TRANSFORMING EDUCATION IN EUROPE
European Schoolnet’s Annual Report 2016
European Schoolnet (www.europeanschoolnet.org) is a network of 31 Ministries of Education from across the European member states, leading educational innovation at European level. As a major international think tank, European Schoolnet operates key European services in education on behalf of the European Commission, member Ministries of Education and industry partners.

European Schoolnet’s activities are divided among three areas of work:

- **Policy, research and innovation**: information sharing and evidence building.
- **Schools services**: enhancing cooperation between schools across Europe.
- **Advocacy**: how ICT and digital media contribute to transforming teaching and learning processes.
European Schoolnet’s remit is to support mainstreaming teaching and learning practice aligned with 21st century standards and expectations for the education of all students. ICT and digital media receive particular attention because of the critical role they play in terms of designing and implementing future classroom scenarios.

To reach its ambitious objective, European Schoolnet (EUN) represents a unique platform of 31 Ministries of education in Europe which facilitates: the exchange of experience gained at national level; access to evidence from research on what works and related policy development issues; the implementation of innovative pilot projects; and the support of teacher education and professional development through the launch of the EUN Academy. Moreover, EUN advocates on several specific issues including STEM, coding, the responsible and safe use of the internet and collaborative learning among others.

Major achievements begun in 2015 and built on during 2016 include:

- The further development of the Future Classroom Lab (FCL, launched in 2012) and the FCL network of learning labs in Europe;
- The launch of the European Schoolnet Academy (EUN Academy), including cooperation with a number of Ministries for the localisation of some courses in the national context;
- The creation and development of the Future Classroom Lab Ambassador scheme as part of the iTEC sustainability activities and exploitation plan;
- The progressive implementation of validation services activities within the FCL, as part of the Living School Lab sustainability activities and exploitation plan;
- The development of STEM initiatives as part of the inGenious sustainability plan;
- The piloting of a Better Internet for Kids networking platform (BIK NET), as well as the development of the eSafety label initiative, and a number of successful projects with industry, such as the Web We Want.

The above achievements were consolidated and further developed in 2016, while continuing to support major initiatives funded by the Commission such as eTwinning, the School Education Gateway (and its related additional activities), the Better Internet for Kids (BIK) core services as well as the continuation of the Scientix initiative.

Moreover, EUN has also developed its positioning in the area of STEM, eSkills, and, most recently in terms of new coding initiatives. More particularly, the EU coding initiative has contributed to support the political momentum for strengthening...
computer science integration in K12. In 2014 EUN launched a survey with its Ministries of Education to gain a more consistent picture on the topic of computer programming and coding skills in national, regional or school curricula across European countries. The report presented the main findings of this survey, and has now been reviewed and updated on the basis of 2015 data. Public private initiatives such as the STEM Alliance and the European Coding initiative have been developed significantly in 2016.

EUN continued with the development of the EUN Academy and complementary training activities under the umbrella of the Future Classroom Lab. In 2016 EUN has also increased its collaboration with ITE organisations and developed some actions in this area which the iTEC project identified as a major roadblock to mainstreaming innovative use of ICT in schools. In this regard EUN developed the Teacher Training Initiative pilot supported under eTwinning and also received funding for the ITELab project proposal (submitted under the Knowledge Alliance action of the Erasmus+ programme).

The emphasis in 2016 remained on providing European added-value and trans-national peer learning as well as experimentation, good practice and comparative work.

During this year European Schoolnet has in particular:

- Examined the lessons from the past related to the use of ICT in school education;
- Reached a common understanding of new opportunities and challenges for schooling;
- Provided, via the EUN Academy, training opportunities for teachers, head of schools and other school actors (such as IT administrators both for pre-service and in-service teacher training);
- Built a vision and roadmap for schooling in Europe, including an EUN position paper based on a secondary analysis of the OECD’s recent report on Students, Computers and Learning;
- Laid the foundations for the organization’s medium and long-term strategies and activities.

This Activity Report documents European Schoolnet’s activities during 2016, highlighting the organization’s main achievements and lessons learned.
European Schoolnet’s two subcommittees and four working groups are of strategic importance in supporting the organization’s agenda, and in fuelling its mission and vision. As the organization’s key instruments, they are used to facilitate a European platform of exchange between Ministries of Education on current national priorities, as well as help prepare for the challenges of the future. They work at a level above and beyond the limited focus of the organization’s individual projects, ensuring EUN’s global agenda is kept on track and constantly fuelled. The section below outlines the priorities, work and developments of EUN’s subcommittees and working groups during 2016.

In 2016, European Schoolnet continued to rely on the work developed by its two subcommittees: the **Policy and Innovation Subcommittee (PIC)** and the **Learning Resource Exchange Subcommittee (LRE)**.

The PIC continued to identify key topics and issues and fuel the Steering Committee, reinforced by the support provided by the new **Research for Policy Making** track aimed at fostering cooperation with researchers at national and international level on topics that are at the core of the EUN remit.

The main focus of the LRE Subcommittee during the year was an in-depth review of the LRE strategy and services which resulted in the creation of a new LRE Directory, a tool that provides detailed descriptions of metadata sources. A decision was also taken to develop closer synergies with the Educational Repositories Network (EdReNe) which was approved during the LangOER conference which was co-organised with EdReNe.

