



SCIENTIX

The community for science
education in Europe



SCIENTIX UPDATE

2019

European Schoolnet (EUN) is a network of 34 Ministries of Education whose mission is to support Ministries of Education, schools, teachers and any stakeholders in Europe in the transformation of education processes. EUN is positioned as an Ideas Lab that is able to help its Ministries develop policies to support the educational reform process at European level based on evidence and facts. The objectives of EUN are to:

- Provide services, content and tools based on ICT to members and partner networks
- Foster and support collaboration and cooperation among schools in Europe
- Support professional development of teachers, teacher trainers, school leaders and support staff
- Disseminate inspiring practice and investigate new models for schooling and learning
- Offer pedagogical and information services with European added value to schools in Europe
- Contribute to the development of technology-enhanced learning in schools.

EUN works on three strategic areas:

- Providing usable evidence and data in the area of innovation in education to inform policy recommendations (via peer exchanges, policy experimentations, surveys and reports and through its various working groups)
- Supporting schools and teachers in their teaching practices (via the running of three European networks – eTwinning, Scientix and BIK)
- Developing and sustaining a network of schools engaged in innovative teaching and learning approaches (via the activities organised around the Future Classroom Lab and the FCL Ambassadors scheme).

Visit www.europeanschoolnet.org

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ON BEHALF OF THE MINISTRIES OF EDUCATION STEM WORKING GROUP

Since its inception in 2010, there is no doubt about how Scientix has contributed to STEM education in Europe and how it will continue to add value to it. Looking at the growing need to prepare and inspire students to pursue STEM studies and careers for the near future, we need motivated, properly trained, well equipped science teachers so that students understand the importance of science in their lives.

Since the early 2000s, there has been growing concern in the European Union about the prospect of insufficient supply of STEM workforce which may hinder further economic development and reduce the economic competitiveness of European countries (The attractiveness of STEM subjects, 2019).¹ From 2003 to 2013 the number of people employed in STEM professions grew by 12% and by 2025, it is expected to grow by a further 13% (EU Skills Panorama 2014),² yet the growing demand for these professions is mismatched by the

recruitment difficulties reported across most EU countries. With technologies playing an ever-bigger role in all areas of work and life, STEM competencies and higher-level STEM skills are becoming the norm.

In this regard, it has become essential for each Member State to develop corresponding national strategies in cooperation with the relevant stakeholders for STEM education but also to support the development and implementation of national strategies for the uptake and dissemination of IBSE and the best use of STEM resources by teachers. Furthermore, promoting community-building with the most appropriate entities likely to generate change in science education in each country is crucial.

This is where Scientix is fundamental: since its inception in 2010, this initiative, supported by the Science with and for Society programme, has contributed significant

1 Boiko, A., Nistor, A., Kudenko I. & Gras-Velazquez, A. (2019). The attractiveness of Science, Technology, Engineering and Mathematics subjects. Results from five countries, September 2019, European Schoolnet, Brussels.

2 EU Skills Panorama (2014). STEM skills Analytical Highlight, prepared by ICF and Cedefop for the European Commission https://skillspanorama.cedefop.europa.eu/sites/default/files/EUSP_AH_STEM_0.pdf

resources over time to promote collaboration among all stakeholders in STEM education, providing access to high-quality training opportunities, follow-up and teaching resources. For example, its comprehensive and popular platform, whose key pages are translated into all 24 EU languages, proposes a set of key services accessible for all STEM stakeholders at no cost for the user:

- Access to information on European science education projects
- Access to high-quality resources in science education, with on-demand translation of some teaching material for free
- Access to Scientix news, enabling users to keep informed about the latest news on science education in Europe
- A Scientix event calendar, bringing together science education events from across Europe and beyond
- Exchange and sharing tools such as forums and chats.

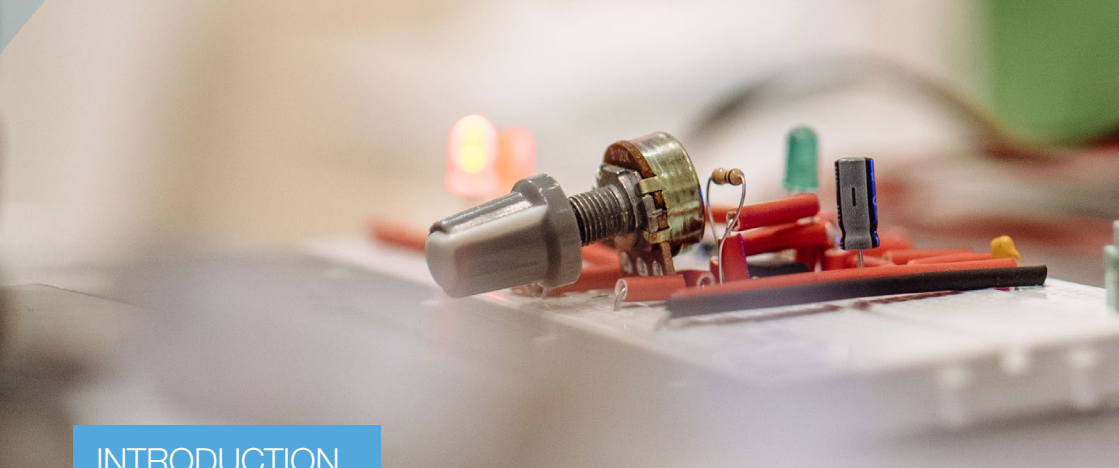
In terms of community-building, its community of educators is represented in particular by 473 teachers from 43 countries who have volunteered to act as Scientix Ambassadors. They actively support the dissemination of Scientix and contribute to the exchange of practices and knowledge among all STEM education stakeholders through various channels in all countries across Europe. These Scientix Ambassadors directly reach over 20,000 students almost daily, and indirectly thousands of other teachers and their hundreds of thousands of students.

According to the TALIS 2018 results,³ collaborative learning is one of the aspects of training that teachers identify as the most impactful. Scientix has undoubtedly achieved a lot in this regard, as the Scientix training opportunities include courses (both online and face to face), webinars and conferences which each bring together from 30 to 600 STEM education stakeholders to discuss and learn about STEM education on a regular basis. Every three years an international Scientix conference is organised. With the participation of around 350 teachers, teacher trainers, policymakers, industry representatives and others, the Scientix Conferences are now recognised as one of the major networking events in STEM education in Europe.

Finally, Scientix has provided a platform for discussion and exchange for Ministries of Education (MoEs) regarding their STEM education policies via the MoE STEM representative Working Group (MoE STEM WG). With 22 countries represented so far, this initiative has laid the foundations for medium- and long-term activities within the Scientix project, following an agenda that addresses the ministries' priorities and main interests. Teachers play a central role in influencing student perceptions about school subjects on the one hand, and on guiding students towards their future professions on the other⁴. Scientix contributes directly to increasing the attractiveness of STEM studies and careers with its activities addressing teachers and promoting the collaboration of all stakeholders involved in STEM education.

3 OECD (2019), TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners, TALIS, OECD Publishing, Paris <https://doi.org/10.1787/1d0bc92a-en>

4 Boiko, A., Nistor, A., Kudenko I. & Gras-Velazquez, A. (2019). The attractiveness of Science, Technology, Engineering and Mathematics subjects. Results from five countries | September 2019, European Schoolnet, Brussels.



