

ITELab case studies 2018



Preparing student teachers for the future classroom : five case studies of university- school collaboration

University of Agder, Norway

University College Dublin, Ireland

Newcastle University, UK

University of Perugia, Italy

Polytechnic Institute of Santarém, Portugal

TABLE OF CONTENTS

INTRODUCTION.....	2
1 NORWAY: UNIVERSITY OF AGDER.....	3
2 IRELAND: UNIVERSITY COLLEGE DUBLIN	6
3 UK (ENGLAND): NEWCASTLE UNIVERSITY	9
4 ITALY: UNIVERSITY OF PERUGIA.....	11
5 PORTUGAL: POLYTECHNIC INSTITUTE OF SANTARÉM.....	14
CONCLUSION	17



Polytechnic of Santarém (Portugal) opens its active education space



ITELab partners from university, industry and student teachers collaborate in European Schoolnet's [Future Classroom Lab](#)

INTRODUCTION

University and industry partners in the [ITELab¹](#) project are investigating how student teachers are being prepared in the pedagogical use of ICT, documenting the results in annual case study collections. The theme for this year's case studies² is the different ways in which universities are working collaboratively with schools to prepare future teachers.

European and national policies, research and projects all underline the importance of the development of digital pedagogical skills in teachers, i.e. the competencies needed to use technology in professional contexts. The five case studies in this report give an insight into how this translates into initial teacher education in the ITELab partner universities. Themes emerging from the case studies include:

- **Policies highlighting university-school approaches**, with examples from Italy, Norway and Portugal;
- **Future classrooms in universities**, innovative learning spaces created by universities and schools in Italy, Norway and Portugal, members of the Future Classroom Lab network³;
- **Digital inclusion**, reflected in initial teacher education in Italy and Portugal;
- **Development of the digital competences of teacher educators**, as well as of student teachers, features in all universities. The DigCompEdu framework underpins the design and evaluation of the ITELab course modules and MOOC. The University of Agder is leading further survey work in 2018/19 to support the development of policy recommendations in this important area;
- **School-industry links**, taking place between Newcastle University (UK) and University College Dublin (Ireland) and local schools and businesses.

The ITE Forum has been established for universities, industry, education ministries and policymakers to discuss these and other issues, and universities are invited to participate in courses running in 2018 and 2019.

Further details, and to subscribe to the ITELab newsletter: [ITELab](#).

¹ ITELab (Initial Teacher Education Lab) is a European Commission Knowledge Alliance funded project between higher education institutions and industry to foster innovation and knowledge exchange in initial/preservice teacher education.

² 2017 case studies highlighted innovative approaches to integrating ICT in the ITE curricula and are available here: <http://itelab.eun.org/research>. They feature ITELab university partners: *University of Agder (NO)*; *University of Perugia (IT)*; and, *the University of Würzburg (DE)*.

³ <http://fcl.eun.org/fcl-network-members>

1 NORWAY: UNIVERSITY OF AGDER

The **University of Agder (UIA)** is a public university offering pre-school, primary and secondary teacher education. From autumn 2017, the five-year master's programmes for future primary and secondary teachers emphasises professional digital competence in all aspects of their programmes. In ITELab, UIA leads on defining competences for teacher educators, and participating in the design and piloting of ITELab modules and MOOC. There is more about how UIA integrates ICT into the curriculum in the [ITELab year one case studies](#).

FRAMEWORKS FOR CHANGE

Following the publication of Norway's Framework for Teachers' Digital Competence (May 2017), the Norwegian Directorate for Education and Training is now working on the release of a new national curriculum for schools called "[Fagfornyelsen](#)" (Subject renewal). This defines "Kjerneelementer" (core elements) in each subject to provide more focus on in-depth learning. The main aim with the renewal is "to make the subjects more relevant for the future" and create better linkages and integration between the different subjects.

For the universities training future teachers, the strategic move aligned with this is an encouragement for them to collaborate more closely with schools. This move is outlined in the [Strategy for Teacher Education 2025 - National Strategy for Quality and Cooperation in Teacher Education, published in](#) autumn 2017 by the Norwegian Ministry for Education and Research. The university and college sector, teachers' organisations and other relevant actors have all been involved in the development of the strategy. One of its four goals is "mutually beneficial cooperation between teacher education institutions, the kindergarten sector and the school sector."

