

The 'teacher effect' on the use of ICT in the classroom



Briefing Papers, published monthly, aim to present the findings of the *Survey of Schools: ICT in Education* on a specific topic and to relate them to the results of European Schoolnet projects on the topic.

Survey of Schools: ICT in Education provides detailed, up-to-date and reliable benchmarking on ICT in school education across Europe, painting a picture of the use of technology for learning in schools: from the provision of infrastructure to teachers' and students' use, confidence and attitudes.

Based on over 190,000 responses from students at grade 4, 8 and 11 in general and vocational education, their teachers and head teachers, in schools randomly selected in around 30 European countries, the Survey questionnaires were administered online and answers analysed during the school year 2011-12.

The Survey, commissioned by the European Commission (Directorate General Communications Networks, Content and Technology), was conducted in partnership between European Schoolnet and the University of Liège (the Service d'Approches Quantitatives des faits éducatifs, Department of Education).

More about the Survey and its findings is available here: www.eun.org/ict-survey

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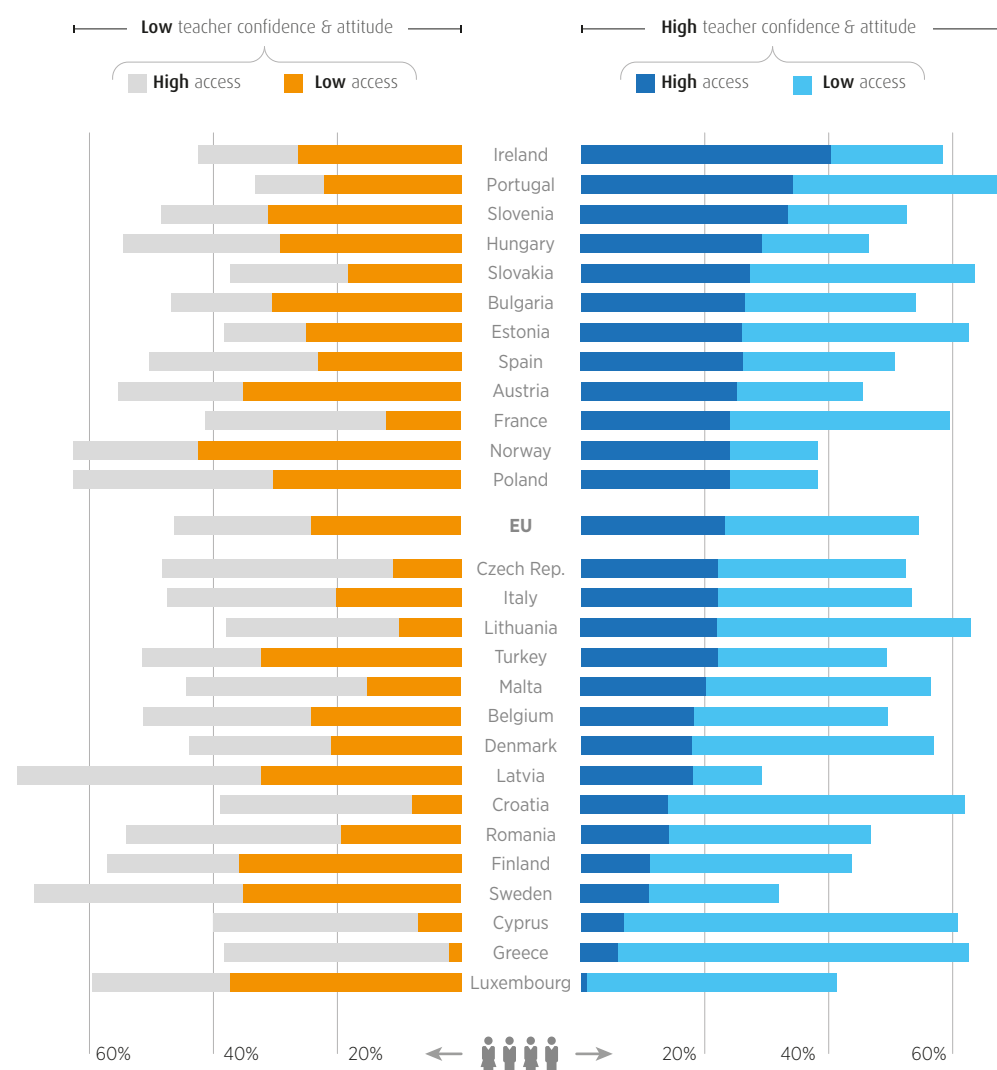
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FIG. 1: Percentage of grade 8 students by type of learning environment (2011-12)