INTRODUCTION

Since 2010, Scientix has been helping European STEM educators inspire young people to take a keener interest in their science, technology, engineering and mathematics classes. These teachers have encouraged young minds not only to gain a deeper understanding of these subjects, but also to consider careers within them.

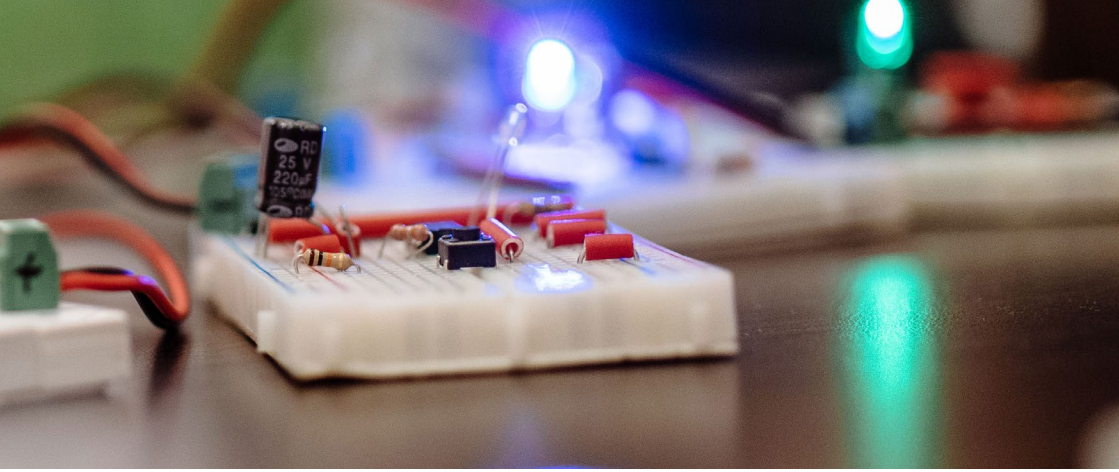
The initiative promotes and supports a Europe-wide collaboration among STEM teachers, as well as education researchers, policymakers and other STEM education professionals.

In its first stage, from 2009-2012, the 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 immensely popular – not least as a golden opportunity for STEM professionals to network.

The key objective of the second phase, from 2013 to 2015, was to expand the benefits and achievements of Scientix at national level. A wide, inclusive network of 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 mathematics education.

This activity has continued in the third stage of Scientix (2016-2019), which is funded by the Horizon 2020 programme of the



European Union for research and innovation. Scientix was originally born at the initiative of the European Commission and has, since its inception, been coordinated by European Schoolnet, a Brussels-based consortium of 34 Ministries of Education, which is a driving factor for innovation in teaching and learning and fosters pan-European collaboration of schools and teachers.

Scientix has grown substantially in these last nine years and this publication details the results of that growth and the successes of the initiative. It also contains suggestions on how to take those successes forward into the future of STEM education in Europe.

This publication deals with all aspects of Scientix, from the resources it provides, to

the events it has made possible and how it contributes to national initiatives on STEM education and the knowledge and practices it has helped disseminate.

Where possible, we have tried to bring facts and stats to show how education professionals and others have helped Scientix become such a vibrant and inclusive community for everyone interested in improving the understanding of STEM in our society.





DISSEMINATING STEM EDUCATION

Scientix has set up a whole array of channels to distribute ideas, materials and other resources to help teachers make the most of their STEM classes. This section takes a look at the different media – and what has made them such an outstanding success in dissemination.

A popular portal with key pages and navigation available in all 24 languages

Like the community it serves, the Scientix portal is an organic, growing entity. Since its inception in 2010, it has evolved in complexity and scale – and in popularity. As an example, in the period 1 October 2017 to 30 August 2019 the number of users had grown by over 15% compared to the period between 1 April 2016 to 30 September 2017 and the number of active sessions on www.scientix.eu had increased by 54.4%. The Scientix portal is used by up to 8,000 teachers every month, reaching almost 100,000 students monthly.

As the community expands, it brings more ideas, resources and interest to the Scientix family.

Furthermore, the navigation of the portal and the key pages have been available in all 24 EU languages since 2016.

Available in all 24 languages of the European Union!

BG	HR	CS	DA	NL	ET
FI	FR	DE	EL	HU	GA
IT	LV	LT	MT	PL	PT
RO	SK	SL	ES	SV	EN

Get introduced to Scientix in your preferred language.

A blog for the community, by the community

Another popular channel for spreading ideas around the community is the Scientix Blog. Its posts are authored by a wide cross-section of the community itself including dedicated STEM teachers and others involved in the initiative.

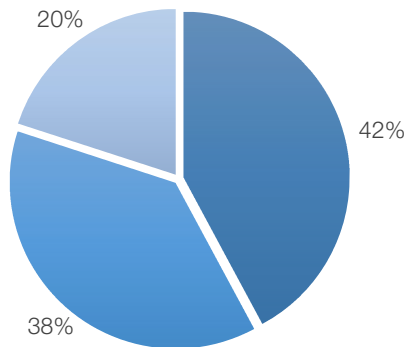
The Scientix Blog was set up in 2014 with the aim of providing a platform for science teachers in Europe to connect and acquire additional information on STEM education topics. The Scientix Blog has successfully expanded, with more than 140 posts published since April 2016.

The Scientix community (EUN colleagues, Scientix Ambassadors and Deputy Ambassadors, Scientix friends) has had the opportunity to publish personal stories on science education in Europe and interesting science-related articles, reports or interviews. With an average of three blog posts each month, the blog provides a continuous point of information exchange for many science teachers in Europe.

Most of the articles on the Scientix Blog have been published so far by Scientix Ambassadors and Deputy Ambassadors, together with contributions from the management team of the Scientix project, guest teachers and other experts on STEM education.

The news items published on the Scientix official portal (www.scientix.eu), and also the Observatory papers, provide a well-rounded information source for educators. Complementing this, the blog service invites STEM educators to share their experiences and views on developments in the field, teaching approaches and best practices, resulting in an informal and direct platform, to which teachers turn to discuss STEM education.

Posts by author type on the Scientix Blog between April 2016 and September 2019



■ Scientix Ambassador (SA) ■ EUN staff (EUN) ■ External contributor and guest teachers

How does it work?

1) The Scientix Blog is open to any Scientix Ambassador, guest teacher or external contributor to publish articles. Suggestions for articles are collected via an [online submission form](#).

More information:

[The Scientix blog online submission form](#)



2) The Scientix Blog coordinator then contacts the authors, reviews the articles and suggests a publication date.

3) The article is then edited and uploaded to the Scientix Blog. The author's full consent is given before final publication.

4) All articles are shared in the [Science Teachers in Europe](#) Facebook group and on the [Scientix Twitter](#).

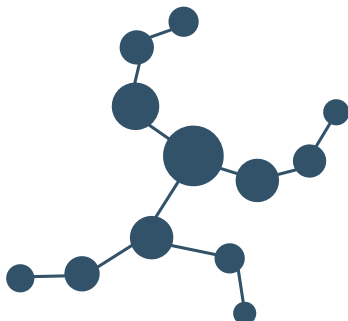
Discover the group:

<https://www.facebook.com/groups/ScienceTeachersEurope/>



Discover Scientix Twitter:

https://twitter.com/scientix_eu



• Between 2016 and 2019, the Scientix Blog featured articles on Science education and with generally a related topic alongside. The authors could choose from a list of categories for their articles, which were then later reviewed by Scientix project staff. As seen in the table below, the most often used categories were “Resource”, “Project”, “Teaching” and “Event”. Articles about resources usually gave tips on where to find useful tools for teaching, or connected educational topics to different resources in the [Scientix resource repository](#). For example: “[Where do I find hands-on Physics resources?](#)”.