COLLABORATION WITH SCHOOLS

The University of Agder (UIA) has a long tradition of close collaboration with schools, involving them in processes such as developing criteria for practice. Recently, a joint task-force has been established to develop a strategy to turn partner schools into Teacher Education Schools. Other on-going initiatives include:

- Developing online training modules to develop teacher educators' and student teachers' pedagogic digital competence. The [ProDig digital skills programme](#) (see the [Agder 2017 case study](#)). The modules are developed in cooperation with teacher educators, classroom teachers, subject discipline specialists and university staff, to ensure that content is relevant and current to the integration of ICT and pedagogical ICT competence for the future classroom. For the academic years 2018-19 and 2019-2020, eight school teachers are being employed by the university to work part-time alongside the university's subject teams to help spread ICT competences and skills across the departments and bridge the gap between teacher education and schools.
- Designing a future classroom at UIA, to support new ways of working and the development of digital skills of teacher educators and student teachers. Inputs into this process, include a workshop (March 2018) hosted by the Norwegian Directorate for Education and Training to encourage a network of universities to

share ideas around the FCL concept. Norway already has two such future classrooms supported by the education ministry, in Oslo and Tromsø ([FCL Rom for Lek Norway](#)). In September 2018, there is a joint team visit to Copenhagen's [FCL Campus Carlsberg, Denmark](#), used for competence development of existing and future teachers. UIA see its future classroom being used by all stakeholders (teacher educators, students, ProDiG-teachers, teachers from schools and kindergartens, and groups of children and pupils) to practise new ways of working and test out new technologies.

- Enriching the teaching experience for student teachers. UIA is working in close partnership with 40 to 50 placement schools where student teachers are given a variety of teaching experiences, with blocks of three weeks' practice, starting in the first year of training. Placements culminate in a three-week period in which groups of 30 student teachers 'take over' a school. Week 1 is work shadowing and preparation under mentors, in week 2 they run the school and all the teaching on their own, with a head teacher, staff meetings and class timetable, and in week 3 they review the experience (see the [Agder 2017 case study](#)). During this time, the 4-5 teaching schools participating in the scheme arrange professional development for their own teaching staff and collaborate with other schools. The week after the students have taken over the schools, the staff at the schools, the student teachers and the mentors from other schools do an evaluation. The teacher educators from the University are also present during the week of the take-over, and they are present for the evaluation in the following week. Feedback from this experience goes back into the administration at the Teacher Education Unit and is used to further develop and ensure quality in this type of practice.



Example from the ProDiG programme - a group of 110 Student Teachers spent a day in Fagerholt School to practice using Interactive White Boards, under the guidance of teachers. https://video.uia.no/media/0_nptq9y0c

"We learn more as a school by working with students. It makes us stay updated on new developments."

Sæbø, Fagerholt School Principal

"Developments in this area move fast in the schools. Surveys among students suggest that they want more digital competence and we want them to get relevant knowledge and skills through their Teacher Education."

Ingvild Bergan, ProDiG Project Manager

"This is a lot of fun. Teachers don't just use blackboards and chalk any more, there is a need for something new."

Synne Lunde Abusdal, ITE student



2 IRELAND: UNIVERSITY COLLEGE DUBLIN

University College of Dublin (UCD) is Ireland's leading, research-intensive university where third-level undergraduate education, fourth-level postgraduate masters and PhD training, research, innovation and community engagement form a continuum of activity. In ITELab, UCD is responsible for coordinating the development of new course modules for student teachers, piloting, and chairing the University-ICT Industry Forum focused on rethinking the way of pedagogical use of ICT.

FRAMEWORKS FOR CHANGE

In June 2018, the Department for Education and Skills (DES) published the 2018 edition of their annual Digital Strategy Action Plan for schools. The Plan, which has over 80 actions, sets out a roadmap for the twelve months ahead to bring the Irish education system further along the path to being the best in Europe at embedding digital technology in teaching, learning and assessment by 2026. The plan is part of the DES' [Digital Strategy for Schools 2015-2020](#) which sets out the government's medium-term plan to realise the potential of digital technologies to enhance teaching, learning and assessment.