MORE PRECISELY:

- Teachers' confidence refers to teachers' perception of their own ICT operational and social media skills, as well as their participation in professional development in ICT.
- Teachers' attitude is their opinion about the relevance of using ICT in different learning processes and ICT's positive impact on different learners' competences.
- The level of access to ICT at school is defined as teachers' access to infrastructure, provision shortages and inadequacy, and teaching time using ICT.
- The picture at grade 8 is similar to that at grade 4, but differs from the one at grade 11 in general education where countries such as Denmark, Norway, Luxembourg, Finland, France and Belgium have a much larger group of highly confident and positive teachers with high access to ICT at school.

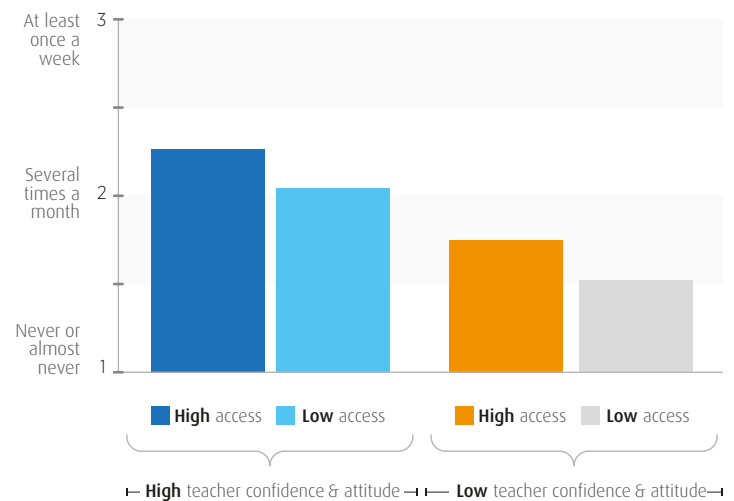
Looking at the frequency of teachers' ICT-based activities with the class for each of the four groups, it appears – not surprisingly – that confident and positive teachers use ICT slightly more often in their teaching. However, figure 2 leads to a very interesting finding: when access to ICT is low, teachers' confidence and attitude make a difference; indeed, such teachers use ICT more frequently during lessons compared to less confident and positive teachers with high access to infrastructure.

These findings clearly show the importance of the link between teachers' confidence and attitude towards the use of ICT for teaching and learning, and the actual use of ICT in the classroom. Boosting the professional development of teachers is therefore likely to be a key lever for an efficient use of the available infrastructure.

MORE PRECISELY:

The frequency of teachers' ICT-based activities with the class is measured on a scale from 1 (never or almost never), 2 (several times a month), 3 (at least once a week) to 4 (every day or almost every day).

FIG 2: Frequency of teachers' ICT-based activities with the grade 8 class (EU average; 2011-12)



Is the professional development of teachers in the use of ICT promoted enough? Are teachers interested in learning about ICT?

