European Schoolnet

University of Liege
Psychology and
Education

SURVEY OF SCHOOLS: ICT IN EDUCATION

COUNTRY PROFILE: HUNGARY

November 2012

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1. INTRODUCTION

ICT IN THE SCHOOL EDUCATION SYSTEM OF HUNGARY

In Hungary[1] schools may be established and maintained by the state, local governments, minority local governments, legal entities (foundations, churches, etc.) as well as natural persons. The education system is highly decentralized and system of public education is operated primarily through local (municipal) governments. The state provides a budget subsidy for the performance of their tasks with around 90% of children attending public-sector institutions. Administrative control and management responsibilities are shared among the national government, the local authorities and the educational institutions. Overall responsibility lies with the ministry of National Resources, which is in charge of education, culture, social affairs, health care, youth and sport. However, school-based VET training is within the competence of the Ministry for National Economy. Public education institutions are independent and legally separate and enjoy full professional autonomy although they are controlled by the decisions of the primary education authority of any educational institution who the employs of the head of the institution. Participation in education is mandatory between the ages of 5 and 18 although the upper limit to the compulsory schooling age will be reduced to age 16 in 2013.

According to Eurydice's **Key Data on Learning and Innovation through ICT at school in Europe**[2], in Hungary there are national strategies covering training measures and research projects[3] in the areas of e-learning, e-inclusion and digital/media literacy. There are central steering documents for ICT learning objectives[4] at both primary and secondary education level for, knowledge of computer hardware and electronics, using a computer, using office applications, searching for information, using multimedia and developing programming skills, and also in using mobile devices and using social media at secondary 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 in secondary schools ICT is also taught as a separate subject. At primary and secondary education level recommendations or suggestions and support are provided in all ICT hardware areas, except for e-book readers and mobile devices, and for all ICT software categories[5] except for tutorial software, digital learning games, and digital resources, where only recommendation or suggestions are provided. According to official steering documents, students at primary and secondary level, and teachers at secondary level, are expected to use ICT in language of instruction, mathematics, natural sciences and the arts, both in class and for complementary activities, and teachers at primary level in mathematics. 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 private funding for hardware and software in schools, and ICT training for teachers.

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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

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. 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.

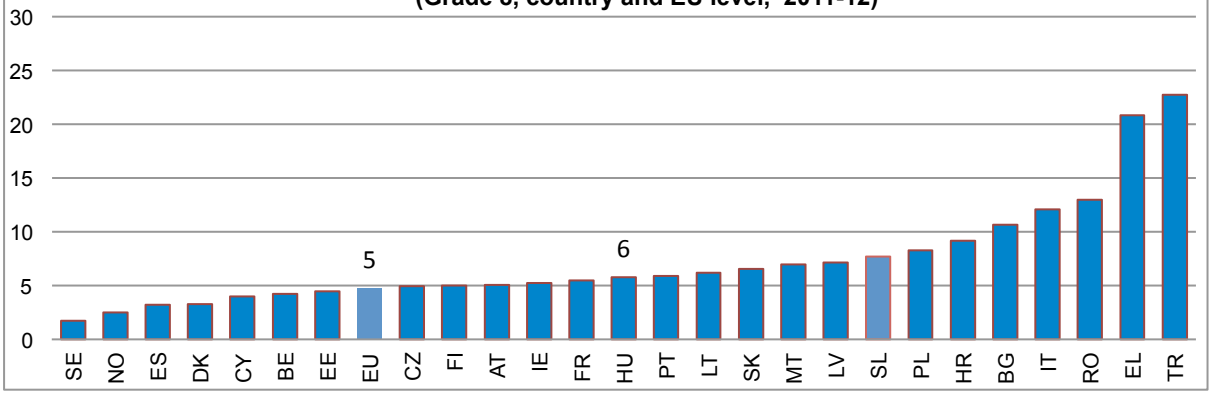
[6] www.ec.europa.eu/dgs/connect/

2. ICT INFRASTRUCTURE

AVAILABILITY OF COMPUTERS FOR EDUCATIONAL PURPOSES

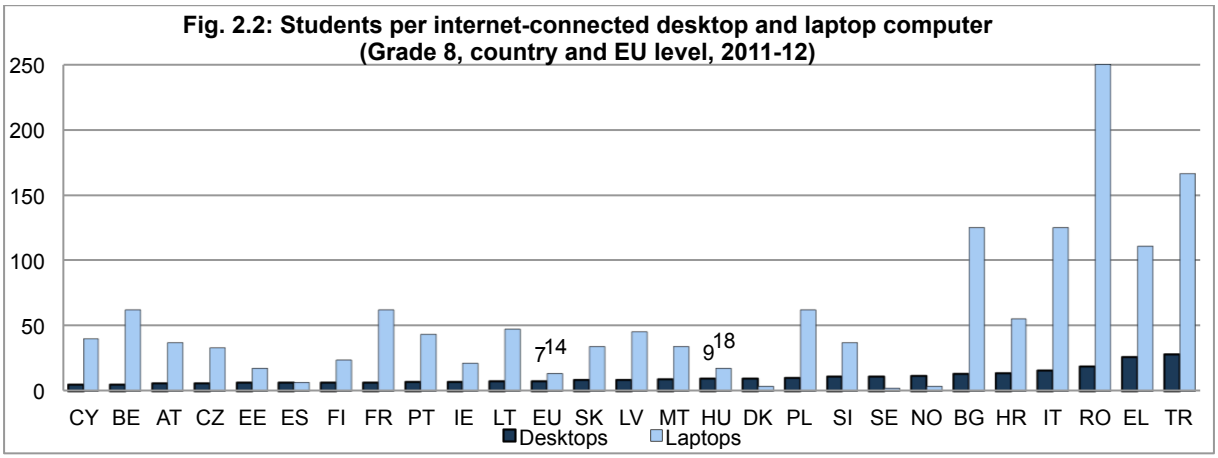
A computer is defined as a desktop or laptop, netbook or tablet computer, whether or not connected to the internet, available for educational purposes in school. In Hungary there are fewer computers available for all grade students than the EU average and provision is fairly consistent at all grades. In most countries the older the student the more the computers, and this trend is also reflected in Hungary at grade 11 vocational (main report fig. 1.1). Fig. 2.1 shows that at grade 8 Hungary is among the middle group of countries on this indicator with 6 students per computer, and is ranked among the middle group of countries at all other grades (main report, fig. 1.1).

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



As for computers connected to the internet at grade 8 most computers are desktops, around the EU average at grade (fig. 2.2). In terms of internet-connected laptop compters at grade 8, Hungary ranks sixth – among the leading group of countries – with a ratio of 18 students per laptop, and it also ranks at this level at grade 4 and grade 11 vocational, and among the middle group of countries at grade 11 general (see main report fig 1.2).

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



The higher the percentage of students from low-income families in a school, the fewer online desktop computers tend to be available in vocational schools in Hungary (main report, section 1). Computers are mainly located in computer lab at all grades, around 80% at grade 11 (main report, fig. 1.3).

Hungary is ranked at grade 8, twelfth highest at 85% compared to the EU average of 76 % of students, in schools where over 90% of computers are operational (main report, fig. 1.4). More students have access to interactive whiteboards, among the leading group of countries at all grades, (main report, fig. 1.5), with Hungary ranked second highest at grade 8, and at this grade the lower the family income the more IWBs are available in school

BROADBAND

In Hungary the percentage of students in schools without broadband is below the EU average at all grades at students at grade 11 general all have access to broadband. At all grades the percentages of students in schools with broadband speeds faster than 10mbps, is lower than the EU mean. A lower percentage of students are in schools with than 100 mbps which is available to all grades except grade 4.

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

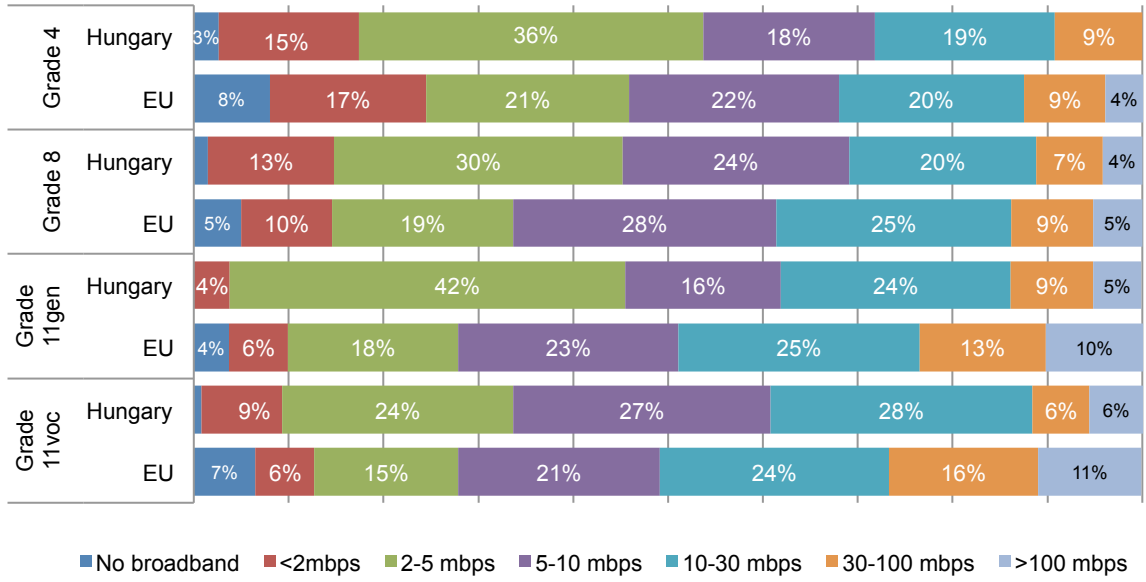
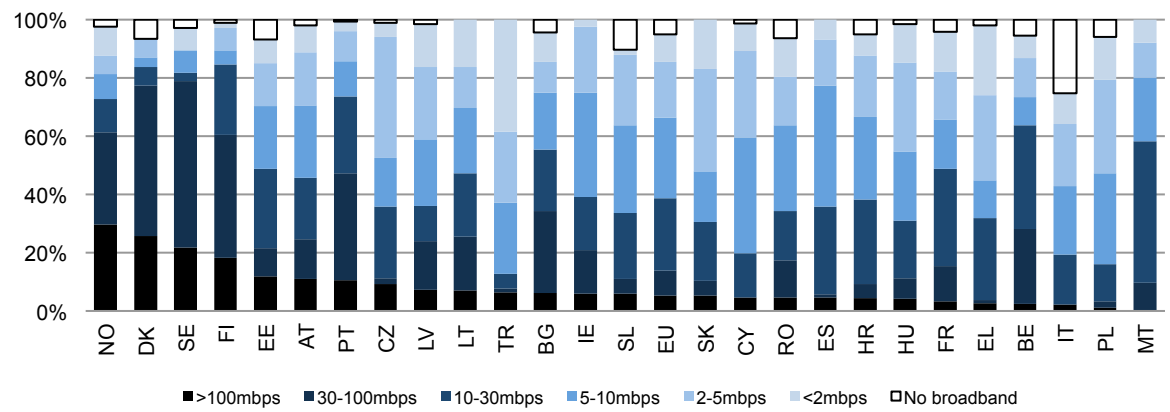


Figure 2.4 shows how Hungary compares with other countries at grade 8, ranked among the lowest group of countries for the percentage of students in schools with more than 100 mbps, but with a low percentage of students in schools with no broadband. Most students are in schools with under 10mbps. Hungary ranks among the bottom group of countries at other grades as regards very high speed internet (main report fig 1.8), except at grade 11 vocational where it is among the middle group of countries.