Additionally, European Schoolnet’s Working Groups continued their activities:

### INTERACTIVE CLASSROOM WORKING GROUP (ICWG)

In 2016, Ministries of Education in the Interactive Classroom Working Group continued to focus on different approaches to personalising learning in schools, including how this can be supported by having access to more flexible learning spaces. Two workshops were organised in March and June that brought together ICWG members and: 1) a focus group of teachers to explore how to develop short professional development resources on personalising learning; and 2) school leaders and experts who had done innovative work on adapting learning spaces. Following these workshops, the focus group of teachers worked together to provide examples of short learning activities on personalising learning, and work commenced on new guidelines for school leaders on adapting learning spaces in schools (to be published in 2017). With funding from some industry partners, the ICWG also started work on new Bring Your Own Device Technical Guidelines. A study visit was organised...
in November for ICWG members to the new Future Classroom Lab at Campus Carlsberg (providing initial teacher education for 10,000 students) in Copenhagen and to two Danish schools that are making innovative use of flexible learning spaces.

**DIGITAL COMPETENCE WORKING GROUP (DCWG)**

In 2016 the Digital Competence Working Group supported the development of the MENTEP project. This consisted in providing feedback on the development of the online tool to assess teachers’ pedagogical competence, which is tested within the project. The WG will continue its work under the new remit of the Digital Citizenship Working Group to be established by the end of 2017.

**MINISTRIES OF EDUCATION STEM REPRESENTATIVES WORKING GROUP (MoE STEM WG)**

The MoE STEM Working Group was established in 2016 to facilitate a platform for discussion and exchange between Ministries of Education regarding their STEM education policies. The overall objective is to help lay the foundations for medium and long-term strategies and activities between Ministries of Education and European Schoolnet in the field of STEM education, and especially within the Scientix project, following an agenda that addresses the ministries’ priorities. The main topics addressed by the MoE STEM WG in 2016 were: 1. The importance of supporting primary schools with the teaching of STEM; 2. The limited information on careers for STEM graduates; 3. Teacher collaboration as a way of sharing project results among themselves and with policy makers; 4. The importance of the WG providing a platform for Ministries of Education to share their expertise and support each other in weaker areas; 5. Scientix should support the dissemination of national initiatives; 6. Ways to make research results more accessible to teachers; 7. Encouraging leading schools from different countries to work together and share expertise; and 8. How to mainstream practices, validation and piloting from different initiatives.

**INDICATORS WORKING GROUP (IWG)**

Created in 2016, the EUN Indicators Working Group’s original remit was to map existing national surveys, understand their scope and methodology, and investigate on that basis the feasibility of a core set of comparable indicators (15-20) possibly collected through existing national surveys. A report will present the results of this analysis in Spring 2017. This mapping and comparative analysis of existing surveys has revealed gaps concerning specific indicators providing qualitative information about the learning processes in place and the learning environment supporting them. For this reason, proposing a set of new indicators on learning processes and environments has also become part of the WG’s remit, and this work will take place in Autumn 2017.
**CORE ACTIVITIES**

This main section of the report describes the organization’s core activities in 2016 in relation to the 5 key areas illustrated in the following graphic. For information concerning the funding of each of the projects featured below, please refer to appendices II and III.

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|  | New proposals |
1. THE FUTURE CLASSROOM LAB (FCL)

- **FCL ambassadors**

  In 2016, 15 Ministries of Education were supporting the network of Future Classroom Ambassadors in 2016 (AT, BE, CZ, DK, EE, ES, FI, FR, HU, IL, IT, NO, PT, TR, SE). The model of the EUN FCL, where teachers obtain professional development both onsite and online, starting from the hub of the Future Classroom, was replicated in 2015 in Estonia (HITSA), Israel and Norway. In 2016, similar initiatives were taken in other countries (e.g. Portugal, Denmark, Czech Republic, Spain, Hungary, France). Particularly noteworthy was how Portugal developed a plan for the nationwide implementation of over 60 future classrooms or learning labs. In 2016, many ambassadors continued with the creation or the reinforcement of a local network of teachers.

  In some countries the ambassador managed to integrate and leverage existing networks like eTwinning (FR, CZ, ES, TR) and Innovative Schools (AT, BE), or they continued to develop the iTEC network (PT), or developed new networks (IL). In 2016 ambassadors started work on a major revision of the Future Classroom Toolkit developed in the iTEC project and many of the ambassadors took part in the Hands on Hack Coding Hackathon on the 20th of October which was part of the European Coding Initiative.

- **FCL training programme**

  The Future Classroom Lab offers a regular training programme addressed to primary and secondary teachers, school leaders and ICT coordinators, enthusiastic to enhance their teaching through new ideas, tools and pedagogies. The courses are fee-based and open to anyone. The courses have been running since 2012 and the training programme is revised and refreshed every year. The training programme aims to reflect the priorities and areas of work of European Schoolnet, as well as take into account the areas of interest of the audience.

  In 2016 the training programme included various topics such as 1:1 pedagogy and devices; eSafety in education; Special Educational Needs; Programming; Digital Skills; Entrepreneurial Learning; and Collaborative Learning.

  Most of the participants are eTwinning teachers who are funded by their National Support Service. Also, many teachers join the courses with the support of the funding provided by the Erasmus+ Programme through their school, and occasionally there are also self-funded participants. There were all together 14 courses in 2016 that comprised 290 participants.
• FCL visitors/tours

The Future Classroom Lab interests also different stakeholders who visit the FCL to be inspired and informed on how existing and emerging technologies can have a transformative effect on teaching and learning processes. Several organisations planning to establish their own learning lab or flexible learning environment also visited the FCL. Among others, the following groups and decision-makers visited the FCL in 2016:

- The Director-General of the DG EAC, 10 February 2016.
- The Minister of Family and Youth in Austria, 15 July 2016.
- Erasmushogeschool Brussels (Initial Teacher Education) and the Principal Policy administrator, DG EMPL, Directorate ‘Skills’, on 25 August 2016.
- Future-Proofing Cybersecurity Panel Discussion & Workshop (with Kaspersky), 6 December 2016.

