Scientix 2 Publishable Summary

Final Report

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Introduction

Scientix continues to go from strength to strength. Significant milestones were reached during Scientix 2 from 2013 to 2016, building on the achievements of its first phase 2009 to 2012. Not only did its rapidly growing group of followers and use of its online tools increase drastically, but also did Scientix show that there is both an interest and need for such a community that supports more collaboration among STEM educators nationally and at the European level. More and more teachers and other educators or stakeholders in STEM education are aware of the Scientix community, which is evident by the number of resources being uploaded, increase in web traffic, social media activities and testimonials from participants at Scientix related events. This report lists all those achievements during this second phase of the project.

First steps, extending the Scientix network to the national level

In its first stage from 2009-2012, the Scientix project built an online portal to collect and present European STEM education projects and their results, and organised a series of well-attended teacher workshops. The first Scientix conference took place in May 2011 and proved to be immensely popular – not least as a golden opportunity for STEM professionals to network.

The second phase's key objective, from 2013 to 2016, has been to expand the benefits and achievements of Scientix at a national level. A wide, inclusive network of 30 National Contact Points (NCPs) has reached out to teacher communities and contributed to the development of national strategies for wider uptake of inquiry-based and other innovative, effective and engaging approaches to science and maths education.

What's more, it was considered vital to build a sustainable and effective relationship with teachers. Therefore, Scientix prepared calls for teachers to become Scientix Ambassadors and Deputy Ambassadors, to help spreading the word about all the things that the community has to offer.

Building a sustainable online community

The **Scientix online portal** is the information hub of the Scientix 2 project. At the start of this second phase, this vital tool in STEM education was further developed and structured, in order to improve its usability and attractiveness, further, where visitors could access information about 487 projects, 2709 resources (i.e. teaching materials, training courses and research reports), 773 events across Europe and 643 news articles. This exceeded all goals set at the beginning of Scientix 2 for uploading new content to the portal.

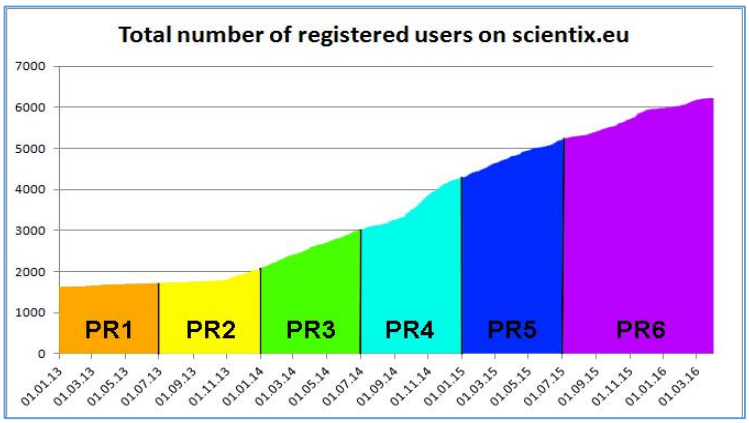


Figure 1: Total numbered of registered users (PR = Progress Report)

By the end of March 2016, more than 6,200 people had registered as active users on the online portal. As they register, they become part of a **public profile directory**, where they can fully participate in the community, interact with other users, download and comment on resources and even establish new partnerships either in their national environment or internationally. By the end of Scientix 2, the number of registered users had nearly quadrupled compared to the first phase of the Scientix community. Additionally, for the duration of the Scientix 2 project, the online portal www.scientix.eu was viewed 1,611,856 times by 365,296 visitors. This amounts to just over 9,300 visits on average per month.

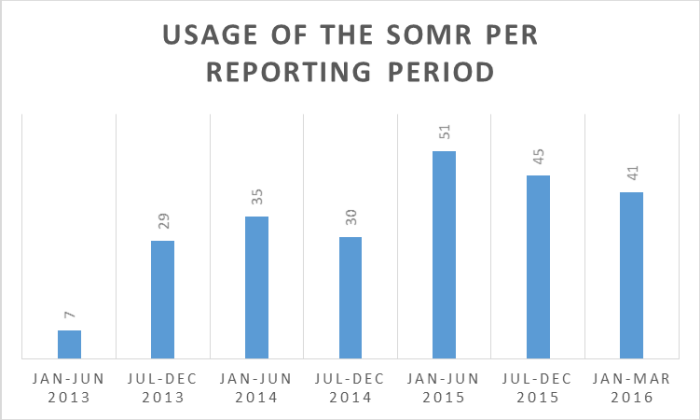
Information on the Scientix online portal was made available in eight different languages in addition to English, being the default one. The other ones are Dutch, French, German, Italian, Polish, Romanian and Spanish. One of the unique services that Scientix offers is a **translation on demand** of teaching materials and other resources, given that they fulfil all the necessary copyright criteria with the author(s) consent.

At the same time as the Scientix portal was redesigned, the translation on demand service eligible languages were expanded beyond the official European Union languages to include all official languages from European Union territories and regions, and FP7 associate countries:

Bulgarian Bosnian Catalan Czech Welsh Danish
German Greek Spanish Basque Estonian Finnish
French Irish Hebrew Croatian Galician Hungarian
Icelandic Lithuanian Latvian Macedonian Italian Maltese
Norwegian Polish Portuguese Romanian Dutch Slovak
Slovenian Albanian Serbian Swedish Turkish

Scientix received more than 2,200 requests for translations from its users, out of which 700 were approved and processed into various languages (requests needed to come from 3 users to be approved.

The **Scientix Online Meeting Room** (SOMR) was booked and used 238 times by various projects and National Contact Points since Scientix offered the service..