Scientix Resources repository:

<http://www.scientix.eu/resources>



• Articles within the “Project” category usually mentioned news related to projects within Scientix or introduced new projects, such as “[Get to know the Science Education department \(and some of its projects\)](#)”.



Discover:

[Get to know the Science Education department \(and some of its projects\)](#)

• Articles within the “Event” category featured reports of events, conferences and meetings attended either by teachers who wished to share their experiences or by Scientix staff and had results or tools that were interesting for science teachers. For example: [Conference “Sharing Inspiration 2019”](#).

Discover:

[Conference “Sharing Inspiration 2019”](#)



Blogging Scientix - a selection from inspiring posts



The Use of Immersive Virtual Reality in the Mathematics Classroom

"Using VR in classroom is not just a new resource, according to the new technologies, this kind of resources provides students the possibility to express themselves and their knowledge in a different way, using a new style of digital literacy."



Building 3D holograms with your students

"Holograms can be used to make the study of different scientific subjects, the proportions, the properties of geometric figures (trapezoids and pyramid trunks) geometric transformations (rotations and central symmetries) and the laws of physics on refraction and reflection of light in a more captivating way."



Gamification in High School Math classes

"Group work and peer-to-peer collaboration allowed a less formal and more productive approach to knowledge, making students become responsible for their own learning and at the center of their training process."



STEAM escape room: How to integrate STEM activities in an escape room made by students for students

"Pupil's teamwork and their collaboration with their peers from distant schools resulted in creating and solving riddles, concerning STEAM educational approach, an access point for guiding students' inquiry, dialogue and critical thinking."

Scientix media at a glance



Portal

1.3 million page views,
161,000 unique visitors



News Digest

2,600 subscribers



Newsletter

3,800 subscribers



Twitter

@scientix_eu,
14,500 followers



Blog

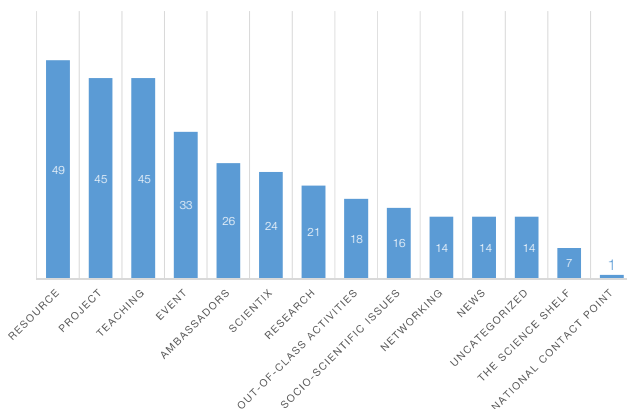
>140 blog posts



Facebook group

15,550 members,
20 posts per day on average

Posts in each category on the Scientix blog between April 2016 and September 2019



Keeping in touch with Scientix Newsletters and Digests

Not everyone has the time to regularly engage online or go searching for the latest news and insights into STEM education. Thanks to the Scientix Digest and Newsletters, Scientix has provided two popular ways to stay in touch with what's happening – at everyone's convenience.

For the digest, every two weeks, over two thousand subscribers – 2,600 as of August 2019 – receive it by email and can read about recent news, resources, projects and events published on the Scientix online portal in any of eight languages of their choice.

The number of subscribers is growing impressively – by over 22% between September 2017 and August 2019. On average, about 35% of the people receiving digests actually open them.

That's much higher than the average for education email newsletters, which is a mere 22.5%. To keep up the good work,

Scientix also developed a new design for it during summer 2016.

The Scientix Newsletter is even more popular, available in both printed and electronic versions. It had 3,837 electronic subscribers by August 2019. With “open” rates oscillating between 35% to 40%, Scientix continues to achieve very good results in email communications when the average for educational content is 18.1%. Each issue has taken up a different topic within STEM education, such as these latest ones during Scientix 3:

- Science trips and on-site experiences
- Girls in STEM
- Supporting research in STEM education
- Interviewing policymakers and practitioners

2,000 copies of each issue are printed and distributed at Scientix events and other relevant meetings, or through NCPs. If you have missed out on a newsletter, you can catch up by visiting the archive at: <http://www.scientix.eu/web/guest/newsletter/archive>.

SCIENTIX
SCIENCE EDUCATION

MARCH 2017

SCIENTIX NEWSLETTER

What's new in Scientix? Get to know Scientix in your country and language!



The idea that Scientix has allowed over 1000 of practitioners from 20 different countries to work together to create a network of science education professionals is a truly remarkable achievement. The network has been built on the basis of trust, respect and mutual support. It is a testament to the power of collaboration and the shared passion for science education that has brought us all together.

Scientix has provided the community of practitioners with a platform to share their experiences, ideas and best practices. This has led to a wealth of innovative projects and initiatives that are making a real difference to science education in our schools and classrooms. We are proud to be part of this journey and to support the work of our practitioners in their own countries.

As part of a new activity week, I had the opportunity to spend time with and observe the work of our practitioners in their own classrooms. It was a truly inspiring experience and a great reminder of the impact that science education can have on our young people. We will continue to work together to support the work of our practitioners and to make a real difference to science education in our schools and classrooms.

SCIENTIX
SCIENCE EDUCATION

OCTOBER 2017

SCIENTIX NEWSLETTER

Science trips and on-site experiences

Powering classrooms with learning scenarios outside schools!




Students and educators can learn science subjects, measurement and scientific practice in real world contexts that are relevant for their lives. This can be done by taking the learning experience to the field. Practitioners have shared their experiences of taking their students to the field and the impact that this has had on their learning. We are proud to support the work of our practitioners in their own classrooms and to make a real difference to science education in our schools and classrooms.

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SCIENTIX
SCIENCE EDUCATION

SCIENTIX NEWSLETTER

Opening minds to STEM careers



Secondary education can sometimes be a challenging time for young people, especially when it comes to choosing a career path. It is important to provide them with the information and support they need to make informed decisions about their future. We are proud to support the work of our practitioners in their own classrooms and to make a real difference to science education in our schools and classrooms.

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SCIENTIX
SCIENCE EDUCATION

SCIENTIX NEWSLETTER

Improving STEM skills through international competitions

No matter where or how - you can find one that meets your interests!



Competitions can provide a great way for students to develop their STEM skills and to work with their peers from other countries. We are proud to support the work of our practitioners in their own classrooms and to make a real difference to science education in our schools and classrooms.

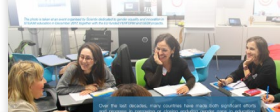
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SCIENTIX
SCIENCE EDUCATION

SCIENTIX NEWSLETTER

Girls in STEM!

Promoting gender equality in the classroom and beyond



It's the fact that girls are under-represented in STEM subjects that makes this a topic that is so important. We are proud to support the work of our practitioners in their own classrooms and to make a real difference to science education in our schools and classrooms.