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

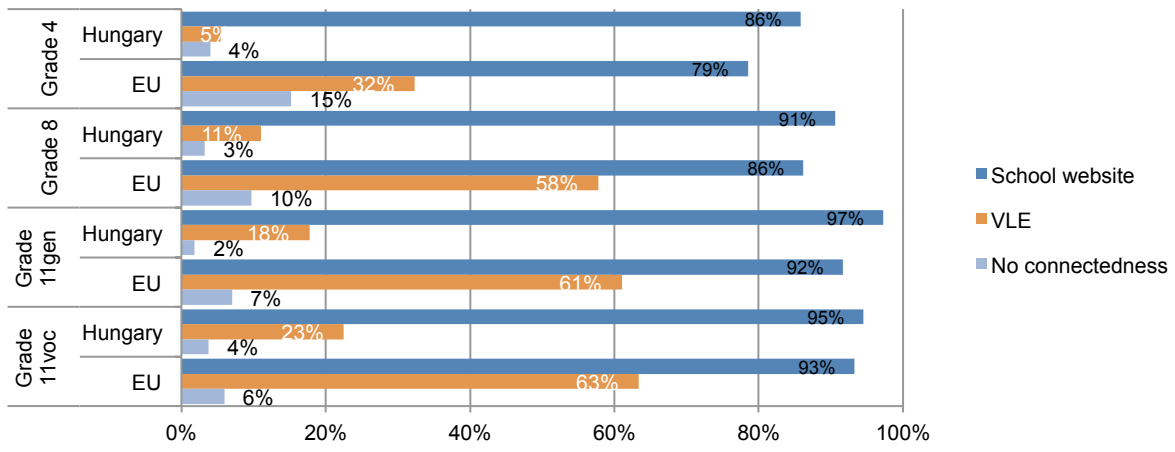


There are significant positive correlations between the population size of the school's locality and broadband, the more densely populated the area the faster the broadband in Hungary at grade 8 (main report, section 1).

'CONNECTEDNESS'

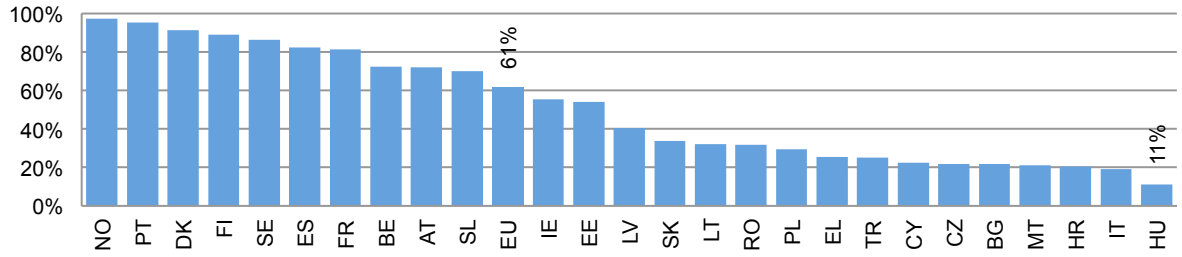
Percentages of students in schools that have 'connected' characteristics, e.g. having a website or a virtual learning environment (VLE) are shown below, as well as those with none of these items. In Hungary, the percentage of students in schools with a website is slightly above the EU mean. There is a much lower percentage of students in schools with a virtual learning environment than the EU mean at all grades. Percentages of students in 'unconnected' schools are lower than the EU average at all grades.

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



Hungary ranks last as regards virtual learning environments at grade 8, as seen in fig. 2.6, and ranks among the bottom three countries at other grades (main report, fig 1.10).

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 Hungary use of ICT by teachers is lower at all grades than the EU average, except grade 8 which is close to the EU level. There are less teachers using ICT in more than 25% of lessons, below the EU average, except at 8 which is at the EU level.

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

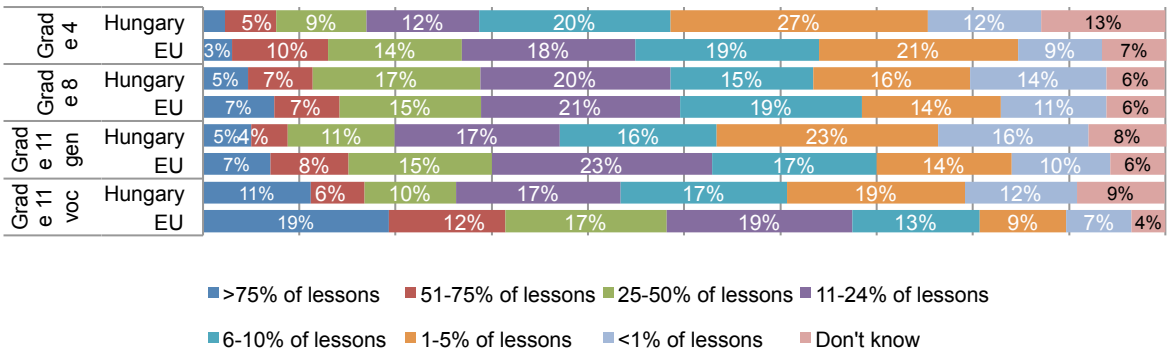
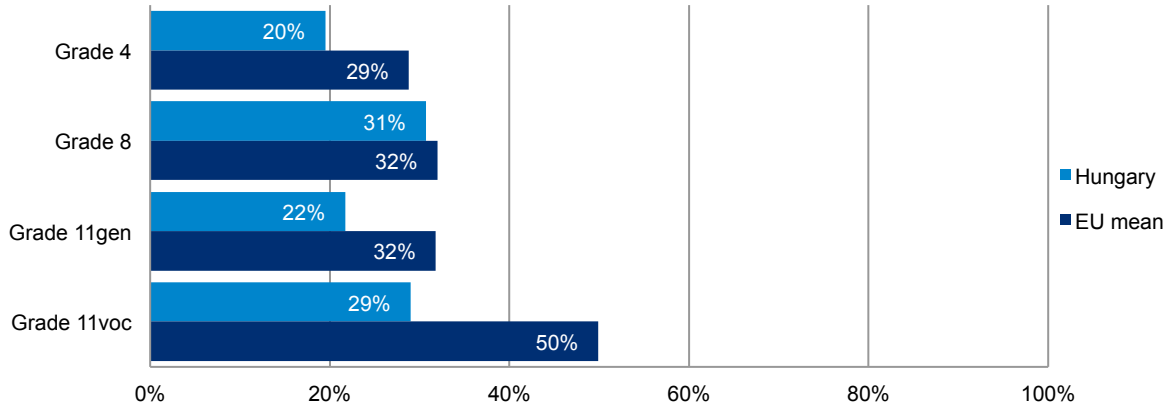
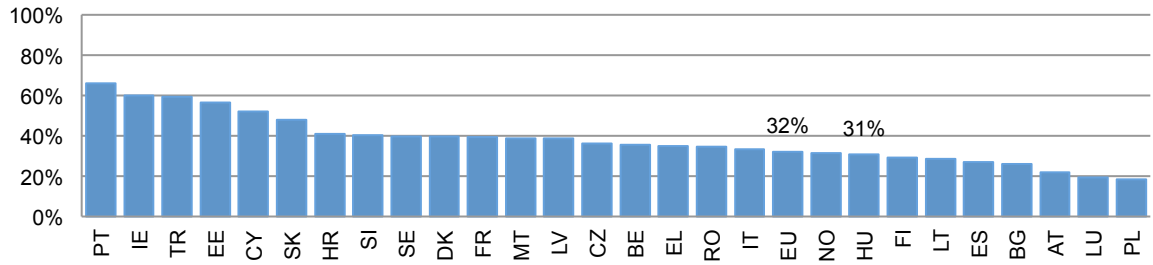


Fig. 3.2: Teachers' use of ICT in at least 25% of lessons
(% students, Hungary and EU, 2011-12)



Teachers in Hungary are below average users of ICT in lessons: when considering percentages using ICT in more than one in four lessons. Fig 3.3 shows Hungary ranks in the lower group of countries at grade 8, as is the case at other grades (see 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)



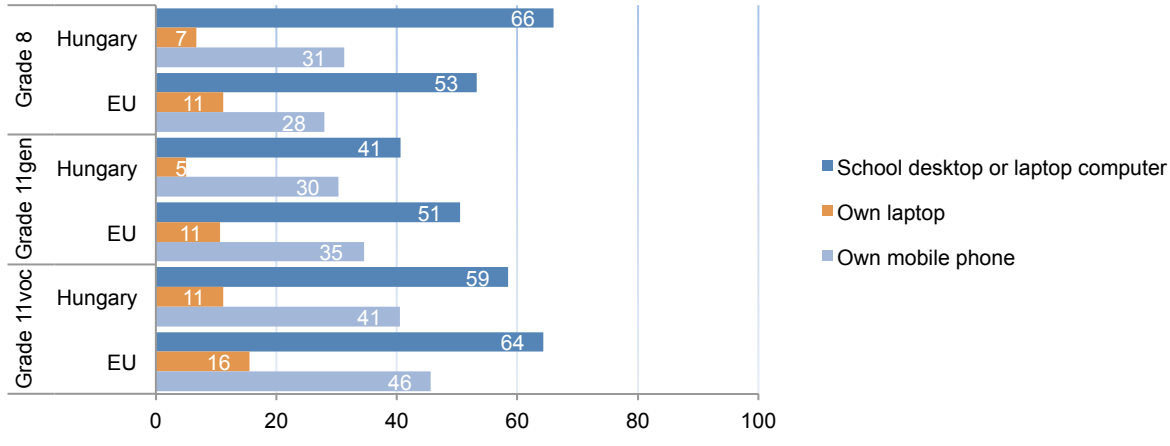
Hungary is among the middle group of countries as regards teachers' use of ICT where teachers have been using ICT in lessons for more than six years (main report, fig 3.2), generally above the EU level.

On the other hand, Hungary is among the leading group of countries, ranked first, in terms of student-centred learning at all grades, except grade 11 vocational where it ranks second among the leading group of countries (main report, fig. 3.5).