So did the **Scientix blog**, where 119 original articles written by STEM educators were uploaded during the project's lifetime (blog.scientix.eu).

Social media proved to be an effective tool during the Scientix 2 project. A new Facebook group was launched, called "***Science Teachers in Europe***", which reached more than 5,000 members by the end of March 2016. This Facebook group is moderated by representatives of the Scientix project and its sole purpose is to help teachers share useful information for science educators and upcoming or past events. Just about ten such posts are shared per day! Its most popular post was liked 89 times and shared 1,126 times by other users.

On **Twitter**, Scientix reached 4,700 followers. From January 2013 to March 2016, it sent out 2,762 messages, of which 8,056 were retweeted, and received 3,183 messages. Those interactions reached a potential of 16.3 million users on Twitter. Scientix tweeted links to content on external pages 1,879 times, which resulted in 30,391 mouse clicks from other users.

Scientix also introduced the **Storify** tool to collect discussions from social media and materials in relation to its events and campaigns. By the end of March 2016, Scientix had created 33 new stories on Storify, out of which its storyline about the "*best use of media in STEM classes*" generated 3,236 views.

Scientix dissemination

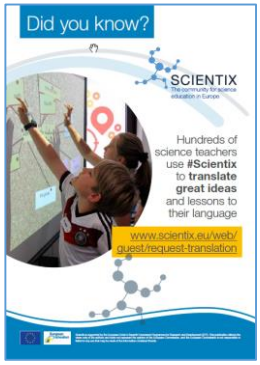
Eleven editions of the Scientix Newsletter were issued as part of Scientix 2. Each of them was dedicated to a pre-defined theme in STEM education, such as nanotechnology, national initiatives in STEM education, collaboration, space sciences, Responsible Research and Innovation (RRI), online training, mathematics teaching and learning, media in STEM

education and the ongoing progress of the Scientix project. An archive with all the newsletters is available on the Scientix online portal here:
http://www.scientix.eu/web/guest/newsletter/archive

The first edition of the **Scientix Newsletter** was published in January 2014 and the last one in March 2016. Each of them was printed and distributed at Scientix events, as well as other events in STEM education across Europe, and an electronic version sent to an ever growing list of subscribers. In the beginning it had 877 subscribers, but by the end of March 2016 they were 2,591. This represents a growth of 159% during the project's lifespan.

In addition to the Scientix Newsletters, the **Scientix Digest** was an electronic update sent every two weeks to a list of subscribers, with the first edition sent out to 67 subscribers in January 2014. By the end of March 2016, Scientix had sent out 46 editions of this electronic newsletter. By the end of Scientix 2, there were 1,713 subscribers to this Digest, representing a growth of 2,5% since this service started.

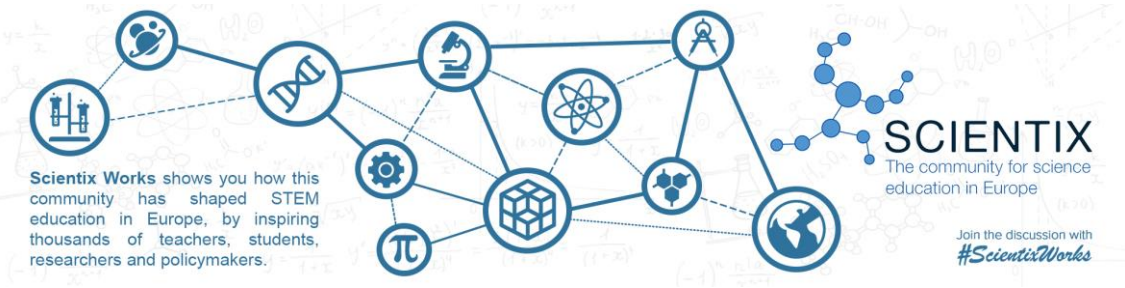
European Schoolnet presented Scientix at 37 different events during the project's operational period. Moreover, it contributed regularly to the dissemination of campaigns and events in STEM education.



Scientix also designed and carried out **three major campaigns** to increase interest in the community and attract new members to it. The theme and slogan of the first campaign was "Did you know?". The campaign presented different Scientix assets in a series of 16 (plus 5 extra messages) messages disseminated twice weekly via Facebook and Twitter (Scientix twitter, Facebook page of the European Schoolnet, Scientix Facebook group). Apart of the messages published, a series of posters created for the campaign made it also more visual to the group of followers. Those messages were localised into other languages to support dissemination of Scientix nationally. A webpage dedicated to the portal is available on the Scientix portal here: http://scientix.eu/web/guest/did-you-know

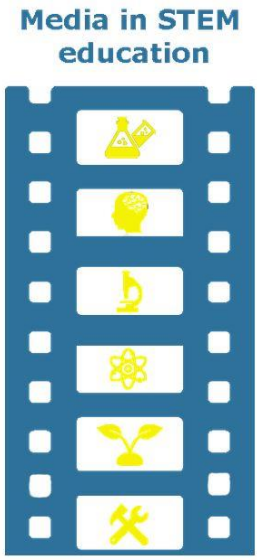
The slogan of the second campaign was "Keep Sharing". This campaign was split into four different sections, in which people were encouraged to share stories on Twitter and Facebook about their experience with Scientix or STEM education, a Twitter competition, various other social media activities that promoted the conference, and through contact with mailing lists. The official social media hashtag for the event #ScientixConf generated 2,236 tweets in connection with the conference. Activities of this campaign are summarised on Storify: https://storify.com/scientix_eu/2nd-scientix-conference-24-26-october-brussels

The third campaign, Scientix Works, is the most successful one of the Scientix 2 project in terms of outreach, additional traffic to the Scientix online portal and impact on key stakeholders in STEM education in Europe. Together the #ScientixWorks and #EMINENT2015 campaign generated more than 6,000,000 impressions on Twitter, and weekly web traffic to the Scientix online portal had never been as much as in the week from 16 to 20 November 2015 throughout the whole project period. The campaign's activities were carried out from September to December 2015.