In addition, on 24 June 2016, the Future Classroom Lab programme was presented during the International Congress on ICT in Education, in Qingdao, China. The conference, co-organised by UNESCO, hosted a session on “ICT promotes structural transformation of education” and EUN was invited to present the FCL model and its roll out as a best practice.

• Validation pilots

Two industry sponsored research validation pilots were concluded in 2016. The project sponsored by Texas Instruments, researched the question of how clearly can students see the content displayed on whole-class display systems, particularly if they are sitting towards the back of the class or have a visual impairment. 12 Teachers from 5 countries were selected in an open call. The before and after survey of 500 students, found 48% had difficulty in seeing the text at the back of the classroom with current projection equipment; following the introduction of high definition projection this dropped dramatically to 6%. The conclusion showed an HD projector provides a big return for a relatively small investment.

The other research project, sponsored by Microsoft, delivered a best practice training guide to support the large-scale implementation of 1-1 devices to schools. The training guide drew on EUN’s best practice work including the Future Classroom Lab validation guide and research supported by the Interactive Classroom Working Group. The training guide was aimed at countries/regions making significant investment in 1-1 devices.
• Cooperation with industry partners

During the last year, European Schoolnet has continued and strengthened its fruitful collaboration with the private sector. Several bilateral projects were developed and implemented together with industry partners including Acer, Amgen, CISCO, Google Education, Kaspersky Lab, Microsoft, Steelcase, and Texas Instruments. Multilateral framework programmes, consisting in the Future Classroom Lab, the STEM Alliance, and the European Coding Initiative, were also further developed. In 2016, the total number of confirmed partners supporting the Future Classroom Lab programme has risen to 35. During 2016, the following companies joined the initiative: HP Inc., Kaspersky, Konica Minolta, Learning by Question, Oyoty, SCM Secure; while others are currently considering joining (DELL, Nureva). The annual FCL industry partners meeting took place on the 8th and 9th of June 2016, involving around 40 representatives of industry who joined European Schoolnet in Brussels to discuss ways to further support the evolution of the Future Classroom Lab model and community. More information on the event is available here.

• Future Classroom Lab Regional Network (FCL Regio)

The Future Classroom Lab Regional Network (FCL Regio) project aims at finding new ways to allow for a more active participation by decision makers in regions in pan-European activities. The project specifically supports the integration of ICT in teaching and learning through the development of Future Classroom Scenarios and videos designed to guide policy makers, educators and school leaders in the proficient use of technology and innovative pedagogical techniques. The network of regional and local authorities established by the FCL Regio project will particularly focus on the creation and support of resources and in-service training opportunities for teachers. In 2016, the project was strengthened and now counts five public local authorities as partners and associate partners, namely: Provincia Autonoma di Trento (IT), Göteborgsregionens kommunalförbund (SE), Generalitat de Catalunya (ES), Castilla y Leon (ES), and Comunidade Intermunicipal da Região de Coimbra (PT).

• New proposal:

In 2016 a proposal was submitted and selected under the Key Action 2 of the Erasmus+ Programme for a Knowledge Alliance project between higher education institutions and industry to foster innovation and knowledge exchange in initial teacher education - the ITELab (Initial Teachers Education Lab) project. The project began in January 2017 and has the following main objectives: identify innovative approaches to incorporating ICT training in courses for student teachers; explore new models for Initial Teacher Education (ITE) delivery; define competencies for newly qualified teachers and teacher educators; develop MOOCs for student teachers to drive change in ITE institutions that are slow to reform curricula; establish a Ministry of Education/industry/High Education forum to help mainstream project results in ITE.
2. KNOWLEDGE-BUILDING

- **School leadership**
  
  Aiming at developing the expertise of school heads and teachers in the area of leadership, several professional development activities in 2016 have been developed.

  - **EUN Academy** – In 2016, work started on the preparation of two Massive Open Online Courses (MOOCs), both focusing on school leadership for the design and implementation of digital strategies. One MOOC mostly targets school heads in European countries and is in English; the participation to the MOOC is on an individual basis.

  - Face-to-face professional training of new school leaders in the French education system – In the context of the cooperation with ESENESR, EUN has also designed and is running three courses on school and shared leadership for newly appointed school leaders. In total, more than one thousand new school leaders are to be trained.

  - eTwinning series of webinars – These webinars focus on specific aspects of school leadership, including shared leadership, teacher leadership, and design thinking as a useful tool to support the design and implementation of leadership strategies. The series of webinars started end of 2016 and will run until March 2017. They are open to all eTwinning participants but are particularly promoted to the group of school leaders now part of the eTwinning community.

- **MENTEP policy experimentation**
  
  The MENTEP project (March 2015-February 2018) is coordinated by European Schoolnet and includes 15 partners from 13 countries. In the first project phase, project partners developed together a new online tool for teachers to self-assess their Technology-Enhanced Teaching (TET) Competence, based on similar existing tools. Until May 2017, field trials will be running in 10 countries to test this new online tool.

  As a first step in 2016, randomly selected teachers in each country were invited to fill in a Benchmark Survey about their present level of competence; which more than 7300 teachers (73% of the teachers invited) filled in. Teachers will be asked to fill in a Follow-up Survey in May 2017, to be able to measure their progress with their TET competence. In a second step, teachers were randomly divided into a test group (that is invited and encouraged to use the new online tool) and a control group (that is not). After the end of the field trials, the results will be analyzed, and discussed and disseminated both at European and national level.
The tool has also been designed to – anonymously- provide an overall picture of the technology-enhanced teaching competence profile and level at local, regional and/or national level as a way to guide training provision development.