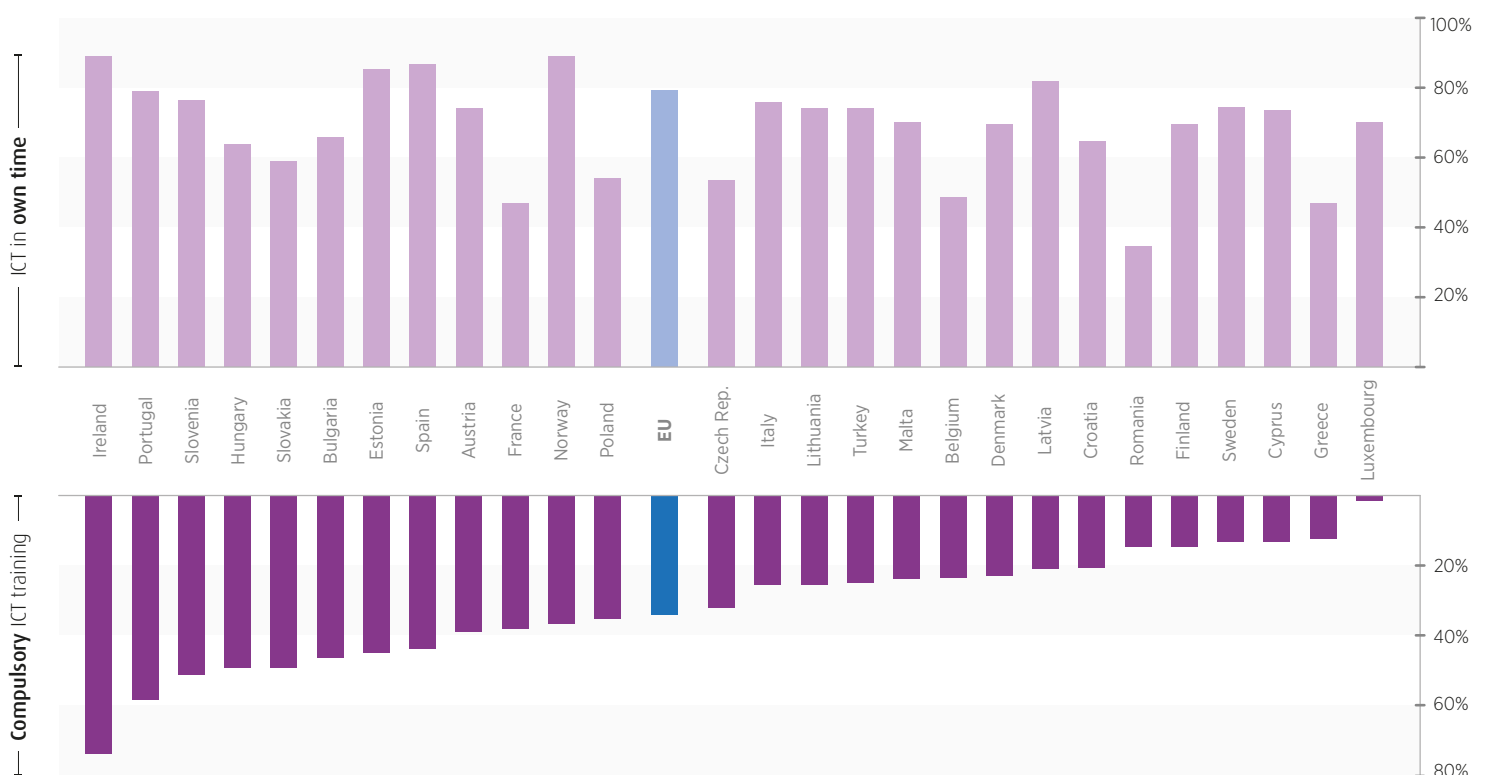
On average, only 25% of students at grade 8 in Europe are taught by teachers for whom ICT training is compulsory (see dark purple bars in FIG. 3), with high differences between countries as shown by figure 3.

By contrast, teachers' involvement in personal learning about ICT in their own time is very high, as on average around 75% of students are taught by teachers who do this. Such an investment is observed despite whether or not ICT training is compulsory for teachers. Developing new types of professional development for teachers would therefore seem a good way to capitalize on teachers' readiness to learn more about using ICT, helping them to fully integrate it into their teaching.

MORE PRECISELY:

- Whether or not ICT training is compulsory in the countries surveyed, the picture varies depending on the grade; see final report available here: www.eun.org/ict-survey
- Teachers' investment in personal learning about ICT in their own time is similar at grades 4 and 11 to grade 8; with a few differences in the order of ranking for some countries, but usually no dramatic differences between grades.