This major media campaign focused mainly on reaching key stakeholders and policymakers in STEM education, as well as the media. It presented and promoted the achievements of the Scientix 2 project up-to-date. A special campaign page was created where all relevant materials and activities were uploaded: http://scientix.eu/web/guest/scientixworks

Two other campaigns of a lesser scale were carried out. From January to March 2016, Scientix organised an award competition around the "best use of media in STEM classes" in cooperation with the Media and Learning Association. STEM teachers in Europe were invited to submit examples that showed innovative use of media in their classes by 15 February 2016.



The jury received 73 contributions in total that were submitted via the social media networks Facebook and Twitter. Winners in each category were selected on 22 February 2016 and they invited to participate in a workshop in Brussels, Belgium, on 9 March 2016, in conjunction with the Media and Learning Conference and the MEDEA Awards: http://www.scientix.eu/web/guest/live/workshops/medea-2016

Secondly, Scientix disseminated actively its comparative analysis on STEM education, published in January 2016. This report was regularly promoted through the social media channels of Scientix and European Schoolnet.

Scientix and multimedia

Scientix recorded and published 22 videos on its **YouTube playlist**. Four of those were short videos about the Scientix project and community. The first one serves as a basic introduction to the Scientix project. The second explains the main achievements of Scientix 2 from the beginning to November 2015, and was first screened at the Eminent 2015 conference in Barcelona with 257 participants present. The third one is a recap on that same conference with a short compilation of comments from the conference keynote speakers. The fourth is an overview video from the Scientix Conference in October 2014.

11 videos were uploaded as part of the Scientix interview series with experts in STEM education, recorded at the Scientix conference in October 2014 and the Eminent 2015 conference. Additionally, 7 new interviews with Heads of Schools across Europe were uploaded and used in an interactive eBook about the Scientix project, published as part of the Scientix Works campaign.

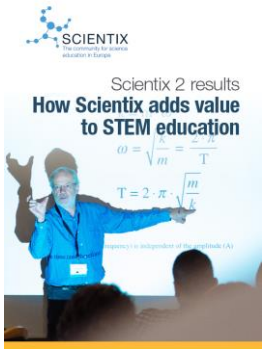
By the end of March 2016, the Scientix designated playlist on YouTube, which had 10,296 combined views, or 858 on average per video
https://www.youtube.com/playlist?list=PLtA54levDap3E6vhIftNnOrKXZCrLirYo

Scientix also used the Flickr tool of European Schoolnet for creating **photo albums** dedicated to its events. Thirteen such photo albums were created for the duration of the Scientix 2 project, with the most popular being from the second Scientix conference, viewed 4,528 times on Twitter (https://www.flickr.com/photos/european_schoolnet/albums).

Scientix publications

"***Scientix: The Community for Science Education in Europe***" was the first official 32 pages long booklet published as part of the Scientix 2 project, in October 2014. It presented specific activities of the Scientix community and their impact through the voices of people involved in it. After a general introduction to Scientix, the specific activities of Scientix and their impact are presented through people involved in the project, each in different way (http://scientix.eu/web/guest/publication)

Outcomes of the second Scientix Conference, held in Brussels in October 2014, were summarised in a A5 conference booklet of 52 pages published in April 2015. The publication was widely distributed and disseminated until the end of the project, including Scientix National Conferences throughout 2015 (http://scientix.eu/web/guest/conference).



The booklet "***Scientix 2 results: How Scientix adds value to STEM education***" was published in November 2015, in connection with the Scientix-Eminent 2015 conference in Barcelona. This publication gives a detailed overview of all activities carried out as part of the Scientix 2 project, the growth of the community and its vision for future expansion and development. 2,000 copies were printed of this publication, of which 600 were distributed at the conference (http://scientix.eu/web/guest/scientixworks#Publications).

In January 2016, Scientix published a **new comparative analysis on STEM teacher education policies and practices in Europe**. The information provided in this report is based on data received from Scientix National Contact Points for STEM education, representing 30 countries in Europe, in response to a survey on national measures and initiatives to increase students' interest in pursuing STEM studies and careers, launched in the summer of 2015 by European Schoolnet. 1,000 copies of this publication were printed and distributed at relevant events.

This publication, as well as the full national reports from 18 of the participating countries, was made available on the Scientix online portal: http://scientix.eu/web/guest/observatory/comparative-analysis-2015

The Scientix resources awards

The **Scientix resource awards** were given to those resources that stand out in terms of quality, after being tested and reviewed by teachers who are involved in the Scientix community. Awarded resources were also translated into all languages of the European Union; provided that they fulfil the necessary criteria for copyrights with the author(s) approval. This award serves as a positive encouragement for STEM projects to share their resources with the community, as they are given a seal of quality.

Awarded resources (up to four resources per competition) are promoted on the Scientix portal, highlighted in its newsletters, at Scientix events and through its social media channels. Representatives of winning projects were invited to Science Projects Workshop in the Future Classroom Lab to present their activities and winning resource.