The two organisations responsible for implementing and supporting the Digital Strategy in Irish schools are the National Council for Curriculum and Assessment ([NCCA](#)), responsible for the framework and curriculum, and [PDST Technology in Education](#), providing a training and support service to all schools. While there is no direct link or reference to initial teacher education in the strategy document, and universities themselves are independent and set their own teaching curriculum, the changes affecting schools filter back to the universities through their various collaborations with these bodies and the schools themselves. For example, UCD hosts lectures and workshops supported by PDST and in turn contributes to PDST's mission through the participation of various individual members of School of Education staff in PDST events.

COLLABORATION WITH SCHOOLS

UCD's collaboration with schools takes place at different levels:

- UCD employs 25 'methods lecturers', curriculum specialists who work part-time for the university and are drawn mainly from partner schools – working either as senior teachers or in a number of cases as deputy principals. Others come from various educational agencies or bodies. They work with the student teachers, bringing new insights and connections applying directly to the classroom. Most of these lecturers have 9 to 10 years' teaching experience, offering a variety of digital skills and current practical experience to student teachers.
- UCD student teachers themselves are on placement approximately 50% of the time during their two-year master's course. For three of the four semesters, each week is split 50% in school, 50% at the university. The students are responsible for applying to partner schools for a placement and are encouraged to change schools from the first to second year of their degree to benefit from different experiences based in different environments (e.g. inner-city, rural). Student

teachers find the ICT provision in schools varies significantly, making opportunities to gain and practice using their digital pedagogy skills unpredictable.

- As part of its ongoing relationship with its 56 partner schools, UCD trains the placement supervisor teacher in the schools on transferable skills such as observation and feedback. UCD also holds an annual symposium with the school principals or deputy principals to discuss latest developments affecting both the schools and UCD. The School also contributes to various teacher conferences and events at regional and national level. Most recently, UCD has offered funded fellowships as one of the benefits to partner schools. Working with Microsoft Ireland, UCD has developed a one-year computational thinking course, with 15 fully-funded fellowships offered to schools. This course is run jointly between the UCD's education and computer sciences departments. It is a good example of UCD's thinking aligned with the digital skills agenda and NCCA's new, six-week module on coding being introduced into all schools.
- UCD School of Education is working further with Microsoft Ireland on developing more personalised approaches to portfolio work with their student teachers. A pilot scheme was launched in 2017-18 through which a number of Year 1 PME's (student teachers) were introduced to elements of the Microsoft ecosystem and supported in becoming Microsoft Innovative Educator Experts; for example Sarah McEvoy who tweets as <https://twitter.com/sarahisabellamc>. This group will operate this academic year as peer-guides to fellow PME's and alongside the ITELab UCD team in opening up new possibilities for UCD student teachers in regard to better technology usage, both in the university programme and in their placement schools.



Prof Pasi Sahlberg with some of the PME students and UCD ITELab team members Dr Aoibhinn Ní Shúilleabháin and Dr Shane Bergin, on a recent visit to the School.

"It's a real challenge. But we are getting there. I think the best thing we can do for our students is encourage them to think about what's doable in their own school settings – because it's all so different – and to have a go at things."

Dr Rachel Farrell, PME Co-director, UCD

"For my own part, I believe I have had the opportunity through this experience to understand many things in a new light. I have seen how a module is developed; having given my insight and heard others. I have a greater understanding of the considerate approach taken in the development of such modules on all levels – coordinating between those in university, industry, and policy making."

Seamus O Sullivan, UCD PME student and ITELab pilot participant

"The biggest challenge is that we don't always know what we don't know! So as I'm an avid lover of all things technological, educational and international, this opportunity [ITELab beta] to collaborate with student teachers from various international learning institutions was a truly eye opening experience."

Aoife Carew, UCD PME student and ITELab pilot participant

3 UK (ENGLAND): NEWCASTLE UNIVERSITY

Newcastle University's (UoN) School of Education has been involved in teacher training for over 100 years, with the first 20 'pupil teachers' enrolled at Newcastle's College of Science in 1890. UoN has a strong reputation for applied research producing a wide range of policy and practice-based investigations. UoN offers a one-year Postgraduate Certificate in Education (PGCE) in Primary, Secondary and via School Direct. In ITELab, UoN is participating in the design and piloting of ITELab modules and student teacher MOOC.

FRAMEWORKS FOR CHANGE

The UK (England) Department for Education's 'Teacher Standards' (2011) do not at any point directly mention digital technology or ICT, but their use is implied. Recent policy focus relates mainly to the implementation of new curricula at GCSE (typically taken at age 16) and A level (taken at age 18), which are more content-heavy than previous curricula. The new curricula sway towards a more 'traditional' teaching of subjects such as English and Mathematics and assessment by summative examinations.