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SCIENTIX
SCIENCE EDUCATION

NOVEMBER 2017

SCIENTIX NEWSLETTER

Supporting research in STEM education

Scientix facilitates various important research activities in Science, Technology, Engineering and Mathematics (STEM) education, and the Scientific Observatory is a compilation of research that is carried out directly as part of the Scientix project.



The EU Framework Programme for Research and Innovation

HORIZON 2020

Principal Supervisor
Competitive Advantage

Since the very beginning, Scientix has brought together practitioners from 20 different countries to work together to create a network of science education professionals. This has led to a wealth of innovative projects and initiatives that are making a real difference to science education in our schools and classrooms.


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SCIENTIX
SCIENCE EDUCATION

AUGUST 2017

SCIENTIX NEWSLETTER

Citizen Science for Science Education



Citizen science is a great way for students to learn about science and to work with their peers from other countries. We are proud to support the work of our practitioners in their own classrooms and to make a real difference to science education in our schools and classrooms.


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SCIENTIX
SCIENCE EDUCATION

SCIENTIX NEWSLETTER

Interviewing policymakers and practitioners

Scientix has published six new video interviews with key stakeholders in Science, Technology, Engineering and Mathematics (STEM) education.



The Scientix network aims at providing relevant stakeholders in STEM education, practitioners, researchers, teachers, education companies, and science communication, with the best possible support in their own countries.

The Scientix network is a truly remarkable achievement. It is a testament to the power of collaboration and the shared passion for science education that has brought us all together. We are proud to support the work of our practitioners in their own classrooms and to make a real difference to science education in our schools and classrooms.

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SCIENTIX
SCIENCE EDUCATION

SCIENTIX NEWSLETTER

Pedagogical trends in STEM education



Scientix has published six new video interviews with key stakeholders in Science, Technology, Engineering and Mathematics (STEM) education. We are proud to support the work of our practitioners in their own classrooms and to make a real difference to science education in our schools and classrooms.

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SCIENTIX
SCIENCE EDUCATION

SCIENTIX NEWSLETTER

Scientix in numbers



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Bringing issues alive with Scientix video interviews

Scientix events provide the opportunity to interview prominent and interesting people involved in STEM education, not least members of the Scientix community itself. These are edited and made public on YouTube, and some have been embedded on the portal.

22 interviews has been published so far. The Scientix interview series have been uploaded and are available on <http://www.scientix.eu/web/guest/interview-series>

While paying tribute to the Scientix project, each of those interviews explains the views of different stakeholders in

STEM education on the current situation, challenges, and ideas for ways forward. To demonstrate those different points of views among stakeholders in STEM education, Scientix carefully selected its interviewees to represent their diverse backgrounds and nationalities and a gender balance. Therefore, Scientix interviewed a Professor of Science Education, an astronaut, Ministry of Education representatives, and scientists, but also teacher trainers and science teachers. All of them talked also about the contribution of Scientix to the development of teaching and learning practices and policies in STEM education across Europe.

For example, during this second half of the Scientix 3 project, the following video interviews were published:

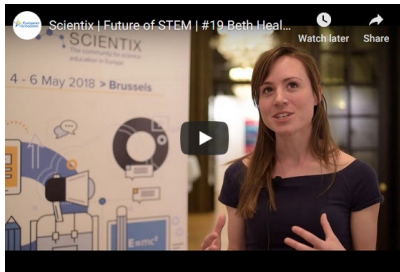
Interviews published by Scientix between 1 November 2017 and 31 August 2019



[Dr François Taddei, Director, Centre de Recherche Interdisciplinaire, France](#)



[Svein Sjøberg, Professor of Science Education, Norway](#)



[Dr Beth Healey, Medical expert on space and extreme environments, United Kingdom](#)



[Mr Evarist Bartolo, Minister of Education and Employment, Malta](#)



[Ms Kavita Sanghvi, Physics Teacher and a Scientix Ambassador, India](#)



[Mr Rory McGann, Lecturer in ICT/Digital Learning, Ireland](#)



The most viewed video during Scientix 3 was the one with Kavita Sanghvi, a Scientix Ambassador in India, who explains how she first heard about the Scientix community

and how it has enhanced her teaching practices. This video alone had had more than 830 views by August 2019.

Reaching out with Scientix social media

Many in the Scientix community have embraced social media as lively, up-to-the-second communication and dissemination channels – and Scientix has played a key role in nurturing the use of these media amongst STEM educators.

Using the [@scientix_eu](https://twitter.com/scientix_eu) handle, Scientix has been active on Twitter since January 2010, had over 14,510 followers by August 2019 and had produced more than 14,000 tweets. It gained 5,062 new followers during the second half of the Scientix 3 project, which means a growth of 53.6 % since 1 October 2017, when the account had 9,448 followers.

A selection of the four best posts is showcased below. All of them promote science education events, collaboration within the science education community

and useful educational resources. Scientix also actively disseminates other educational initiatives in Europe, having already established its position as a trusted source of news and regular updates for anyone interested in science education in Europe.

A post celebrating the International Day of Women and Girls in Science 2019 was the message that received the greatest response on the Scientix Twitter account. It contained two posters of women scientists and a link where you could find even more free-to-download posters with famous female scientists (the posters were not designed by Scientix, only promoted by the project). This post was liked 346 times, retweeted 195 times and got seven replies. In total, it had a potential reach of 451,416 people.

The tweet can be found here: https://twitter.com/scientix_eu/status/1094878103296450560



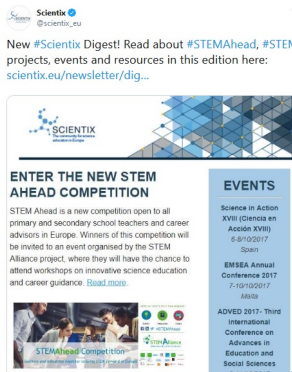
If the potential reach of Scientix tweets is analysed, the following tweets, after the one shown above, had the greatest impact.

1) An interview in Spanish with a pharmaceutical researcher about creating medications for diseases like cancer.



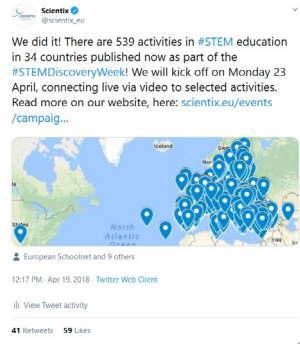
The interview was published by Women Scientists in Biomedicine YouTube channel as a part of the series “De mayor quiero ser científica” (“When I grow up, I want to be a scientist”) and was promoted by Scientix as it has a large group of followers from Spain which might have found the topic relevant and interesting. This post potentially reached 347,117 people.

2) Announcement of the new issue of the Scientix Digest



On 3 October 2017 Scientix tweeted about the new issue of the Scientix Digest, its bi-weekly newsletter sent in eight languages, potentially reaching 282,050 users on Twitter.

3) An update from the STEM Discovery Week 2018



On 19 April 2018 Scientix shared an update about its STEM Discovery Week campaign, announcing the number of activities registered with the screenshot of the map of activities taking place all around the world as the part of the campaign. This post reached 188,791 users on Twitter potentially.

Any STEM education enthusiast can join Scientix’s brilliant Facebook group, which increased its membership from 2,000 to 21,327 followers from January 2015 to August 2019. All members are encouraged and invited to share tips and stories about science and classroom ideas.