Eight rounds of the Scientix resources awards were handed out during Scientix 2, in three categories (Best material for teachers, best material for students, and best STEM report):

Round	Category	Project	Resource	Sub-missions	Result
1	Materials for teachers	ENGINEER	Super Sucker: Designing a contraption that sucks up litter	143	26 Oct 2014
	Materials for students	astroEDU	Star in a Box: High School		
	STEM reports	PRIMAS	PRIMAS Guide of supporting actions for teachers in promoting IBL		
2	Materials for teachers	ESTABLISH	ESTABLISH IBSE Teaching and Learning Units: Integrated Science	22	21 Dec 2014
	Materials for students	INQUIRE	INQUIRE lesson plan: Plants and Climate		
	STEM reports	ESTABLISH	Report on how IBSE is implemented and assessed across participating countries		
3	Materials for teachers	ENGINEER	ENGINEER: How can we measure the volume of an inflated balloon? From medical problem to engineering solution	57	1 Mar 2015
	Materials for students	Make the link	STEM challenge:Beat the Flood		
	STEM reports	SAILS	Report on mapping the development of key skills and		

Round	Category	Project	Resource	Sub-missions	Result
			competencies onto skills developed in IBSE (D1.1)		
4	Materials for teachers	EUNAWE	Universe in a box	69	18 May 2015
	Materials for students	Mascil	Plate restoration		
	STEM reports	ASSIST-ME	Report on the current state of the art in formative and summative assessment in IBE in STM - Part II: Digital assessments		
5	Materials for teachers	PROFILES	Climatic refugees the Cypriots: A fictional scenario or a forthcoming reality? (Teacher's guide)	35	13 Jul 2015
		Science in school	Simulating the effect of the solar wind		
	Materials for students	Go-Lab	Inquiry Learning Space (ILS): Series and parallel circuits		
	STEM reports	Go-Lab	Go-Lab: D3.1 Preliminary Go-Lab requirements specifications, needs analysis, and creative options (M12)		
6	Materials for teachers	FEAST	FEAST workshop 1: TALKING ABOUT SCIENCE – FLOATING AND SINKING	57	14 Sep 2015
	Materials for students	ESERO-UK	Rosetta - Primary Resource Book		
	STEM reports	FaSMEd	D3.1 Prototype toolkit: A prototype toolkit		
		Eduscience	Moving schools closer to the world of science		
7	Materials for teachers	No winner	No winner	80	9 Nov 2015
	Materials for students	Joy of Maths	The Joy of Math: Trigonometry		
	STEM reports	iTEC	iTEC: D6.4 iTEC Environments Manual V3 (Replacement: Toolset 4.2 of the Future Classroom Toolkit)		
8	Materials for teachers	SBC	The screens, the brain... and the child - Sequence 8: imagination	202	4 Mar 2016
	Materials for students	BiOutils	BiOutils: Yeast		
	STEM reports	eCity	eCity Environment Specification		

All results of the Scientix Award are available on the Scientix online portal here:

http://www.scientix.eu/web/guest/scientixawards

A communication hub for National Contact Points in STEM education

A network of **30 National Contact Points for STEM education (NCPs)** was built as part of the Scientix 2 project. The kick-off meeting of this new ground for multinational cooperation in STEM education was held at European Schoolnet in Brussels, Belgium, in November 2013. The eighth and final meeting between NCPs was held in Dublin, Ireland, in September 2015.

Through this collaboration with NCPs across Europe, it was possible to share and disseminate information about the Scientix community at the national level to teachers, as well as other educators, policymakers and stakeholders in STEM education.

The NCPs also organised 29 national conferences to address various issues in STEM education in their home environment, with support from the Scientix project. These national conferences brought thousands of educators together in the effort of bringing collaboration in STEM education to the top of the discussion agenda. These face-to-face conferences attracted more than 6,500 participants, mainly teachers. Representatives of the Scientix project attended each of those conferences.

Event	Dates	Total number of participants per event
Cyprus	27-28 November 2015	90
Croatia	18-20 November 2015	100
Portugal	13-14 November 2015	300
France	12-14 November 2015	60
Switzerland	10-11 November 2015	120
Slovakia	9-10 November 2015	100
Romania	30-31 October 2015	150
Spain	23-25 October 2015	200
Greece	9-10 October 2015	195
Poland	8-9 October 2015	150
Austria	7-8 October 2015	200
Netherlands	1-2 October 2015	400
Estonia	11–12 September 2015	250
Slovenia	20-21 August 2015	600
Sweden	17-18 August 2015	300
Latvia	26-27 June 2015	100
Turkey	15-16 June 2015	237
Finland	1-3 June 2015	300
United Kingdom	17-18 April 2015	100
Hungary	20-21 March 2015	175
Denmark	19-20 March 2015	900
Israel	18-19 March 2015	300
Malta	27-28 February 2015	130
Bulgaria	7-8 December 2014	101
Ireland	21-22 November 2014	213
Italy	21-22 November 2014	200
Belgium	17-19 November 2014	498
Czech Republic	13-14 June 2014	100
Lithuania	6-7 May 2014	100

Working with a network of Scientix Ambassadors

Direct cooperation with teachers was also integral to the Scientix project. Four cycles of Scientix Ambassadors and Scientix Deputy-Ambassadors were organized during the project's lifetime. Those Ambassadors contributed to the dissemination of Scientix via social media, by evaluating resources, by helping out with organising national Scientix national conferences and presenting the project at local, national and international events in STEM education.

Cycle 1: November 2013 to August 2014: By the end of June 2014 the teachers panel for Cycle 1 (November 2013 – August 2014) was considered complete with 86 teachers from 34 countries. Those Scientix Ambassadors and Deputy Ambassadors presented the Scientix project at 194 events in 2014.