The impact of this on initial teacher education student teachers means that, during placement practice in schools, they face more constraints on what, and how they teach, with less freedom to experiment. For example, project-based learning has a more limited profile than previously. For student teachers, what is increasingly taking priority is the ability to manage behaviour, impose discipline and use digital management information systems to track student progress.

Government-led initiatives which have seen the introduction of ['teaching schools'](#) , [School-centred initial teacher training \(SCITT\)](#) , and the growth in ['Schools Direct'](#) have radically altered initial teacher education provision in England, as student teachers are increasingly 'taught on the job' by these new providers.

COLLABORATION WITH SCHOOLS

As a result of the changes to initial teacher education (ITE) in England, UoN's teacher training programme and relationship with schools has altered significantly.

- Core subject (English, mathematics and science) student teachers now spend over two-thirds of their time based in schools teaching, with far more limited intervention and support from the University. What student teachers do is also increasingly set by the schools themselves, as they become more directive in what they want taught and how, giving student teachers little freedom to plan and experiment. This in turn puts pressure on time in the university curriculum devoted to, for example, developing thinking skills, meta-cognitive techniques and experimenting with different digital pedagogy approaches.
- In 2018, as part of its work in ITELab, UoN carried out a small, exploratory survey with its student teachers (Post-Graduate Student Teachers' Use of Digital Technology) to find out more about their digital experience in schools. It revealed that digital technology is used primarily to improve efficiency and

effectiveness rather than support innovation and transformation in teaching and learning, and that student teachers:

- Are familiar with the school's administration and management information systems;
 - Use websites such as Pearson for lesson plans and materials closely linked to exam board requirements;
 - Access more general resources (e.g. BBC Bitesize) rather than specialist resources;
 - Use free apps and software (e.g. Kahoot, Socrative).
- UoN is proactively looking for opportunities to innovate and bring in the dimensions of development and experimentation in its work with schools. Examples offered by ITELab (e.g. Professional Learning Networks) support this work, and early feedback from their student teachers indicates that they value it. The team is also collaborating with UoN's [OpenLab](#), whose work focuses on experience-centred digital design, with a strand devoted to education. Five doctoral students are working with schools in the use of technology, three under the supervision of the education department. One of the projects with primary schools is based around [cheap, wearable activity monitors](#). This work is now being used in UoN's project-based learning week with secondary schools, teachers and student teachers.

"UoN is quite technically advanced introducing various apps and different ways of interacting with the students. ITELab helps enhance what know.... it's forward thinking, exploring different ways of using technology that supports your pedagogy, linking to what current research says, looking at different things across the world and how effective they are, stepping away from traditional teaching, engaging with your students in a new way and making technology part of your pedagogy".

Hazel Marshall, UoN PGCE student and ITELab pilot participant



[ITELab student teacher videos](#)

4 ITALY: UNIVERSITY OF PERUGIA

The **University of Perugia (UoP)** offers initial teacher training for kindergarten and primary school. Particular attention is given to the acquisition of competence in English and digital competence. Specific training is given on the integration of pupils with special educational needs. In ITELab, UoP is participating in the design and piloting of ITELab modules and student teacher MOOC. Read more about how UoP integrate ICT into the curriculum in the [ITELab-year one case studies](#)

FRAMEWORKS FOR CHANGE

The [Italian Digital School National Plan](#) provides for digital competence in schools and in initial teacher education. Having a national vision on the integration of ICT and the training of student teachers is an important factor for promoting digitally competent and confident future teachers. The ITE curriculum is prescribed by law with special reference to enabling inclusion and accessibility to special educational needs students. The implementation of this national plan continues. In relation to this, action 28 of the national plan, requires every school to have a teacher nominated in their schools as a 'Digital Animator', with a strategic role in the school for the diffusion of digital skills across the school.

COLLABORATION WITH SCHOOLS

There are 86 school digital animators training and working with the local regional education office in Umbria and the university collaborates with them and their schools through their student placement programme and participation in various digital school initiatives.

