European Schoolnet

University of Liege
Psychology and
Education

SURVEY OF SCHOOLS: ICT IN EDUCATION

COUNTRY PROFILE: POLAND

November 2012

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1. INTRODUCTION

ICT IN THE SCHOOL EDUCATION SYSTEM OF POLAND

In Poland[1], the education system is centrally managed by the ministry of National Education and the ministry of Science and Higher Education. Full-time compulsory education in school covers children and young people aged 6-16 years, whereas part-time compulsory education (to be received in school or non-school settings) concerns young people aged 16-18 years. Upper secondary schools, which are not compulsory, are attended by the vast majority of the population in the age group 16-19/20 years and are administered by district authorities. Only the national educational policy is developed and implemented centrally, while the management of education and the administration of schools is decentralized. The responsibility for the administration of primary schools and lower secondary schools is delegated to the commune, with management of schools above the lower-secondary level, art schools and special schools has delegated to districts as their statutory responsibility. The responsibility for pedagogical supervision rests with the heads of the regional education authorities in 16 provinces

According to Eurydice's **Key Data on Learning and Innovation through ICT at school in Europe**[2], in Poland there are national strategies covering training measures in all areas[3] except for the area of ICT in schools. There are central steering documents for all ICT learning objectives[4] at secondary education level and for knowledge of computer hardware and electronic, using a computer, using mobile devices, and searching for information, at primary level. In primary and secondary schools ICT is taught as a general tool for other subjects/or as a tool for specific tasks in other subjects, and also taught as a separate subject, and in addition in secondary schools ICT is included within technology as a subject. At primary and secondary education level recommendations or suggestions and support are provided in all ICT hardware areas, and for all ICT software categories[5]. According to official steering documents, students and teachers at secondary level are not expected to use ICT in subjects either in class or for complementary activities. There are no central recommendations on the use of ICT in student assessment. Public-private partnerships for promoting the use of ICT are encouraged for providing extra-curricular activities.

THE SURVEY OF SCHOOLS: ICT IN EDUCATION

In 2011, the European Commission Directorate General Communications Networks, Content and Technology[6] launched the Survey of Schools: ICT in Education, the primary goal of which is to benchmark countries' performance in terms of access, use and attitudes to ICT at grades 4, 8 and 11.

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[1] https://webgate.ec.europa.eu/fpfis/mwikis/eurydice/index.php?title=Home

[2] http://eacea.ec.europa.eu/education/eurydice/documents/key_data_series/129EN.pdf**, published in 2011, specifically the following tables and associated commentaries:** A6, B6, B7, C2, C3, C4, C12 and E10.

[3] from the following areas: ICT in schools, e-learning, e-inclusion, digital/media literacy, e-skills development.

[4] i.e. knowledge of computer hardware and electronics, using a computer, using mobile devices, using office applications, searching for information, using multimedia, developing programming skills, and using social media.

[5] from a range of hardware and software, i.e. computers, projectors or beamers, DVDs, videos, TV, cameras, mobile devices, e-book readers, smartboards, virtual learning environments; tutorial software, office applications, multimedia applications, digital learning games, communication software, digital resources.

[6] www.ec.europa.eu/dgs/connect/

The Survey of Schools is one of a series within the European Union's cross-sector benchmarking activities comparing national progress to Digital Agenda for Europe (DAE) and EU2020 goals. The Survey is funded by the European Commission Communications Networks, Content and Technology Directorate General and is a partnership between European Schoolnet and the Service d'Approches Quantitatives des faits éducatifs in the Department of Education of the University of Liège. The survey took place between January 2011 and May 2012, with data collection in autumn 2011, and covered 31 countries (the EU27, Croatia, Iceland, Norway and Turkey). In four countries (Germany, Iceland, Netherlands and the United Kingdom) the response rate was insufficient, making reliable analysis of the data impossible; therefore the findings in this report are based on data from 27 countries.

This country profile should be read in conjunction with the Report of the Survey of Schools: ICT in Education (the 'main report'). The profile presents key indicators concerning access, use and attitudes to Information and Communication Technology in primary and secondary schools derived from responses to surveys completed by head teachers, teachers and students, showing national results against the EU average and, where possible, for grade 8 only. Charts for this grade are shown but not for other grades for reasons of brevity and clarity and because results at this grade tend to be indicative of all grades (i.e. having the characteristics and revealing issues found both at grade 4 and at grade 11). The text provides information about the results and rankings at other grades and a reference to the particular chart in the main report.

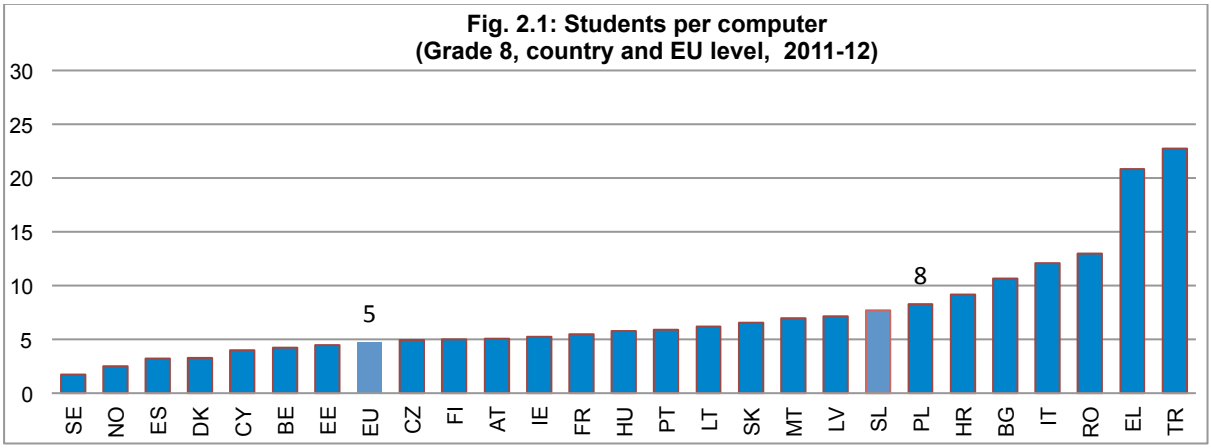
The full report, country profiles, background information, questionnaires, tables, details of the methodology and the raw data are freely available at https://ec.europa.eu/digital-agenda/en/pillar-6-enhancing-digital-literacy-skills-and-inclusion. The authors may be contacted at essie-eu@eun.org and information about the survey is at http://essie.eun.org.

2. ICT INFRASTRUCTURE

AVAILABILITY OF COMPUTERS FOR EDUCATIONAL PURPOSES

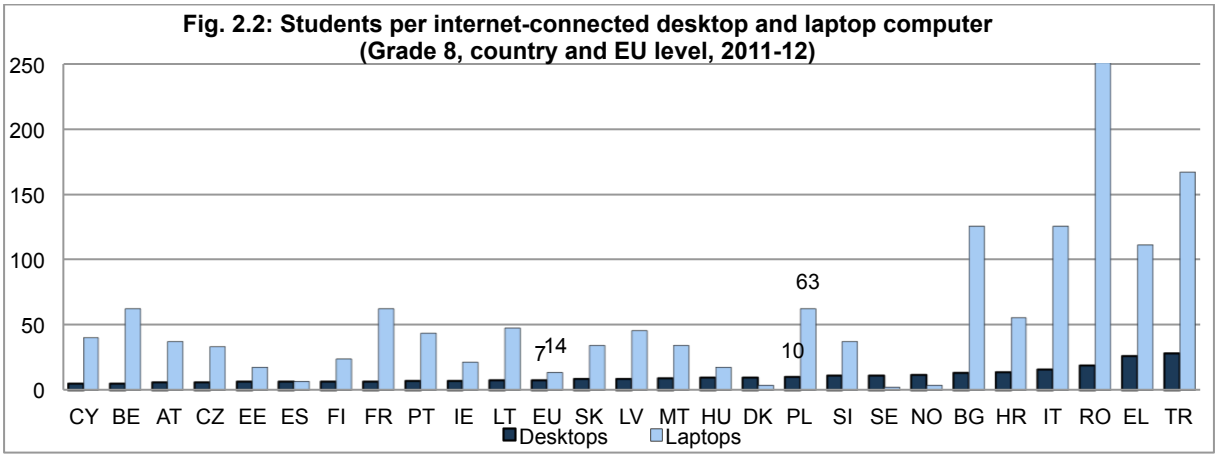
A computer is defined as a desktop or laptop, netbook or tablet computer, whether or not connected to the internet, available for educational purposes in school. In Poland there are fewer computers available for all grade students than the EU average and provision is fairly consistent at all grades, although it is close to the EU average at grade 4. In most countries the older the student the more the computers (main report, fig. 1.1), and although it is less than half this trend is also reflected in Poland at grade 11 vocational. Fig. 2.1 shows that at grade 8 Poland ranks in the lower group of countries on this indicator with 8 students per computer. At other grades (main report, fig. 1.1) the position is similar.

Fig. 2.1: Students per computer (Grade 8, country and EU level, 2011-12)



As for computers connected to the internet in schools, in Poland there is below the EU average provision of desktop computers and considerably fewer laptops for students at all grades (grade 8 fig. 2.1, main report fig. 1.2).

Fig. 2.2: Students per internet-connected desktop and laptop computer (Grade 8, country and EU level, 2011-12)



Computers tend to be located in dedicated labs rather than classrooms at all grades (main report, fig. 1.3). Poland is well above the EU average, with 85% grade 8 students in schools where over 90% of computers are operational (main report, fig. 1.4).

With high numbers of students per interactive whiteboard at all grades, Poland ranks in the lower group of countries (main report, fig. 1.5) and the situation is similar as regards students per data

projector (main report, fig. 1.6). Maintenance of ICT equipment is very much a task for school personnel (main report fig. 1.12).

BROADBAND

In Poland the numbers of students in schools without broadband is generally lower than the EU mean. At all grades percentages of students in schools with broadband faster than 5mbps is lower at grades 4 and 8 but close to the EU mean at grade 11.

Fig. 2.3: Broadband speed
(% students excluding 'don't know', Poland and EU, 2011-12)

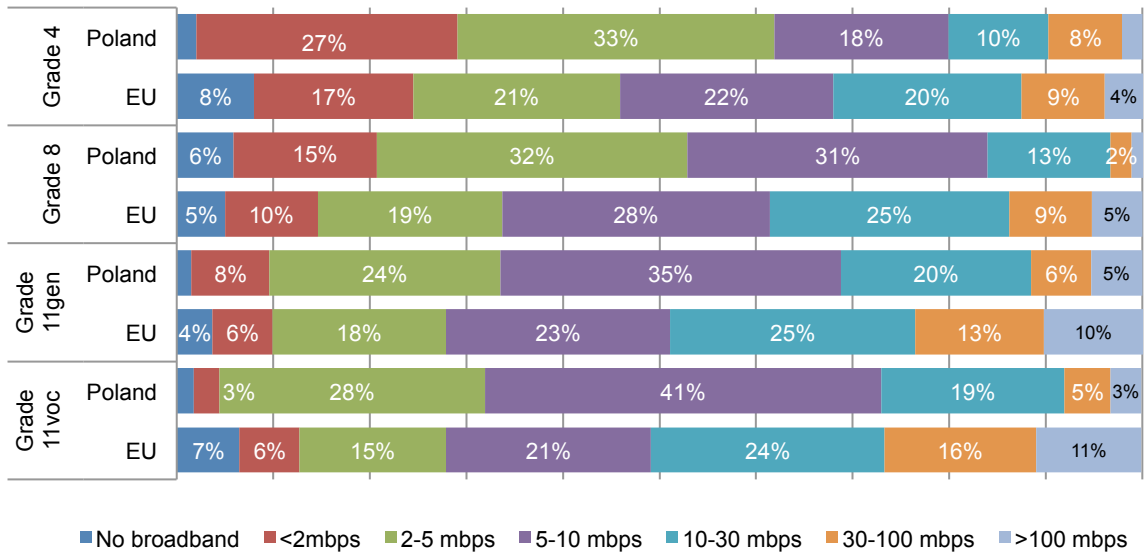
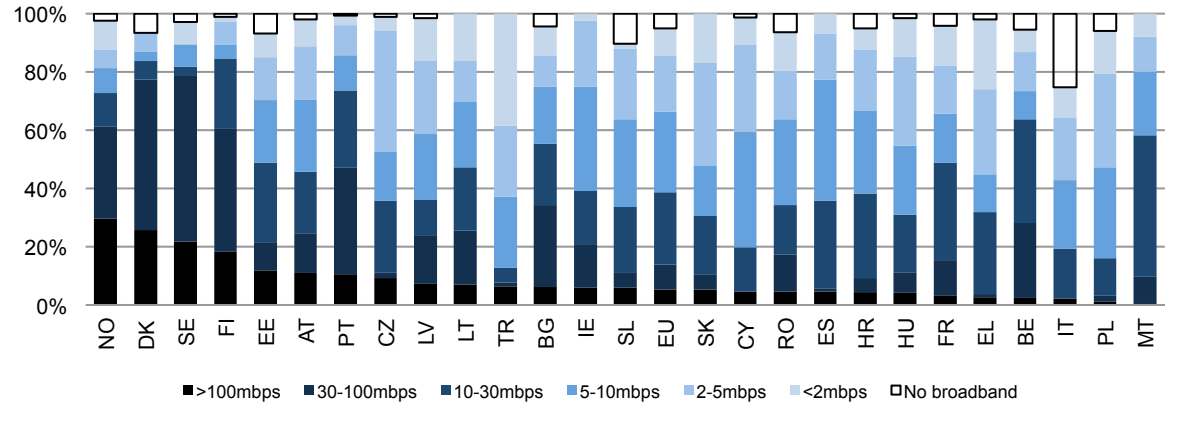