- **CO-LAB project**
  The project CO-LAB - Collaborative Education Lab (December 2015 - January 2018), funded under Erasmus+ programme, is coordinated by European Schoolnet and includes 6 partners from 6 countries. The main aims are to design and enrich collaborative teaching and learning scenarios, train educators on the topic, support the implementation of these scenarios in the classroom, give teachers the opportunity to exchange between peers, and define how policy frameworks could be adapted to better support collaborative learning.

  In 2016, the project developed 6 learning scenarios, complemented by Assessment Guidelines, as well as the CO-LAB MOOC, which ran successfully on the European Schoolnet Academy in October-November 2016. National workshops were also organised to launch the initiative, involving educators and policy makers.

- **Development of the European Schoolnet Academy (EUN Academy)**
  In 2016, the EUN Academy offered 5 courses. The Developing Digital Skills course developed under the eSkills for Jobs project ran in a second iteration with 1512 enrolments. The Games in Schools course developed originally in 2015 with the support of the Interactive Software Federation of Europe (ISFE) was updated with new content and ran for a third round with 1188 enrolments. The Teaching with Space and Astronomy in your Classroom course developed as the first of four MOOCs in the Space Awareness project ran with 1483 enrolments. The Collaborative Teaching and Learning course developed as part of the CO-LAB project attracted 2398 enrolments. The Administering School ICT Infrastructure course was developed with the support of the Cisco Foundation and had 1617 enrolments.

- **New proposal**
  - TeachUP policy experimentation (Call EACEA/34/2015) – A proposal was submitted (and selected end of 2016) under the Key Action 3 of the Erasmus+ programme, focusing more precisely on the strengthening of teacher training and education by using the opportunities of new technologies (priority 3 of the Call). The three main research questions of TeachUP aim at (1) measuring the impact of providing online expert tutoring/mentoring on retention and learning achievement in MOOCs for teachers, (2) identifying the conditions to better support self-regulated learning online and (3) the conditions for peer-assessment be a reliable and credible alternative to expert assessment. The MOOCs developed to investigate the above questions address the new competences required for
teachers in personalized learning, formative assessment, teacher collaboration and creative thinking. The policy experimentation, starting early 2017, is based on randomised sampling of teachers and student teachers in ten countries and field trials using test and control groups.
3. DIGITAL CITIZENSHIP

- Development of the BIK initiative
  
  In 2016, the Better Internet for Kids (BIK) Phase 1 project ended in June 2016. Within this context, EUN continued to coordinate and animate – in partnership with INHOPE – the European network of Safer Internet Centres (SICs), each focusing on their respective strands of work (i.e. awareness, youth participation and helpline versus hotline). Meanwhile, EUN finalised the development and deployment of tools and services of the BIK private community, the BIK public web portal at www.betterinternetforkids.eu and the Safer Internet Day (SID) minisite at www.saferinternetday.org. Following a new call for tender under the Connecting Europe Facility, a BIK Phase 2 project was successfully initiated in October 2016, with highlights including the annual Safer Internet Forum, an Insafe training meeting, and various BIK dissemination and campaigning activities, also in the lead up to Safer Internet Day 2017.

- Completion of the ENABLE project
  
  The ENABLE (European Network Against Bullying in Learning and Leisure Environments) project came to a close at the end of 2016. Led by EUN with five partners from Croatia, Denmark, Greece and the UK, and several other European countries implementing results, the project adopted a holistic social and emotional learning (SEL) methodology. Education resources developed include 10 SEL lesson plan modules, a training kit for peer supporters, a parent/carer pack, a series of webinars, and a book entitled Bullying – perspectives, practices, insights, with chapters from researchers, parents and teachers worldwide. The inclusion of articles on ENABLE in well-established EU-wide and national newsletters proved a rapid means of reaching a broad population, with more than 38,000 downloads recorded at enable.eun.org alone.

- eSafety Label initiative
  
  In 2011, European Schoolnet set up the eSafety Label initiative, a European-wide accreditation and support service for schools. In 2016, one of the key activities evolved around the revision of the the eSafety Label assessment form, allowing schools to self-assess the level of eSafety in their institution. Work included the development of new eSafety advice and guidance around current hot topics, such as online extremism, radicalisation and hate speech. The eSafety Label community currently includes over 4,200 educators and national contact points (Ministries of Education, universities, Safer Internet Centres, etc.) from across Europe. So far 18 Gold, 67 Silver and 1,236 Bronze labels have been awarded.
• **Completion of the eSkills for Jobs campaign**

The eSkills for Jobs campaign, coordinated on behalf of the European Commission by European Schoolnet and DIGITALEUROPE, aimed to raise awareness of the opportunities that digital skills offer for employment and employability. The project ran from 2015 and ended at the end of December 2016. EUN's main activities included: an updated media and communication plan for the whole year, daily social media activity, management of the eSkills website, re-run of the “Developing digital skills” MOOC, development of the e-Skills Manifesto, collection of self-assessment tools on digital skills, and the creation of infographics related to ICT job profiles.

• **Digital skills and Jobs Coalition**

The Digital Skills and Jobs Coalition (DSJC) is building on the Grand Coalition for digital jobs. The Secretariat of the Digital Skills and Jobs Coalition is coordinated by DIGITALEUROPE, together with European Schoolnet and Telecentre Europe.

- The scope of this coalition, which was launched on 1 December 2016, includes four strands: 1) Digital skills for all citizens; 2) Digital skills for the ICT professionals; 3) Digital skills for the labour force; 4) Digital skills in education. EUN's activities in 2016 consisted of contacting pledging organisations to ask them to re-pledge, reaching out to new possible pledgers (a total of about 60 pledges have been collected to date), and the evaluation of 16 best practices which were awarded at the launch event.