Cycle 2: September 2014 to March 2015: 81 teachers were initially selected for the second cycle of the Scientix Teachers Panel, with three more added a couple of months later. This time, the Scientix Ambassadors and Deputy-Ambassadors were from 37 different countries originally. A total of 104 presentations were reported only for the first 3 months of Cycle 2.

Cycle 3 and 4: March 2015 to March 2016: A new call for teachers was launched in March 2015. By the end of April, the teachers' panel for Cycle 3 was considered complete with 90 teachers from 38 countries. Teachers from the 3rd and 4th Cycle of the Scientix Teachers' Panel participated in two workshops, delivered 249 presentations about the Scientix community at various events, created 6 new Moodle courses and organised 10 webinars. Additionally, they contributed to the dissemination of Scientix via social media, evaluated resources, and supported the project overall with for example radio interviews, helping out with national Scientix conferences and with organising the Eminent conference in Barcelona in November 2015. What's more, under the Scientix Projects' Support initiative in cycle 4 from January to March 2016, the teachers' panel offered its assistance to STEM projects, thus strengthening further the ties between Scientix and various national and European projects in STEM education.

Scientix Projects' Networking Events

Eleven networking events for representatives of STEM projects were organised as part of the Scientix 2 project. The Scientix projects' networking events (SPNEs) bring together project coordinators, managers and other representatives, from European and national science education projects. The goal is to allow projects to share and exchange their experiences, present their work, and to facilitate creating new collaborations and partnerships. Each of these events is centred on a specific topic or challenge faced by the projects. The following table contains information about the main topics discussed at those events, as well as the number of projects presented and participants who attended.

Event	Topic	Location	Dates	Proj [1]	Pax [2]	In collaboration with
SPNE1	Communication and Dissemination activities	Brussels	27 – 29 Nov 2013	13	17	Proconet & PRIMAS
SPNE2	Teachers training in European projects and Policy recommendations	Brussels	5 Sep 2014	22	32	nanOpinion
SPNE3	Teachers participation in STEM projects	Brussels	20 Feb 2015	12	16	FCL workshop
SPNE4	Responsible Research and Innovation and STE(A)M	Barcelona	16 Apr 2015	11	16	RRI Tools & STEAMBarcelona
SPNE5	Materials created in projects: hands-on, online portals, papers...	London	24 Apr 2015	11	17	TEMI
SPNE6	Cross-curricula activities in projects & whole-school activities involvement	Brussels	8 May 2015	15	21	FCL-Heads of Schools
SPNE7	Involving other third parties, organizations and advisers in European projects (who, how, what for)	Brussels	19 Jun 2015	17	28	Friends of Scientix FCL
SPNE8	Evaluation within projects	Brussels	16 Oct 2015	15	26	FCL workshop
SPNE9	Experiencing STEM and Digital Skills inside and outside of the classroom	Brussels	6 Nov 2015	24	41	I-LINC and FCL workshop
SPNE10	Introduction of new STEM topics in the curriculum (e.g. Environmental studies, active citizenship, space education, robotics etc.)	Brussels	26 Feb 2016	25	33	FCL workshop
SPNE11	The importance for STEM education of Head of schools associations & Teacher associations" and "Teaching the History of Science nowadays."	Brussels	18 Mar 2016	15	22	FCL workshop

In total, 269 people have joined the SPNEs since the beginning of the Scientix 2 project, or just about 24 on average per event.

Hands-on training and workshops at international events

European Schoolnet organized Scientix workshops in **various international conferences and workshops** from the beginning of the project till the end to present and promote the Scientix community and its benefits for STEM education. The aim of these workshops was to either present Scientix services to teachers and project managers, or other relevant science education actors, or to serve as facilitators to the presentation of other science education projects. For the duration of the project, 15 workshops were carried out at external events.

Organiser	Topic and/or event	Location	Dates
eduTechCluster	"Scientix and the use of ICT in STEM classes" workshop during ITworldEdu 2016	Barcelona	Mar 2016
EPCA	STEM careers and industry workshop	Berlin	Oct 2015
eTwinning	eTwinning professional Development workshop – Science, environment and entrepreneurship in eTwinning projects	Warsaw	Oct 2015
eTwinning	eTwinning conference 2015	Brussels	Oct 2015
Ecsite	'Forming Opinion – But How?' worshop during the Ecsite Annual Conference 2015	Trento	Jun 2015
Bahçeşehir University	Eurasia Regional Symposium & Brokerage Event Horizon 2020	Istanbul	Apr 2015
eduTechCluster	"Experiences in the use of ICT in STEM education from across Europe", workshop at ITworldEdu 2015	Barcelona	Feb 2015
eTwinning	"Teaching materials for STEM projects; where to get them, how to know they are good?" and "Creating STEM projects in eTwinning - looking for new ideas and new colleagues?" workshops at the eTwinning 2014 Annual Conference	Rome	Nov 2014
European Schoolnet	Policy recommendations in STEM projects - experiences and results" workshop during the EMINENT 2014 conference	Zurich	Nov 2014
CASTeL	"Scientix, Inquiry Based Learning and Online content" workshop at the SMEC annual conference 2014	Dublin	Jun 2014
European Schoolnet	"Teacher professional development and STEM: How to engage pupils better?" workshop at the EMINENT 2013 annual conference	Helsinki	Dec 2013
La main à la pâte	National Scientix workshop: "The national workshop of the pilot centres' network (Rencontres des Centres Pilotes)"	Nancy	Dec 2013
InGenious	Science Projects Workshop at the Future Classroom Lab	Brussels	Apr 2013
eTwinning	Scientix Workshop during the 2013 eTwinning Annual conference	Lisbon	Mar 2013

Workshops to support teachers' professional development in the Future Classroom Lab

Science Projects Workshops in the Future Classroom Lab (SPWatFCL) are regular events organized by European Schoolnet (EUN) and based at the EUN, aimed both at training teachers in the use of technologies in the classroom in association with materials and pedagogies from projects and encourage science projects to work together instead of in isolation. The content is all STEM related and the participants STEM teachers and/or other STEM education stakeholders.