Fig. 2.4 shows how Poland compares with other countries at grade 8: a low percentage of students in schools with fast broadband and 6% in schools without broadband. At other grades Poland ranks higher and there are fewer students in schools without any broadband (main report, fig. 1.8).

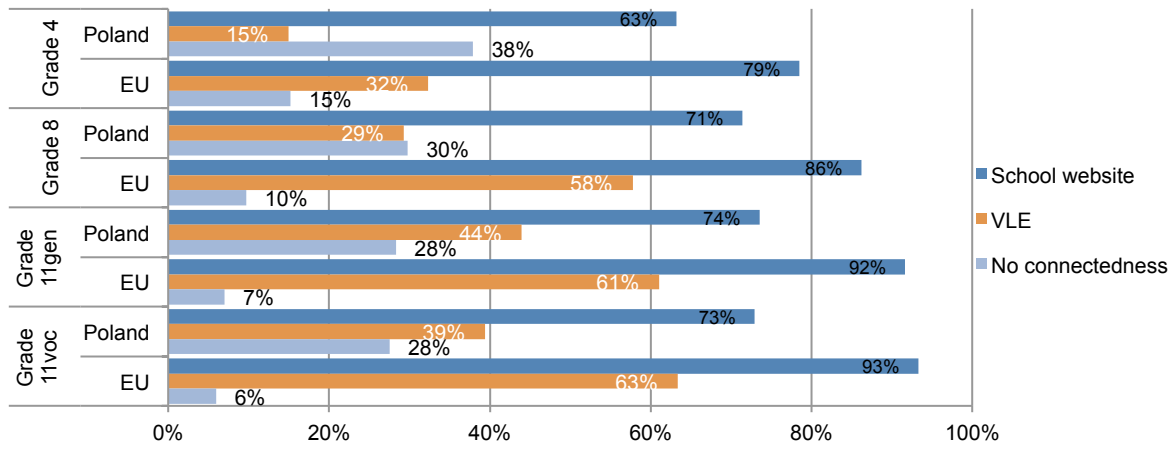
Fig. 2.4: Broadband speed
(Grade 8, country and EU level, 2011-12, ranked by >100mbps, 2011-12)



‘CONNECTEDNESS’

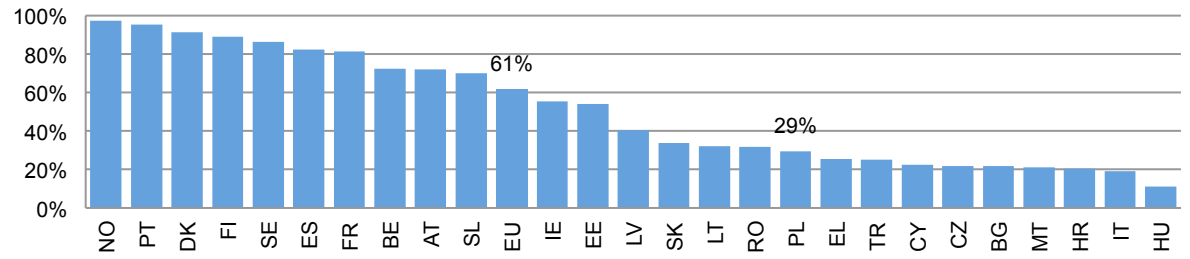
Percentages of students in schools that have ‘connected’ characteristics, e.g. having a website or a virtual learning environment (VLE) are shown below, as well as those with none of these items. In Poland, a lower percentage of than the EU mean are in schools with a website, and also fewer in schools with a virtual learning environment at all grades. Percentages of ‘unconnected’ schools are consistently higher that the EU average.

Fig. 2.5: Percentage of students in connected schools - website, virtual learning environment, no connectedness
(Poland and EU, 2011-12)



Poland ranks well below other countries as regards virtual learning environments at all grades (fig. 2.6, main report fig. 1.10). Of schools with VLEs, relatively few offer external access (main report fig. 1.11).

Fig. 2.6: % of students in schools with a virtual learning environment (Grade 8; country and EU level, 2011-12)



3. FREQUENCY OF ICT USE IN CLASS

FREQUENCY OF ICT USE BY TEACHERS IN CLASS

Teachers' frequency of use of ICT in lessons is shown in the charts below. In Poland ICT frequency of use by teachers is close to the EU average. The number of teachers using ICT in more than 25% of lessons, is close to the EU average. The most intense use of ICT is found at grade 11 vocational where over a quarter use it in more than 75% of lessons.

Fig. 3.1: Frequency of use of ICTequipment by teachers in lessons
(in % students, Poland and EU, 2011-12)

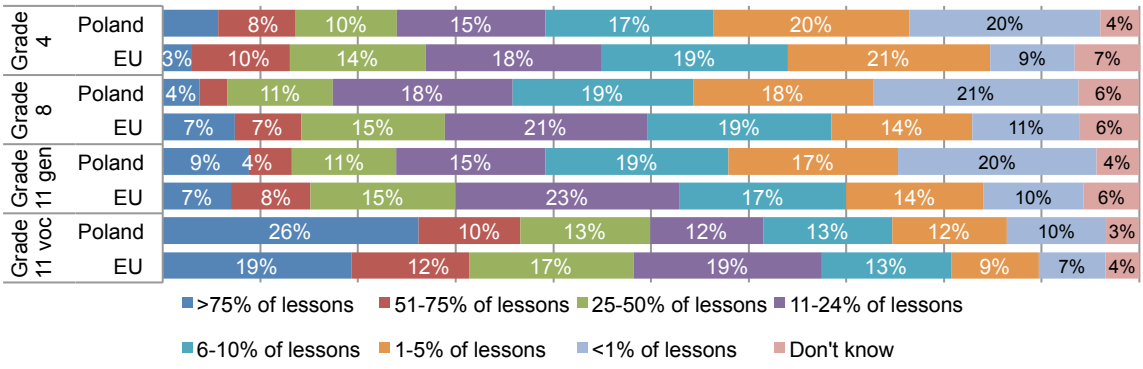


Fig. 3.2: Teachers' use of ICT in at least 25% of lessons
(% students, Poland and EU, 2011-12)

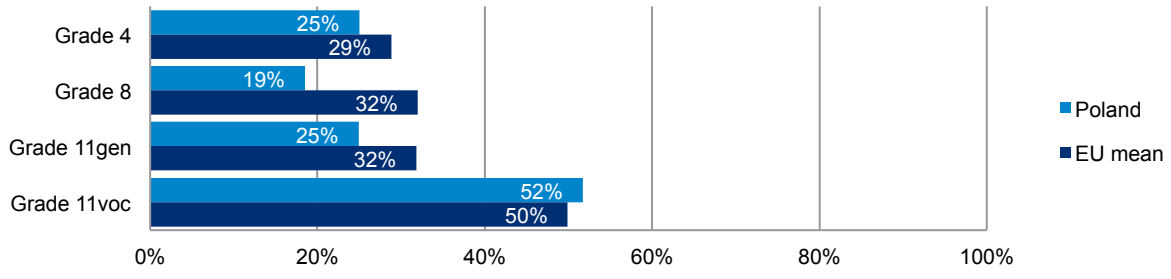
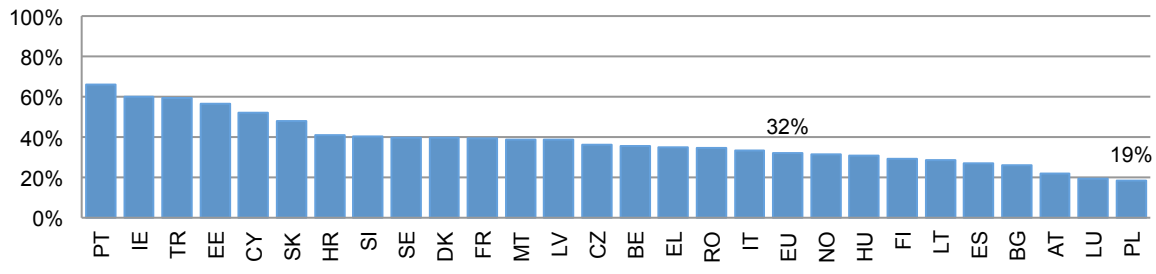


Fig 3.3 shows Poland ranks last at grade 8 for percentage of students in schools where teachers use ICT in more than one lesson in four, and in the bottom third at other grades (main report, fig. 2.2).

Fig. 3.3: Teachers' use of ICT in more than 25% of lessons
(Grade 8, EU and country level, 2011-12)

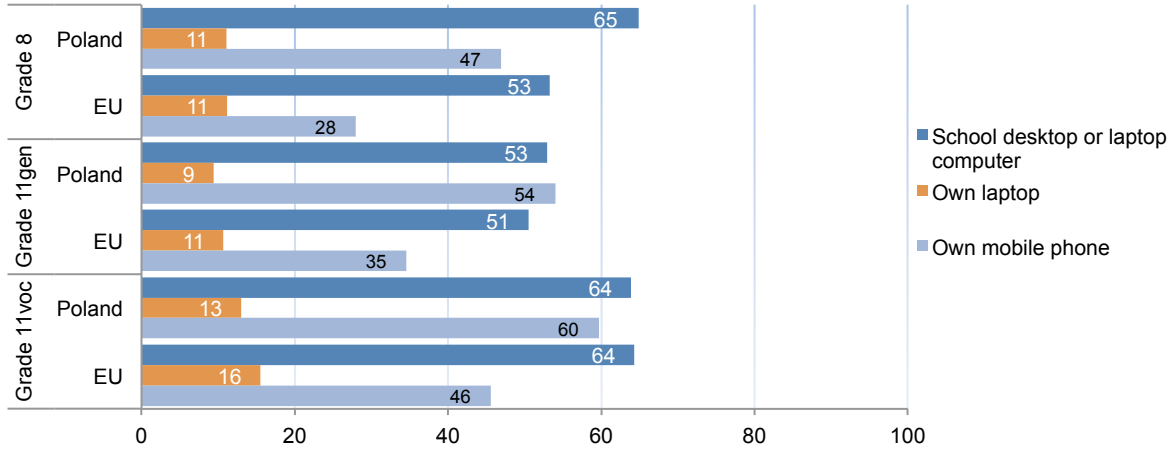


Yet as regards teachers' use of ICT (Section 3 of the main report), relatively high percentages of teachers in Poland have been using ICT in lessons for more than six years except at grade 11 vocational (main report, fig 3.2). Poland is among the middle group of countries in terms of student-centred learning (fig. 3.5).