- UoP has published several open courses on the EduOpen platform, offered to student teachers, in-service teachers, and for some courses (e.g. [Cyber-bullying](#)) to parents as well. The [Learning to Learn](#) course reflects the university's on-going research interest in the design of inclusive teaching and learning paths aimed at developing skills in all pupils, especially pupils with Specific Learning Disorders.
- The university works closely with three schools in Umbria which are specialist centres for assistive technologies, with teachers from these centres coming to the university as part of the training of student teachers. One of the many research interests investigated also through European Projects, is inclusive education and special needs. The Italian school system has been fully inclusive since the 1970s and inclusive education is one of the main topics in initial teacher education. At UoP, future teachers learn how to address the needs of school children with disabilities, special needs or coming from disadvantaged backgrounds in an effective way. During the last year of their university course, future teachers attend the Special Pedagogy module, which is one of the longest modules, and they also attend the Special Pedagogy lab, where they are requested to develop inclusive educational activities. While drafting these activities, students are asked to think about an inclusive use of educational technologies or technologies in general. Therefore, when future teachers start to work in school they are, ideally, equipped with knowledge, know-how and creativity to use technologies with inclusive aims. Students are also encouraged

to reflect about the added value of technologies in special education and digital pedagogy.

- 12 teachers from these schools spend 50% of their time in the university as tutors to support and scaffold teaching and learning for the student teachers, acquire digital pedagogy skills and competences and help them with their active training in schools.
- Through the 'Interlab' project, UoP works with future teachers on flexible learning spaces and future learning in ten schools across Umbria. The programme is linked to the Italian education ministry's [INDIRE School Architecture initiative](#) on the use of space in schools. Locally, Professor Floriana Falcinelli (UoP) sits on the Technical Committee of [Classroom 3.0, new spaces for learning](#) in 1° Circolo Didattico "San Filippo" with the aim of supporting teachers to become action researchers.
- Within the university, UoP is currently planning to create one flexible learning space in each of the 16 departments linked to the Education Department. This initiative also has the support of central funding from the education ministry as part of "classroom 3.0" project. The Education Department, led by Professor Floriana Falcinelli, is leading the in-service training of all academics to develop their digital pedagogical competences linked to the use of these new spaces. The first session on the vision and to open minds to these new spaces was held in June 2018. With a view to aligning with the [DigCompEdu](#) framework, the programme will continue in coming school year, focusing on the production of multimedia and special needs materials to increase the engagement of all student learners.



University of Perugia student teachers receive the prize for winning the 'Scavenger Hunt' digital city competition, June workshop 2018, Brussels

"It is now clear that, when dealing with the crucial role played by technology in everyday life, schools cannot and should not turn their back to it: the world is changing, and so school has to change with it.

This though can't take place if the traditional process of teaching-learning is not modified starting from its roots; it is about an innovation that takes place in every area of education and involves the learning spaces, materials, the relationship between teacher and learner, and, most of all, the construction of knowledge which must happen within a stimulating environment able to understand and give value to learners' interests, thanks to their active work, where the learner builds their own knowledge.

Educational technology can help this change thanks to the use of educational strategies. Naturally, this cannot happen without the goodwill of changing of everyone connected to the educational system (not only teachers, then), investing in it. Not just the physical space (material, educational strategies and tools) should be re-imagined, but also the mind-frame should be renewed, through the lenses of lifelong learning; a lifelong learning which changes with the person, even through the challenges the world would deal us with."

Benedetta, UoP primary student teacher and ITELab pilot participant

5 PORTUGAL: POLYTECHNIC INSTITUTE OF SANTARÉM

Polytechnic Institute of Santarém's (IPS) Higher School of Education (ESE) offers courses on: teacher training, communication and multimedia education, fine arts, social service. ESE participates extensively in national and international teacher training programs. ESE coordinates: in-service teacher training in several areas with the Portuguese Ministry of Education. In ITELab, IPS is participating in the design and piloting of ITELab modules and student teacher MOOC

FRAMEWORKS FOR CHANGE

The educational system in Portugal is undergoing major change with the introduction of a new [student profile framework](#) for students when they complete upper secondary education. The 'National Promotion for School Success' is a challenge issued by the Ministry of Education for schools and principals to implement innovative measures to increase student success. In 2017/2018, two new initiatives were piloted; the [Pedagogical Innovation Pilot-Project \(PIPP\)](#) comprising about six schools, and the [Autonomy and Flexibility Curriculum Project](#) that involved 270 schools. These initiatives piloted the freedom to change pedagogical practices, with digital pedagogy and collaborative teaching integral to this change. Following this pilot, in 2018/2019, all primary (first-cycle) schools have been given the autonomy and flexibility to manage 25% of the curriculum in the first year of each cycle. Each school has the autonomy to manage within this percentage, encouraging the collaborative and transversal work between disciplines, as well as the transversal use of information and communication technologies.

