006

	Educational Level (AT)						Type of locality (AT)			Internet Access (AT)	
	Total AT	Total EU25	Primary	Lower secondary	Upper secondary	Vocational	Densely populated	Intermediate	Thinly populated	Narrow band	Broadband
Computers per 100 pupils <sup>a</sup>	16.2	11.3	11.4	13.8	20.6	24.3	13.9	16.2	17.6	14.4	16.9
... of which internet connected	14.2	9.9	7.0	12.8	19.8	23.1	13.2	13.8	15.2	11.9	14.9
<b>Percentage of schools having...</b>											
Computers for teaching <sup>b</sup>	99.2	98.7	98.6	99.6	99.0	100.0	98.9	100.0	98.7	100.0	100.0
Internet access <sup>c</sup>	99.2	96.2	98.6	99.6	99.0	100.0	98.9	100.0	98.7	100.0	100.0
Broadband internet access <sup>d</sup>	68.1	66.9	58.6	72.3	82.7	85.5	66.9	72.8	65.1	0.0	100.0
A website <sup>e</sup>	64.2	63.0	45.2	80.7	99.0	95.9	92.0	60.0	60.7	52.3	70.4
An e-mail address for the majority of teachers <sup>f</sup>	76.0	65.2	74.3	76.8	72.7	82.0	80.4	74.2	76.2	78.8	75.6
An e-mail address for the majority of pupils <sup>g</sup>	21.4	23.5	9.9	29.0	26.0	39.7	27.5	14.0	25.0	13.7	25.1
A LAN <sup>h</sup>	68.2	55.2	51.8	82.7	87.7	89.3	75.7	67.6	66.9	53.1	75.9
An intranet <sup>i</sup>	38.6	40.8	23.5	48.9	68.6	65.9	61.5	30.0	39.3	26.4	44.6
An external support or maintenance contract <sup>j</sup>	32.3	47.1	28.2	45.6	37.4	27.8	40.0	31.5	31.2	32.3	32.8
<b>Percentage of schools using computers for education in...</b>											
Computer labs <sup>k</sup>	50.7	80.5	21.1	87.6	98.3	84.4	64.7	53.3	45.7	34.3	58.2
Classrooms <sup>l</sup>	64.8	61.4	87.4	37.3	39.8	36.7	53.7	64.4	67.7	77.5	59.1
School library <sup>m</sup>	16.9	33.4	3.8	39.5	63.4	21.5	25.1	14.0	17.0	8.4	20.7
Other locations accessible for pupils <sup>n</sup>	25.9	27.0	14.5	31.0	74.2	54.8	33.9	24.9	24.7	14.1	31.2

*Source: LearnInd HTS 2006; Base: a: all pupils; b-j: all schools, k-n: schools using computers for educational purposes for pupils (cf. index b); Question: a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording.*

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## Czech Republic: Key findings

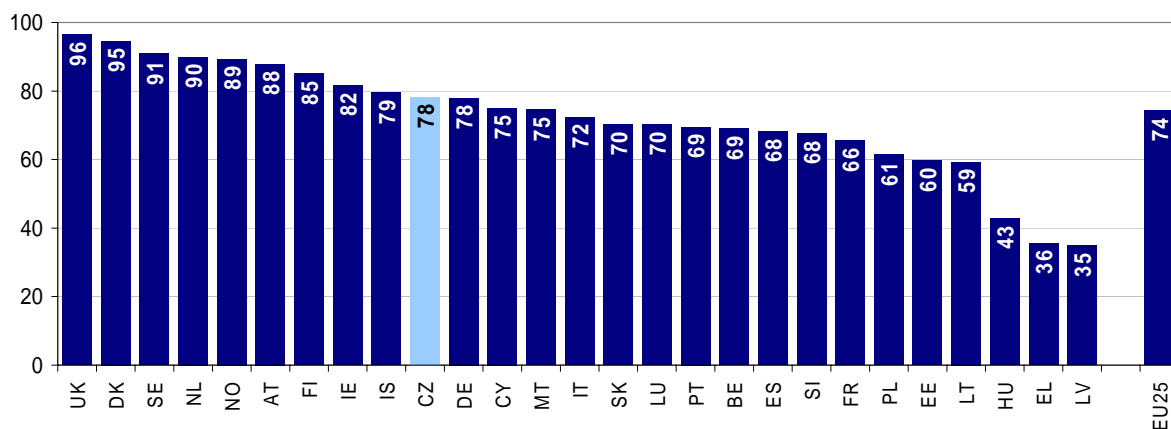
(Almost) all Czech schools are equipped with computers and internet connection. 63% use the internet via a broadband connection. With this figure the Czech Republic ranks at number 22 of the 27 countries participating in the survey. There is a large variation between school types: while only 55% of primary schools have a broadband internet connection, at 77% the penetration is highest among upper secondary schools. Rural areas also lag behind urban ones in terms of broadband access, with 56% of the former connected to the internet via broadband as opposed to 74% of the latter.