STUDENTS' ICT USE

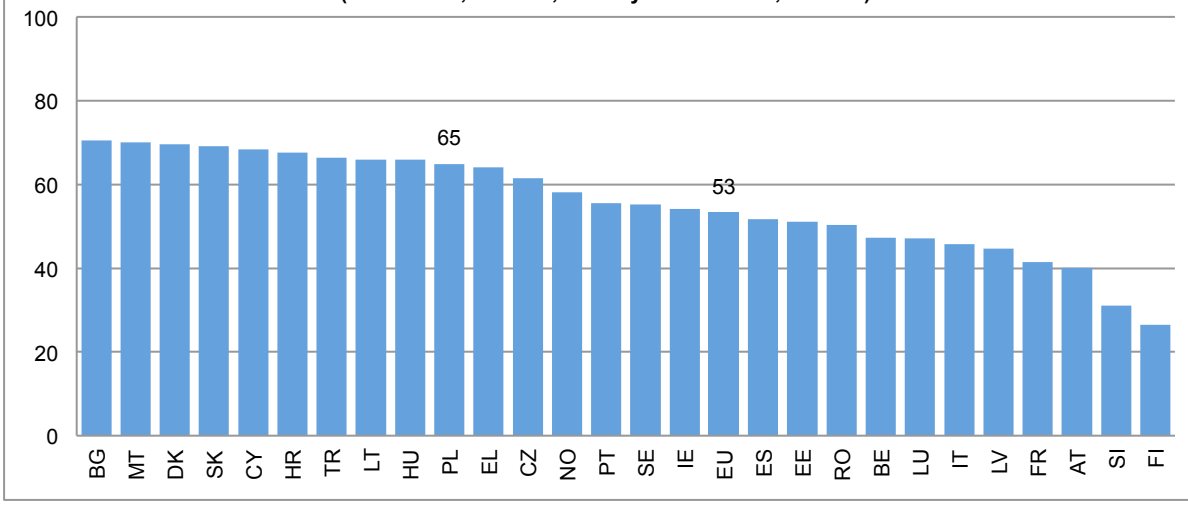
Students at grade 8 and 11 were also asked how frequently they used various items of ICT equipment in their lessons for learning purposes. The chart below shows their reported intensity of use of a school computer, and their own laptop or mobile phone. In Poland student use of computers in class is close to the EU mean, while their use of their own laptop is in line with the EU mean. Mobile phone usage is above the EU mean at all grades.

Fig. 3.4: Percentages of students using ICT equipment in class for learning, at least once a week
(Poland and EU, 2011-12)



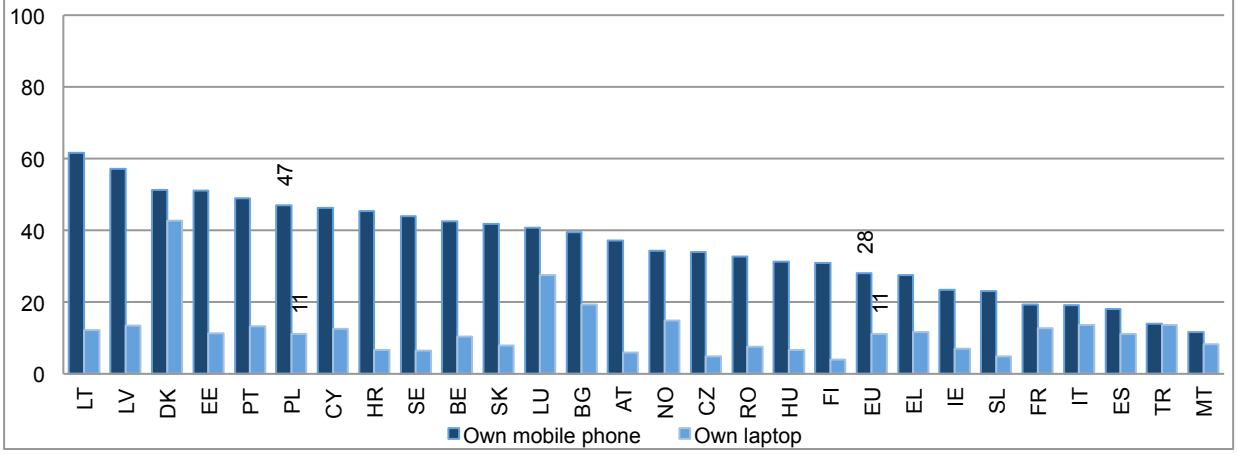
At grade 8 students' reported use of computers is tenth highest in Europe, 65% saying they use them at least once a week (fig. 3.5), but lower at grade 11 (main report fig. 2.5).

Fig. 3.5 Use of school desktop/laptop for learning purposes at least weekly
(% students, Grade 8, country and EU level, 2011-12)



Compared to other countries at grade 8 (fig.3.6), students in Poland are relatively heavy users of their own mobile phone but there is less use of their own laptop in school. At other grades these figures rank Poland in the top five countries for mobile phone use in lessons for learning (main report fig. 2.5).

Fig. 3.6 Use of own mobile phone or laptop for learning purposes at least weekly
(% students, Grade 8, country and EU level, 2011-12)



Students reported use of interactive whiteboards is around the EU average at all grades (main report, fig. 2.6). Concerning students' ICT-based activities during lessons, Poland is among the middle-ranking countries as measured by frequency of use (main report, fig. 3.8) at all grades.

4. DIGITAL CONFIDENCE

TEACHERS

In Poland teachers' confidence in their operational skills with ICT is higher than the EU mean (close to 'somewhat') at all grades. Their confidence in social media skills is generally above the EU mean (between 'a little' and 'somewhat').

Fig. 4.1: Teachers' self-confidence in their operational and social media skills

(by grade; mean score of students with 1 being 'none' and 4 being 'a lot'; Poland and EU; 2011-12)

Fig. 4.1a: grade 4

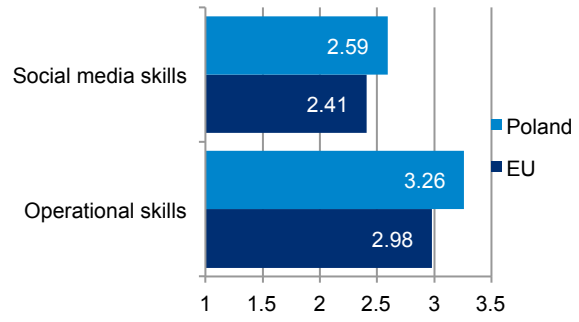


Fig. 4.1b: grade 8

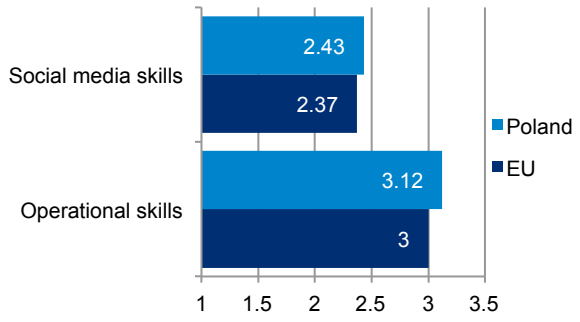


Fig. 4.1c: grade 11 gen.

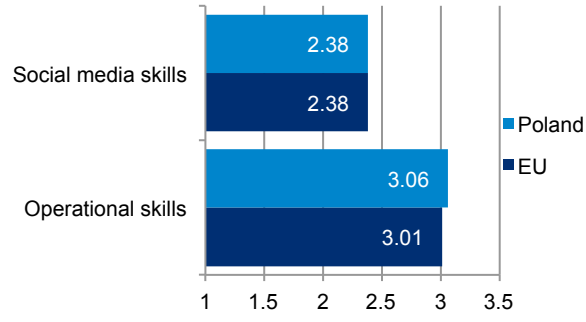
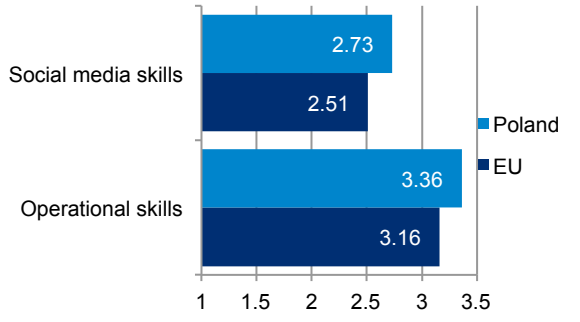


Fig. 4.1d: grade 11 voc.



Comparing confidence levels at grade 8, teachers' confidence in their operational skills places Poland sixth (fig. 4.1e), and in the upper group of countries at other grades (main report fig 4.13). Poland is also above the EU mean as regards social media confidence (fig. 4.1f, main report fig. 4.14).

Fig. 4.1e Teachers' confidence in their operational skills
(Grade 8, country and EU level, 2011-12)

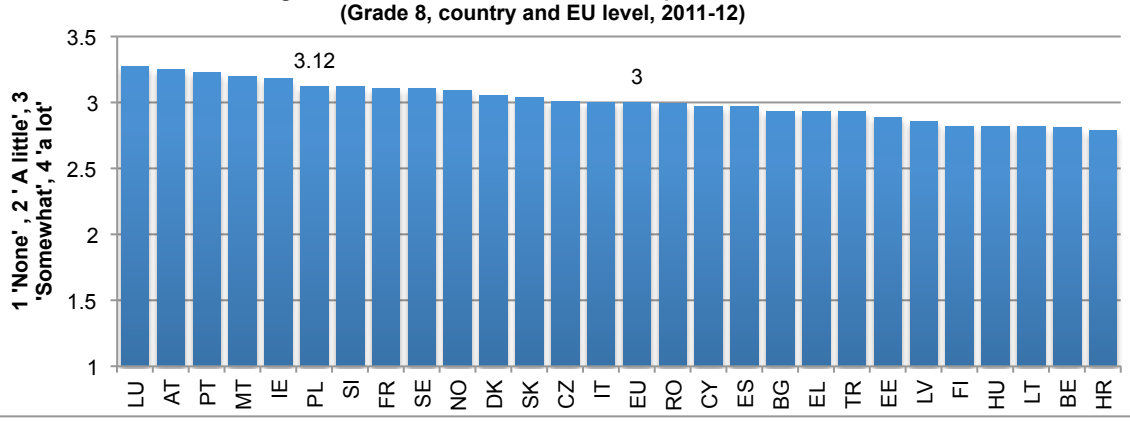
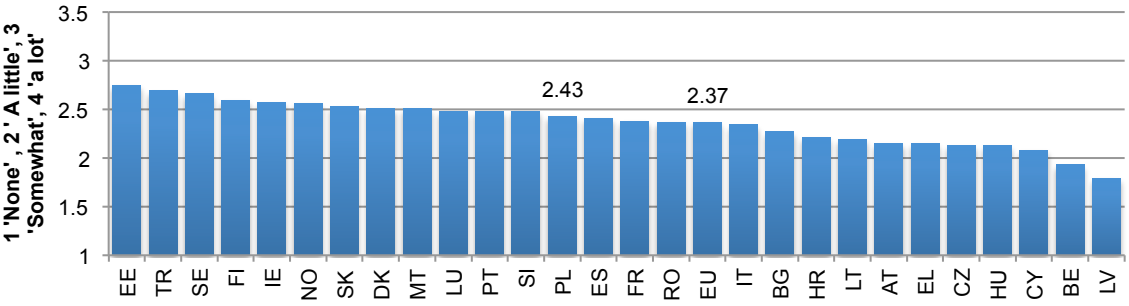


Fig. 4.1f Teachers' confidence in their social media skills
(Grade 8, country and EU level, 2011-12)



STUDENTS

In Poland students' confidence in their social media and operational ICT skills is above the EU mean at all grades.