The Polytechnic Institute of Santarém's (IPS) School of Education includes one of ten regional ICT Competence Centres in Portugal, supporting digital pedagogical and ICT skills training to in-service and future teachers. This network reports directly to the education ministry's team responsible for Education Resources for Educational Technology ([ERTE](#)). Work includes specialist training and resources for schools in areas such as ICT and curriculum ([educational digital resources production](#), [MOOCs](#)), digital citizenship resources ([SeguraNet](#)), and training and transversal projects. IPS is responsible for a new course to young people with intellectual disability on 'Digital Inclusion in Labour Market' (<https://labourmarketformation.wordpress.com/>)

COLLABORATION WITH SCHOOLS

As an ICT Competence Centre and a teacher training institution, IPS builds on their strong links with schools and teachers:

- As a result of the recent opening up of the curriculum with flexibility for all first cycle schools, IPS has run a series of seminars in which teachers share their experiences; student teachers are invited to these as well. In the most recent seminar (<http://cctic.ese.ipsantarem.pt/ticportugal/> July 2018), 70 teachers shared their work on collaborative methodologies, with specific skills training on Google Drive, as well as a Future Classroom Lab Ambassador session on flexible learning spaces, [Portuguese Future Classrooms](#) (of which there are 32). For teachers with more than 20 years' experience, the level of change and

innovation can be challenging, particularly around the process leading to assessment and exams. Student teachers find this change adds to the demands of their studies, including understanding the different contexts and the collaboration expected with teaching colleagues when they enter schools.

- IPS itself provides a multi-disciplinary and collaborative approach to teacher education, supported by various flexible spaces, including: [Creative Lab](#) for collaboration across mathematics and science; [FabLab](#) (fabricated technologies) where schools propose a project, work on it and then come to the lab to use equipment such as 3D printers to complete it; [Active Education Space](#) a project inspired by the [Future Classroom Lab](#), in which an area of IPS has been transformed into a flexible learning space used for training student teachers' and teacher trainers' in digital pedagogical skills, linking to the network of FCL Ambassadors in Portugal; and now, developing a new innovative education space adapted to young students with intellectual disability.
- IPS is active in the digital inclusion agenda, helping to address the challenge of digital inclusion of younger citizens. Working closely with the Ministry of Education, the Ministry of Labour, Solidarity and Social Security, and local enterprises, IPS has developed a new course ('Digital Inclusion in the Labour Market') aiming to promote digital literacy and employability, focusing on young people with disabilities. This new course was presented to the community in September 2018, and is supported by the new, 'special needs space' where student teachers can develop their skills in this area.



IPS Director of the School of Education, Susana Colaço, and Neusa Branco share their vision at the opening of the new active education space

“ITELab student teacher MOOC is easy to follow, step by step, you choose whatever you want to, gives you resources for your future professional life. It's online, and the main advantage is that you get to participate in a teaching community, you talk to other teachers from other countries, you share experiences, you find out what teachers from across Europe are doing which is great. You share during the course, and after the course, we learn from each other, it's wonderful.”

Maria, IPS primary student teacher and ITELab pilot participant
[ITELab student teacher videos](#)



IPS primary student teacher, Juliana Cunha, presents to other student teachers in the live teach-meet event as part of the 'Networked Teacher – teaching in the C21st' student teacher MOOC

CONCLUSION

All five case studies show how university teacher education faculties are responding to the drive – backed by explicit government policies in Norway – for more school-based initial teacher education, to ensure that new teachers are not only theoretically but also practically ready for tomorrow's classrooms.

In Norway there is a long history of collaboration between schools and universities and, continuing this tradition, the University of Agder is supporting the development of teacher education schools, online training modules jointly developed by specially-appointed teachers and university staff, a future classroom lab, and a remarkable scheme in which student teachers 'take over' the running of schools for three weeks. This is for "mutually beneficial cooperation" between ITE providers and schools.