The 1st Science projects workshop in the FCL was organized in the framework of the first Scientix. Two more Science projects workshops in the FCL were organized in the framework of the inGenious project (http://tinyurl.com/scientix-inGenious) and the Global excursion project (http://tinyurl.com/scientix-Global-excursion), in 2013 and 2014, respectively.

During Scientix 2, eight more Science Projects Workshops at the Future Classroom Lab (SPWatFCL) were organized, bringing together 470 teachers, mostly teachers and heads of schools, to Brussels, where they were introduced to innovative practices in pedagogy, inquiry-based teaching and learning and had the opportunity to learn from their colleagues from all across Europe through peer learning activities. They also attended workshops that were led by projects available in the Scientix project gallery. The main goal of those events is to support a wide ranging and practical cooperation among teachers in STEM education.

The following SPWatFCLs were organised under the Scientix 2 project from the beginning to the end:

- From the 23rd to the 25th of May, Scientix held, at the European Schoolnet (EUN) headquarters, the **4th Science Project Workshop in the Future Classroom Lab** (4th SPWatFCL) in combination with the 4th Scientix Spring Teachers Workshop. The event was led by Scientix and brought together 32 teachers from 25 different countries.
- The **5th Science Projects Workshop at the Future Classroom Lab** (5thSPWatFCL), organised by Scientix, took place in Brussels, between the 20th and 22nd February 2015 and allowed participants to learn about various projects in science education and resources available for classroom use, as well as to make new connections with international peers; the event gathered 60 participants from 25 countries.
- The **6th Science Projects Workshop at the Future Classroom Lab** (6thSPWatFCL) took place between the 8th and 10th May 2015 and mainly targeted heads of schools. Heads of Schools are important stakeholders in Scientix, as they are key actors in allowing innovative learning to permeate into the classroom. Thus, the aim of the event was to present Heads of Schools with examples of what STEM teachers can get from Scientix and other science projects and to open a space for sharing knowledge and tips between Heads of Schools and discuss whole school approaches to improve the interest of students in science careers. 60 participants from 18 countries joined the event, including 26 heads of schools new to international Scientix events (who have been selected among almost 100 applicants), 7 Future Classroom School Leaders, Scientix resources winners and 22 project and organization representatives.
- The **7th Science Projects Workshop at the Future Classroom Lab** (7thSPWatFCL) took place in Brussels, between the 19th and 21st June 2015. The event gathered 70 participants from 24 countries. In previous editions of this event, Scientix took care of the selection of participants. For this edition, 22 of the teachers were selected through “friends of Scientix” organisations, most of them new to the project. “Friends of Scientix” organisations were encouraged to make their selection procedures as transparent and fair as possible and to communicate back to Scientix details about their competition. One “awarded” teacher was normally allowed per each “friend of Scientix”. The 70 participants, included 45 teachers, 17 project and organization representatives and Scientix Resources winners.
- The **8th Science Projects Workshop in the Future Classroom Lab** (SPW8atFCL) took place in Brussels, from 16 to 18 October 2015. The event gathered 83 teachers from 27 different countries all over Europe. The 8th SPWatFCL was held together with the 8th Scientix Projects Networking Event (SPNE8). This meeting was addressing project representatives from European and national science education projects. It created an enthusiastic environment for the discussion of opportunities and challenges, promoting partnerships within the different organisations present at the event.

- The **9th Science Projects Workshop in the Future Classroom Lab** (9thSPWatFCL), organised by Scientix, took place in Brussels in November 2015, from Friday 6 to Sunday 8 November 2015. On this occasion, the event targeted to heads of school and offered participants a unique opportunity to learn about different science education projects and resources in the framework of European collaboration and of EUN's Future Classroom Lab. In this occasion the event gathered 60 participants from 31 different countries.
- Following the structured established by previous Science Projects Workshops, the **10th SPWatFCL** was organised in conjunction with the 10th Scientix Projects Networking Event (SPNE10). Both events took place at the European Schoolnet offices, from 26 to 28 February 2016. More than 40 STEM teachers, new to international Scientix events, attended the workshops, and all the projects and organisation representatives who participated in SPNE10 were also invited to the weekend event. Fifteen of them chose to share their projects and introduce their organisations during the weekend.
- The **11th Science Projects Workshop in the Future Classroom Lab** (SPWatFCL11) was the final event of its kind under the Scientix 2 umbrella. Maintaining the structure and objectives of previous SPWatFCL events, it was organised at European Schoolnet (EUN) in Brussels, over the weekend. 65 participants (teachers and project representatives) from 19 different countries got together on the weekend between 18 and 20 March 2016 to share new ways of teaching science education, promote new ideas and engage in innovative practice with the aim of making education in science and technology more engaging for students of all ages. Keeping with the tradition, the SPWatFCL11 was organised in conjunction with the 11th Scientix Projects Networking Event.

More details about all those events, including presentations delivered, can be found on the Scientix online portal here: http://scientix.eu/web/guest/live/science-project-workshop

The Second Scientix Conference and EMINENT 2015

The **2nd Scientix Conference** took place on 24-26 October 2014 in Brussels. With 596 teachers, project managers, policy-makers and science education researchers attending from 41 countries, it was one of the major networking events in STEM education in Europe. The programme featured 70 talks, 14 workshops, 7 round-tables, 25 exhibition stands.