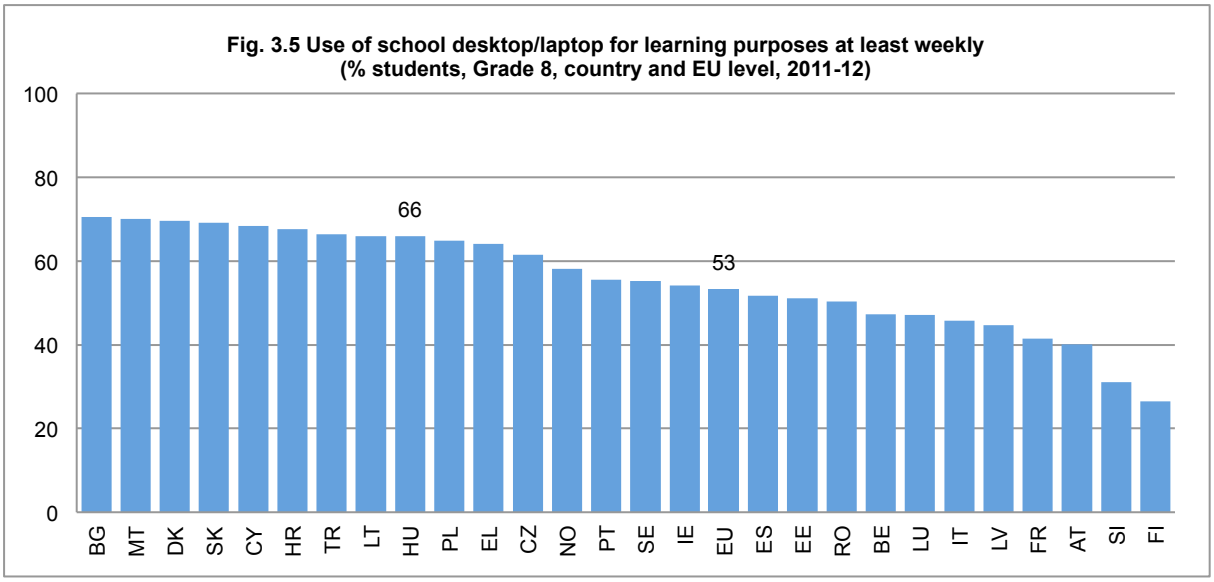
STUDENTS' ICT USE

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 Hungary student use of computers in class is below to the EU mean at grade 11 but higher at grade 8. Use of their own laptop is below the EU mean at all grades. Mobile phone usage is lower than the EU mean except at grade 8 where it is slightly higher.

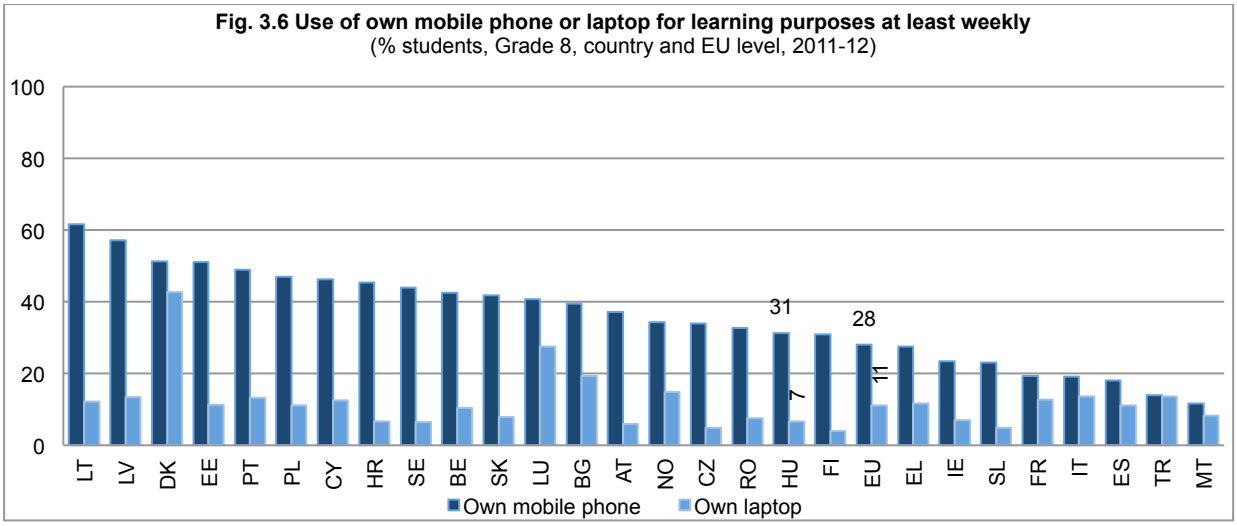
Fig. 3.3: Percentages of students using ICT equipment in class for learning, at least once a week
(Hungary and EU, 2011-12)



At grade 8 students' reported use of school computers is the ninth highest in the EU, with 66% saying they use them at least once a week (fig. 3.5), but at grade 11 Hungary is ranked among the lowest group of countries on this measure (main report, fig. 2.5).



Compared to other countries at grade 8 (fig.3.6), students in Hungary are average users of their own mobile phone, but there is less use of their own laptop in school than most other countries. At grade 11 Hungary is among the bottom group, below the EU average (main report, fig. 2.5).



Students report using interactive whiteboards more frequently than the EU average: Hungary ranks in the highest two countries at grade 8, and is also among the leading group of countries at grade 11 (main report, fig. 2.6). Concerning students' ICT-based activities during lessons, Hungary is among the leading countries as measured by frequency of use (main report, fig. 3.8) at grade 8, but much lower in ranking (among the bottom group of countries) at grade 11 where high percentages of students report never or almost never using ICT in lessons in the last year.

4. DIGITAL CONFIDENCE

TEACHERS

In Hungary teachers' confidence in their operational skills with ICT is close to the EU mean at all grades (close to 'somewhat'). Their confidence in social media skills is lower than the EU average at all grades, notably at grade 4 where it is close to 'a little'. The mean score of students in Hungary being taught by teachers declaring confidence in their operational skills is less than 3 in all grades, and below 2.4 in social media, below the EU mean.

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'; Hungary and EU; 2011-12)

Fig. 4.1a: grade 4

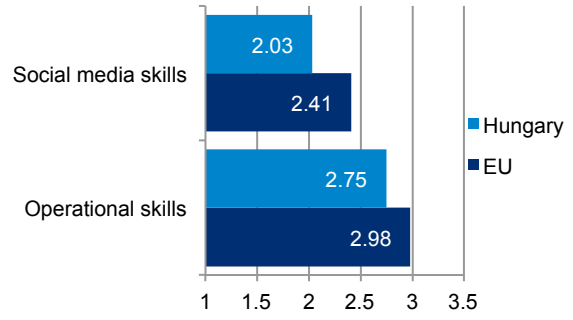


Fig. 4.1b: grade 8

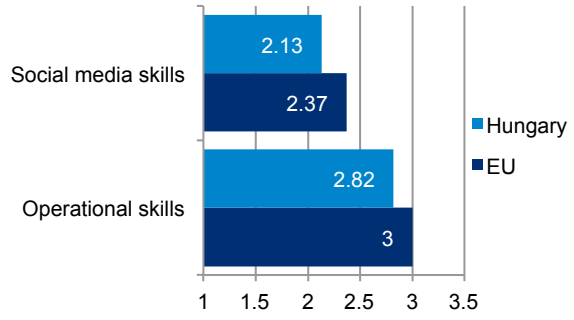


Fig. 4.1c: grade 11 gen.

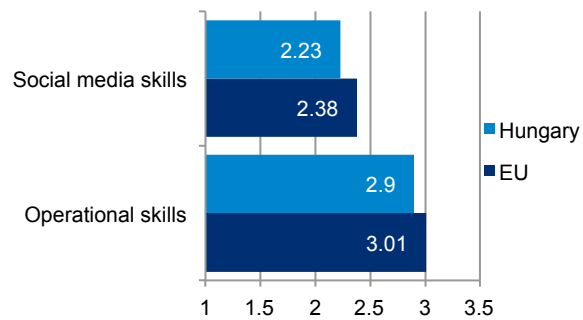
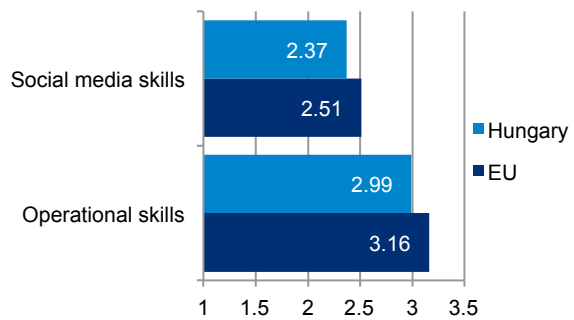
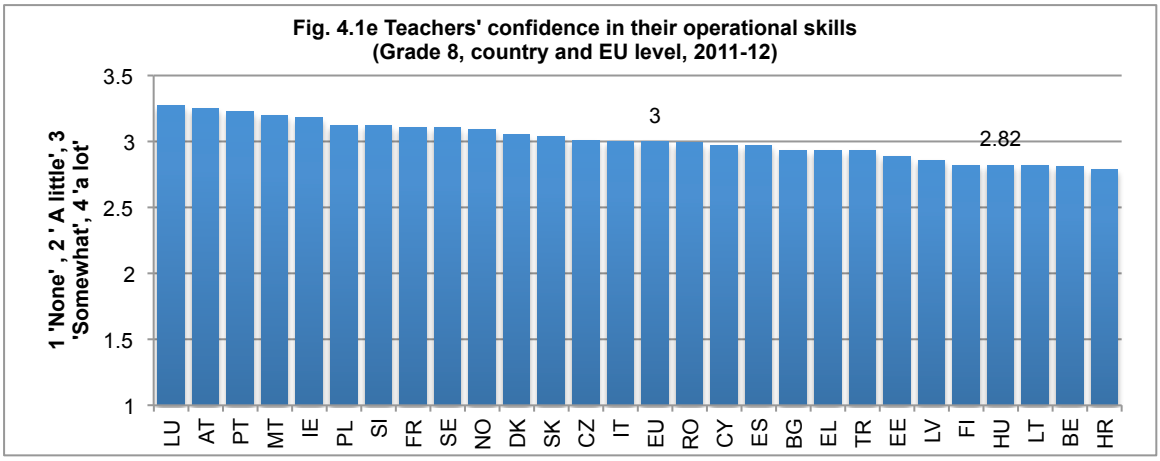


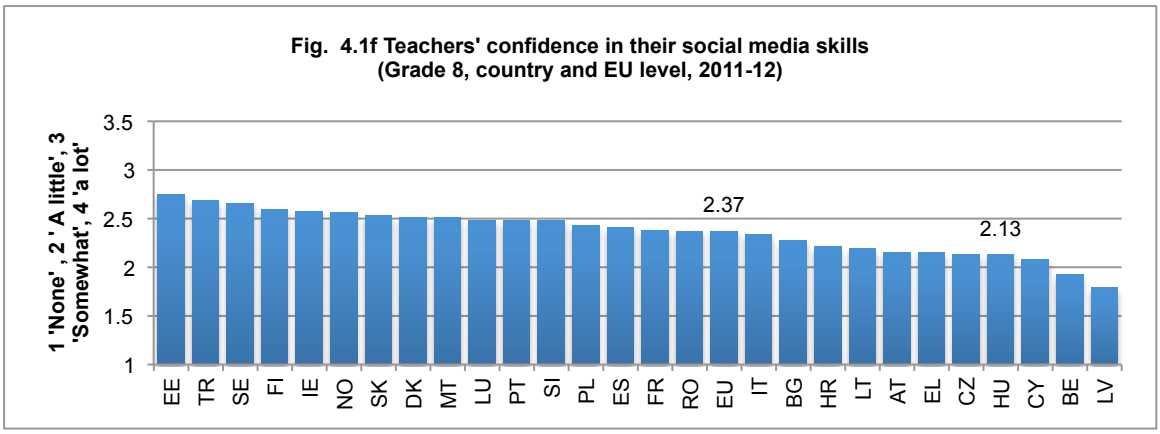
Fig. 4.1d: grade 11 voc.