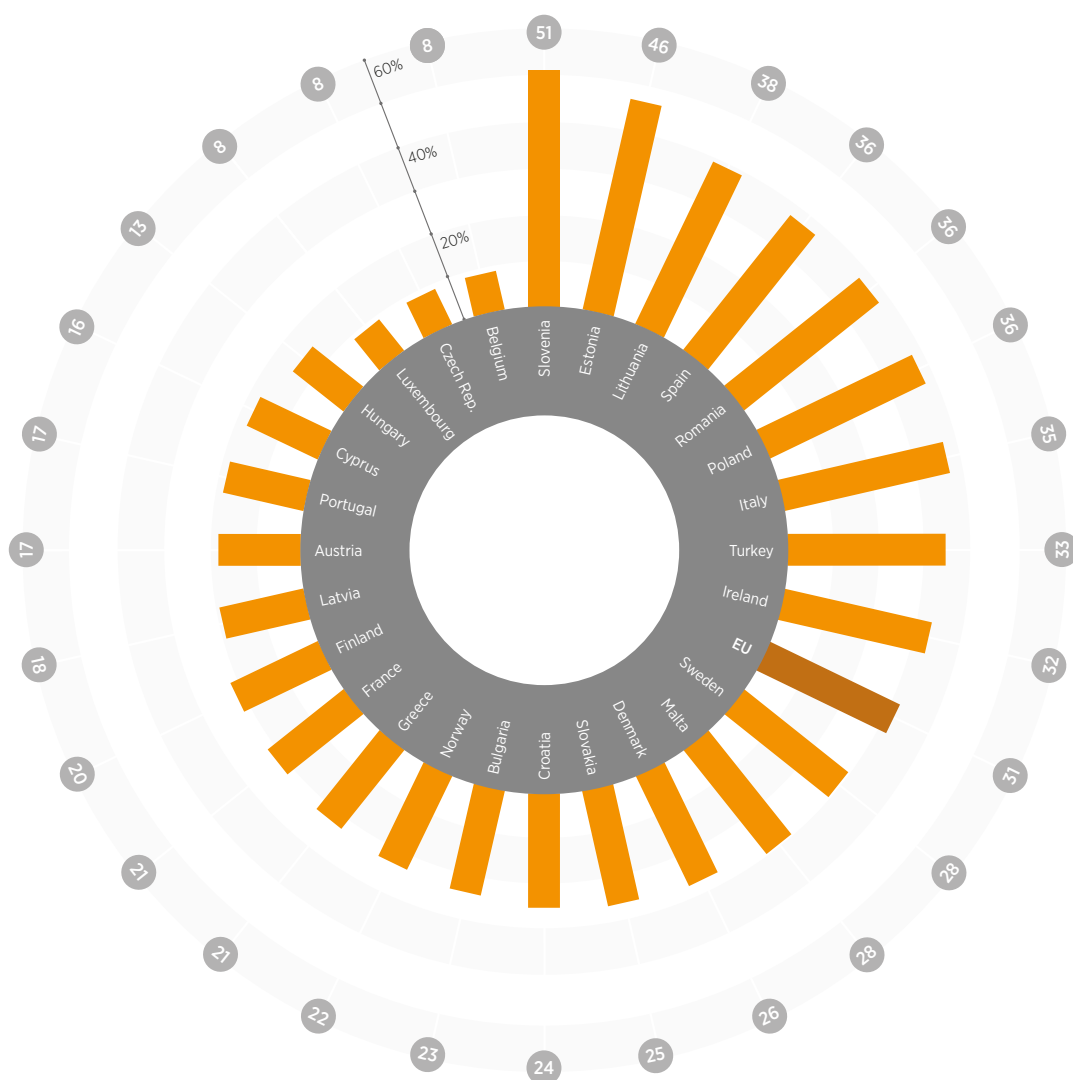
FIG 3: percentage of grade 8 students taught by teachers for whom ICT training is compulsory and/or declaring to engage in personal learning about ICT during their spare time (2011-12)



To what extent are innovative types of teacher development available?

Teachers' participation in online communities for professional discussion with other teachers is one innovative scheme for professional teacher training investigated by the Survey. As shown in figure 4, the picture reveals an emergent uptake, again to a very different extent depending on the countries.