Fig. 4.2: Students' self-confidence in their ICT skills

(by grade; mean score of students with 1 being 'none' and 4 being 'a lot'; Poland and EU; 2011-12)

Fig. 4.2a: grade 8

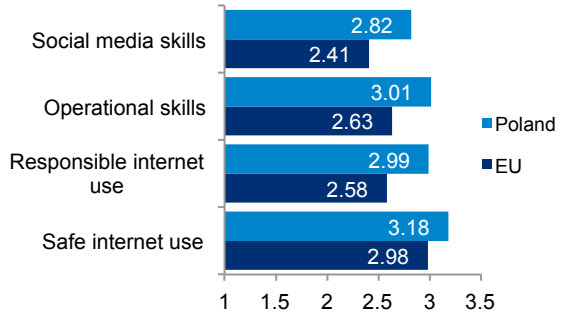


Fig. 4.2b: grade 11 gen.

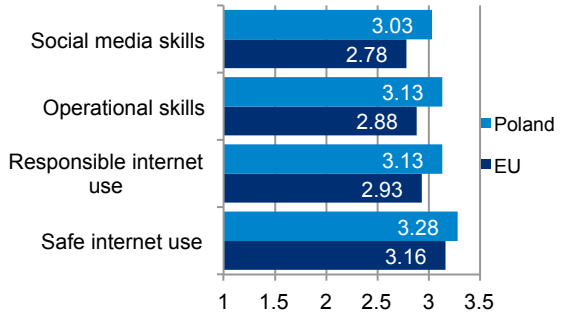
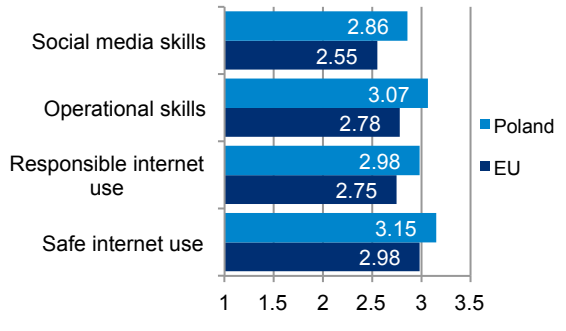
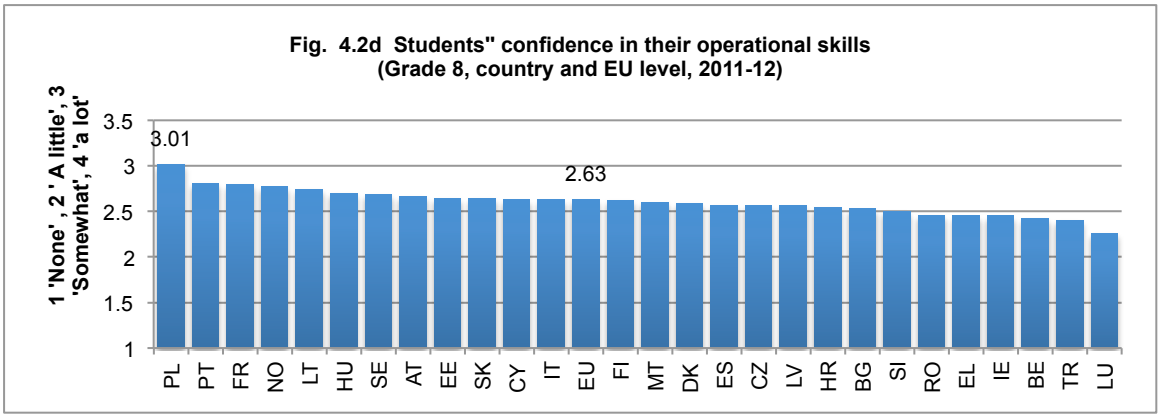
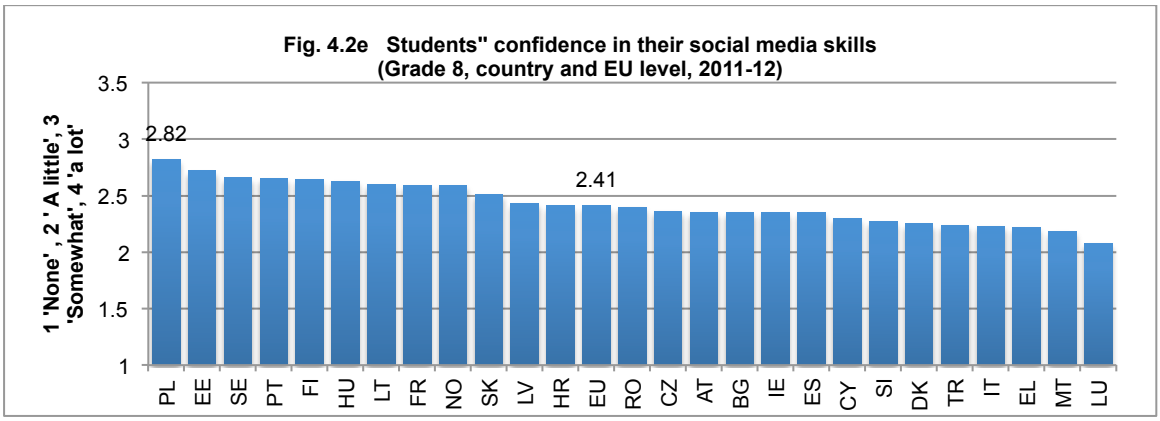


Fig. 4.2c: grade 11 voc.



Confidence in operational skills is higher than any other country amongst grade 8 students (fig. 4.2d) and in the top two at grade 11 (main report, fig. 4.18). In social media at all grades Poland ranks first (fig. 4.2e for grade 8, main report fig. 4.19).





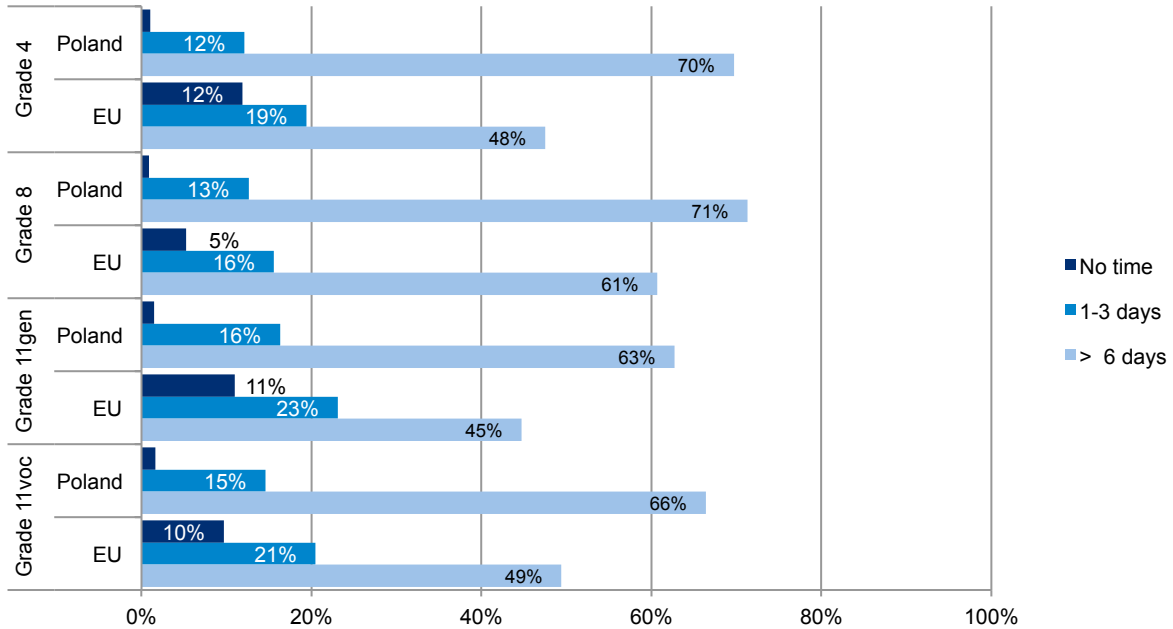
At all grades students in Poland are, on average, well above the EU average in terms of confidence to use the internet safely, and to use it responsibly (main report, fig. 4.16, 4.17).

5. PROFESSIONAL DEVELOPMENT

TIME SPENT ON TRAINING

In Poland the percentage of students in schools where teachers have spent no time on ICT professional development activities is well below the EU mean. Conversely it is clear that large numbers have undertaken more than six days' ICT training in the past two years, with more than 60% of students in schools where teachers have had more than 6 days' training, with more than 70% fewer at grade 8.

Fig. 5.1: Time invested by teachers in professional development activities during the past two years (in % of students; excluding '4-6 days' and '< 1 day'; Poland and EU; 2011-12)



ENGAGEMENT IN TRAINING

As Fig. 5.2 below shows, high percentages are reported of students taught by teachers who have recently undergone ICT training provided by school staff at grade 11, but grades 4 and 8 grades are below the EU mean. However generally fewer are in schools where teachers have recently undergone ICT training provided by school staff or received personalised training (below the EU average).

Fig. 5.2: Means through which teachers have engaged in ICT related professional development during the past two years

(by grade; in % of students; Poland and EU; 2011-12)

Fig. 5.2a: grade 4

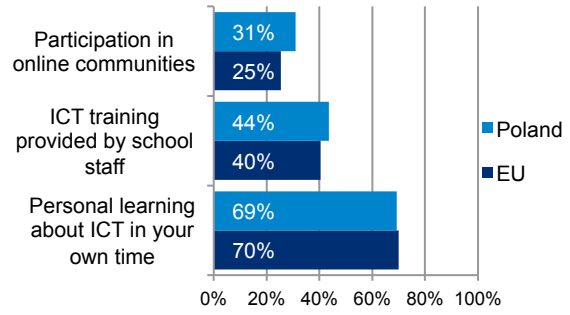


Fig. 5.2b: grade 8

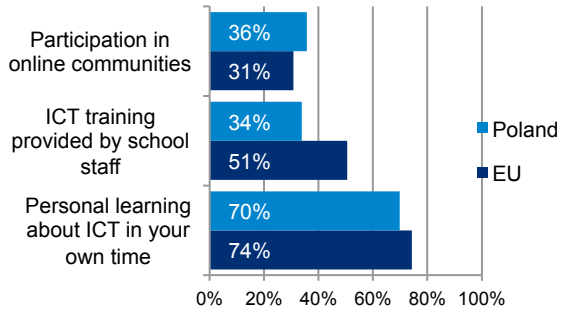


Fig. 5.2c: grade 11 gen.

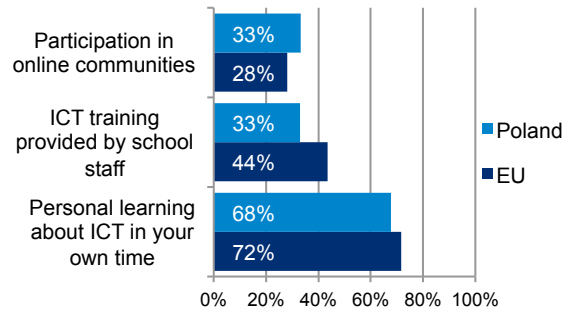


Fig. 5.2d: grade 11 voc.

