



CONTINUOUS PROFESSIONAL DEVELOPMENT THROUGH AND IN ICT



One of European Schoolnet's key aims is to broker educational research findings and other evidence to our key stakeholders: ministries of education, schools, teachers, and industry partners. The *European Schoolnet Perspectives* series is one way through which we achieve this.

The issues aim to:

- Summarize research evidence from key studies on innovation in education;
- Translate this evidence into concrete ideas for policy action;
- Conclude with the implications of the evidence for using technology in teaching and learning.

All issues can be accessed online: www.europeanschoolnet.org/resources/perspectives

Comments and suggestions on *European Schoolnet Perspective* are welcome: info@eun.org.

European Schoolnet is the network of 34 European Ministries of Education, based in Brussels. As a not-for-profit organisation, we aim to bring innovation in teaching and learning to our key stakeholders: Ministries of Education, schools, teachers, researchers, and industry partners.



Many teachers would like to integrate information and communication technologies (ICT) in their teaching and adopt more innovative, student-centred practices, but have low confidence in their ICT skills and in their competence to adopt innovative pedagogies. Continuous professional development (CPD) can help close the gap in their digital skills and build their confidence in classroom practices. But do teachers have access to CPD opportunities relevant to their context? Does the CPD offer match their needs? Which CPD formats are most available – and which the most impactful? The report “*Teachers and School Leaders as Lifelong Learners*” (Volume 1) from the 2018 OECD Teaching and Learning International Survey (TALIS) can help answer these questions thanks to its findings on teachers’ characteristics and professional development activities.

To further investigate professional development and innovative teaching practices specifically in the EU Member States, the Indicators Working Group of European Schoolnet (EUN) commissioned further analysis of the TALIS data. It was undertaken by EUN’s Knowledge Team and the Research Institute for the Evaluation of Public Policies FBK/IRVAPP (Italy) who carried out additional analyses to more closely examine CPD in general and the CPD in and through ICT in those 23 EU Member States which took part in the TALIS survey.

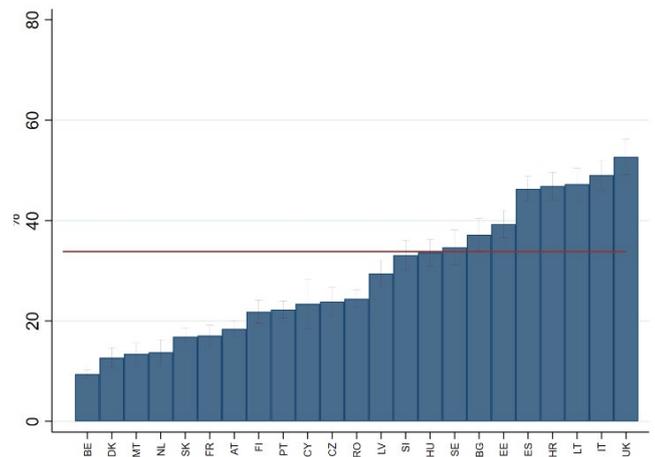


Figure 1. Proportion of teachers who participated in CPD in the form of online courses/seminars in the preceding 12 months in EU Member States. The red line represents the average of EU Member States. Source: FBK-IRVAPP analysis of TALIS 2018 data.

BACKGROUND INFORMATION

Conducted every five years by the OECD, the Teaching and Learning International Survey (TALIS) is a survey on the working conditions and learning environments of teachers and school leaders in primary and secondary schools. The 2018 survey focused on the continuous professional development, collaboration and induction practices of teachers, their use of innovative teaching methods and their self-efficacy in using them. The TALIS 2018 report “*Teachers and School Leaders as Lifelong Learners*” is available [here](#).

The second-level analysis was conducted on the data for the 23 EU Member States that took part in TALIS 2018: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Hungary, Italy, Latvia, Lithuania, Malta, Netherlands, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom. Although causality cannot be fully established between teacher characteristics due to the cross-sectional data of TALIS, the analysis reveals interesting insights on the relations between them. The full report by IRVAPP can be found [here](#).

FINDINGS

Continuous professional development through ICT

Evidence from the analysis

Although teachers in EU Member States reported having participated in various CPD activities in the last 12 months, only 34% had participated in CPD in the form of online courses/seminars (**Fig 1**), close to the OECD average (36%). Teachers were more likely to have participated in online courses/seminars if they were formally trained to use ICT, taught STEM subjects and worked at a public (state) school.

The relatively low participation suggests there is an untapped potential of online

courses to meet CPD needs, all the more so because 54% of teachers reported that CPD opportunities offered to them conflict with their work schedule and 38% that the offer is not relevant for their context. Online courses, as they are not limited by geographical barriers, often offer the option to be followed in a self-paced manner and offer a wide choice of topics, may therefore more closely fit teachers' time constraints and needs.