The vast majority of schools use ICT in computer labs (91%). This seems to be the typical location where most pupils are confronted with ICT in schools. 36% of the teachers using computers use them in less than 10% of all lessons. Teachers in vocational schools use computers in class much more frequently than their colleagues in general education.

22% of teachers in the Czech Republic still do not use computers in class. 44% state a lack of computers in their schools as an important barrier but only 16% express the opinion that teachers lack the necessary skills to utilise computers in their teaching.

The as yet sub-optimal quality of the internet connection in many schools requires some improvement. Czech schools could probably also benefit from higher levels of integration of ICT in teaching subjects in class as opposed to mostly using ICT only in dedicated computer labs, although the intensity of ICT use in Czech schools is at a level above the European average with hardly any differences according to the age of teachers.

### Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: LearnInd CTS 2006; Base: All teachers; Question: Q7. See questionnaire for exact wording

## ICT equipment in Czech schools 2006

	Educational Level (CZ)			Type of locality (CZ)				Internet Access (CZ)				
	Total CZ	Total EU25	Total NMS10	Primary	Lower secondary	Upper secondary	Vocational	Densely populated	Intermediate	Thinly populated	Narrow-band	Broadband
Computers per 100 pupils <sup>a</sup>	9.3	11.3	7.1	7.6	7.2	10.9	12.1	9.2	8.8	9.7	9.0	9.4
... of which internet connected	8.2	9.9	6.4	6.4	6.2	10.1	11.0	8.0	7.9	8.7	7.8	8.4
<b>Percentage of schools having...</b>												
Computers for teaching <sup>b</sup>	99.6	98.7	96.7	99.4	99.6	100.0	100.0	100.0	98.5	100.0	100.0	100.0
Internet access <sup>c</sup>	99.2	96.2	94.7	98.8	99.2	100.0	100.0	100.0	98.5	99.1	100.0	100.0
Broadband internet access <sup>d</sup>	62.6	66.9	43.4	54.9	60.3	77.2	76.4	73.9	63.0	55.5	0.0	100.0
A website <sup>e</sup>	74.8	63.0	66.7	63.0	78.9	99.4	99.2	91.3	73.3	65.6	66.7	80.5
An e-mail address for the majority of teachers <sup>f</sup>	83.6	65.2	48.1	84.2	81.4	83.3	82.9	86.2	82.2	82.8	85.8	83.4
An e-mail address for the majority of pupils <sup>g</sup>	45.4	23.5	24.4	45.7	44.9	43.8	41.5	42.8	44.4	47.6	48.1	44.4
A LAN <sup>h</sup>	80.6	55.2	60.4	77.9	80.2	85.8	86.2	79.7	85.9	78.0	79.2	82.4
An intranet <sup>i</sup>	38.8	40.8	26.9	34.6	36.0	48.1	48.0	41.3	37.8	37.9	35.0	41.5
An external support or maintenance contract <sup>j</sup>	65.8	47.1	44.3	76.4	72.9	44.4	48.0	61.6	63.7	69.6	76.5	60.4
<b>Percentage of schools using computers for education in...</b>												
Computer labs <sup>k</sup>	90.7	80.5	94.6	86.5	96.7	99.4	100.0	94.2	91.7	88.1	87.4	92.6
Classrooms <sup>l</sup>	47.6	61.4	29.5	48.0	44.7	46.3	42.3	51.4	46.6	45.8	45.9	48.9
School library <sup>m</sup>	19.9	33.4	36.8	11.4	17.5	35.2	35.8	30.4	18.8	14.1	16.4	22.0
Other locations accessible for pupils <sup>n</sup>	23.9	27.0	20.2	18.0	23.6	34.0	35.8	18.1	20.3	29.5	25.1	22.7

*Source: LearnInd HTS 2006; Base: a: all pupils; b-j: all schools, k-n: schools using computers for educational purposes for pupils (cf. index b); Question: a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording.*

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## Information and Communications Technologies (ICTs) in Schools

# Iceland: Key findings

All Icelandic schools now use computers for teaching and have internet access. A very high 92% use the internet via a broadband connection. With this figure Iceland ranks at number 5 of the 27 countries participating in the survey. There is very little variation between school types.

80% of Icelandic classroom teachers had used computers in class in the 12 months prior to the survey, with little variation across school types and between urban and rural areas. The share of intensive ICT users is much higher in secondary and vocational schools, where it reaches figures above 70%. Only in primary schools do just over one third of teachers use ICT in class.