Comparing confidence levels at grade 8, teachers' confidence in their operational skills places Hungary among the bottom group of countries (fig. 4.1e), and this is also the situation at all other grades (main report, fig. 4.13).



At grade 8 Hungarian teachers are fourth from last as regards social media confidence (fig. 4.1f) and ranked among the lowest half of countries at other grades (main report, fig. 4.14).



STUDENTS

In Hungary students' confidence in their social media and operational ICT skills is higher than the EU mean (close to 'somewhat') at all grades, except grade 11 vocational where it is slightly lower in social media skills.

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'; Hungary and EU; 2011-12)

Fig. 4.2a: grade 8

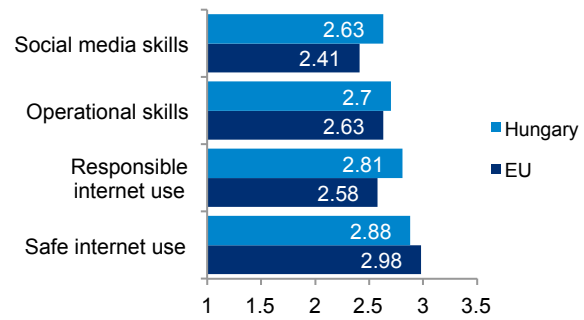


Fig. 4.2b: grade 11 gen.

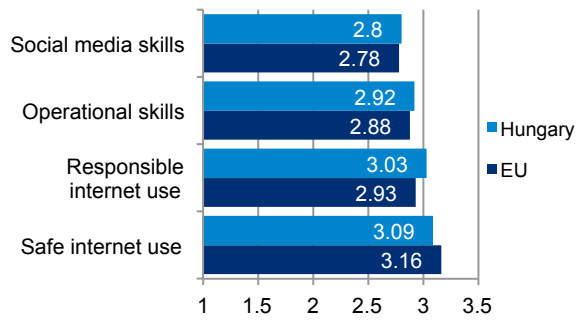
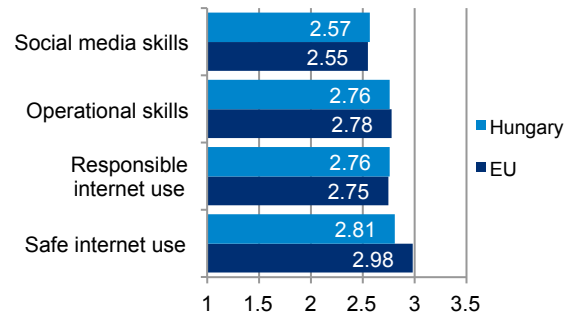
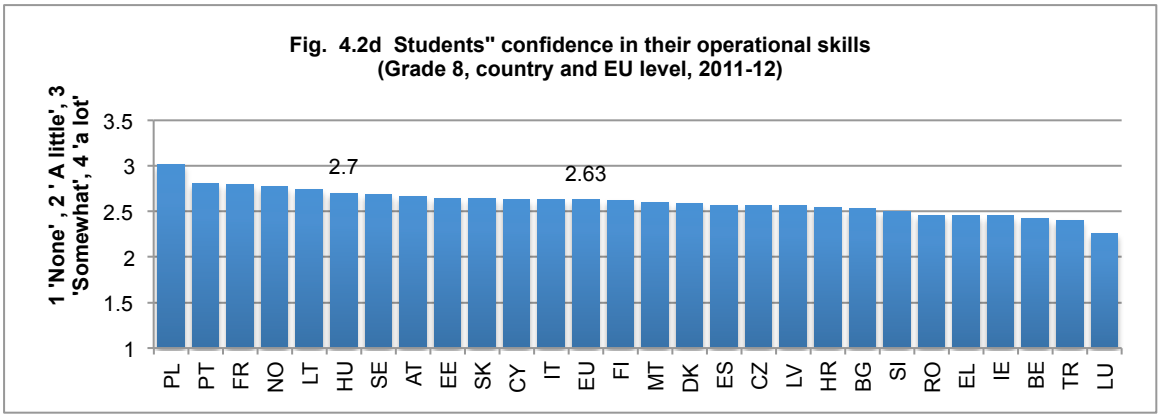


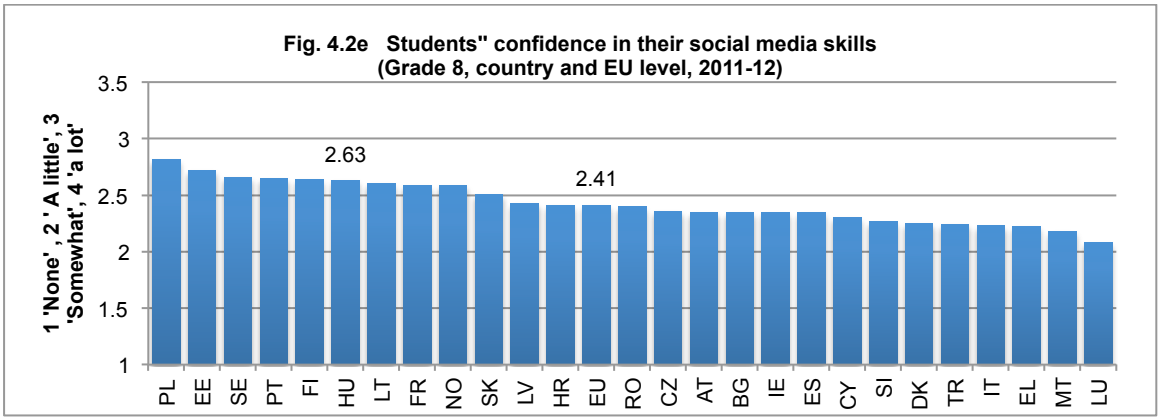
Fig. 4.2c: grade 11 voc.



Confidence in operational skills is higher than the EU mean amongst grade 8 students (fig. 4.2d), with Hungary also ranked among the leading group of countries at grade 11 (main report fig. 4.18).



Hungary is among the leading group countries for confidence in social media competence at grade 8 (fig. 4.2e) as is the case at grade 11 vocational, but at grade 11 general Hungary ranks among the middle group of countries (main report, fig. 4.19).



At grade 8 Hungary is in the middle group of countries in terms of confidence to use the internet safely and among the leading three countries to use it responsibly. At grade 11 Hungary also ranks in the middle group of countries in terms of confidence to use the internet safely and responsibly (main report, fig. 416, 4.17).

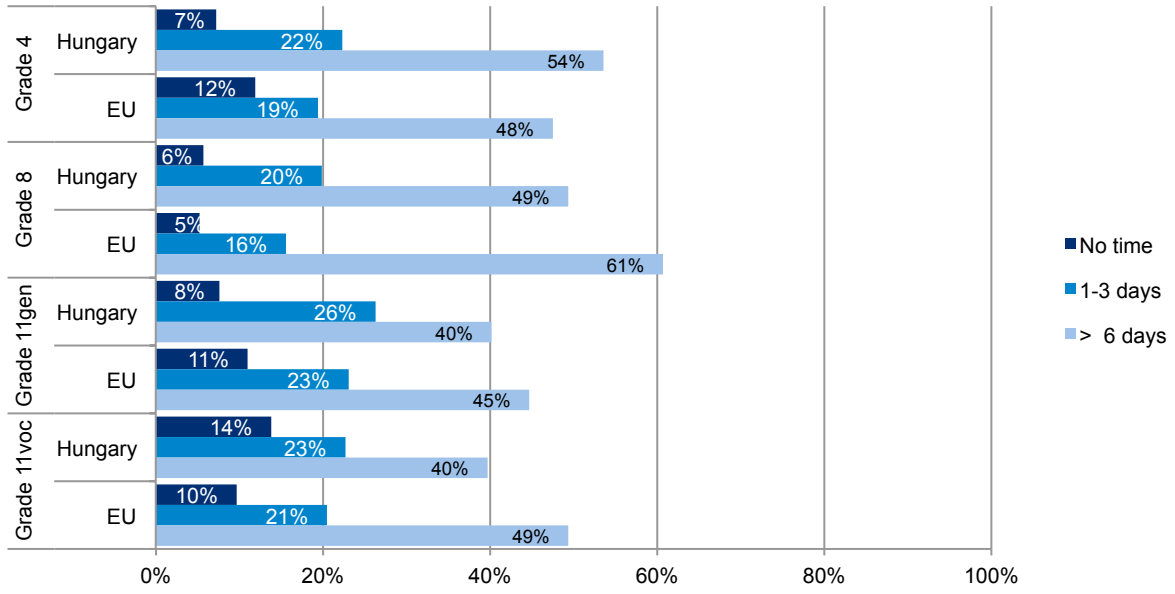
5. PROFESSIONAL DEVELOPMENT

TIME SPENT ON TRAINING

Fewer students at grade 8 and 11 in Hungary are taught by teachers who have invested more than 6 days in professional development activities during the past two years, compared to the EU average, with more teachers at grade 4.

In Hungary more are in schools where teachers have spent between 1 and 3 days on ICT professional development activities and is above the EU mean at all grades. Those who have spent no time are close to the EU mean at all grades, except grade 11 vocational which is higher.

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'; Hungary and EU; 2011-12)



ENGAGEMENT IN TRAINING

As Fig. 5.2 below shows, in Hungary less than the EU average of students are in schools where teachers have recently undergone ICT training provided by school staff, at all grades. Less than the EU average of students are in schools where teachers have recently undergone training through online communities or personal learning.

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

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

Fig. 5.2a: grade 4

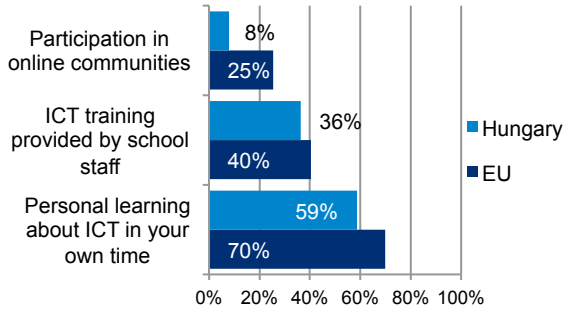


Fig. 5.2b: grade 8

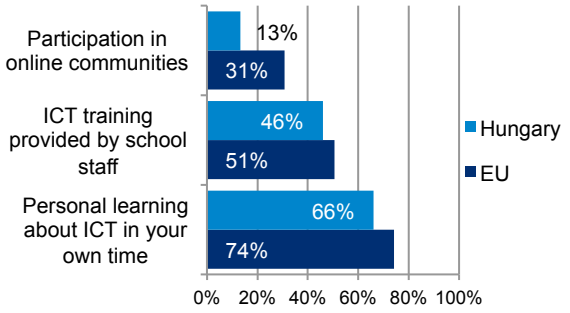


Fig. 5.2c: grade 11 gen.

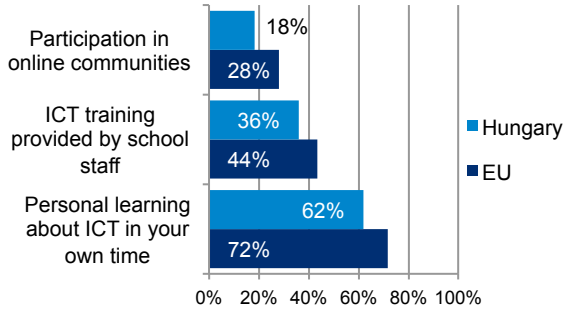


Fig. 5.2d: grade 11 voc.