University College Dublin also employs teachers, in this case as methods lecturers, and student teachers spend 50% of their time in schools. The university trains and supports placement supervisor teachers in 56 partner schools, runs annual symposia for school principals and offers fellowships for teachers on computational thinking courses. Partnership with industry, in this case, Microsoft, features strongly in UCD's activities.

Much ITE in the United Kingdom is now school- rather than university-based, and the case study from the University of Newcastle shows how higher education providers are adapting to new circumstances. Student teachers spend up to two-thirds of their time in schools, leaving little time to developing skills and approaches not found in some schools such as meta-cognition and different digital pedagogies. A survey revealed that student teachers' experience of ICT in schools tended to be its use to improve efficiency and effectiveness rather than to innovate and transform. During project weeks in partnership with schools, doctoral students introduce teachers and student teachers alike to wearable activity monitors.

In Italy the drive for change focuses on the digital competence in schools and ITE. The University of Perugia case study shows how higher education is responding, by developing online courses open to both student and serving teachers emphasising how ICT can support inclusion and enable all students to develop digital competence. Student teachers spend more time at university than in the three previous countries, giving them time to learn in depth about, for example, assistive technologies in a Special Technology Lab. Teachers are seconded from local schools to prepare and support student teachers on placement. As in Norway, the university is involved in designing new learning spaces, this time both at the university and in schools, and encouraging teachers to become action researchers .

In Portugal, collaboration and innovation is encouraged on a large-scale, both in primary and secondary schools, and the Polytechnic Institute of Santarém is one of a network of government-funded regional ICT Competence Centres developing the digital competences of both, in-service and future teachers. They have organised seminars on collaboration and flexible learning spaces open to both student and in-service teachers. As in Norway and Italy, the university has set up future classroom labs in which student teachers develop their digital pedagogical skills and serving teachers

can use specialised or expensive equipment for projects, and a special needs space where students learn about supporting learners with special educational needs and disabilities.

What emerges from these case studies is a blurring of the boundaries between universities and schools, between university staff and teachers, and between student teachers and in-service teachers, for the benefit of all. Imaginative new learning spaces and joint projects help cement these new relationships and ensure that tomorrow's teachers are well prepared for tomorrow's schools.

JOIN OUR ITE FORUM. WE ARE LOOKING FOR POLICY-MAKERS, UNIVERSITIES AND INDUSTRY TO EXCHANGE KNOWLEDGE AND INSPIRE INNOVATIONS.

The [ITE Forum](#) enables knowledge exchange between universities, industry partners and policy-makers engaged in the field of initial teacher education (ITE). Join us as an associate partner.

The Forum is based on a series of online webinars to share and discuss the best practices in order to give recommendations on the innovation of the ITE curricula.

[Read more... http://itelab.eun.org/ite-forum](http://itelab.eun.org/ite-forum)

ITELab (Initial Teachers Education Lab) is a three-year Knowledge Alliance project between higher education institutions and industry coordinated by European Schoolnet and co-funded under the European Commission's Erasmus+.

W: (will be all replaced by icons) <http://itelab.eun.org>

 #ITELab_eu

E: info-itelab@eun.org

Sign up to our [newsletter!](http://bit.ly/ITELab_Newsletter) http://bit.ly/ITELab_Newsletter

ITELab PROJECT PARTNERS



UNIVERSITÀ DEGLI STUDI DI PERUGIA



UNIVERSITY OF AGDER

Escola Superior de Educação [IPSantarém]



iris connect

discovers. develop. share.



Microsoft



Newcastle University

Steelcase EDUCATION



SMART®

Inspired Collaboration™

ITELab ASSOCIATE PARTNERS: <http://itelab.eun.org/partners/associate-partners>



Co-funded by the Erasmus+ Programme of the European Union



ITELab (Initial Teachers Education Lab) is a Knowledge Alliance project between higher education institutions and industry to foster innovation and knowledge exchange in initial teacher education (ITE). Project number: 575828-EPP-1-2016-1-BE-EPPKA2-KA. It is co-funded under the European Commission's Erasmus+ Programme from January 2017 to December 2019.

This publication was created with the financial support of the Erasmus+ Programme of the European Union. This publication reflects the views only of the authors and the European Commission cannot be held responsible for any use that may be made of the information contained herein.



Co-funded by the
Erasmus+ Programme
of the European Union