Further analysis of TALIS data reveals that

teachers are more likely to feel confident in their teaching and make use of innovative teaching practices when they participate in online courses or seminars and in peer/self-observation and coaching activities as part of a formal school arrangement, or when they participate in a network of teachers. The potential of online courses could therefore be tapped through the peer/self-observation and teacher networking in online discussions, small online study groups and peer/self-assessed activities.

Ideas for policy action

- Increasing the online course offer to teachers can provide cost-effective CPD. For instance, the TeachUP project¹ developed MOOCs (massive open online courses) on innovative teacher competences. The courses were well received by more than 3000 teachers from 10 countries. The course material is being reused and adapted to the local context in Austria, Portugal and Hungary.
- Create incentives to participate in online CPD, a format relatively less recognised compared to traditional ones. Formal recognition (e.g. accreditation) and supporting more tailored and school-embedded opportunities can increase participation.
- Although online courses offer flexibility, teachers still need schools to make time for them to participate in CPD. School leaders can help by planning time for CPD and providing a supportive environment.
- Consider developing small-scale online courses, e.g., school-level teacher training to create a peer learning environment among colleagues which can further encourage putting new ideas into practice.

Continuous professional development in ICT

Evidence from the analysis

Across the 23 EU Member States, 53% of teachers participated in CPD activities to develop ICT skills in teaching in the last 12 months, a lower proportion than the OECD average (60%). Among these countries, participation is highest in Latvia, Finland, Estonia, Croatia and Lithuania, and lowest in Belgium, United Kingdom, Czech Republic, Austria and Portugal. Interestingly, participation in CPD in ICT skills has decreased from TALIS 2013 to 2018 (**Fig 2**).

However, the data do not tell us whether this is due to a drop in supply or a drop in demand.

Participating in CPD in ICT skills in teaching seems beneficial regardless of individual and school characteristics. Teachers who participated in a CPD activity in ICT skills feel more confident in using ICT in their classroom and are also more likely to use it in their classes.

Teachers of STEM subjects, followed by teachers of social sciences, are more likely to participate in CPD in ICT skills compared to arts and language/humanities teachers. Teachers in public, relatively well-funded and more innovative schools are also more likely to participate in this form of CPD. Teachers are also slightly more likely to participate in CPD in ICT skills if they are male and their education included ICT-related subjects.

¹ Co-funded by the Erasmus+ Programme, the [Teach-UP](#) project investigated ways of scaling up online teacher training. It compared peer vs. expert assessment and investigated the impact of offering personalised support on course attrition rates.

BACKGROUND INFORMATION

In the International Computer and Information Literacy Study ([ICILS 2018](#)), the percentage of teachers participating in CPD on the pedagogical use of ICT is lower than in TALIS (43% compared to 60%). Again however, the survey cannot distinguish whether this is because the offer or the uptake is low. Nevertheless, it provides insights into three types of support teachers receive in accessing and participating in CPD in ICT skills. Among the participating EU Member States, teachers in Finland, Denmark and Luxembourg are supported through funding, access to resources and having leave from teaching to participate; in France teachers are supported through access to resources and leave from teaching. In Germany, support is provided through access to resources, while in Portugal through leave from teaching.

Across countries participating in ICILS, the types of CPD with low participation levels are (1) courses and webinars on integrating ICT into teaching and learning (46%); (2) use of collaborative work spaces to jointly evaluate student activity (40%); (3) ICT mediated discussions or forums on teaching and learning (40%); (4) using ICT tools for personalised student learning (28%); (5) use of ICT for students with special needs or specific learning difficulties (24%). This suggests that in CPD for ICT skills, there is the potential to combine CPD in digital skills with collaboration among teachers and topics related to personalised student learning.



Ideas for policy action

- Integrate training with and about ICT into initial teacher training as a way to predispose teachers to participating in CPD in using ICT in teaching.
- In CPD, consider combining digital skills training with topics of personalised student learning, because technology can facilitate it.
- Offer more opportunities for CPD in ICT skills
- Create incentives for participation.

Teacher self-efficacy in using ICT in the classroom



Evidence from the analysis

Teachers' confidence in their own capabilities (self-efficacy) is important as it correlates with the likelihood of their implementing new practices and participating in professional development ([Opfer, 2016](#)). EU Member State teachers participating in TALIS 2018 are on average almost as confident as the OECD average (65% vs. 67%) in their ability to use ICT in their teaching. Among European teachers, those from Portugal and Denmark reported the highest overall self-efficacy, while those from France and Estonia reported the lowest self-efficacy in using ICT in class.

Both teacher and school characteristics seem important for self-efficacy in using ICT in teaching. Teachers with high self-efficacy in using ICT are more likely to (1) have participated in CPD in ICT skills; (2) have a full-time contract; (3) have had formal training in using ICT tools; (4) have longer work experience; (5) perceive their colleagues as innovative practitioners and (6) work in a school with relatively fewer resource shortages. Although STEM teachers and male teachers have lower overall self-efficacy scores in pedagogical practices, they have higher self-efficacy in

using ICT.