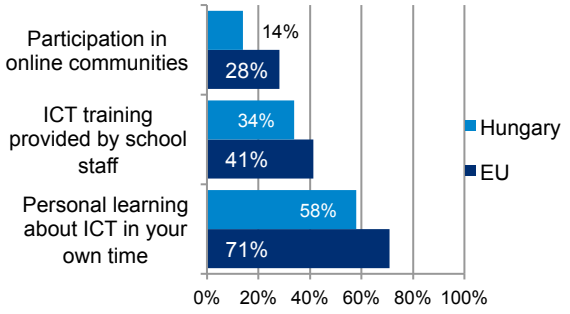
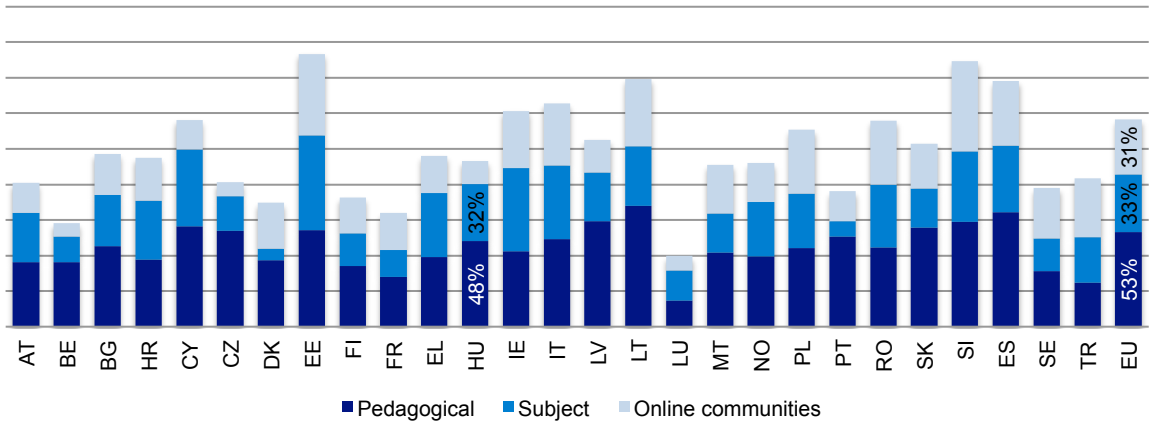


Fig. 5.2e shows that grade 8 teachers in Hungary have had subject-specific ICT training close the EU average, but have taken part less in online communities or in pedagogical training than the EU mean. Hungary ranks among the middle group of countries at all grades regarding pedagogical training, except at grade 11 vocational where it is among the bottom group, among the bottom group of countries for participation in online communities at all grades, and is among the leading group of countries for subject-specific ICT training at grade 4, the middle group of countries at grade 8 and 11 general, and the bottom group at grade 11 vocational (main report fig 4.6, 4.7, 4.8).

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



In Hungary at all grades percentages of students taught by teachers for whom ICT training is compulsory is higher than the average, ranking among the middle group of countries, except at grade 8 where Hungary is among the top group (main report, fig. 4.2). As regards involvement in personal learning about ICT in their own time (main report, fig. 4.4), percentages (in the range 58% to 69%) below the EU mean at all grades, with Hungary ranked among the bottom group of countries. The percentage of students taught by teachers participating in training provided by school staff is among the bottom group of countries at all grades, except at grade 8 where Hungary ranks among the middle group of countries (main report, fig. 4.5).

Between 6 and 14 per cent of students are taught by teachers who have not spent any time on ICT-related professional development activities during the preceding two years (main report, fig. 4.11); less than the EU mean at all grades, except at grade 11 vocational.

6. SCHOOL SUPPORT MEASURES

Students in Hungary are in schools where above EU averages of ICT strategies are implemented at grade 4 and at grade 8, among the middle group of countries, but at grade 11 Hungary ranks among the lowest group of countries, below the EU mean (main report, fig. 5.3). There are above below average percentages of students in schools with strategies to support teacher collaboration at all grades, with Hungary among the lower group of countries, except at grade 11 vocational where it is among the middle group of countries on this measure (main report, fig. 5.7). Hungary is ranked among the top five countries at all grades, among the bottom group of countries, as regards strategies about responsible internet and social media use (main report, fig. 5.10). Hungary ranks among the bottom group of countries for percentages of students in schools with change management programmes at all grades (main report, fig. 5.14).

ICT COORDINATOR

In Hungary, compared to the situation at EU level (see Fig. 6.1), very few students are in schools where ICT coordinators are provided at all grades. Students are in schools that employ full time ICT coordinators, above the EU mean, at grades 8 and 11 and close to the EU level at grade 4 who also provide pedagogical as well as ICT support.

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

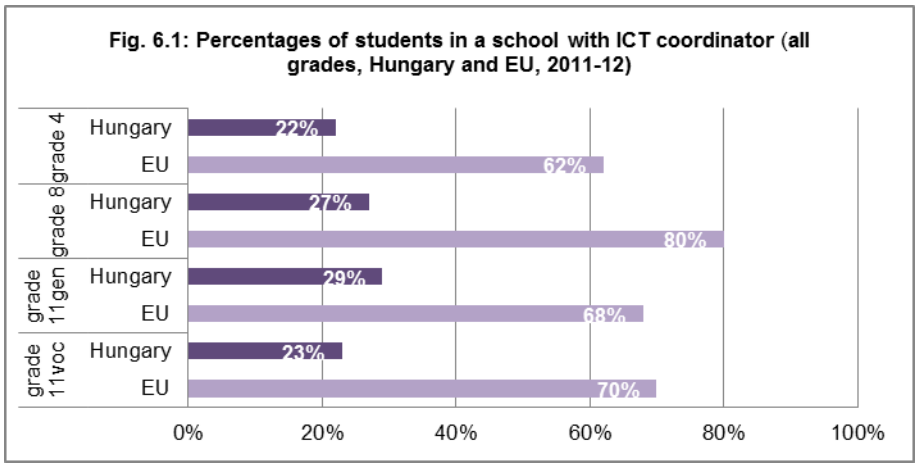
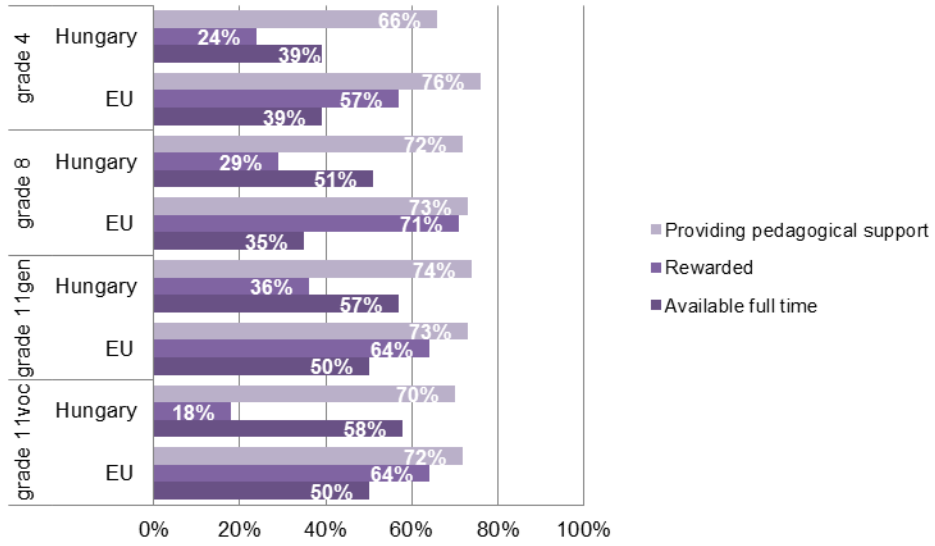


Fig. 6.2: Percentages of students in a school with ICT coordinator available full time, and/or rewarded and/or providing pedagogical support (all grades, Hungary and EU, 2011-12)



INCENTIVES

In Hungary many students are in schools where there are incentives or rewards for using ICT, in the form of equipment and financial incentives above the EU average at all grades.

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

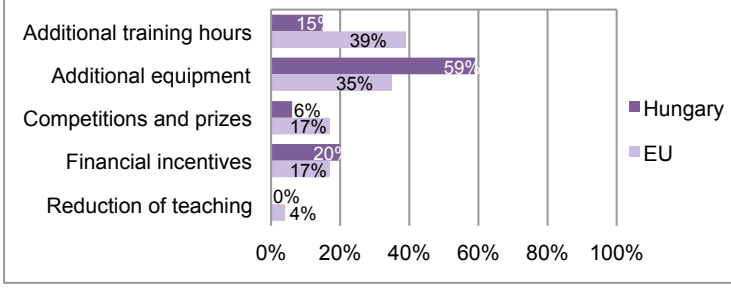


Fig. 6.3b: grade 8

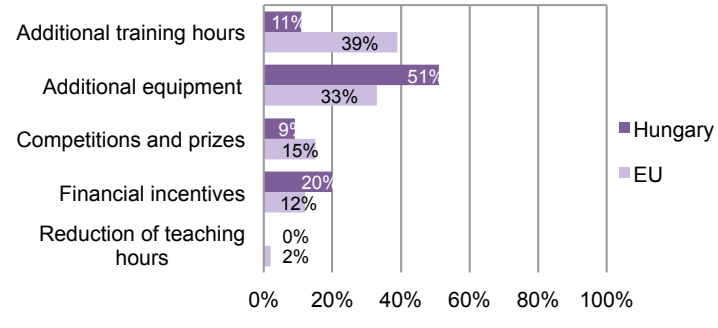


Fig. 6.3c: grade 11 gen.

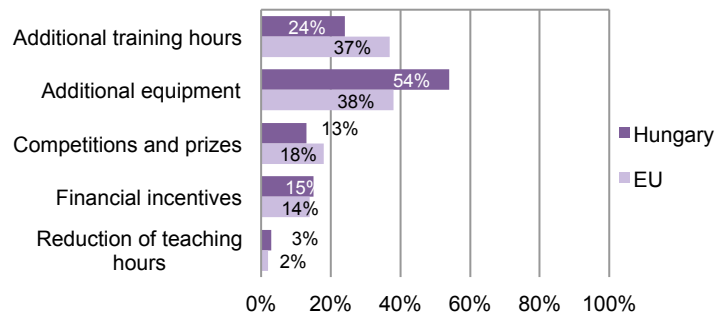
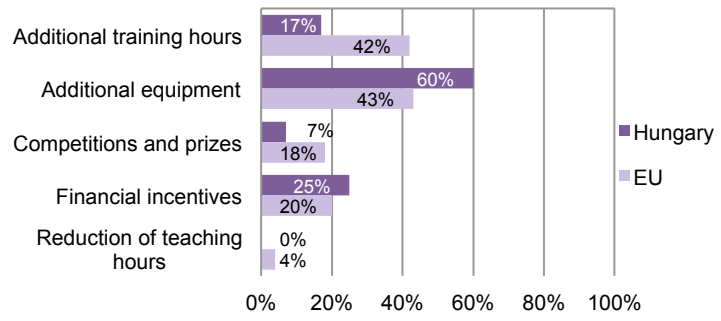


Fig. 6.3d: grade 11 voc.