• **Development of the I-LINC project**

The I-LINC project, coordinated by Telecentre Europe, aims to foster digital skills for youth employability and entrepreneurship. In 2016, EUN collected 118 Best practices on the I-LINC portal, over 40 resources for teachers, shared 100 policies on digital skills and animated the activity of a group of young people who produced a position paper.

• **Development of the coding initiative**

The European Coding Initiative brings together a wide array of stakeholders to promote coding and computational thinking at all levels of education. In 2016 the Coding Initiative organised, in collaboration with the Future Classroom Lab ambassadors and network’s labs, a hackathon on coding and digital creativity. The Hands on Hack - Coding Jam @ the Future Classroom Lab - took place on 20 October 2016. On the 6th December 2016, European Schoolnet and Kaspersky organised the Future-Proofing Cybersecurity panel discussion and a co-creation workshop at the Future Classroom Lab.
• **WebWeWant activity**

The *Web We Want* project revolves around a handbook for teens and for educators, which gives support for both parties, in order to start the online safety discussion in the classroom. Both handbooks are available in 13 languages at [www.webwewant.eu](http://www.webwewant.eu). In 2016, one highlight was the collaboration with the ENABLE project, which allowed the development of a *new chapter for the teens handbook*, on current hot topics such as cyberbullying, online radicalisation and hate speech.

• **eConfidence**

*eConfidence* started in November 2016, is coordinated by Instituto Tecnologico de Castilla y Leon, and will explore methodologies to better design serious games fostering behavioural change.

• **DISCODE**

*DISCODE* (Disconnected, discouraged, disenabled? Let’s code!) is coordinated by the Politecnico of Milan Foundation, kicked off in December 2016, and aims to deliver a training program based on gamification and interactive tools, helping students (12-18 years old) at risk of dropout to acquire basic knowledge of computer programming as a way for acquiring and embedding digital and numerical literacy.

• **New proposals**

Newly submitted proposals include an online safety capacity building project to be coordinated by INHOPE, focusing on sustainable hotline development in the Global South in cross-collaboration with the helpline and awareness-raising community and the SELMA (Social and Emotional Learning for Mutual Awareness) project which intends to promote mutual awareness, tolerance and respect, through a holistic empowerment approach, which tackles online hate, most notably in schools but also in out-of-school communities that impact on well-being¹.

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¹ Please note that at the time of publication the results of these proposals are not known.
4. ETWINNING, SCHOOL EDUCATION GATEWAY AND THE TEACHER ACADEMY

Etwinning, the School Education Gateway and the Teacher Academy are initiatives of the European Union. They are funded by Erasmus+, the European programme for Education, Training, Youth and Sport. They are governed by the eTwinning Steering Committee, a body composed of the European Commission’s Directorate-General for Education and Culture and the Education, Audiovisual and Culture Executive Agency. On behalf of the European Union, European Schoolnet operates the Central Support Service, in charge of implementing eTwinning and the School Education Gateway platform, including the Teacher Academy online courses.

- eTwinning

The year 2016 has been particularly successful for eTwinning, with almost 90,000 new users and 10,000 new projects registered. eTwinning has now reached more than 470,000 registered users and more than 50,000 projects in its 12 years of existence. Many of the activities carried out during the year focused on the topic of ‘Citizenship’:

- The annual Conference held in Athens in October, with more than 50 workshops, offered its almost 600 participants an overview on the future development of eTwinning from different perspectives in regards to its potential to educate, and to cultivate digital citizenship across Europe.
- The Thematic Conference in Florence, with more than 200 school heads was largely inspired by the ‘Declaration on Promoting citizenship and the common values of freedom, tolerance and non-discrimination through education’, and stressed upon the importance of investing in personal development, especially among children and young people.
- Two online communication campaigns involving thousands of teachers promoted the development of European projects focused on digital citizenship.
- The eTwinning Book gave the floor to teachers involved in projects dealing with “active citizenship”.

eTwinning also continued to offer various professional development opportunities to teachers in 2016: 10 Online Seminars, 28 Learning Events, dozens of on-site workshops, and hundreds of online events ran in eTwinning Live. eTwinners also had the possibility to engage in online activities in one of the 600 Groups active on the platform on diverse topics.
The stronger role of eTwinning Plus countries\(^2\) and the establishment of a scheme which involves Teacher Training Institutions are also two of the main achievements in 2016.

- **School Education Gateway/Tools**

  Launched in February 2015, the School Education Gateway provides a single online point of entry for teachers, schools, experts and other people involved in early childhood and school education helping them to stay informed about European policy and actions for schools. The platform hosts also the Erasmus+ Tools, which are three online directories aimed at schools preparing their Erasmus+ Key Action 1 and Key Action 2 applications: Course Catalogue, Mobility Opportunities and Strategic Partnership requests. Since 2016, the platform also hosts the Teacher Academy that offers MOOCs to teachers and education professionals. The EC celebrated the official launch of the School Education Gateway on 19 October 2016. In the course of 2016 the platform was enriched with ongoing publications and new articles as well as some new content sections: an events calendar, theme pages, stakeholder interviews and polls. The platform also holds the European Toolkit for Schools, aimed at promoting inclusive education and tackling early school leaving. The toolkit was enhanced and improved during 2016 to include a self-assessment form for schools and an open resource submission.