More information about this event, including keynote presentations, pictures, the conference programme and a dedicated publication are available on the Scientix portal http://scientix.eu/web/guest/conference

The organisation of the **2015 edition of the annual EMINENT conference of European Schoolnet** was in the hands of the Scientix 2 project. This event got 257 key stakeholders in STEM education together in Barcelona on 19 and 20 November 2015, to discuss "STEM in education and life". The conference guests discussed the main milestones reached during the second phase of the Scientix project, to hear what education policy makers from across Europe had planned – and do some serious

networking. They also had the opportunity to participate in and discuss the latest trends in STEM education in five workshops, and to meet project leaders exhibiting at twenty different exhibition stands.

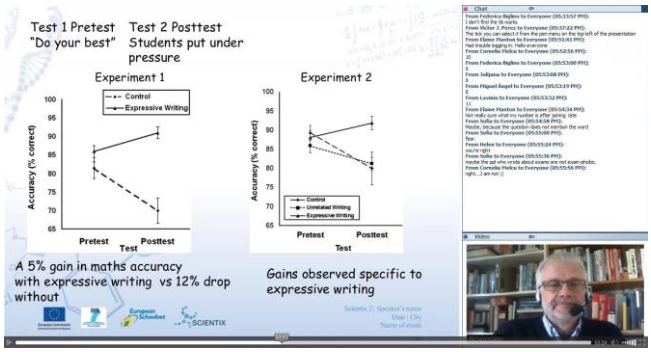
Scientix and European Schoolnet used all its communication channels to present and promote the event, which also was the star of the “Scientix Works” media campaign.

All information about the EMINENT 2015 event, including new materials distributed and presented to the participants, is available here http:// scientix.eu/web/guest/live/eminent-2015

In terms of Scientix sustainability actions, the successful co-organization of Eminent with Scientix, convinced the Ministries of Education to commit to setting up a Ministries of Education STEM Working Group which met for the 1st time in March 2016, with representatives from ten Ministries of Education.

Online training activities for STEM educators

Scientix webinars are popular online training activities that are accessible to everyone who’s interested to attend, completely free of charge. A total of 25 webinars were organised as part of Scientix 2, in which 1710 registered and 879 attended the live session of the webinars. On average, 35 attended the live version of each webinar session, the most popular being “Educational robotics and coding in the curriculum” on 6 May 2015, with 78 visitors present.



During the live sessions, the participants can interact directly with the participants and other guests. Shortly after each webinar has ended, a video recording of it is uploaded to YouTube and made available on the Scientix online portal, with 24 uploaded during Scientix 2 here:

http://www.scientix.eu/web/guest/live/scientix-webinars

Title	Date	Registrations	Attendees
1:1 AND (N):1 Education approaches in STEM - Opportunities & Challenges	29/01/2015	96	31
Teaching nanoscience in secondary school	26/02/2015	60	35
How to improve students' STEM exam scores without doing a lot of extra work	12/03/2015	60	33
Multiple intelligence in teaching STEM	26/03/2015	48	43
Examples of online Science Simulations and their use in Inquiry Based Learning	16/04/2015	62	35
Educational robotics and coding in the curriculum: approach to promoting STEM and inclusion in the classroom	06/05/2015	132	78
Manuskills Approach - Raising Students' Awareness in Manufacturing	11/05/2015	40	32
The World is My Classroom – Using digital tools to help develop language skills in the science classroom	19/05/2015	59	33
Identify, evaluate and organize students' arguments within a Socio-Scientific Issues SSI discussion	02/06/2015	40	27
Manuskills Approach - Raising Students' Awareness in Manufacturing through STEM	08/06/2015	29	21
Using technology on field trips, rubber boot school	17/06/2015	36	14
Quirky ideas to pique and promote student interest in STEM classrooms	03/09/2015	112	51
Descartes rectangular coordinate system	16/09/2015	60	24
Responsible Research and Innovation at school - tips and tools for supporting young scientists	28/09/2015	49	11
Gender equity in science education	14/10/2015	89	50
Mobile applications for STEM education: how to use them in class	27/10/2015	104	45
Programming and coding in Physics classes	12/11/2015	124	29
Open source hardware	24/11/2015	80	31
Cloud-based systems in your STEM classroom	30/11/2015	47	26
Women in Science	05/02/2016	106	50
3D printing and STEM education	10/02/2016	69	40
Mathematical Modelling of Real Life Examples in STEM Education and IBDP	19/02/2016	64	34
Free/libre software and Inclusion in schools	24/02/2016	49	39
Extra-curricular activities - path to STEM stars	08/03/2016	48	36

Title	Date	Registrations	Attendees
Using discrepant events and mysteries to enliven the teaching and learning of science	15/03/2016	47	31
Total (not unique)		**1710**	**879**

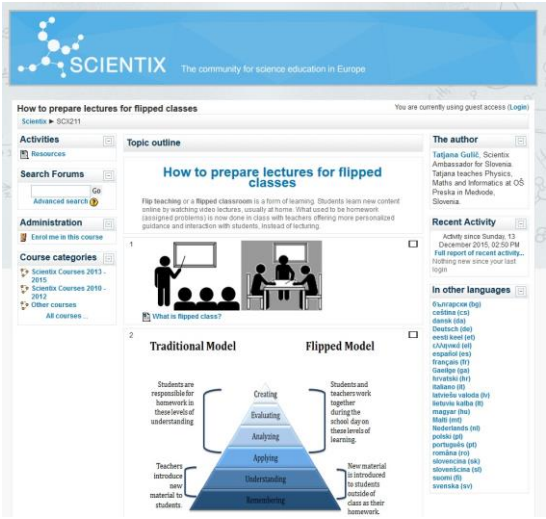
The **Scientix Communities of Practice** (CoP) entail a moderated online forum, led by a designated expert, where STEM teachers will be able to discuss on science and technology subjects. The objective of the CoP is to let the participants engage and discuss with each other on those questions they are more interested in, to end up formulating a series of final ideas or conclusions.