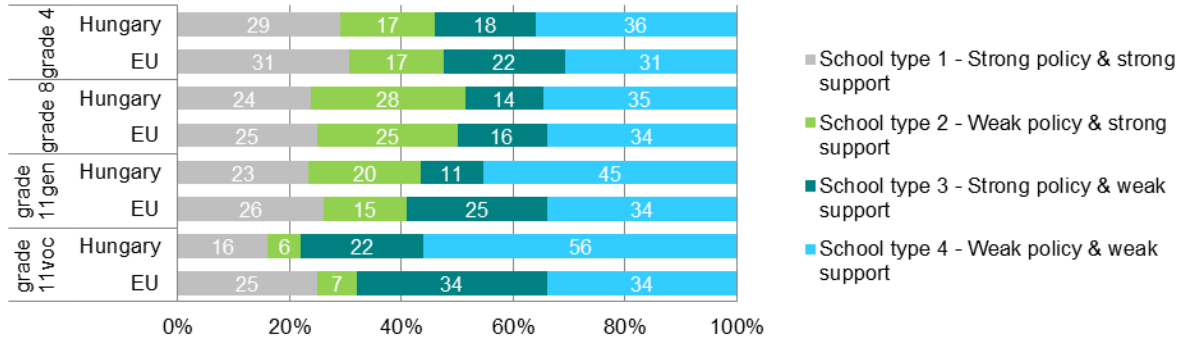
For further details please refer to Section 5 of the survey report.

7: CLUSTERS

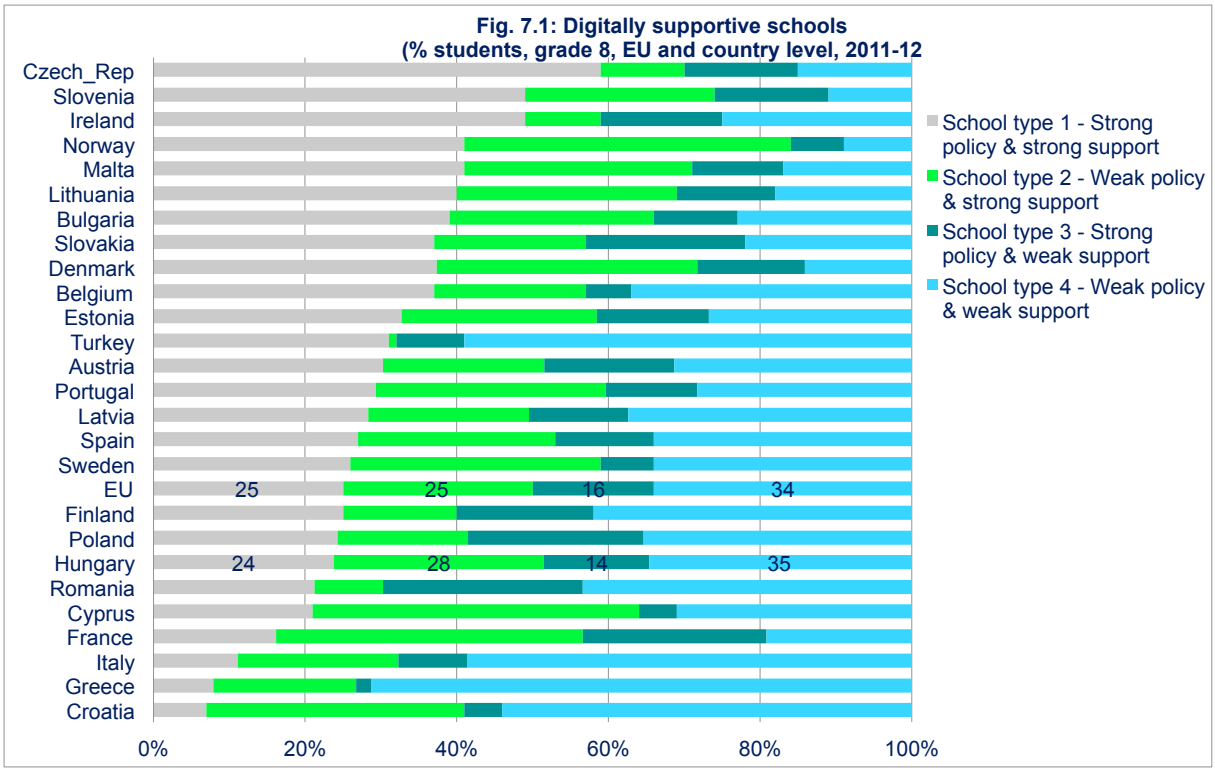
THE DIGITALLY SUPPORTIVE SCHOOL

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 Hungary, over 50% of grade 8 students are in schools with strong support but percentages are lower at other grades, particularly vocational.

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

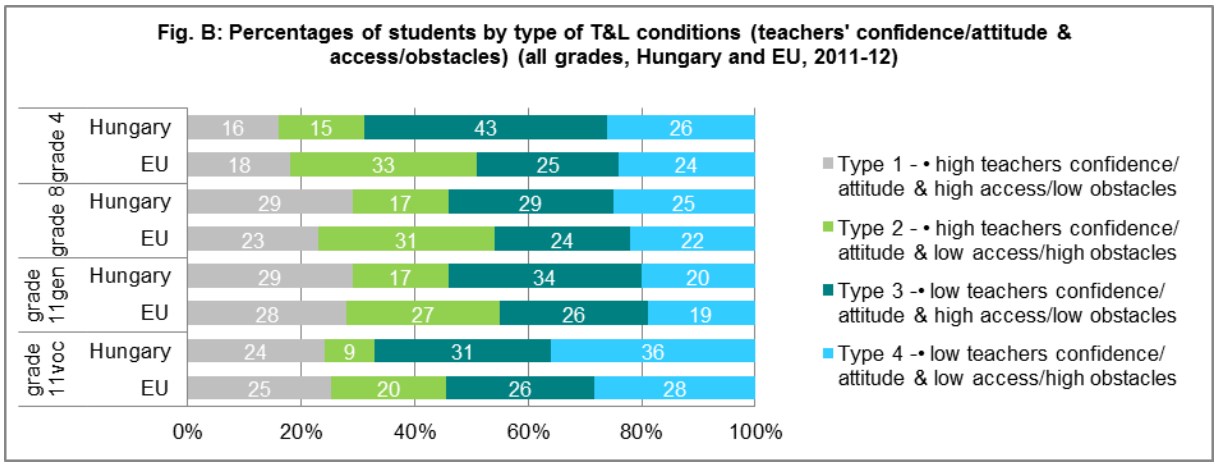


Hungary ranks low compared to other countries considering schools with strong policy and strong support (type 1) ranked among the bottom group of countries (fig. 7.1) at grade 8 and grade 11 vocational, although higher, among the middle group of countries at other grades (main report, fig. 8.1).

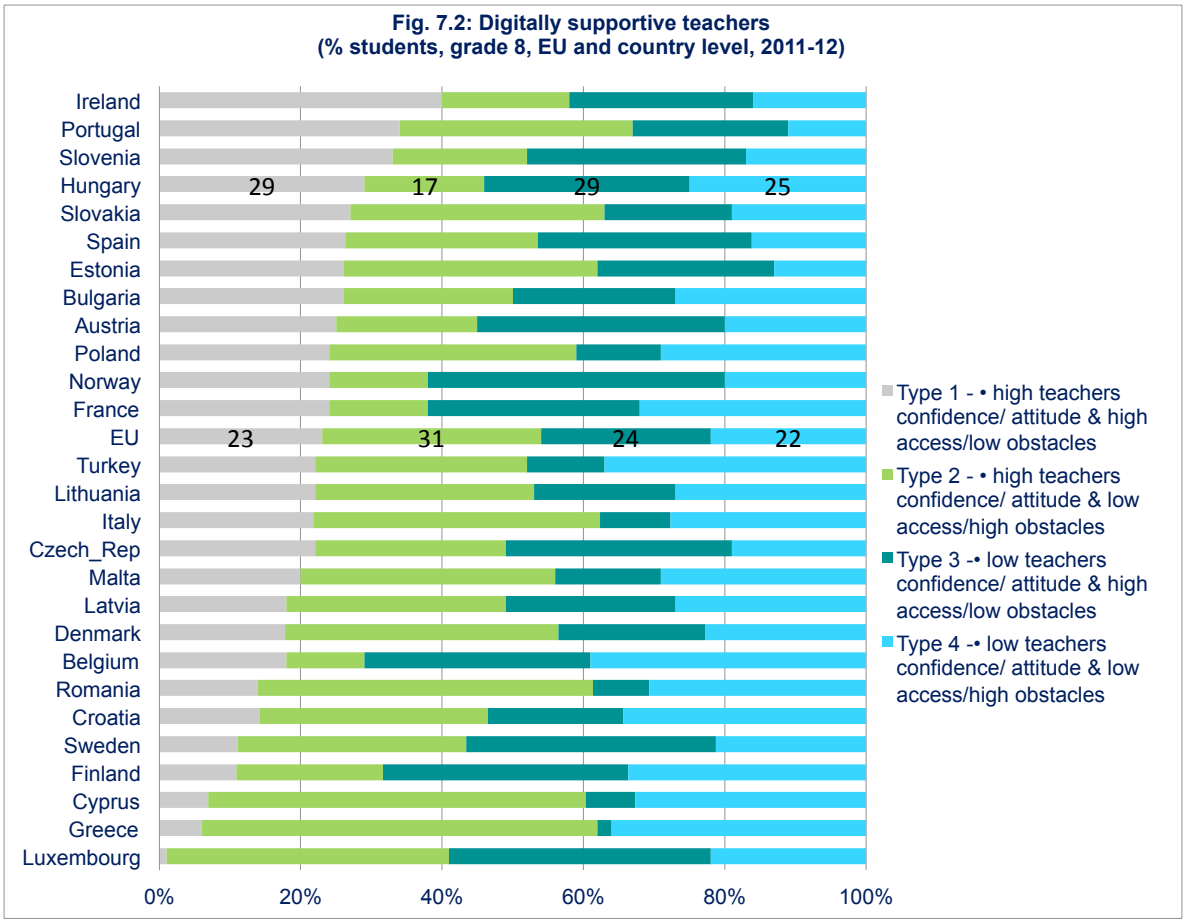


DIGITALLY CONFIDENT AND SUPPORTIVE TEACHERS

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 Hungary are close to or above the EU mean at all grades.

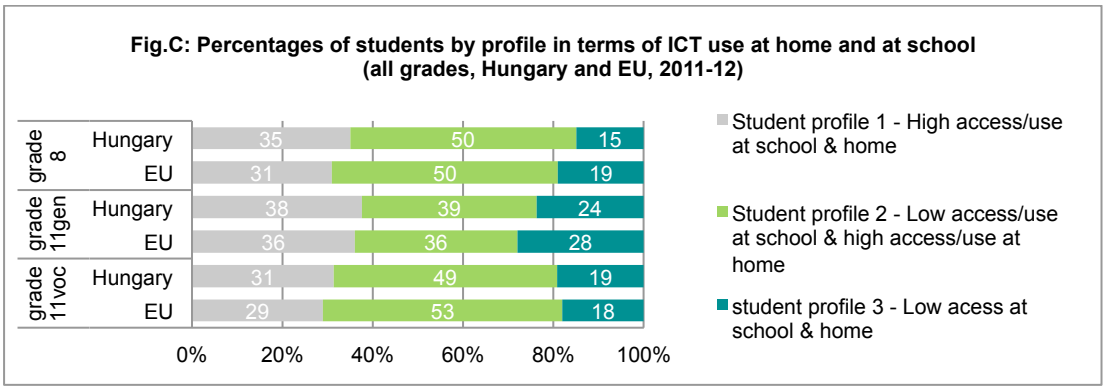


A higher percentage of students at grade 8 compared to other countries is in schools with type 1 teachers (fig. 7.2), ranking Hungary among the leading group of countries in this respect, but other grades there are lower percentages, with Hungary placed among the middle group of countries (main report, fig. 8.3).