The Facebook page is also used to inform a large group of educators and policy-makers about any developments happening in the Scientix community. Among topics commonly promoted on the Facebook page are Scientix webinars, Scientix campaigns

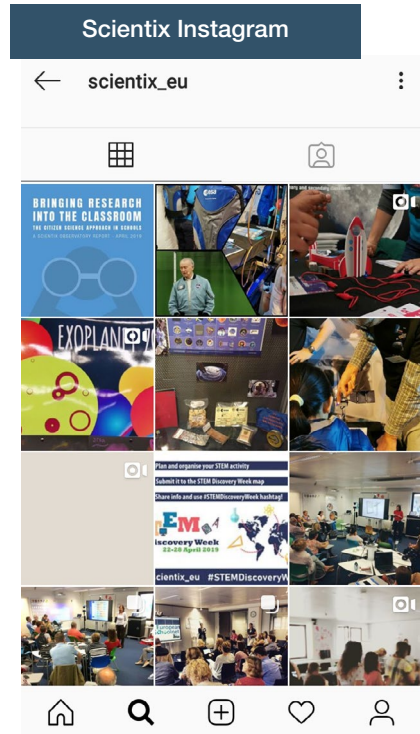
and events, especially the STEM Discovery Week, and calls for Scientix Ambassador Training Courses, to name only a few.

The group has benefited substantially by focusing solely on information relevant to STEM education. Its members not only get regular updates on science education and relevant teaching methods, but also the chance to network with their peers in Europe and elsewhere.

We can easily see the success of this method: from 1 October 2017 to 31 August 2019, 5,357 posts were published, receiving 52,907 reactions from group members. 244 posts were published on average per month and each of the 5,357 posts received an average of 11 reactions.

To complete the account of the activities of Scientix in promoting STEM initiatives at national level, it started to use Instagram in March 2017. Scientix first created an Instagram account – which can be accessed under: https://www.instagram.com/scientix_eu/ – to support its STEM Discovery Week campaign in April 2017, in connection with one of its competitions for teachers. As part of that competition, teachers could submit their designs for posters based on Scientix resources by adding the hashtag #ScientixPoster to their post on Instagram.

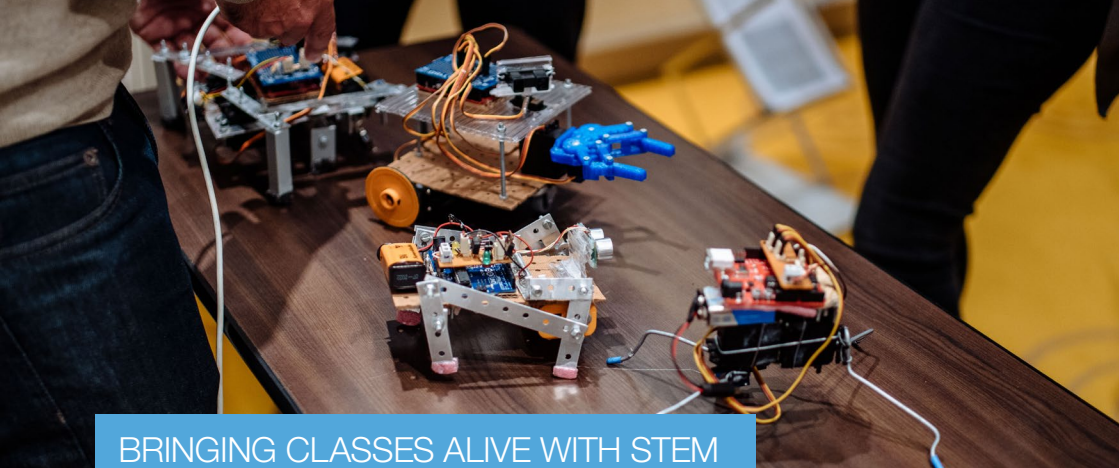
Both have proved a great way of informing the Scientix community of upcoming events and initiatives. They are also an effective way to mobilise educators and others to get involved in those events and become part of the community – if they're not already.



The personal touch: sharing ideas face to face

Many media are extremely effective at disseminating ideas – but none beats the immediacy and power of face-to-face encounters. As can be seen elsewhere in this publication, Scientix and its community have been instrumental in organising and promoting a wide range of live events – from small local workshops to large national and international conferences.

These have all been invaluable in ensuring that ideas are exchanged and spread into the wider STEM community and classrooms. See the section Organising Scientix Conferences and Networking Events (below) for more details.



BRINGING CLASSES ALIVE WITH STEM PROJECTS AND RESOURCES

The Project Library

The project library is the most visited section of the Scientix portal, along with related resources of the resource repository. This gallery is a collection of over six hundred projects dedicated to STEM education in Europe. Each of those projects has a profile in this gallery translated into the “standard Scientix languages”. Those profiles have a general description of the project, as well as information especially relevant to researchers on the one hand and teachers on the other.

651 projects are currently available on the platform. Those generating the most interest at the time of writing include areas such as how schools can develop a STEM strategy at school level and get a label or how to build STEM collaboration with industries.

How does it work?

Anyone who wishes to have a project added to the Scientix project gallery must complete and submit a dedicated form. All of the projects therefore follow the exact same structure of information.

If you want to look for a specific project, this is easy: the search window on the Scientix online portal makes it possible for any user to find a project according to his/her interest (such as country, subject, target group etc.).

Approved projects may be public- or private-funded, at European, national, regional or local level. Their work agenda must be concerned with STEM education. Individual teachers' projects or activities without any financial support are not eligible for upload to the project gallery.

Resources in Scientix: ready-to-use materials for teachers

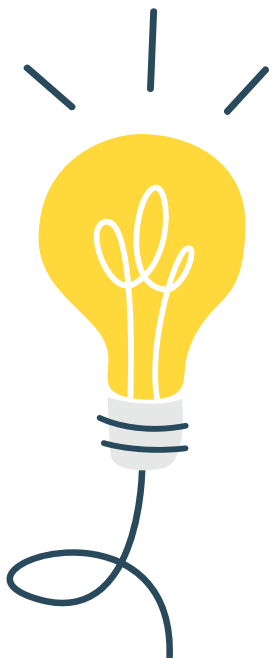
The Scientix resource repository is a collection of learning objects in STEM education, categorised as teaching materials, STEM reports and training courses. Those resources are the products of projects already published as part of the Scientix project gallery. Policy and research reports published by the EU institutions or other national or international bodies may also be included in the repository.

As of September 2019, over 3,050 resources are accessible through the Scientix portal. They include 2,238 teaching materials, 761 STEM reports and 63 training courses.

How does it work?

Registered users on the Scientix online portal can upload resources to be reviewed by the Scientix editorial team. To make this option visible and clear to all users, they must follow the upload guidelines.

When a resource is uploaded via the submission form on the Scientix online portal, it may only contain the metadata of the resource. The description of each particular resource in the Scientix resource repository is linked to the actual location of the resource (in most cases, it is the website of the project which has produced the resource).



As a general rule, new resources are collected together with new projects. When a resource is uploaded, it is requested that the user provide information about the title, description, author(s) and copyright licence in each individual case. The Scientix resource form requires users to check pre-defined boxes: target audience, type of resource, suitable education and age levels, and school subjects.