Nine Communities of Practice were held as part of Scientix bringing the total of such online forums held by Scientix 2 to 9 during the project's lifetime. In total these communities had 56,451 views on the Scientix online portal that received 1,288 comments from users.

- "Scientific activities and the general public" http://scientix.eu/web/scientix-cop-01/home
- "Back to school" http://scientix.eu/web/scientix-cop-02/home
- "Lessons learned: The Scientix Conference and other networking events in STEM education" http://scientix.eu/web/cop3/home
- "Gender in STEM education" http://scientix.eu/web/scientix-cop-4/home
- "STEM in primary schools" http://scientix.eu/web/scientix-cop-5/home
- "Science and Science Fiction in Education" http://scientix.eu/web/scientix-cop-6/home
- "Scientix 3 – What would be the NCPs and Teachers' Project Wishes" http://scientix.eu/web/scientix-cop-7/home
- "Open Source Software & CC Allowing Derivatives Resources in Education" http://scientix.eu/web/scientix-cop-8/home
- "Flipped classrooms and robotic teachers" http://scientix.eu/web/scientix-cop-9/home

All Scientix Communities of Practice can be found at: http://scientix.eu/web/guest/community

Moodle courses (Moodle is an acronym for Modular Object-Oriented Dynamic Learning Environment) is yet another online educational tool for professional development offered on the Scientix platform. The courses created in Scientix 2 were developed by Scientix Ambassadors who shared from their experiences, knowledge and expertise through this medium. Thus, the Scientix Moodle platform, a form of online training developed by teachers, for teachers, becomes an essential Scientix tool for teacher training and an important building block in creating a community of international teachers in STEM, thus contributing to key objectives of the Scientix project.



New Moodle courses were created throughout the three Cycles of the Scientix Teachers' Panel, with a

total of 28 new courses being uploaded between August 2014 and December 2015. Of the total courses developed by Scientix Ambassadors over the course of Scientix 2, 22 were translated from English into the remaining 23 official EU languages during Cycle 3 and Cycle 4 of the teachers' panel. This resulted in 506 extra Moodle courses being published. All Moodle courses can be accessed via http://moodle.scientix.eu

Achievements of the Scientix 2 project and conclusions

Educators are becoming part of this growing network after attending local and national conferences, and workshops organised by Scientix and its team of NCPs and Ambassadors.

What's more, the existence and continued evolution of Scientix complements Europe's "Open Science" agenda, promoting a culture of openness and cross-country collaboration at primary and secondary education levels.

It's no surprise then that the vast majority of those involved in the Scientix initiative would like it to continue into 2016 and beyond.

Scientix 2 at a glance

1 Coordinator (European Schoolnet), 30 NCPs, ~90 Scientix teacher ambassadors, 38 countries involved, 6 MEUR, 39 months

Scientix portal:

- Over 480 projects,
- More than 2200 resources (i.e. teaching materials, training courses and research reports)
- >770 events across Europe
- >640 news articles
- 6,200 people registered
- 700 resources translated using the Scientix translation on demand service
- Scientix Online Meeting Room used 238 times
- 110 blog entries published
- Scientix Facebook group ~5,000 members
- Twitter ~4,700 followers
- Viewed ~1,611,000 times by ~365,200 visitors. ~14,300 visitors on average per month (during last 6 months of the project)

Dissemination

- 11 newsletters
- 46 Scientix digests sent out to over 1,700 subscribers
- 3 major media campaigns
- 22 videos
- Presentations: 37 (EUN), 98 (NCPs), 547 (Scientix teachers' ambassadors)
- 4 publications
- Eight rounds of the Scientix resources awards, 25 winners
- 9 Scientix observatory papers published

Training and networking

- 11 Scientix Projects Networking events (269 participants, 180 projects), 15 hands–on international workshops (EUN) + 107 National workshops (NCPs), eight Science Projects Workshops in the Future Classroom Lab (470 participants), 14 Scientix ambassadors' workshops
- 2 international Scientix conferences (2nd International conference: 596 participants + Eminent: 257 participants) + 29 National Scientix conferences (6,500+participants)
- 25 webinars, 879 attendees
- 9 Communities of Practice, 1,288 comments
- Moodle courses: > 500 in 24 languages
- 1 Ministries of Education STEM working group meeting with 10 Ministries of Education represented

www.scientix.eu

More information: Àgueda Gras-Velázquez <agueda.gras@eun.org>

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SCIENTIX
The community for science education in Europe

Scientix 2 (Jan 2013 - Mar 2016)

European Schoolnet
coordinator (EUN)

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6 M€

39 months

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8 Science Projects Workshops in the FUTURE CLASSROOM LAB

470 participants

14 Scientix AMBASSADORS workshops

more than **500** MOODLE COURSES in **24** LANGUAGES

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+ **29** National Scientix conferences

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+6,500 participants

25 Webinars

879 attendees

9 Communities of practice

1,288 comments

1 Ministries of Education STEM working group meeting with **10** Ministries of Education represented

Scientix (2012-2015) was supported by the European Union's Framework Programme for Research and Development (FP7) and coordinated by European Schoolnet. This publication reflects the views only of the authors and it does not represent the opinion of the European Commission, and the European Commission is not responsible or liable for any use that may be made of the information contained therein.