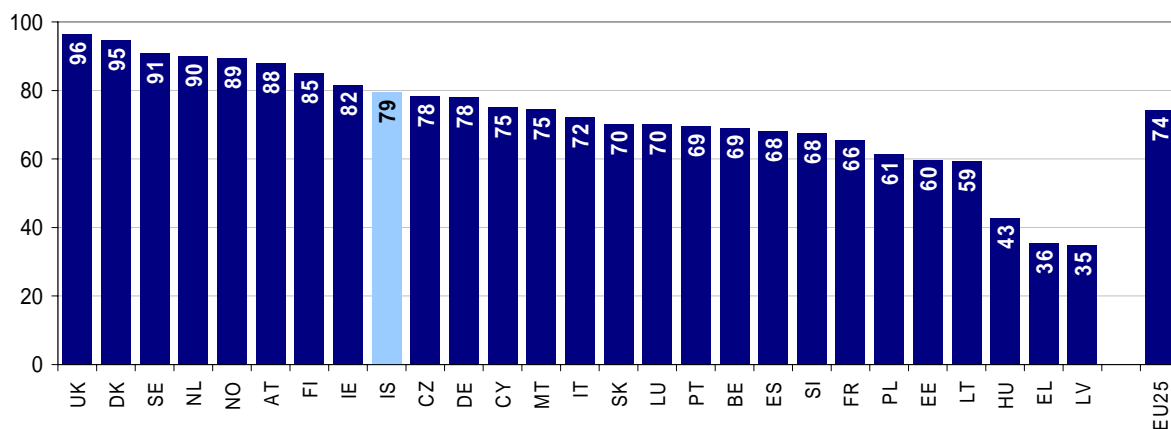
Icelandic teachers rely very heavily on existing online material from established educational sources (87% compared to an EU25 average of 74% resulting in rank 2 in Europe).

There is no difference in ICT use according to age of teachers in Iceland (indicator used here: years of teaching experience).

20% of teachers do not use computers in class in Iceland. When asked for the most important barrier, half of the teachers state that their subject does not lend itself to being taught with the use of ICT.

Only 35% wish there were better ICT support and maintenance actions taken. This is by far the lowest figure in Europe and demonstrates the very good level of ICT equipment and related service provision in Icelandic schools.

### Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: LearnInd CTS 2006; Base: All teachers; Question: Q7. See questionnaire for exact wording

## ICT equipment in Icelandic schools 2006

	Educational Level (IS)						Type of locality (IS)			Internet Access (IS)	
	Total IS	Total EU25	Primary	Lower secondary	Upper secondary	Vocational	Densely populated	Intermediate	Thinly populated	Narrow-band	Broadband
Computers per 100 pupils <sup>a</sup>	15.3	11.3	14.5	14.3**	17.3*	18.8*	N/A	14.9	15.9	18.1*	15.3
... of which internet connected	14.8	9.9	14.1	14.3**	17.2*	17.6*	N/A	14.2	15.6	17.3*	14.7
<b>Percentage of schools having...</b>											
Computers for teaching <sup>b</sup>	99.5	98.7	100.0	100.0**	100.0*	94.6*	N/A	98.7	100.0	100.0*	100.0
Internet access <sup>c</sup>	99.5	96.2	100.0	100.0**	100.0*	94.6*	N/A	98.7	100.0	100.0*	100.0
Broadband internet access <sup>d</sup>	91.5	66.9	91.0	100.0**	100.0*	89.7*	N/A	98.7	86.8	0.0*	100.0
A website <sup>e</sup>	93.6	63.0	92.9	100.0**	100.0*	94.6*	N/A	98.7	90.3	59.8*	97.1
An e-mail address for the majority of teachers <sup>f</sup>	96.1	65.2	96.8	77.3**	100.0*	94.6*	N/A	96.8	95.6	93.2*	96.9
An e-mail address for the majority of pupils <sup>g</sup>	35.6	23.5	26.9	77.3**	83.9*	69.4*	N/A	54.5	23.2	13.4*	37.7
A LAN <sup>h</sup>	64.7	55.2	59.6	77.3**	100.0*	89.7*	N/A	64.8	64.7	26.8*	68.4
An intranet <sup>i</sup>	73.7	40.8	72.8	61.3**	92.2*	79.2*	N/A	76.3	72.0	47.1*	76.4
An external support or maintenance contract <sup>j</sup>	59.7	47.1	64.0	16.0**	50.2*	37.7*	N/A	44.7	69.6	60.5*	60.0
<b>Percentage of schools using computers for education in...</b>											
Computer labs <sup>k</sup>	84.1	80.5	82.8	100.0**	91.4*	88.3*	N/A	92.0	79.0	53.9*	86.7
Classrooms <sup>l</sup>	67.7	61.4	71.9	38.7**	47.9*	34.8*	N/A	74.7	63.3	59.5*	68.4
School library <sup>m</sup>	49.3	33.4	47.1	61.3**	65.5*	58.1*	N/A	63.6	40.2	13.4*	52.4
Other locations accessible for pupils <sup>n</sup>	39.7	27.0	37.1	77.3**	47.4*	46.0*	N/A	46.3	35.6	39.5*	39.8

Source: LearnInd HTS 2006; Base: a: all pupils; b-j: all schools, k-n: schools using computers for educational purposes for pupils (cf. index b); Question: a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording. Notes: "xx.x\*": based on at least 10 and less than 50 cases; "xx.x\*\*" based on less than 10 cases. No densely populated areas existing in Ireland.

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