Supporting the accessibility of resources in any language

Ensuring that all educators can benefit from Scientix resources, regardless of their location or native language has been a big achievement for Scientix. A key service offered by Scientix for this purpose is the Translation on Demand service (ToD). Registered users of the Scientix portal can request translation of some of the Scientix teaching materials into a language of their choice for free and in a very simple way! Since its launch in May 2010, it has received more than 1,490 requests for translation.

How does it work?

Whether or not a teaching material is available for translation depends on the copyright conditions under which the material is distributed and the format of the resource.

For a teaching resource to be eligible for the ToD service,

- the licence must allow modifications and derived works, and
- it has to be for classroom use (i.e. not reports for example).
- In Scientix 3, an extra condition was

required: authors or submitters of the resource also have to provide an editable version of the resource when filling in the upload form, in order for the resource to be eligible for ToD. The reason for this change is twofold. First, this makes it easier for teachers to modify the resource depending on their needs, and secondly it preserves the quality of any versions added to the repository through the ToD service. Resources submitted before this new requirement will have their ToD eligibility revoked, even if they were previously “translatable” until now, until the editable version is received by European Schoolnet.

- All translations carried out through the Scientix on-demand service must contain an acknowledgement to Scientix: “Translation has been provided by Scientix, www.scientix.eu. ” A repository of resources embedded in other websites

A repository of resources embedded in other websites

Scientix has also developed a brand-new tool, the Scientix Resources widget! It allows

users to search for Scientix resources from any Web page.

To implement the widget on your website, you simply copy the code below and paste it in a place where you want to display the widget (side bar, footer, body field). The code is:

```
<h3 style="text-align: center;">Scientix resources</h3>

<div id="scientix-widget"
language="en">&nbsp;</div>

<script src="http://www.scientix.eu/scientix-theme/js/scientix-widget.js">
</script>
```

You can adapt the style (CSS) of the “Scientix resources” text box according to your needs.

This great feature was created in collaboration with the excellent project STIMEY, which aims to take STEM education forward so as to bring science and society closer together in Europe.

SCIENTIX RESOURCES

Scientix Resources widget



PROVIDING TRAINING OPPORTUNITIES ONLINE, IN BRUSSELS AND ALL OVER EUROPE

One of the main objectives of Scientix is to support the STEM teaching community in Europe in locating and making the best use of high-quality teaching resources in STEM education. Training activities directed at teachers and other STEM education stakeholders on the use of STEM education techniques and methodologies that have been successfully tested and implemented have significant benefits at European level. In particular, ensuring that as many educationists as possible are aware of the need to find ways to encourage pupils to pursue the study of STEM subjects and careers and, most significantly, of the resources and pedagogical methodologies that enable them to achieve this, is among the most significant aims of the training activities led by Scientix.

Moodle courses

One educational tool in the Scientix armoury is its Moodle courses (Moodle is an acronym for Modular Object-Oriented Dynamic Learning Environment).

23 Moodle courses have been developed for the Scientix community by its Ambassadors

and Deputy Ambassadors. They explore various tools and techniques to use in the science classroom. Among the course topics are subjects such as augmented reality, GPS in STEM teaching, electrical engineering and 3D printing.



Webinars

Scientix webinars are popular online training courses that invite experts in particular subjects in STEM education to share their knowledge and demonstrate through a live connection various solutions for STEM classes. Anyone can register and attend these webinars for free. They also give attendees the chance to put questions

directly to the presenter or the community.

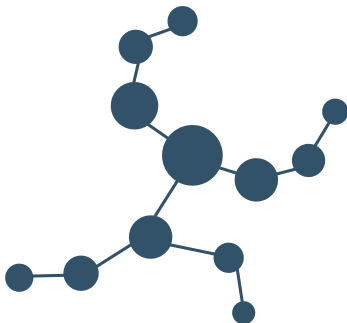
More than 4,500 participants have registered for 43 Scientix webinars since they were launched between January 2015 and September 2019.

The one-hour webinar sessions are an ideal opportunity for Scientix community members to explore exciting STEM-related topics, such as 1:1 computing, language learning in the science classroom, STEM in lower grades and online science simulations in Inquiry-Based Science Education (IBSE).

Participants in the Scientix webinars receive a certificate of attendance.

Here are some webinars that have inspired the Scientix community during Scientix 3:

- Scientix webinar: Start to STEM
- STEM Alliance and Scientix joint webinar: Hacking STEM Projects For IBSE
- Scientix webinar: Say yes to STEM!
- STEM Alliance and Scientix joint webinar: Companies and schools promoting girls in STEM
- Scientix webinar: Cracking STEM with Project-Based Learning



Massive Online Open Courses (MOOCs)

European Schoolnet Academy courses target teachers and other education professionals such as head teachers, ICT coordinators or school counsellors. By the end of 2015, the Academy had seen more than 90,000 enrolments from across Europe and the world.

While the Scientix Moodle courses are self-paced and non-tutored, the MOOCs offered through the European Schoolnet Academy run for a limited time and are tutored, and on successful completion of a course, participants receive digital badges and digital certificates. The MOOCs follow a connectivity and collaborative approach and include peer assessment among teachers. Digital badges can be exported into Mozilla's Badge Backpack (<http://openbadges.org/>) so that they can easily be shared with employers or other interested parties.

While typical retention rates for MOOCs are around 10%, Academy courses have achieved retention rates of over 40% with an average across all courses of 36%.

Being hosted on the EUN Academy, the Scientix MOOCs are able to tap into an already established and consolidated pool of teachers and education professionals. This ensures maximum outreach of the course content.

While the two following MOOCs were organised by Scientix in collaboration with other STEM projects and one ran twice, a third MOOC was organised between October 2017 and September 2019:

Opening Minds to STEM Careers (Rerun)

Home | Contact Form

Join them in the
'Opening minds to STEM Careers' MOOC
 starting on 16th of April 2018
 on the European Schoolnet Academy

To enrol in this course you first have to register as a user on the European Schoolnet Academy platform. To register, please click the button below.

[Register](#)

Start date

Monday, 16 April 2018

Duration

The course will run for 8 weeks and an extra week of grace at the end. The estimated workload is 2-3 hours per week. In regards to the duration of the course, participants will be able to finish this.

Please note that this course has concluded, although its content remains available for perusal. You can access the modules by enrolling in the course and clicking the "Modules" tab above; however, it is no longer possible to receive the course badge, the module badges, or the course certificate. Finally, please note that support for this course is no longer provided by the course instructors or the EUN.

Opening minds to STEM Careers' MOOC

Opening Schools to STEM Careers

Home | Contact Form

STEM career pathways Soft skills and STEM abilities STEM career events STEM career counselling vision STEM counselling approaches Community partnership and collaboration

To enrol in this course you first have to register as a user on the European Schoolnet Academy platform. To register, please click the button below.

[Register](#)

Start date

Monday, 25th September 2017

Duration

This MOOC will run for 8.5 weeks, with 7 modules (one module per week) and an extra 1.5 week at the end of the course. The workload is estimated at 2-3 hours/week. Participants will be able to finish it in minimum 5 weeks, maximum 8.5 weeks. This means that, instead of opening one module of the course at the

Please note that this course has concluded, although its content remains available for perusal. You can access the modules by enrolling in the course and clicking the "Modules" tab above; however, it is no longer possible to receive the course badge, the module badges, or the course certificate. Finally, please note that support for this course is no longer provided by the course instructors or the EUN Academy team.