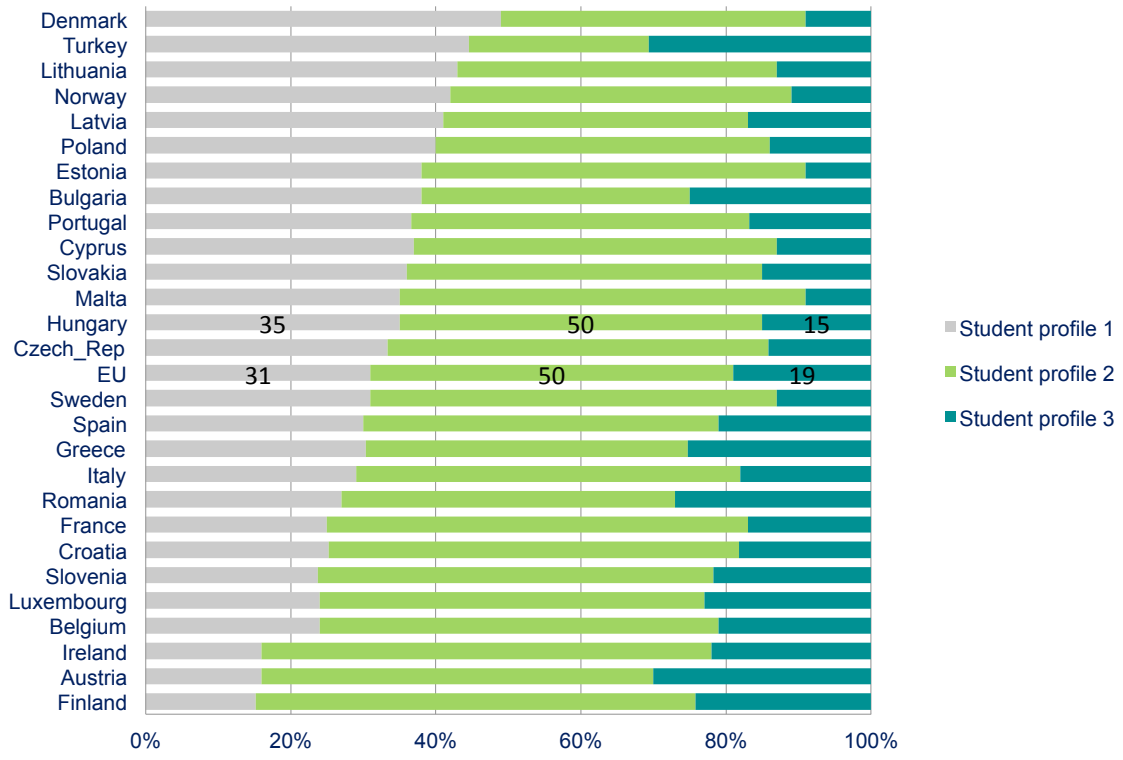
THE DIGITALLY SUPPORTIVE STUDENT

A *digitally supportive student* being defined as having high ICT access and use at school and at home, the percentages of such students in Hungary are above EU means at all grades in the survey.



On this measure, percentages of type 1 grade 8 students are above the EU average ranked among the middle group of countries (fig. 7.3), as is the situation at all grades (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 Hungary, very few grade 8 students are in type 1 schools but percentages in either type 1 or type 2 schools are above EU means at all grades.

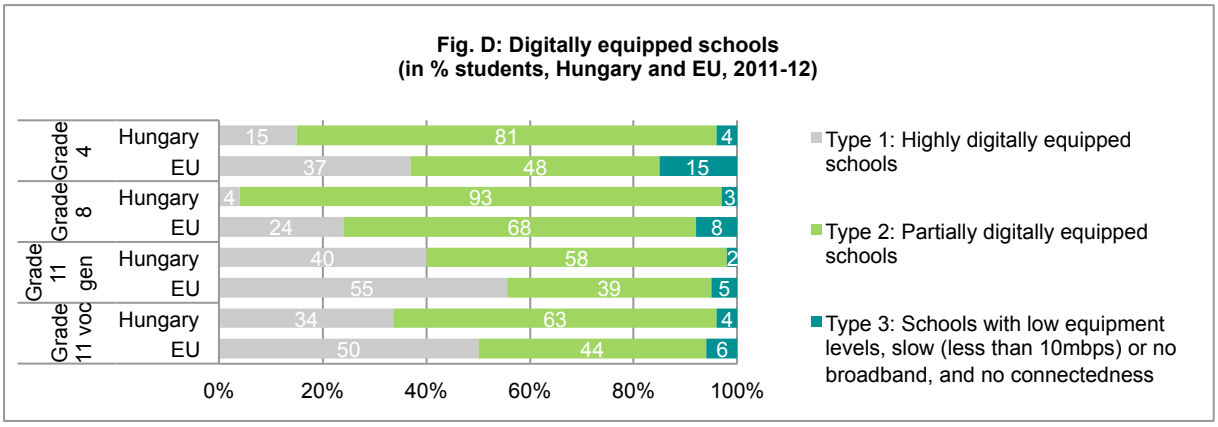
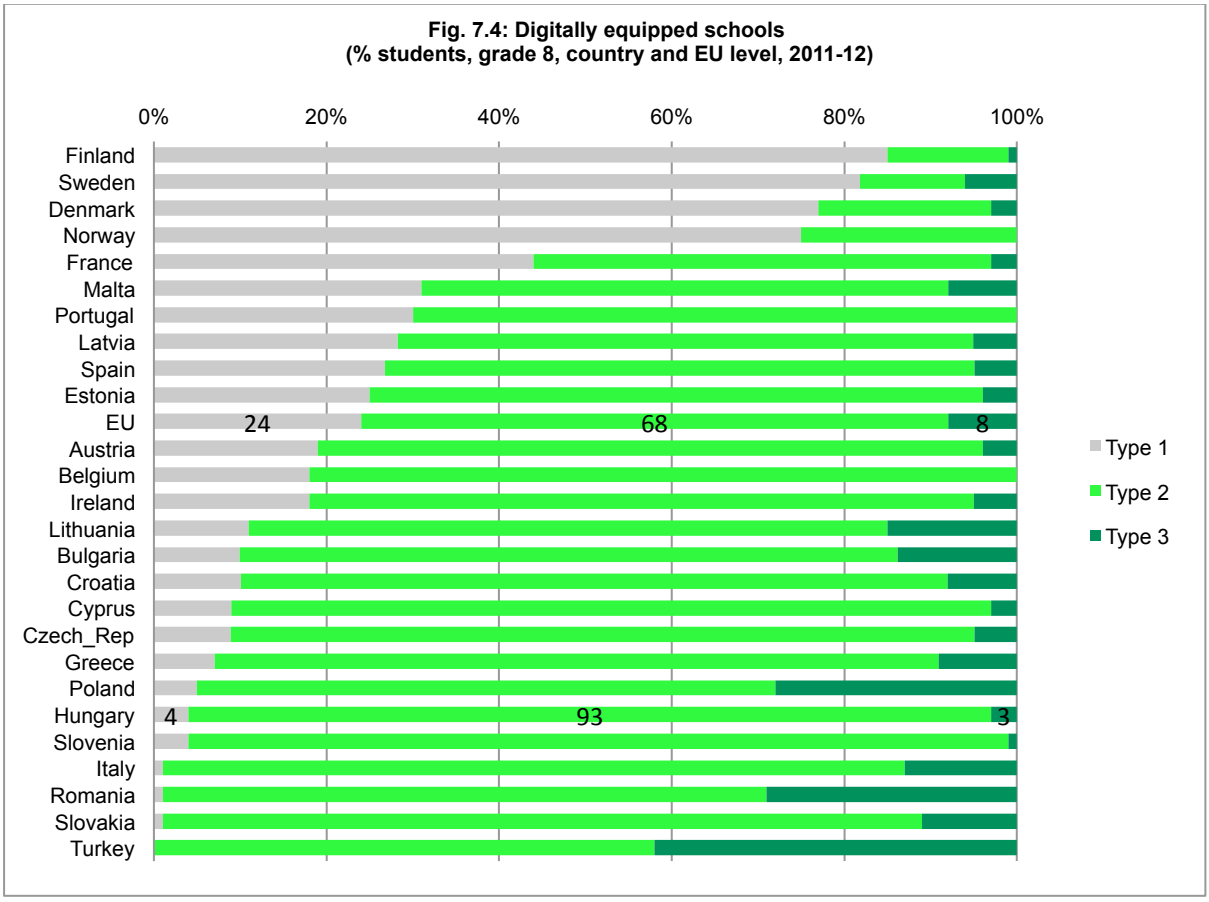


Fig. 7.4 shows how Hungary compares against other countries at grade 8 on this measure, ranking among the bottom group of countries, with the highest percentages of students in type 2 schools compared to other countries – almost all students are in this type of school. At other grades the situation is similar (main report, fig. 1.13), with Hungary among the bottom group of countries on this measure, with very high percentages of students in type 2 schools at grade 4, but less pronounced at grade 11.



CONCLUSION

Students in Hungary benefit from levels of computer access close to the EU mean, and almost all are in 'connected' schools with broadband internet (although at slower speeds than in other countries). It is at grade 8 where both teacher and student use of ICT is highest, and is close to the EU average, above as regards students. At all grades surveyed teachers' confidence in ICT is lower than the EU mean but students' is generally higher. Professional development is generally formal and takes place outside school, and many students are in schools without ICT coordinators although when they are in port they tend to be better rewarded than in other countries.

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.