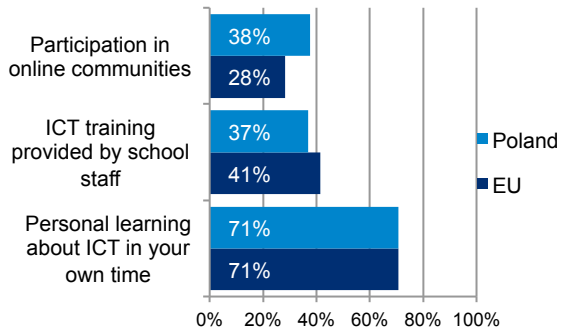
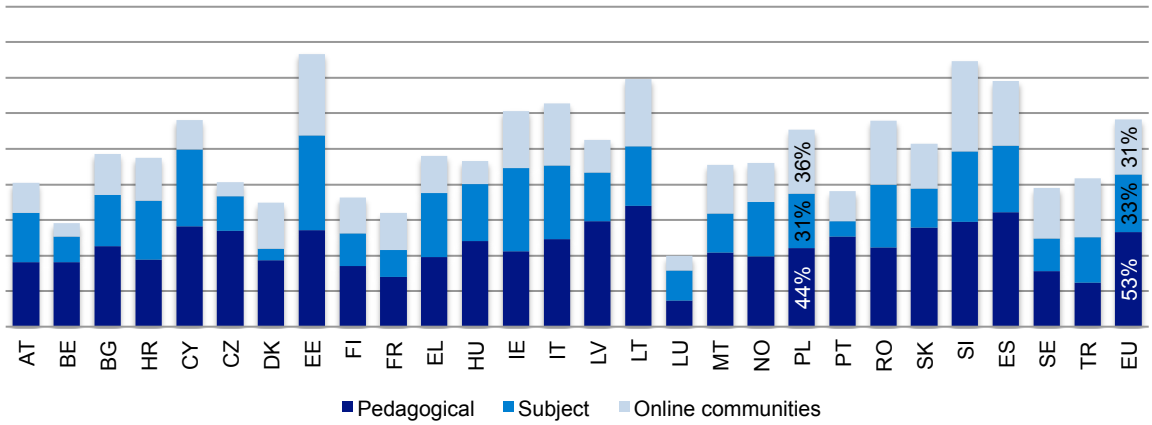


Fig. 5.2e shows that grade 8 teachers in Poland have taken part in professional development close to EU means in the preceding two years.

Fig. 5.2e: Participation in professional development (Grade 8, by type, country and EU, 2011-12)



In Poland at most grades percentages of students taught by teachers for whom ICT training is compulsory are among the lowest in the EU (main report, fig. 4.2). As regards involvement in personal learning about ICT in their own time (main report, fig. 4.4), percentages rank Poland in the lower half of countries at all grades. The percentage of students taught by teachers participating in training provided by school staff is among the lowest at grades 8 and 11 but close the mean at grade 4 (main report, fig.4.5).

Very few teachers in Poland have not had any ICT training at all during the preceding two years (main report, fig. 4.11).

6. SCHOOL SUPPORT MEASURES

In general students in Poland are in schools where EU averages of ICT strategies are implemented (main report, fig. 5.3), 20-30% being in such schools. On the other hand at all grades, there are high percentages of students in schools with strategies to support teacher collaboration (main report, fig. 5.7). However, as regards strategies about responsible internet and social media use, Poland is among the bottom countries on this measure.

High percentages of students in Poland are in schools with change management programmes at all grades (main report, fig. 5.14).

ICT COORDINATOR

In Poland, compared to the situation at EU level, considerably fewer proportions of students at all grades are in schools where ICT coordinators are provided. However students at all grades are in schools that employ more full-time ICT coordinators than the EU mean.

Fig. 6.1: Percentages of students in a school with ICT coordinator (all grades, Poland and EU, 2011-12)

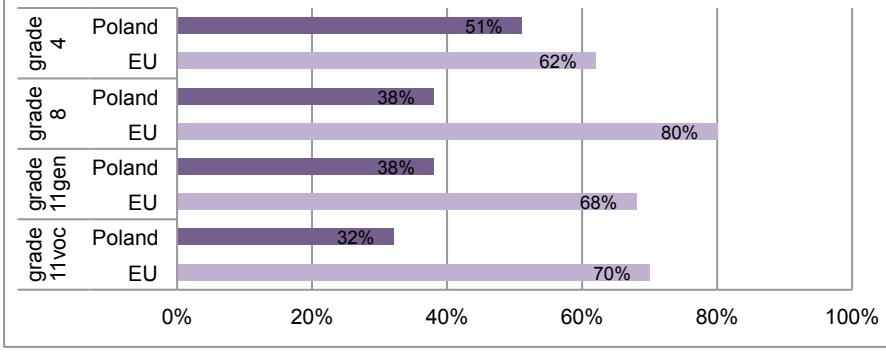
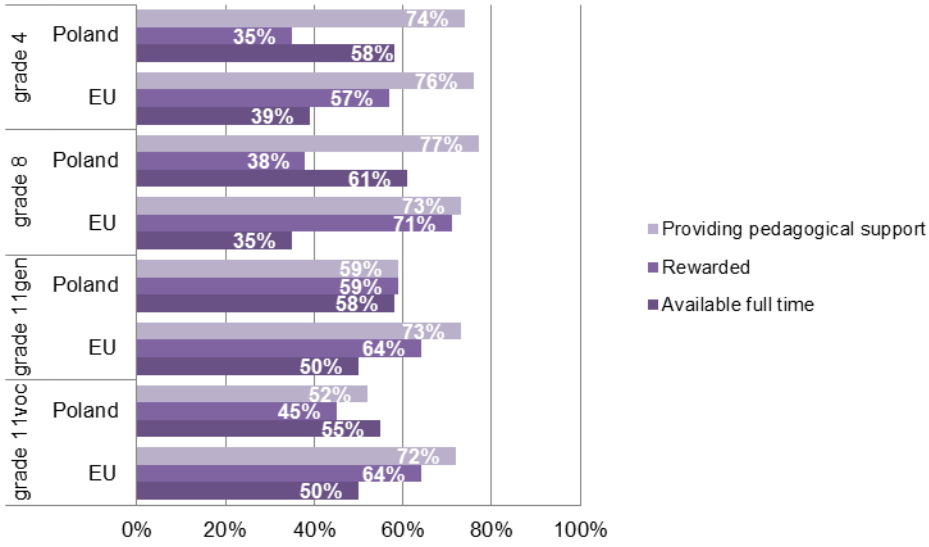


Fig. 6.2: Percentages of students in a school with ICT coordinator available full time, and/or rewarded and/or providing pedagogical support (all grades, Poland and EU, 2011-12)



INCENTIVES

The majority of students at all grades are schools in Poland where the ICT coordinator is provided with incentives considerably above the EU level, in all areas except for reduction in hours.7

Fig. 6.3a: Percentages of students in schools with incentives to reward teachers using ICT in T&L (grade 4; in % of students; Poland and EU; 2011-12)

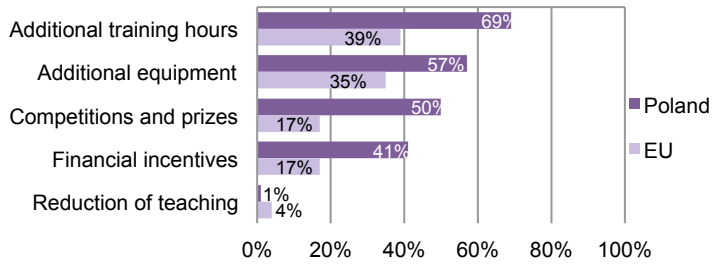


Fig. 6.3b: grade 8

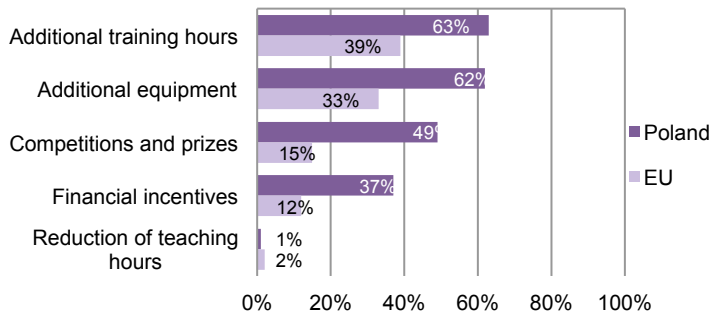
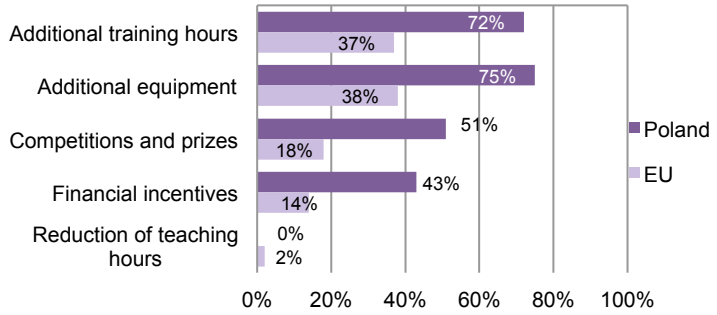
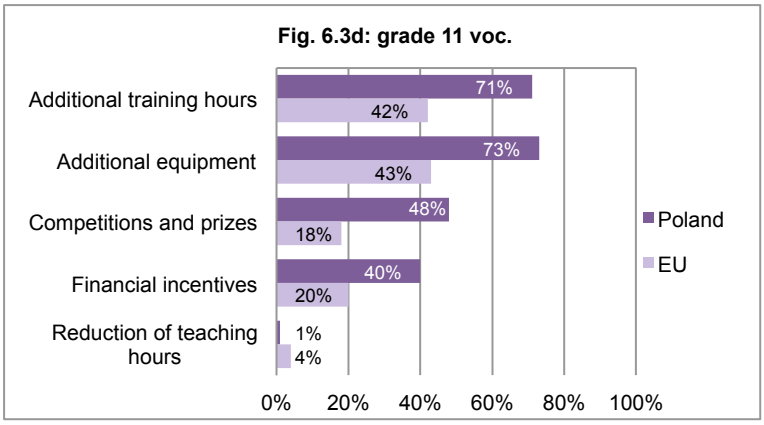


Fig. 6.3c: grade 11 gen.





For further details please refer to Section 5 of the survey report.

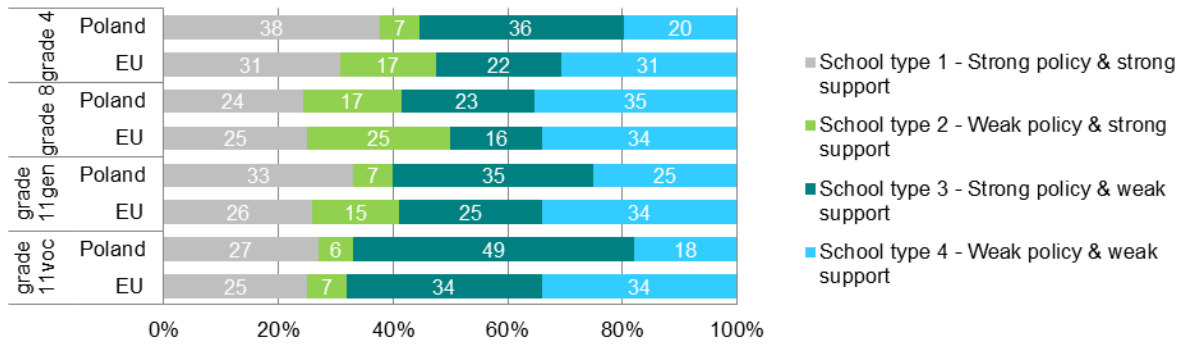
7: CLUSTERS

THE DIGITALLY SUPPORTIVE SCHOOL

Results from the Survey of Schools: ICT and Education suggest that a 'digitally supportive school' develops strong concrete support measures for teachers to use ICT in teaching and learning (ICT coordinator, teacher training, etc.), whether or not associated with strong policies (written statement about introducing ICT in teaching and learning and/or in subject, etc.).