- **Teacher Academy**

  The Teacher Academy service was launched in May 2016 as part of the School Education Gateway. The Academy expanded the course catalogue on the School Education Gateway with an online course offer and also added to the existing offer of teaching materials. Seven online courses were delivered in 2016.
5. STEM EDUCATION

- **Scientix**

Scientix 2 arrived to an end at the end of March 2016 and Scientix 3 started 1 April for a new period of 3 years. 9 National Contact Points (NCPs) from Croatia, Serbia, Slovenia, Macedonia, Latvia, Poland, Italy, Romania and Bulgaria, were selected for the period November 2016 – March 2019 to support the dissemination of Scientix at national level and organize a number of activities to promote STEM education, depending on the needs and situation of each country. As part of National activities and support, 175 Scientix Ambassadors out of 308 participants were selected to be part of the Scientix 3 Teachers Panel following a 2 months long course set-up in September 2016.

Training and networking opportunities were also developed with the organization of Two Science Projects Workshops in the Future Classroom Lab. One Science week-long FCL training course was also organized in September 2016 which aimed to provide STEM teachers with resources and ideas to develop more engaging science lessons and to increase students’ interest for STEM subjects and careers. The programme included a visit to the “European Contest for Young Scientists” (EUCYS) fair and to its Awards ceremony. Scientix also had a stand throughout the EUCYS Conference. Two Scientix workshops have been conducted, one at the DRAWING ED 2016 conference in Madrid, June 2016 and the 2nd one at the Mascil Final conference in Freiburg, November 2016.

From January to March 2016, Scientix 2 organised an award competition around the “best use of media in STEM classes” within the MEDIA IN STEM Campaign, in cooperation with the Media and Learning Association. 2 Scientix Newsletters were published in 2016 and the Scientix Digest continued to be published every 2 weeks using a redesigned template. 5 Scientix Observatory papers were produced and published in 2016, in the Scientix Observatory section on the website. Throughout 2016, Scientix 3 also supported two media campaigns in STEM education: BACK TO SCHOOL WITH THE STEM ALLIANCE and STEM DISCOVERY WEEK 2016.

- **STEM Alliance**

In 2016, European Schoolnet, in cooperation with CSR Europe (the business network of Corporate Social Responsibility), launched a new multi-annual public-private initiative called STEM Alliance, whose objective is to develop innovative STEM actions [www.stemalliance.eu](http://www.stemalliance.eu). Within the STEM Alliance initiative, industry and Ministries of Education will join forces to: (1) support the competitiveness of companies by ensuring a STEM-skilled workforce; (2) promote the attractiveness and importance of STEM jobs in all industrial sectors; (3) improve and promote all existing industry-education STEM initiatives supported by industry; (4) contribute to innovation in
STEM teaching at all levels of education (primary, secondary, tertiary) by developing greater contextualisation of STEM teaching and making STEM studies more attractive for young students and; (5) enhance industry-education collaboration at national level across all member states. Smaller STEM projects (Go-Lab, RRI Tools, EU Space Awareness, AmgenTeach, etc.) will continue to support the STEM agenda.

Overall the STEM Alliance actively engaged 997 teachers, more than 13,000 students, 120 companies and 719 schools across Europe, with 12 industry partners supporting the initiative. In 2016, the following actions were developed to support innovative STEM Education teaching and promote STEM jobs all over Europe: Two European campaigns (STEM Discovery Week and Back To School); events on the evaluation of STEM teaching, IT skills and the placement of teachers in industry; webinars involving STEM professionals and STEM Education experts; a STEM Alliance video presenting the initiative and the links it builds between schools and industry; and two Publications “Setting the Scene: ICT in STEM Education – Impacts and Challenges” and “ICT Tools for STEM Teaching and Learning Transformation Framework”. On 24 November the STEM Alliance high-level event brought together 140 business leaders, Ministries of Education, non-profit organisation representatives, teachers and EU leaders, resulting in a repository of STEM education resources for the contextualisation of STEM teaching (61 resources available).

- **Completion of the Go-Lab project**
  During 2016, which was the last year of this 4 year project, EUN acted as National Coordinator and provided ongoing support and guidance to 94 teachers from 6 countries (Belgium, Italy, Poland, Croatia, Ireland, France) during the Go-Lab implementation activities. A 2-day Go-Lab focused workshop at the Future Classroom Lab in collaboration with STEM Alliance and Amgen Teach (58 participants, 13 countries, 11 workshops) was organized and took place between 3-5 June 2016. As part of the evaluation activities that EUN led, the team implemented 3 complete case studies, including school visits and observations, in 3 schools in 2 countries (France, Belgium). Collected evaluation data, from 150 teachers and 577 students from 15 countries, in relation to the efficiency and impact of the Go-Lab tools and platform has been analyzed and reported in this final report. EUN also developed the policy and teachers recommendations brochure for the adoption of online laboratories in classrooms.

- **Completion of the Responsible Research and Innovation Tools project**
  The project was funded under the Framework Programme FP7 (2007-2013), kicked-off on 1st of January 2014 and ended on 31 December 2016. The project was set up to empower all actors to contribute their share to the Responsible Research and Innovation (RRI) initiative. EUN was in charge of the Science education dimension and experts for the education community. In 2016, EUN developed an educational handbook entitled “RRI in
practice for schools. Handbook for teachers” with the aim of helping educators to develop and implement RRI oriented practices in the classroom. EUN also ran 4 face-to-face workshops and one online webinar to train teachers on RRI and make the link with their curriculum. On 21-22 November 2016, more than 250 people attended the final Conference which served as an “open market” to share and exchange ideas on how research and innovation can be built further on more open and responsible foundations.