Opening schools to STEM Careers' MOOC

STEM Is Everywhere!

Home | Contact Form

Real-world STEM problems Interdisciplinary STEM classes Resources, tools & strategies 21st century skills Collaborate with STEM teachers

To enrol in this course you first have to register as a user on the European Schoolnet Academy platform. To register, please click the button below.

[Register](#)

Start date

Monday, 29 October 2018

Duration

The course will run for 5.5 weeks, with a total number of 4 modules (one module per week) and an extra year week at the end of the course for peer to peer activity. The estimated workload is 2-3 hours per week. Total estimated time: approximately 17 hours.

Please note that this course has concluded, although its content remains available for perusal. You can access the modules by enrolling in the course and clicking the "Modules" tab above; however, it is no longer possible to receive the course badge, the module badges, or the course certificate. Finally, please note that support for this course is no longer provided by the course instructors or the EUN Academy team.

STEM Is Everywhere! MOOC

- “Opening Minds to STEM careers,” targeting STEM teachers (opened on 3 April 2017, with certification granted to participants finalising all compulsory course activities by 4 June 2017), and
- “Opening Schools to STEM careers,” targeting heads of schools and career advisers (opened on 25 September 2017 with certification granted to participants finalising all compulsory course activities by 22 November 2017).

A third MOOC, entitled, “STEM Is Everywhere,” targeted primary and secondary school teachers, and teacher trainers (opened on 29 October 2018 with certification granted to participants finalising all compulsory course activities by 6 December 2018).

3,972 people from around 55 countries registered to take part in the “STEM is Everywhere” MOOC”; 2,164 of them ended up following the course. By the end of the completion period, 853 participants had passed the MOOC and received the course certification. This represented great results: a 54% course engagement rate (the proportion of the total number of people registering who actually followed the course) and a 39% completion rate (the proportion of participants who successfully completed the course). Besides following the course, 94% of respondents who answered the post-course survey agreed or agreed strongly that they plan to use at least one new teaching practice to introduce STEM in real life to their students, indicating a clear increase in their confidence in using real-world STEM problems in their classrooms.

As a result of the MOOC, 36 state-of-the-art Scientix lesson plans have been published

as an example for any interested teacher on how to connect STEM lessons with real-world problems. The published works are available on the Scientix website.

The MOOCs make an important contribution to the Scientix dissemination strategy, while also supporting the development and implementation of national strategies for the uptake and dissemination of IBSE and community building.

Here you can see some feedback from STEM is Everywhere MOOC participants:



“Practical workshops of coding and active discovery of Internet resources, such as virtual laboratories, inspired me to create my own scenarios of classes which I will be able to share on well-known platforms: Go-Lab, Scientix, Graasp.”

“It is very difficult to write about the most useful part. Each part had at least some points that were somehow inspirational. I could see many examples on how to connect virtual with real life.”

“Learned new e-tools about STEM, new pedagogical approaches, and the FCL inspired me to reorganise usual classroom according to this role model to the best it can be.”

“The most useful and interesting part was inquiry learning and use of online laboratories with Go-Lab (day 2), Making and Tinkering in STEM (day 2), Time for Mathematics! Mathematical connections in the early years (day

3) and Cell EXPLORERS/Little cells workshop (day 4).”

”

and draw conclusions from the experiments.”

The respondents explained how they would apply what they have learned in their teaching practice (some responses):

“

As a Biology teacher, I want my students to acquire skills, planning, communication and use of ICT devices for nature conservation purposes. This will allow us to create cross-subject correlation, combine knowledge from various subjects, and use computer programs and ICT methods learned in workshops to protect the natural environment and ecological education. Of particular interest to me as a Biology teacher were the Cell Explorers workshop – the methodology, activities and experiments were exciting, which is why at school I plan to create a scientific circle “ECO-explorers” in which students will carry out various experiments, make hypotheses

“I intend to include some of these platforms in daily practice and in a transversal way to all areas. I refer in particular to projects related to ‘Teaching with Space-Universe in the Classroom, Go-Lab, Time for Mathematics’.”

“I have new interesting ideas for lessons. In September, I will share my knowledge with colleagues.”

“I’m going to use Padlet and Tinkercad during my lessons at school. I’m inspired by other teachers and hope to run one more eTwinning project.”

“I would like to share some information with my colleagues. I am going to use coding with my son to explore and to start coding with my pupils as well. I will ask donors to buy me some Blue-bots. Also I will use some knowledge about space in my eTwinning project.”

”



Science Project Workshops in the Future Classroom Lab

Looking for opportunities to learn and meet other teachers? These events aim to train teachers in the use of technologies in the classroom in association with materials and pedagogies from projects and to encourage science projects to work together rather than in isolation (both important objectives of Scientix). Since October 2017, eight Science Project Workshops in the Future Classroom Lab (SPWatFCL) have been organised; in total 317 participants attended them, of whom 284 are teachers.

Following feedback from teachers, starting with the 24th SPWatFCL, the future SPWatFCL events shifted slightly their programme, with registration for the event starting on the Friday at noon and the event finishing with dinner on the Saturday.

SPWatFCL events were often organised in conjunction with other STEM education projects, to allow more networking opportunities among participants and to reduce costs. Representatives of various

projects in Science Education are also invited to SPWatFCL events and able to request slots in the programme to carry out workshops and presentations addressing teachers.

Science week-long FCL training courses

Organised for the first time in September 2016, these one-week training courses in the Future Classroom Lab (FCL), organised on the premises of European Schoolnet in Brussels, Belgium, became so successful that two additional one-week courses were organised in 2018 and 2019. They are a perfect opportunity for STEM teachers to learn in depth about one specific topic in STEM education while having the time to collaborate with other teachers from all over Europe.

While Scientix would cover part of the costs, interested teachers can obtain additional financial support for this course from the Erasmus+ programme of the European Union.



Here are some details about the three one-week training courses organised since 2016:

1. The course “Innovative Practices for Engaging STEM Teaching” took place from 14 to 19 September 2016. This six-day course introduced participants to resources and ideas that help them develop more engaging science lessons and increase students’ interest in STEM subjects and careers. It offered a combination of hands-on workshops and an active exploration of resources, including visits to virtual research centres and innovative tools for classrooms. The programme included sessions from other STEM education projects and a study visit to see the European Contest for Young Scientists.
2. The second course, “Science, Technology, Engineering and Mathematics in primary school classrooms,” was held in Brussels on 25-29 June 2018 with the participation of 23 teachers from seven European countries, who were interested in STEM for primary teaching. In the course of the week, participants were introduced to a variety of pedagogical approaches, tools

and resources aiming to help them develop their own ideas about STEM activities that were interactive, fun and project-based, making learning both interesting and relevant for their students. Trainers shared ideas with the participants on interdisciplinary and inquiry-based learning and how to enhance standard educational materials with creative technologies.

Participants got involved in STEM experiments, created STEM-inspired lesson plans and activities and were introduced to the richness of STEM careers. They also discovered the benefits of bringing tinkering and coding into primary classrooms, by using their imagination and creativity to produce unique prototypes. 3D-design thinking and digital storytelling sessions inspired participants to identify alternative strategies and solutions that might not be instantly apparent. Fun ways of making Mathematics meaningful, as well as ways to explore the universe and the cells in the classroom, were discussed. Participants also got acquainted with the FCL, the innovative learning environment in Brussels, Scientix, the community for



science education in Europe, and eTwinning, the online community for schools.