Fig. 2.1
Computers per 100 students

COUNTRY	Grade4	SE1	Grade8	SE2	Grade11gen	SE3	Grade11voc	SE4
Hungary	13.3	(0.9)	17.3	(1.0)	16.8	(1.0)	25.2	(1.4)
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	Hungary	2.6%	(1.6)	14.8%	(3.5)	36.3%	(4.9)	18.1%	(3.9)	19.0%	(4.8)
	EU	8.0%	(1.3)	16.5%	(2.3)	21.4%	(2.4)	22.1%	(2.2)	19.5%	(2.2)
2. Grade8	Hungary	1.5%	(1.0)	13.3%	(3.0)	30.4%	(4.0)	23.9%	(3.7)	19.7%	(3.4)
	EU	5.0%	(0.8)	9.6%	(1.3)	19.1%	(2.3)	27.7%	(2.4)	24.8%	(2.3)
3. Grade11gen	Hungary	0.0%	(0.0)	3.8%	(1.7)	41.7%	(4.9)	16.4%	(3.4)	24.2%	(4.1)
	EU	3.7%	(1.3)	6.2%	(0.8)	18.0%	(2.8)	23.2%	(3.0)	25.4%	(3.9)
4. Grade11voc	Hungary	0.8%	(0.1)	8.5%	(2.9)	24.4%	(4.1)	27.1%	(4.3)	27.6%	(4.4)
	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
9.2%	(2.9)	0.0%	(0.0)
8.6%	(1.4)	4.0%	(1.3)
7.0%	(2.1)	4.2%	(1.7)
8.6%	(1.6)	5.2%	(1.2)
8.7%	(2.7)	5.1%	(2.1)
13.3%	(2.6)	10.3%	(8.0)
6.0%	(2.2)	5.7%	(2.5)
15.7%	(7.1)	10.9%	(5.3)

Fig. 2.5
Connectedness

Level	COUNTRY	SchWebsite	SE1	VLE	SE2	NoConnect	SE3
1. Grade4	Hungary	85.8%	(4.5)	5.5%	(2.1)	4.0%	(2.0)
	EU	69.7%	(3.6)	26.8%	(2.0)	15.9%	(2.2)
2. Grade8	Hungary	90.6%	(2.6)	11.0%	(2.7)	3.2%	(1.7)

Level	COUNTRY	SchWebsite	SE1	VLE	SE2	NoConnect	SE3
	EU	86.0%	(1.6)	61.4%	(3.0)	8.4%	(1.2)
3. Grade11gen	Hungary	97.2%	(1.4)	17.8%	(3.7)	1.8%	(1.1)
	EU	91.7%	(3.1)	61.0%	(7.9)	7.0%	(2.9)
4. Grade11voc	Hungary	94.5%	(2.1)	22.5%	(4.2)	3.8%	(1.9)
	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	Hungary	2.3%	(1.4)	5.3%	(2.2)	9.4%	(2.4)	11.7%	(3.0)	19.9%	(3.7)
	EU	3.0%	(0.4)	10.0%	(2.4)	13.9%	(1.4)	18.0%	(1.8)	19.1%	(2.1)
2. Grade8	Hungary	4.7%	(1.0)	6.7%	(1.5)	17.4%	(2.1)	19.8%	(2.0)	14.8%	(1.8)
	EU	7.4%	(1.0)	6.8%	(0.8)	14.7%	(0.9)	20.7%	(1.2)	18.9%	(1.4)
3. Grade11gen	Hungary	5.0%	(1.5)	3.8%	(1.4)	11.1%	(2.1)	17.2%	(2.3)	16.3%	(1.9)
	EU	7.0%	(1.0)	8.1%	(1.4)	14.9%	(1.4)	22.9%	(3.8)	17.1%	(1.8)
4. Grade11voc	Hungary	11.2%	(2.0)	5.6%	(1.3)	9.5%	(1.9)	17.1%	(2.2)	17.3%	(2.3)
	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
26.7%	(4.2)	11.8%	(3.0)	12.9%	(4.5)
20.7%	(2.7)	8.7%	(1.4)	6.7%	(1.4)
16.3%	(2.1)	14.2%	(2.0)	6.0%	(1.2)
14.4%	(1.0)	11.0%	(1.0)	6.1%	(0.8)
23.0%	(2.5)	15.6%	(2.3)	8.1%	(1.5)
14.0%	(1.5)	10.3%	(1.4)	5.7%	(0.9)
18.5%	(2.5)	11.6%	(1.9)	9.1%	(1.6)
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
Hungary	19.5%	(3.8)	30.7%	(2.7)	21.7%	(2.9)	29.0%	(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	Hungary	31.3	(1.5)	6.7	(0.8)	66.0	(1.5)
	EU	28.0	(0.8)	11.2	(0.7)	53.3	(1.1)
2. Grade11gen	Hungary	30.3	(1.1)	5.0	(0.6)	40.6	(2.1)
	EU	34.6	(1.3)	10.7	(1.1)	50.5	(1.5)
3. Grade11voc	Hungary	40.5	(1.3)	11.2	(1.0)	58.5	(2.3)

Level	Country	OwnMobPhone	SE1	OwnLaptop	SE2	SchoolComputer	SE3
	EU	45.6	(1.3)	15.5	(0.7)	64.3	(1.5)

Fig. 4.1

Scales Teachers ICT skills

Level	COUNTRY	SocialMediaSkills	SE1	OperatSkills	SE2
1. Grade4	Hungary	2.03	(0.08)	2.75	(0.07)
	EU	2.41	(0.03)	2.98	(0.02)
2. Grade8	Hungary	2.13	(0.05)	2.82	(0.04)
	EU	2.37	(0.04)	3.00	(0.03)
3. Grade11gen	Hungary	2.23	(0.06)	2.90	(0.04)
	EU	2.38	(0.07)	3.01	(0.03)
4. Grade11voc	Hungary	2.37	(0.06)	2.99	(0.05)
	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	Hungary	2.63	(0.03)	2.71	(0.03)	2.81	(0.03)	2.88	(0.04)
	EU	2.41	(0.02)	2.63	(0.02)	2.58	(0.02)	2.98	(0.02)
2. Grade11gen	Hungary	2.80	(0.02)	2.92	(0.02)	3.03	(0.02)	3.09	(0.03)
	EU	2.78	(0.02)	2.88	(0.01)	2.93	(0.03)	3.16	(0.02)
3. Grade11voc	Hungary	2.57	(0.03)	2.76	(0.03)	2.76	(0.03)	2.81	(0.03)
	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	Hungary	53.6%	(4.9)	22.3%	(4.0)	7.2%	(2.4)
	EU	47.5%	(4.2)	19.4%	(3.0)	11.9%	(2.4)
2. Grade8	Hungary	49.4%	(2.8)	19.9%	(2.1)	5.7%	(1.3)
	EU	60.7%	(1.6)	15.6%	(1.0)	5.2%	(0.5)
3. Grade11gen	Hungary	40.2%	(3.0)	26.3%	(2.5)	7.6%	(1.5)
	EU	44.7%	(5.2)	23.1%	(3.4)	11.0%	(1.6)
4. Grade11voc	Hungary	39.7%	(2.7)	22.7%	(2.1)	13.8%	(2.0)
	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	Hungary	7.9%	(2.5)	36.4%	(4.6)	58.7%	(5.1)

Level	COUNTRY	OnlineComm	SE1	ICTtraining	SE2	PersonalLearning	SE3
	EU	25.4%	(2.5)	40.3%	(3.2)	70.0%	(2.8)
2. Grade8	Hungary	13.3%	(1.7)	45.9%	(3.0)	66.1%	(2.7)
	EU	30.8%	(1.6)	50.5%	(1.7)	74.2%	(1.3)
3. Grade11gen	Hungary	18.3%	(2.4)	36.1%	(3.3)	62.0%	(3.0)
	EU	28.0%	(2.4)	43.5%	(2.2)	71.7%	(2.2)
4. Grade11voc	Hungary	14.1%	(2.0)	33.8%	(3.0)	57.9%	(2.7)
	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
Hungary	21.8%	(4.0)	27.1%	(3.7)	28.8%	(4.2)	23.1%	(4.0)
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	Hungary	38.7%	(10.2)	24.3%	(8.6)	66.2%	(10.1)
	EU	39.3%	(3.0)	56.5%	(3.0)	75.9%	(2.3)
2. Grade8	Hungary	51.0%	(8.3)	28.9%	(7.6)	71.5%	(7.3)
	EU	34.8%	(2.9)	70.6%	(2.4)	72.5%	(2.5)
3. Grade11gen	Hungary	56.7%	(8.9)	35.8%	(8.6)	74.1%	(7.9)
	EU	49.6%	(6.9)	63.6%	(7.7)	73.4%	(4.2)
4. Grade11voc	Hungary	58.1%	(9.7)	17.8%	(6.9)	70.3%	(9.7)
	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	Hungary	14.9%	(3.4)	58.5%	(5.0)	6.1%	(2.5)	20.3%	(4.8)	0.0%	(0.0)	32.2%	(5.4)
	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	Hungary	11.4%	(2.7)	50.7%	(4.3)	8.8%	(2.4)	20.3%	(3.5)	0.0%	(0.0)	18.2%	(3.4)
	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	Hungary	24.1%	(4.1)	53.6%	(4.8)	12.8%	(3.1)	14.8%	(3.5)	2.7%	(1.6)	17.9%	(4.0)
	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)
4. Grade11voc	Hungary	17.1%	(3.7)	59.8%	(4.8)	6.9%	(2.2)	24.8%	(4.3)	0.0%	(0.0)	18.7%	(4.0)
	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	Hungary	29	(4.42)	17	(3.56)	18	(3.87)	36	(5.17)
	EU	31	(2.70)	17	(3.17)	22	(2.53)	31	(2.98)

Level	COUNTRY	Type1	SE1	Type2	SE2	Type3	SE3	Type4	SE4
2. Grade8	Hungary	24	(3.57)	28	(3.79)	14	(2.82)	35	(4.09)
	EU	25	(1.91)	25	(2.20)	16	(1.83)	34	(2.15)
3. Grade11gen	Hungary	23	(4.04)	20	(3.85)	11	(3.02)	45	(4.91)
	EU	26	(2.28)	15	(8.69)	25	(3.74)	34	(5.30)
4. Grade11voc	Hungary	16	(3.84)	6	(2.17)	22	(3.85)	56	(4.81)
	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	Hungary	16	(3.36)	15	(3.51)	43	(5.01)	26	(4.14)
	EU	18	(2.02)	33	(2.95)	25	(2.33)	24	(2.64)
2. Grade8	Hungary	29	(2.56)	17	(1.97)	29	(2.43)	25	(2.52)
	EU	23	(1.43)	31	(1.27)	24	(1.52)	22	(1.17)
3. Grade11gen	Hungary	29	(3.10)	17	(2.42)	34	(3.08)	20	(2.67)
	EU	28	(2.41)	27	(2.68)	26	(1.65)	19	(1.67)
4. Grade11voc	Hungary	24	(2.58)	9	(1.51)	31	(2.58)	36	(2.92)
	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	Hungary	35	(1.58)	50	(1.60)	15	(1.44)
	EU	31	(1.00)	50	(0.85)	19	(0.67)
2. Grade11gen	Hungary	38	(1.52)	39	(1.32)	24	(1.15)
	EU	36	(1.18)	36	(1.00)	28	(1.47)
3. Grade11voc	Hungary	31	(1.55)	49	(1.74)	19	(1.36)
	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	Hungary	15	(4.37)	81	(4.60)	4	(1.96)
	EU	37	(4.43)	48	(4.15)	15	(2.12)
2. Grade8	Hungary	93	(2.25)	4	(1.64)	3	(1.62)
	EU	68	(2.87)	24	(3.31)	8	(1.16)
3. Grade11gen	Hungary	40	(4.74)	58	(4.77)	2	(1.07)
	EU	55	(12.27)	39	(10.34)	5	(2.06)
4. Grade11voc	Hungary	4	(1.81)	34	(4.43)	63	(4.57)
	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 Hungary 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. 8.1 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 Hungary participation levels are well above the EU mean at all grades, particularly at grade 8 where 182 schools took part.

Fig. 8.1: Participation rates
(% of sampled schools with at least one questionnaire completed, all grades, Hungary and EU, 2011-12)