FIG 4: percentage of grade 8 students taught by teachers who have participated in online training communities (2011-12)



Conclusion

This brief overview shows that on average at EU level around half of European students are taught by highly confident teachers with positive attitudes on the use of ICT in the classroom. A smaller proportion of those teachers however, work in conditions of high access to ICT in the classroom (*digitally confident and supportive teachers*). Moreover, given that teachers with low confidence but high access to equipment engage relatively less in ICT based activities, it is clear that increasing teacher confidence and investing in teacher professional development are key to achieving the optimal utilisation of the available infrastructure. Teachers all over Europe are already using their personal time to engage in ICT learning, showing a willingness to become better prepared for the 21st century classroom. Policymakers would be wise to build on teachers' existing positive attitudes, by providing more and more innovative forms of continuous professional development, and to keep in mind the central importance of teachers' motivation for the successful use of ICT in the classroom.

Project Focus: Innovative teacher training at the CPDLab courses

The Project Focus page links the main findings from the *Survey of Schools: ICT in Education* analysed in each issue of the *Briefing Papers* with one specific project coordinated by European Schoolnet.

As this issue explores the “teacher effect” and innovative teacher training methods, we asked Dorothy Cassells, Project Manager, and Elina Jokisalo, Communications Officer, to explain how the CPDLab project is contributing to innovating training and to changing the way teachers are successfully motivated and equipped for the classroom of the future.



Q: What is the CPDLab? Why was it initiated?

Teachers in Europe are positive about using technology and use it outside the classroom, but they often lack guidance and quality training on pedagogical approaches inside the classroom. To address this, European Schoolnet's CPDLab project (Continuous Professional Development Lab) has developed training courses to help participants make better use of new technology in the classroom, engage students

with technology to improve motivation and results, and explore possibilities in the training venue in Brussels, a fully equipped **Future Classroom Lab** (<http://fcl.eun.org>). The courses, aimed at secondary schools teachers, range from making the most of your IWB, bringing eSafety into everyday teaching, and implementing new teaching and learning activities in the future classroom.

Q: How are CPDLab courses organised? How do you equip teachers to expand the impact of their experience and foster real change in their original context?

Each of the courses, with the first running at summer 2013, consists of ten modules that can be used independently and combined in different ways. This enables different learning pathways according to the need of different target groups. For example, in the eSafety course, the teachers can find more interesting the classroom-based modules, whereas the whole-school plan is more relevant for ICT coordinators, head teachers and policy makers.

The courses organised in Brussels have been designed in particular for teachers and trainers involved in CPD within their school, region or

country. We expect that participants are able to **convey the “message” back home to more teachers**. Moreover, the course contents will be available for re-use and localisation (translation and adapting) by training providers, under Creative Commons 3.0 licence, and this will play an important part in the “domino effect”.

The project partners are also looking into taking advantage of the technology to support extended learning opportunities through access to shared **learning resources, webinars, forums**, and the involvement of **social media** extending the opportunities still further.

Q: The Survey of Schools: ICT in Education shows that the level of teachers' ICT confidence is a key determinant of the final use of ICT in the classroom. How is the CPDLab making a difference in boosting teachers' motivation to use ICT in the classroom?

The course development has brought together the expert knowledge and experience of the CPDLab project partners, expert groups and trainers in each of the course areas, as well as expert teachers and teacher trainers for each of the project partner countries. This combined expertise has led to a very **practical hands-on approach**, with the emphasis on helping the teacher in the classroom through a series of activities, **sharing ideas and approaches gained from colleagues**.

The participating teachers don't receive just handed-out information but real opportunities to **rethink their own teaching practices through peer-learning**, and practical examples and activities. Moreover, in the Future Classroom Lab, where the courses are delivered, the participants can **familiarise themselves with different technology** which they might not be able to test elsewhere.

Q: How do you reach the less ICT-confident teachers?

Here again, the **practical element** of each of the courses is vital. The courses are based on **working in groups** which leads the more experienced to support and encourage the less confident, sharing

practical tips and ideas that work for them. Also, through **localised contents and modules** realised on national or local level, a higher number of European teachers can benefit from the courses.

The CPDLab, supported by the European Commission's Lifelong Learning Programme, offers its courses through the EC's Comenius-Grudtvig training database. The project partners are European Schoolnet, INDIRE (Italy), Directorate-General of Education (Portugal), Finnish National Board of Education, Norwegian Centre for ICT in Education, and University of Oulu (Finland). To find out more and watch videos displaying CPDLab activities, please go to <http://cpdlab.eun.org/>