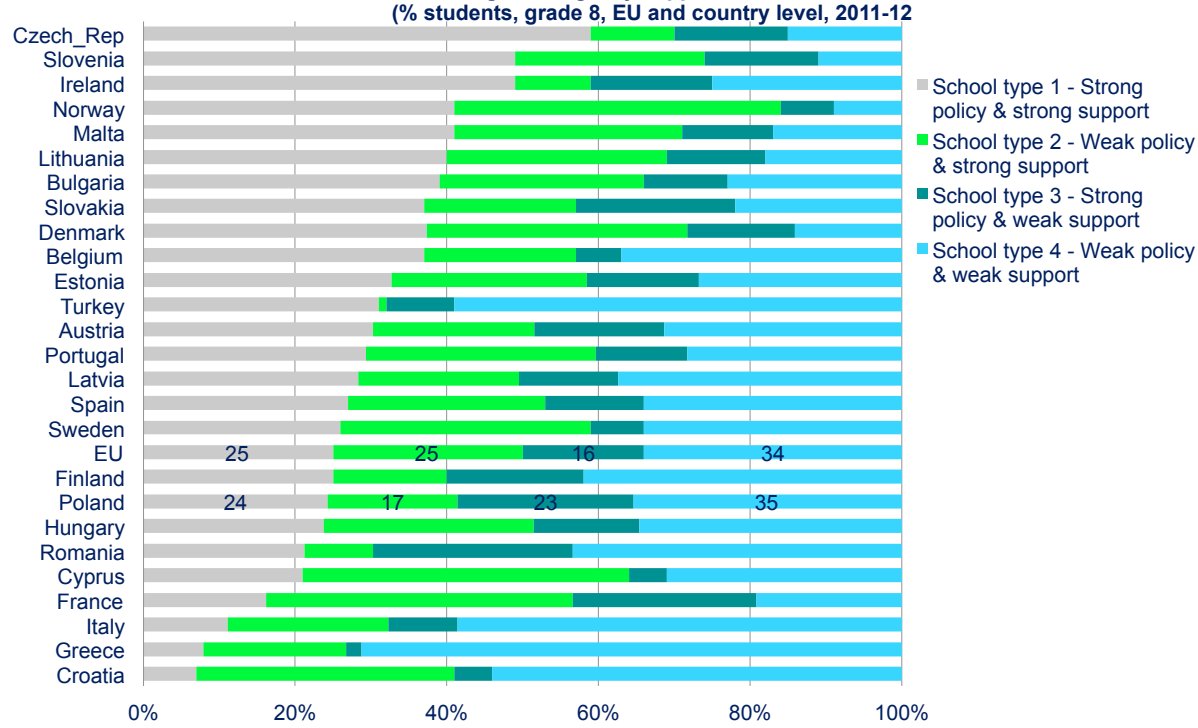
In Poland, percentages of students in schools with strong support are around EU means, slightly above at grades 4 and 11 general.

Fig. A: Percentages of students by school type in terms of policy and support (all grades, Poland and EU, 2011-12)



At grade 8 Poland ranks low compared to other countries considering schools with strong policy and strong support (type 1) and in the middle group of countries at other grades (main report, fig. 8.1).

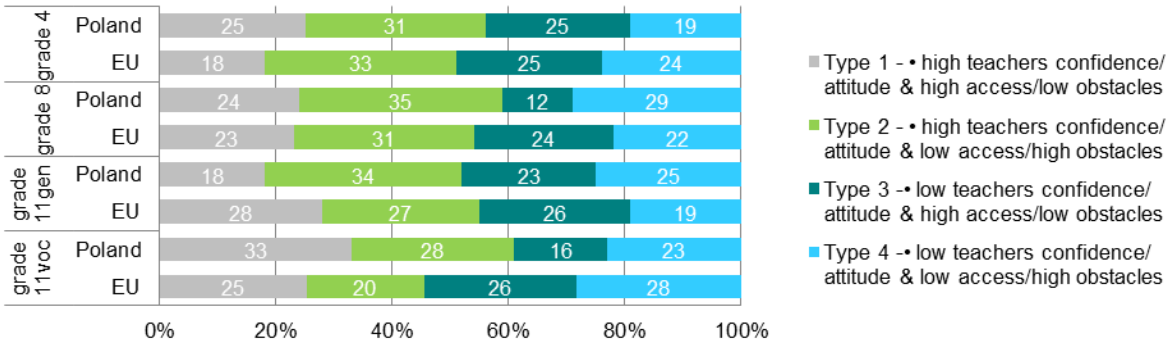
Fig. 7.1: Digitally supportive schools (% students, grade 8, EU and country level, 2011-12



DIGITALLY CONFIDENT AND SUPPORTIVE TEACHERS

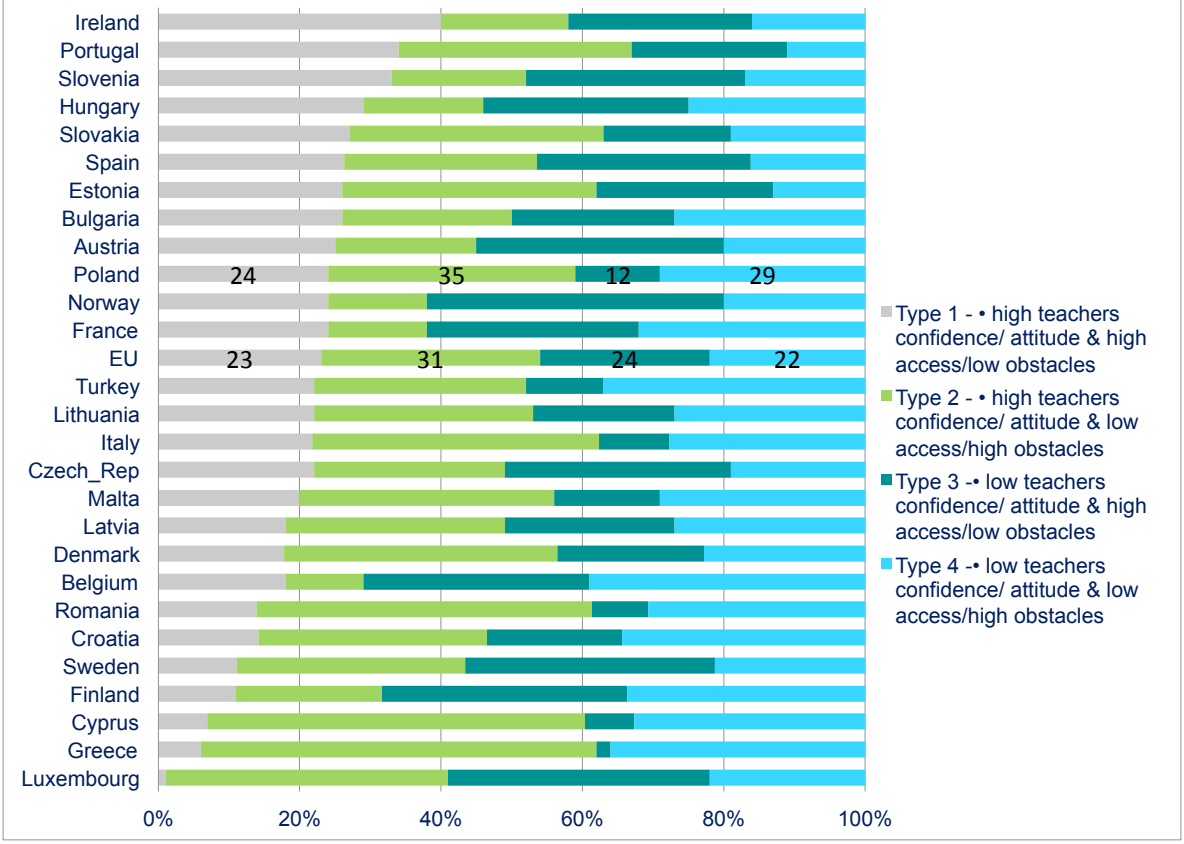
The concept of the 'digitally supportive teacher' also emerged from a close analysis of the data. Such teachers have high confidence in and a positive attitude towards ICT and high access to ICT and low obstacles to using it. Teachers having high confidence in and a positive attitude towards ICT even seem to be able to overcome low access to ICT and high obstacles. Percentages of students taught by *digitally supportive teachers* in Poland are above EU means (except at grade 11 general).

Fig. B: Percentages of students by type of T&L conditions (teachers' confidence/attitude & access/obstacles) (all grades, Poland and EU, 2011-12)



Compared to other countries Poland is in the upper half at all grades except 11 vocational as regards percentages of students in schools with type 1 teachers (fig. 7.2, main report fig. 8.3).

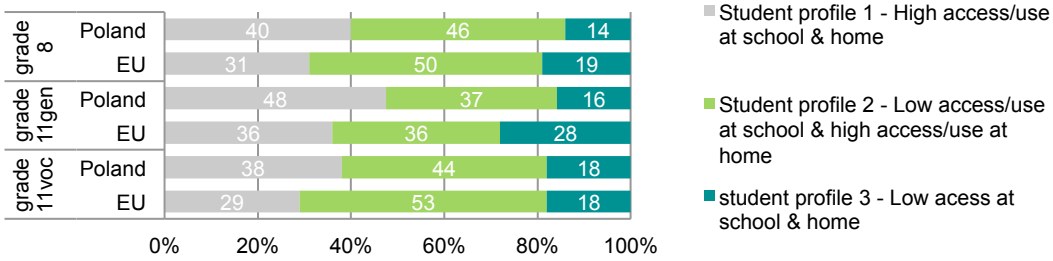
Fig. 7.2: Digitally supportive teachers (% students, grade 8, EU and country level, 2011-12)



THE DIGITALLY SUPPORTIVE STUDENT

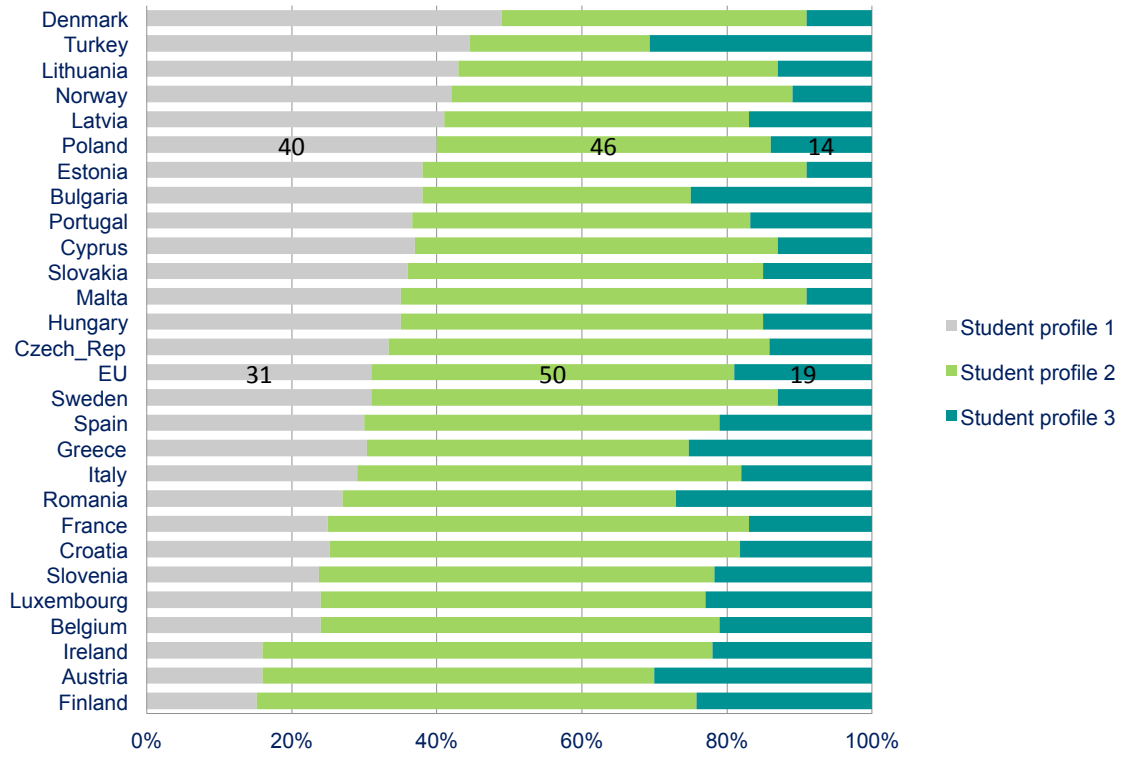
A *digitally supportive student* being defined as having high ICT access and use at school and at home, the percentages of such students in Poland are higher than in other countries.

Fig.C: Percentages of students by profile in terms of ICT use at home and at school (all grades, Poland and EU, 2011-12)



On this measure, percentages of type 1 students in Poland are among the highest in Europe at all grades (fig. 7.3, main report fig. 8.5).