The ICILS 2018 survey emphasizes how important self-efficacy is, indicating that teachers are more likely to use ICT if they have a stronger belief in their efficacy to employ ICT practices. According to ICILS, the ICT tasks that teachers are least confident with are the use of online discussion and online collaboration tools, and the use of learning management systems.



Ideas for policy action

- Including online collaboration tools and learning management systems in CPD can help teachers increase the benefit they gain from online training and help them use these tools effectively in blended or remote teaching.
- Developing skills in ICT tools and applications in initial teacher education can boost teachers' self-efficacy in using ICT in their teaching and the likelihood they will undertake CPD in this topic.
- To identify teacher needs in the current Covid-19 context, investigate teacher self-efficacy in blended, hybrid or fully online teaching and develop CPD programmes for online education.

CONCLUSION

Teacher characteristics are more influential than school characteristics in the likelihood they will participate in CPD, as this analysis has shown. Although choosing to undertake CPD is closely linked to self-efficacy and innovative practices, a significant proportion of teachers had not participated in online courses/seminars and peer/self-observation, coaching or networking activities in the 12 months before the TALIS survey. Given that many teachers reported that a lack of time and of relevant offers prevented participation in CPD, offering online courses is surely a viable option. Furthermore, including peer learning activities in online courses can further improve them and their impact.

Participation in online CPD in ICT skills is perhaps more important than ever because of Covid-19. Although teachers are confident in searching for information on the internet and using digital office tools, they are not very confident in their efficacy to use learning management systems and online discussion platforms, two areas that are most needed in hybrid and blended teaching necessitated by social distancing measures. There is a need to investigate how confident teachers feel in using online platforms as a medium of teaching and how their skills in this area can be further developed.

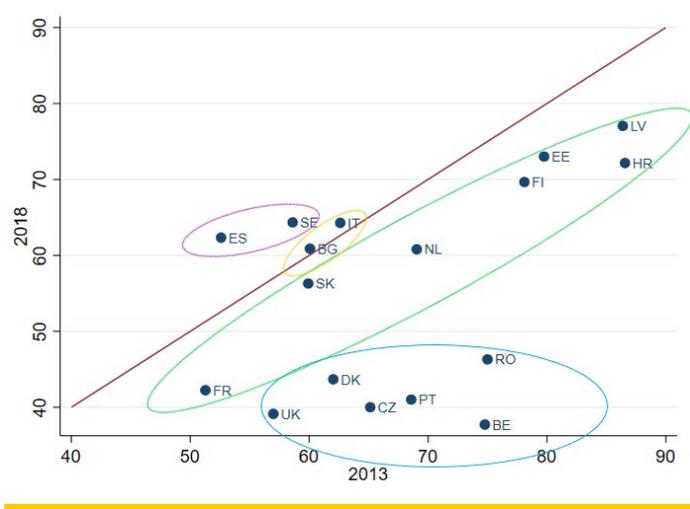
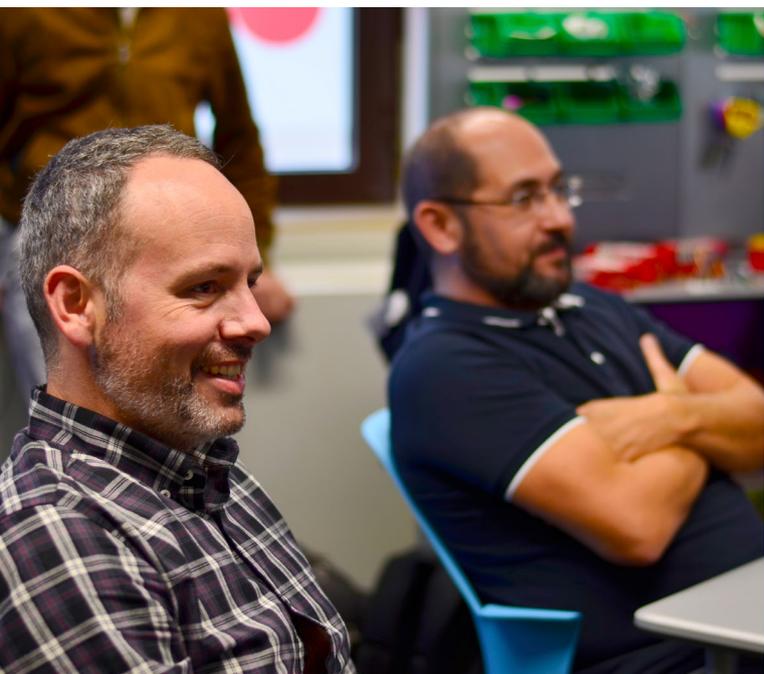


Figure 2. Variation between 2013 and 2018 in the proportion of teachers who participated in CPD in ICT skills for teaching in the preceding 12 months in EU Member States. The figure includes only countries that had comparable data from both TALIS 2013 and TALIS 2018. The data suggest a drop in participation in 2018 for countries circled in blue. Source: FBK-IRVAPP analysis of TALIS 2018.