• Development of the Space Awareness project

The Space Awareness project aims to stimulate the next generation of space-oriented scientists, providing free high quality teaching and learning resources to inspire and engage young people. In the Space Awareness project, EUN is responsible for the overall coordination of 4 MOOCs, two of which it participated in developing the content for. In September 2016 MOOC1 on the topic “Teaching with Space and Astronomy in your Classroom” was completed by 369 teachers. MOOC2 on the topic “Navigation through the ages” is currently under development and will be launched at the end of February 2017.

Another important task during 2016 has been the development of the Career Hub which aims to provide teachers, parents and students with a variety of materials, resources and events in order to demonstrate the richness of available space careers.

Finally, in collaboration with ESA-ESTEC (European Space Agency - European Space Research and Technology Centre - ESTEC) and Galileo Teacher Training Program (GTTP), EUN organized, on behalf of Space Awareness, the Science Education International workshop in Leiden, Netherlands, on 18-22 October 2016. The workshop was attended by 115 participants and included more than 30 workshops including expert talks and a visit to the European Space Research and Technology Centre (ESTEC).

• Amgen Teach initiative

Launched in 2014, Amgen Teach is a European programme funded by the Amgen Foundation with direction and technical assistance provided by EUN. In terms of international dissemination actions taken in 2016, the project was presented in five major international events. During the Ministries of Educations STEM representatives Working Group meeting of March 2016, Ministries confirmed the added value of Amgen Teach, based on the first-hand experiences presented by teachers invited to the meeting. 15 Amgen Teach teachers were invited to the Future Classroom Lab workshop, from which 15 case studies and 4 teacher interviews were collected and used to develop the Amgen Teach teachers’ video.
From the training perspective, 56 face to face courses were organized in 2016, with 1075 teachers attending the training and 1014 of them having registered to the Amgen Teach website. Over 123,000 students have benefited indirectly from the trainings and the 3 Distance Learning Activities reached 130 participants. Finally, in relation to the evaluation of the programme, over 950 pre and 790 post questionnaire results were collected. Based on the feedback, 10 national reports and an overall international evaluation report were produced.

• **Systemic – Say yes to STEM in the classroom**

The project kicked-off on 1st of November 2016 for a duration of 36 months. EUN is coordinator along with the following four partners: The Ministry of Education of Malta; The Ministry of Education of Portugal; OBITEC centre in Obidos, Portugal and CSR Europe. The project aims to develop new teaching approaches to continuing professional development of STEM teachers in Europe, with a particular focus on improving teachers’ and career counsellors’ knowledge on existing STEM jobs and skills needed to access them. The project is supported by the European Commission’s Erasmus + programme and is complementary to the STEM Alliance’s activities.

• **Europeana DSI2**

During 2016, EUN identified with the support of Ministries of Education across ten countries, 20 teachers (one primary and one secondary level teacher per country from Czech Republic, Greece, Portugal, Austria, Ireland, Estonia, Italy, Finland, France and Hungary) to participate in a small validation pilot between November 2016 and May 2017. During the pilot, the teachers will develop and test pedagogical scenarios and learning activities that incorporate Europeana content, consisting of millions of multilingual digitized items from European museums, libraries, archives and multi-media collections. During the first workshop at the Future Classroom Lab in November 2016, participating teachers received an in-depth introduction to the Future Classroom Toolkit, a set of resources and tools that help teachers innovate their classroom practices. Following the first workshop, the first pilot phase was launched for teachers to further communicate and develop learning activities. EUN has set-up a dedicated social media group and a Learning Management System, called Schoology aiming at connecting teachers sharing content and systems that fuel education with Europeana data.

• **New proposal**

In 2016, EUN contributed to the development of the proposal for the Next Lab project in which it is as a partner. The project aims to offer a unique and extensive collection of interactive online (virtual and remote) laboratories that, through a process of mixing and re-use, can be straightforwardly and efficiently combined with dedicated support tools (learning apps) and multimedia material to truly form open, cloud-based, shareable educational resources with an embedded pedagogical structure.
COMMUNICATION ACTIVITIES

EMINENT 2016:

Eminent (European Schoolnet’s annual conference) was devoted in 2016 to further shaping European Schoolnet’s digital citizenship agenda, following on from the earlier eTwinning conference where 585 teachers from across Europe discussed how best to promote digital citizenship through education. EMINENT 2016 was hosted by the Czech Ministry of Education, Youth and Sports and the Centre for International cooperation in Education (DZS), and brought together 138 education experts, representatives of national ministries, industry partners and other stakeholders, to discuss the educational implications of empowering young people to be digital citizens. Key topics such as how to increase the digital skills of teachers and learners, support the safe and responsible use of the internet, and combat online hate speech and radicalisation, were addressed by experts and stakeholders. European Schoolnet’s Ministry of Education members from across Europe gave an overview of the national digital citizenship policies and programmes in place in their countries encouraging peer learning. The voices of European policy making as well as teachers and youths were also represented in dedicated roundtables.

The conference concluded with a commitment from European Schoolnet to take on board the main outcomes and lessons learned from the conference, including considering establishing a European Schoolnet Digital Citizenship Working Group allowing Ministries of Education across Europe to exchange views, expertise and best practices in this area. Moreover, to reach out to practitioners directly, it was proposed that the potential offered by the European Schoolnet Academy be leveraged to offer innovative courses to teachers in 2017, responding to the Digital Citizenship issues raised during Eminent 2016.