Fig.7.3: Digitally supportive students (% students, grade 8, EU and country level, 2011-12)



THE DIGITALLY EQUIPPED SCHOOL

A *digitally equipped school* is well equipped, has fast broadband (above 10mbps) and is 'connected' (i.e. has at least one of these: a website, email for teachers and students, a local area network, a virtual learning environment). Analysis of the data revealed three clusters of schools according to these measures:

- Type 1: Highly digitally equipped schools, characterised by relatively high equipment levels, fast broadband and relatively high connectedness
- Type 2: Partially digitally equipped schools, with lower than type 1 equipment levels, slow (less than 10mbps) or no broadband, and some connectedness
- Type 3: As type 2 but with no connectedness

In Poland, percentages of students in type 1 schools are lower than in other countries, considerably so at grades 4 and 8.

Fig. D: Digitally equipped schools
(in % students, Poland and EU, 2011-12)

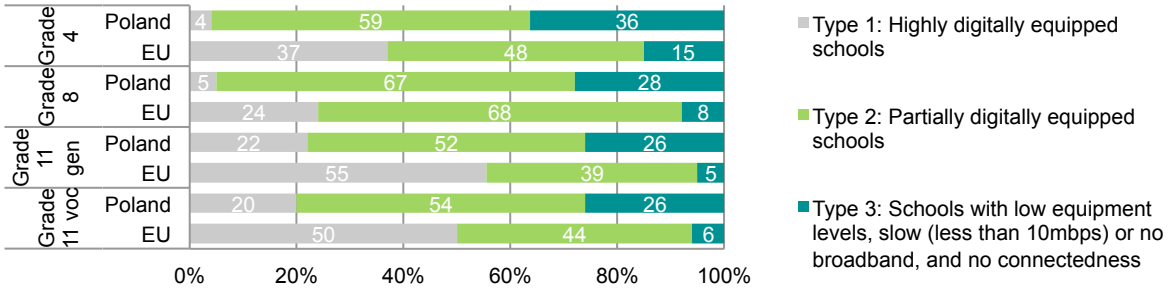
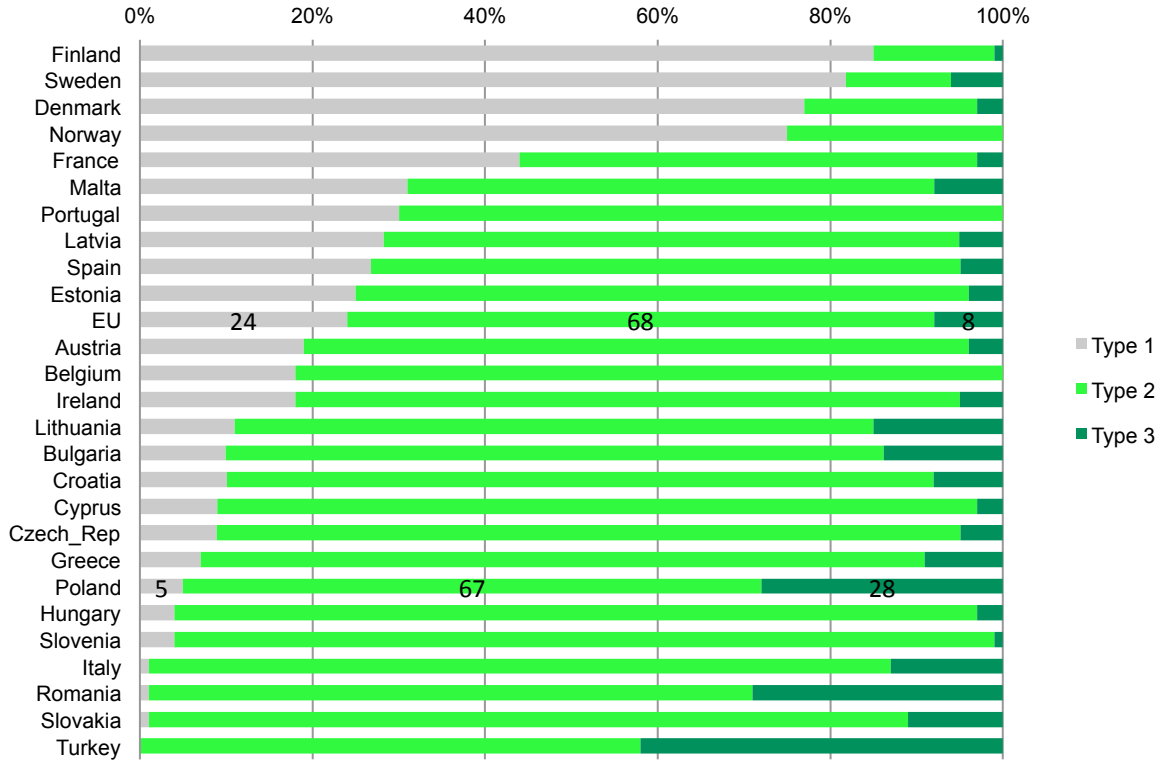


Fig. 7.4 shows how Poland compares with other countries at grade 8 on this measure. Very few students are in type 1 schools compared to other countries and most are in type 2. The situation is similar at other grades (main report, fig. 1.13), Poland being in the bottom third of countries in terms of type 1 schools.

Fig. 7.4: Digitally equipped schools
(% students, grade 8, country and EU level, 2011-12)



CONCLUSION

Students in Poland tend to be in schools where teacher confidence in ICT is above the EU mean, their use of ICT is close to but below the EU mean (except in vocational schools) and student confidence and use is at or above the EU mean, despite having relatively lower levels of computers, connectivity and connectedness compared to their peers in other countries.

This high confidence and use could well be the result of higher than average time spent on ICT professional development than the EU mean, but is possibly hampered by the lack of ICT coordinators in some schools.

Analysis of the data in the *Survey of Schools: ICT and education* suggests a '*5C approach*' to addressing issues identified in the survey:

- **Capacity building**, through sustained investment in teachers' professional development
- **Concrete support measures**, accompanying specific policies at school level
- **Combined policies and actions**, in different policy areas within a systemic approach
- **Country-specific support**, addressing large differences and degrees of ICT provision and implementation
- **Competence development**: these four actions directed at increasing effectively and dramatically young people's digital competence and the key competences described in the European framework.

ANNEX

TABLES

Note: For reasons of space, only selected country-EU data tables are shown here; those for all-country charts (e.g. fig. 2.2) are available online. SE = Standard Error; w = insufficient data.

Fig. 2.1
Computers per 100 students

COUNTRY	Grade4	SE1	Grade8	SE2	Grade11gen	SE3	Grade11voc	SE4
Poland	10.2	(0.4)	12.1	(0.6)	11.6	(0.4)	15.5	(0.9)
EU	14.5	(0.7)	21.1	(1.2)	23.2	(7.7)	33.6	(10.6)

Fig. 2.3
Broadband speed

Level	COUNTRY	NoBroadband	SE1	LessThan2	SE2	From2to5	SE3	From5to10	SE4	From10to30	SE5
1. Grade4	Poland	2.0%	(1.0)	27.1%	(4.2)	32.8%	(4.5)	18.0%	(3.1)	10.4%	(3.0)
	EU	8.0%	(1.3)	16.5%	(2.3)	21.4%	(2.4)	22.1%	(2.2)	19.5%	(2.2)
2. Grade8	Poland	5.9%	(1.9)	14.8%	(2.9)	32.2%	(3.7)	31.1%	(3.7)	12.7%	(2.5)
	EU	5.0%	(0.8)	9.6%	(1.3)	19.1%	(2.3)	27.7%	(2.4)	24.8%	(2.3)
3. Grade11gen	Poland	1.5%	(1.1)	8.1%	(2.2)	23.9%	(3.4)	35.3%	(3.8)	19.7%	(3.1)
	EU	3.7%	(1.3)	6.2%	(0.8)	18.0%	(2.8)	23.2%	(3.0)	25.4%	(3.9)
4. Grade11voc	Poland	1.8%	(1.0)	2.6%	(1.1)	27.5%	(4.0)	41.1%	(4.2)	18.9%	(3.0)
	EU	6.5%	(1.8)	6.2%	(1.3)	15.2%	(3.0)	21.2%	(2.6)	24.2%	(4.6)

From30to100	SE6	MoreThan100	SE7
7.6%	(5.4)	2.1%	(1.1)
8.6%	(1.4)	4.0%	(1.3)
2.2%	(1.0)	1.2%	(0.7)
8.6%	(1.6)	5.2%	(1.2)
6.2%	(1.7)	5.3%	(2.0)
13.3%	(2.6)	10.3%	(8.0)
4.8%	(1.9)	3.2%	(1.2)
15.7%	(7.1)	10.9%	(5.3)

Fig. 2.5
Connectedness

Level	COUNTRY	SchWebsite	SE1	VLE	SE2	NoConnect	SE3
1. Grade4	Poland	63.2%	(5.2)	15.0%	(3.2)	37.9%	(5.4)
	EU	69.7%	(3.6)	26.8%	(2.0)	15.9%	(2.2)
2. Grade8	Poland	71.4%	(3.5)	29.3%	(3.5)	29.8%	(3.6)

Level	COUNTRY	SchWebsite	SE1	VLE	SE2	NoConnect	SE3
	EU	86.0%	(1.6)	61.4%	(3.0)	8.4%	(1.2)
3. Grade11gen	Poland	73.5%	(3.6)	44.0%	(4.0)	28.3%	(3.8)
	EU	91.7%	(3.1)	61.0%	(7.9)	7.0%	(2.9)
4. Grade11voc	Poland	72.9%	(3.6)	39.4%	(4.1)	27.5%	(3.8)
	EU	93.1%	(1.8)	63.5%	(4.7)	5.8%	(1.6)

Fig. 3.1
ICT equip use by teachers

Level	COUNTRY	MoreThan75	SE1	From51to75	SE2	From25to50	SE3	From11to24	SE4	From6to10	SE5
1. Grade4	Poland	5.7%	(1.7)	7.9%	(5.4)	10.4%	(2.7)	15.2%	(2.8)	17.2%	(3.4)
	EU	3.0%	(0.4)	10.0%	(2.4)	13.9%	(1.4)	18.0%	(1.8)	19.1%	(2.1)
2. Grade8	Poland	3.8%	(0.9)	2.8%	(0.7)	10.8%	(1.5)	18.4%	(2.0)	18.5%	(1.9)
	EU	7.4%	(1.0)	6.8%	(0.8)	14.7%	(0.9)	20.7%	(1.2)	18.9%	(1.4)
3. Grade11gen	Poland	8.8%	(1.4)	4.4%	(1.0)	10.7%	(1.4)	15.3%	(1.6)	18.7%	(2.0)
	EU	7.0%	(1.0)	8.1%	(1.4)	14.9%	(1.4)	22.9%	(3.8)	17.1%	(1.8)
4. Grade11voc	Poland	26.2%	(2.7)	10.4%	(1.3)	13.3%	(1.5)	11.6%	(1.7)	13.2%	(1.8)
	EU	19.3%	(1.4)	12.1%	(1.2)	16.8%	(1.0)	19.3%	(2.8)	13.2%	(1.3)

From1to5	SE6	LessThan1	SE7	DontKnow	SE8
20.1%	(3.5)	19.5%	(3.7)	4.0%	(2.1)
20.7%	(2.7)	8.7%	(1.4)	6.7%	(1.4)
18.4%	(2.0)	21.1%	(2.2)	6.1%	(1.2)
14.4%	(1.0)	11.0%	(1.0)	6.1%	(0.8)
17.4%	(1.5)	20.3%	(2.0)	4.3%	(0.9)
14.0%	(1.5)	10.3%	(1.4)	5.7%	(0.9)
11.7%	(1.6)	10.2%	(1.5)	3.3%	(0.9)
9.0%	(1.5)	6.8%	(1.1)	3.5%	(0.5)

Fig. 3.2
Frequency of ICT use by teachers

COUNTRY	Grade4	SE1	Grade8	SE2	Grade11gen	SE3	Grade11voc	SE4
Poland	25.0%	(5.5)	18.5%	(2.0)	24.9%	(2.2)	51.7%	(2.9)
EU	28.8%	(2.6)	32.0%	(1.6)	31.8%	(1.8)	49.9%	(2.1)

Fig. 3.3
Using ICT equipment

Level	Country	OwnMobPhone	SE1	OwnLaptop	SE2	SchoolComputer	SE3
1. Grade8	Poland	46.9	(1.3)	11.1	(0.8)	64.9	(1.2)
	EU	28.0	(0.8)	11.2	(0.7)	53.3	(1.1)
2. Grade11gen	Poland	54.0	(1.1)	9.4	(0.6)	52.9	(1.6)

Level	Country	OwnMobPhone	SE1	OwnLaptop	SE2	SchoolComputer	SE3
	EU	34.6	(1.3)	10.7	(1.1)	50.5	(1.5)
3. Grade11voc	Poland	59.7	(1.2)	13.0	(1.0)	63.9	(1.6)
	EU	45.6	(1.3)	15.5	(0.7)	64.3	(1.5)

Fig. 3.4
Scale Use of ICT activities

Country	Grade8	SE1	Grade11gen	SE2	Grade11voc	SE3
Poland	1.68	(0.02)	1.60	(0.02)	1.71	(0.02)
EU	1.63	(0.01)	1.65	(0.03)	1.62	(0.04)

Fig. 4.1
Scales Teachers ICT skills

Level	COUNTRY	SocialMediaSkills	SE1	OperatSkills	SE2
1. Grade4	Poland	2.59	(0.08)	3.26	(0.05)
	EU	2.41	(0.03)	2.98	(0.02)
2. Grade8	Poland	2.43	(0.04)	3.12	(0.03)
	EU	2.37	(0.04)	3.00	(0.03)
3. Grade11gen	Poland	2.38	(0.04)	3.06	(0.03)
	EU	2.38	(0.07)	3.01	(0.03)
4. Grade11voc	Poland	2.73	(0.05)	3.37	(0.04)
	EU	2.51	(0.03)	3.16	(0.02)

Fig. 4.2
Scales Students ICT skills

Level	country	SocialMediaSkills	SE1	OperatSkills	SE2	RespInternUse	SE3	SafeInternUse	SE4
1. Grade8	Poland	2.83	(0.02)	3.02	(0.02)	3.00	(0.02)	3.18	(0.02)
	EU	2.41	(0.02)	2.63	(0.02)	2.58	(0.02)	2.98	(0.02)
2. Grade11gen	Poland	3.03	(0.02)	3.13	(0.02)	3.13	(0.02)	3.28	(0.02)
	EU	2.78	(0.02)	2.88	(0.01)	2.93	(0.03)	3.16	(0.02)
3. Grade11voc	Poland	2.86	(0.02)	3.07	(0.02)	2.99	(0.02)	3.15	(0.02)
	EU	2.55	(0.02)	2.78	(0.02)	2.75	(0.02)	2.98	(0.02)

Fig. 5.1
Time in professional development

Level	COUNTRY	MoreThan6	SE1	From1to3	SE2	NoTime	SE3
1. Grade4	Poland	69.7%	(4.3)	12.1%	(3.0)	1.0%	(0.7)
	EU	47.5%	(4.2)	19.4%	(3.0)	11.9%	(2.4)
2. Grade8	Poland	71.3%	(2.3)	12.6%	(1.7)	0.9%	(0.5)
	EU	60.7%	(1.6)	15.6%	(1.0)	5.2%	(0.5)
3. Grade11gen	Poland	62.7%	(2.3)	16.3%	(1.8)	1.5%	(0.6)
	EU	44.7%	(5.2)	23.1%	(3.4)	11.0%	(1.6)

Level	COUNTRY	MoreThan6	SE1	From1to3	SE2	NoTime	SE3
4. Grade11voc	Poland	66.4%	(2.2)	14.6%	(1.8)	1.6%	(0.6)
	EU	49.4%	(3.2)	20.5%	(3.0)	9.7%	(1.6)

Fig. 5.2
Type of training

Level	COUNTRY	OnlineComm	SE1	ICTtraining	SE2	PersonalLearning	SE3
1. Grade4	Poland	30.9%	(4.3)	43.6%	(5.3)	69.2%	(4.5)
	EU	25.4%	(2.5)	40.3%	(3.2)	70.0%	(2.8)
2. Grade8	Poland	35.8%	(2.5)	33.8%	(2.9)	69.7%	(2.5)
	EU	30.8%	(1.6)	50.5%	(1.7)	74.2%	(1.3)
3. Grade11gen	Poland	33.2%	(2.4)	33.0%	(2.6)	67.7%	(2.2)
	EU	28.0%	(2.4)	43.5%	(2.2)	71.7%	(2.2)
4. Grade11voc	Poland	37.5%	(2.5)	36.9%	(2.7)	70.7%	(2.4)
	EU	28.2%	(1.5)	41.4%	(3.6)	70.8%	(1.5)

Fig. 6.1
ICT Coordinator

COUNTRY	Grade4	SE1	Grade8	SE2	Grade11gen	SE3	Grade11voc	SE4
Poland	51.2%	(5.0)	37.9%	(3.7)	38.3%	(3.9)	32.0%	(3.8)
EU	62.0%	(3.6)	79.6%	(1.9)	67.7%	(4.8)	69.7%	(3.5)

Fig. 6.2
Type of ICT coordinator

Level	COUNTRY	AvailFullTime	SE1	Rewarded	SE2	ProvPedSupport	SE3
1. Grade4	Poland	58.4%	(7.7)	35.3%	(7.4)	73.5%	(6.4)
	EU	39.3%	(3.0)	56.5%	(3.0)	75.9%	(2.3)
2. Grade8	Poland	60.9%	(6.2)	37.7%	(6.0)	76.6%	(5.3)
	EU	34.8%	(2.9)	70.6%	(2.4)	72.5%	(2.5)
3. Grade11gen	Poland	57.6%	(6.8)	59.0%	(6.9)	59.0%	(7.1)
	EU	49.6%	(6.9)	63.6%	(7.7)	73.4%	(4.2)
4. Grade11voc	Poland	55.4%	(6.9)	45.1%	(6.9)	51.5%	(7.0)
	EU	49.7%	(3.3)	63.6%	(4.6)	71.5%	(3.9)

Fig. 6.3
Incentives

Level	COUNTRY	TrainingHours	SE1	Equipment	SE2	Competitions	SE3	FinancialInc	SE4	ReductionHours	SE5	Other	SE6
1. Grade4	Poland	69.1%	(4.3)	57.2%	(5.1)	50.1%	(5.1)	41.3%	(4.7)	1.0%	(0.7)	25.2%	(4.1)
	EU	30.1%	(4.5)	26.6%	(3.8)	12.9%	(2.4)	13.0%	(2.1)	2.9%	(0.6)	12.8%	(2.3)
2. Grade8	Poland	63.3%	(3.8)	61.5%	(3.7)	48.9%	(3.9)	37.5%	(3.7)	1.2%	(0.7)	23.9%	(3.5)
	EU	34.1%	(2.6)	33.6%	(1.9)	13.3%	(1.6)	10.0%	(1.0)	1.5%	(0.4)	14.8%	(1.8)
3. Grade11gen	Poland	71.7%	(3.5)	74.9%	(3.4)	50.7%	(4.0)	42.6%	(3.9)	0.0%	(0.0)	26.6%	(3.7)
	EU	36.9%	(9.1)	37.7%	(3.5)	17.6%	(4.4)	14.3%	(2.8)	1.7%	(0.7)	15.3%	(5.0)

Level	COUNTRY	TrainingHours	SE1	Equipment	SE2	Competitions	SE3	FinancialInc	SE4	ReductionHours	SE5	Other	SE6
4. Grade11voc	Poland	70.6%	(3.8)	72.6%	(3.7)	48.2%	(4.3)	40.5%	(4.1)	1.4%	(0.1)	29.7%	(4.2)
	EU	41.6%	(8.1)	43.4%	(7.7)	17.8%	(4.2)	19.4%	(4.9)	4.3%	(1.3)	18.7%	(4.5)

Fig. A
Digitally supportive schools

Level	COUNTRY	Type1	SE1	Type2	SE2	Type3	SE3	Type4	SE4
1. Grade4	Poland	38	(5.20)	7	(2.46)	36	(4.64)	20	(3.47)
	EU	31	(2.70)	17	(3.17)	22	(2.53)	31	(2.98)
2. Grade8	Poland	24	(3.32)	17	(2.91)	23	(3.41)	35	(3.61)
	EU	25	(1.91)	25	(2.20)	16	(1.83)	34	(2.15)
3. Grade11gen	Poland	33	(3.80)	7	(2.14)	35	(3.79)	25	(3.45)
	EU	26	(2.28)	15	(8.69)	25	(3.74)	34	(5.30)
4. Grade11voc	Poland	27	(3.64)	6	(1.98)	49	(4.26)	18	(3.11)
	EU	25	(3.12)	7	(2.21)	34	(7.50)	34	(8.58)

Fig. B
Digitally supportive teachers

Level	COUNTRY	Type1	SE1	Type2	SE2	Type3	SE3	Type4	SE4
1. Grade4	Poland	25	(3.84)	31	(4.26)	25	(5.33)	19	(3.60)
	EU	18	(2.02)	33	(2.95)	25	(2.33)	24	(2.64)
2. Grade8	Poland	24	(2.33)	35	(2.63)	12	(1.47)	29	(2.70)
	EU	23	(1.43)	31	(1.27)	24	(1.52)	22	(1.17)
3. Grade11gen	Poland	18	(1.95)	34	(2.50)	23	(2.16)	25	(2.12)
	EU	28	(2.41)	27	(2.68)	26	(1.65)	19	(1.67)
4. Grade11voc	Poland	33	(2.86)	28	(2.31)	16	(1.82)	23	(2.26)
	EU	25	(1.49)	20	(2.69)	26	(2.83)	28	(1.67)

Fig. C
Digitally supportive students

Level	COUNTRY	Type1	SE1	Type2	SE2	Type3	SE3
1. Grade8	Poland	40	(1.29)	46	(1.12)	14	(0.94)
	EU	31	(1.00)	50	(0.85)	19	(0.67)
2. Grade11gen	Poland	48	(1.19)	37	(1.05)	16	(0.68)
	EU	36	(1.18)	36	(1.00)	28	(1.47)
3. Grade11voc	Poland	38	(1.33)	44	(1.22)	18	(1.02)
	EU	29	(1.60)	53	(1.03)	18	(1.37)

Fig. D
Digitally equipped Schools

Level	COUNTRY	Type1	SE1	Type2	SE2	Type3	SE3
1. Grade4	Poland	4	(1.61)	59	(5.19)	36	(5.24)

Level	COUNTRY	Type1	SE1	Type2	SE2	Type3	SE3
	EU	37	(4.43)	48	(4.15)	15	(2.12)
2. Grade8	Poland	67	(3.64)	5	(1.78)	28	(3.46)
	EU	68	(2.87)	24	(3.31)	8	(1.16)
3. Grade11gen	Poland	22	(3.33)	52	(3.97)	26	(3.57)
	EU	55	(12.27)	39	(10.34)	5	(2.06)
4. Grade11voc	Poland	26	(3.56)	20	(3.33)	54	(4.18)
	EU	6	(1.88)	50	(13.83)	44	(12.07)

NOTES

EU mean. In this report, 'EU mean' refers to the weighted average for the 27 countries in the survey (EU27 without Germany, Netherlands and the United Kingdom, Croatia, Norway and Turkey).

Confidence. Teachers and students were asked to rate their level of confidence in their ability to perform ICT related tasks according to a scale ranging from 'not at all' to 'a lot'. By subjecting the data to factorial analysis four scales emerged from the list of items. These included operational skills and social media skills and two additional scales related to students' ability to use the internet safely and responsibly. For a detailed definition of these skills, please refer to section 4 of the survey report.

Participation. For the Survey of Schools: ICT and Education, 300 schools in Poland were selected at random at each of four levels (grade 4, 8, 11 general and 11 vocational) and invited to participate in the survey. Fig. 1.1 shows the percentage of those schools in which at least one survey questionnaire was submitted, the EU average ranging from 35 to 40 percent depending on the grade. In Poland participation levels (68% on average – 814 schools) are the second highest of all 31 countries.

Fig. 1.1: Participation rates
(% of sampled schools with at least one questionnaire completed, all grades, Poland and EU, 2011-12)