EUN PUBLICATIONS:

Click on any of the titles below to directly access the publications published by European Schoolnet in 2016:

1. Developing Computational Thinking in Compulsory Education - Implications for policy and practice
2. Monitoring eTwinning Practice – A pilot project guiding teachers’ competence development
3. ENABLE resource pack for students, teachers, parents and campaigners
4. Efforts to Increase Students’ Interest in Pursuing Science, Technology, Engineering and Mathematics Studies and Careers
5. Growing Digital Citizens: developing active citizenship through eTwinning
EUN WEBSITE AND SOCIAL MEDIA STATISTICS:

European Schoolnet’s website gives access to the network’s corporate outputs and services as well as links to all the projects which European Schoolnet coordinates or is a partner in.

Most visited pages on www.europeanschoolnet.org: In 2016 the most visited page was the EUN landing page with 82,160 page views (out of 250,553 page views in total). The next most visited page was the home page www.eun.org/home (12,402 page views) followed by the vacancies page (6,709 page views), teacher-training page (6,636 page views) and Observatory>Trends page (5,754 page views).

Type of visitors to the EUN website and length of average visit: In 2016 the EUN website attracted 77,080 visitors. Similar to last year's trend the EUN website attracted more new visitors (70.9%) than returning visitors (28.1%). In 2016, on average, visitors spent 1:53 minutes on the EUN website, illustrating an improvement in comparison to 2015 (01:26 minutes).

Social media channels: EUN’s most popular social media channels in 2016 were Twitter, Facebook, YouTube and LinkedIn. Twitter is the most popular EUN social media channel, with 33,418 interactions (likes, comments and shares on posts) in 2016, followed by 18,805 on Facebook, 1593 on YouTube and 559 on LinkedIn. In the following graphic you can find more information concerning European Schoolnet’s audience growth and engagement over the past four years on our two main social media channels (Facebook and Twitter).
CONCLUSION

In 2016 EUN has consolidated its position as a multi-stakeholder network that provides Ministries of Educations, schools, head teachers, teachers, teacher trainers, researchers and industry with services and activities supporting the agenda of transforming education in Europe.

While continuing the strengthening of its successful activities (professional development opportunities for schools – including FCL activities and the EUN Academy - project based initiatives, working groups, etc.) new areas of activities have also been considered (e.g. school leaders and initial teacher education).

In order to ensure that EUN develops and reinforces its role as a credible education think tank, the full support of all its members is much appreciated and remains crucial.
APPENDIX I: WEBSITES

[Links to various educational websites and projects]
### APPENDIX II: EUROPEAN COMMISSION FUNDED PROJECTS

The projects below are funded with support from the European Union’s programmes, Erasmus+, Horizon 2020, Connecting Europe Facility and Daphne Programme.

<table>
<thead>
<tr>
<th>Project</th>
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<th>Description</th>
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<tr>
<td>eTwinning</td>
<td>Funded by the Erasmus+ programme of the EU</td>
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<td>School Education Gateway</td>
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<td>Teacher Academy</td>
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<td>Teacher Academy</td>
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<td>Next-Lab</td>
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<td>Space Awareness</td>
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<td>eSkills for Jobs</td>
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<td>Digital Skills and Jobs Coalition</td>
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This report reflects the views only of European Schoolnet and the European Commission cannot be held responsible for any use which may be made of the information contained therein.
APPENDIX III: PRIVATELY FUNDED PROJECTS

The projects below are funded by private partners.

<table>
<thead>
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<td>Texas Instruments</td>
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The following projects have been made possible with previous and in some cases continued financial and in-kind support from private partners.

**Web We Want**
- Google
- LIBERTY GLOBAL

**eSafety Label**
- Kaspersky Lab
- LIBERTY GLOBAL
- Microsoft
- Telefonica

**All You Need is Code**
- Facebook
- LIBERTY GLOBAL
- Microsoft
- Samsung
- SAP

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1 The Web We Want project also receives in-kind support from members of the Insafe network: [www.betterinternetforkids.eu/web/portal/policy/insafe-inhope](http://www.betterinternetforkids.eu/web/portal/policy/insafe-inhope)

This report reflects the views only of European Schoolnet and the partners mentioned above cannot be held responsible for any use which may be made of the information contained therein.
APPENDIX IV: FUTURE CLASSROOM LAB INDUSTRY PARTNERS

* Although not yet the case in 2016, at the time of publication these companies are industry partners of the Future Classroom Lab.
APPENDIX V: EUROPEAN SCHOOLNET MEMBERS

Federal Ministry of Education - www.bmb.gv.at
Flemish Ministry of Education and Training - www.ond.vlaanderen.be
General Administration of Teaching and Scientific Research of the French Community of Belgium - www.cfwb.be/
Centre for International Services - www.dzs.cz
National Agency for IT and Learning - www.stil.dk
Information Technology Foundation for Education - www.eitsa.ee
Finnish National Agency for Education - www.oph.fi
Ministry of Education and Religious Affairs - www.minedu.gov.gr
Ministry of Human Capacities - www.oktatas.hu
Department of Education & Skills - www.education.ie
MAKASH and Ministry of Education - www.makash.org.il

National Institution of Documentation, Innovation and Innovative Research - www.indire.it
Centre of Information Technologies of Education - www.itc.smm.lt
Ministry of National Education and Vocational Training - www.men.lu
Ministry for Education and Employment - www.education.gov.mt
Kennisnet Foundation - www.kennisnet.nl
Norwegian Centre for ICT in Education - iktsenteret.no
Ministry of National Education - www.men.gov.pl
Ministry of Education and Science - www.dge.mec.pt
Ministry of Education, Science, Research and Sport - www.minedu.sk
National Institute for Educational Technologies and Teacher Training - www.ite.educacion.es
Swedish National Agency for Education - www.skolverket.se
Specialist Agency for ICT and Education - www.educa.ch
Ministry of National Education - www.meb.gov.tr