3. Between 23 and 27 April 2019, Scientix organised for the third time a week-long learning course for STEM teachers. A total of 41 teachers from seven different countries joined this five-day course. The aim was to introduce participants to resources and ideas to help them develop more engaging science lessons which would help increase students' interest in STEM subjects and careers. The course was co-organised with Scientix and three other European projects: Next-Lab (Next Generation Stakeholders and Next Level Ecosystem for Collaborative Science Education with Online Labs), TIWI (Teaching ICT with Inquiry) and the STEM School Label.

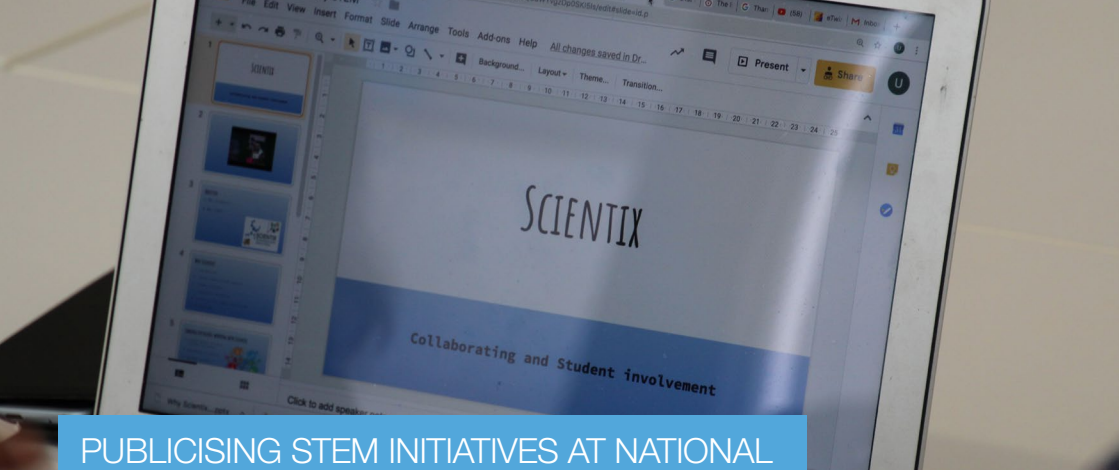
The teachers who attended the course got resources and ideas that can help them bring effective and quality teaching of STEM disciplines into their classrooms, while also developing and applying innovative teaching approaches to increase young students' knowledge, skills and interest in STEM. The course

included hands-on workshops, for example on coding, and active exploring of online resources, such as virtual labs and research centres or space-related activities, among other ingenious tools. The FCL course "Enhancing STEM practice and strategy in secondary schools" was held in conjunction with the fourth edition of the increasingly popular STEM Discovery Week campaign to raise awareness about the possibilities of STEM studies and career.

Hands-on training Scientix Workshops at non-Scientix events

Workshops – a great success in enthusing teachers about Scientix and innovation in STEM education – have taken place in various European cities since 2015. Their function is either to present Scientix services to teachers and project managers or other relevant science education actors, or to serve as facilitators for the presentation of other science education projects. Nine of these workshops were organised within the following events:

- 1 **June 2016:** Scientix workshop during Drawing-Ed conference (Madrid)
- 2 **October 2016:** Workshop during the Space Education International Workshop (Leiden)
- 3 **8 November 2016:** Workshop at the Educating the Educators conference (Freiburg)
- 4 **2-3 March 2017:** Scientix workshops (Orihuela and Murcia)
- 5 **26-27 September 2017:** The Scientix stand at the European Researchers' Night (Brussels)
- 6 **October 2017:** Scientix workshop during Drawing-Ed conference Vlaams Lerend Netwerk STEM SO (Leuven)
- 7 **May 2018:** Scientix workshop in Bulgaria: Bringing Scientix and Next-Lab to Bulgarian schools (Sofia)
- 8 **October 2018:** Scientix workshop during the annual eTwinning Conference, (Warsaw)
- 9 **November 2018:** Raising Awareness and Interest in STEAM Employment (Trieste)



PUBLICISING STEM INITIATIVES AT NATIONAL LEVEL WITH THE STEM DISCOVERY WEEKS

Scientix is also bringing visibility to STEM initiatives organised at national level. Following this objective, Scientix was among the initiators of the STEM Discovery Week campaign, first organised in April 2016 and in subsequent years in the last week of April.

This campaign has grown significantly every year since it was first held in terms of popularity and has now become an integral part of the Scientix project.

Scientix has managed, thanks to this campaign, to build a network of educators all across Europe and around the world who are very enthusiastic about increasing general interest in STEM studies and careers and who consider the STEM Discovery Week to be a great opportunity to promote and advance such efforts. Each year, a dedicated Web page is published in the Campaigns section on the Scientix online portal to explain how people can participate in or contribute to the campaign.

From the beginning, some fundamental activities have underpinned the STEM Discovery Week:

- Every year educators are encouraged to organise or participate in activities or actions in STEM education.
- Every year educators are invited to join competitions to showcase their work in the field of STEM education and to get it recognised by some of the organisers of the campaign.
- Every year the STEM Discovery Week seeks collaboration with relevant stakeholders to support the dissemination and outreach of the campaign.

The first edition of the STEM Discovery Week, celebrated 22–29 April 2016, was complemented by two competitions under the common headline #STEM4YOU and #STEMDiscoveryWeek, either by organising a STEM event or by submitting a video. During the 2016 STEM Discovery Week, there were 94 events in 25 countries associated with it.

In 2017, Scientix took an even greater role in the STEM Discovery Week campaign. It offered three competitions for STEM teachers:

1. CREATE YOUR OWN POSTER:

STEM teachers designed and shared graphic posters, explaining how they used resources from the Scientix resource repository to teach subjects at primary and secondary schools.

2. ORGANISE A STEM EVENT:

STEM teachers could organise events dedicated to a subject in STEM education in two categories.

3. YOUR FAVOURITE SCIENCE BOOK:

In collaboration with the United Nations Educational, Cultural and Scientific Organisation (UNESCO), teachers could discuss learning scenarios based on eight science books. The books were selected by the 358 Scientix Ambassadors before the competition. The competition was launched on the World Book and Copyright Day on 23 April 2017. Participation in the STEM Discovery Week was much greater in 2017 than in the previous year. In total, 119 events were submitted and registered as STEM Discovery Week events, 105

posters about Scientix resources were created and shared, and 109 comments were published in the book discussion. It was estimated that the STEM Discovery Week 2017 reached a total of 1,500 schools, 2,000 teachers, 13,300 students and 146 companies in 23 countries.

In 2018, for the first time, external projects, organisations and schools were invited to become partners of the STEM Discovery Week. By becoming partners, they agreed to support a shared communication plan about the campaign and to support the organisation of activities in relation to it.


For this purpose, Scientix published two calls for partners, one targeted at projects and the other at organisations and schools, and a third call for activities, in which everyone was encouraged to organise and submit activities in STEM education to have them published on a shared map of activities.

In order to become partners of the STEM Discovery Week, all projects and organisations first had to publish a shared Web page on their own websites about the STEM Discovery Week or to include a shared image banner in their newsletter. The original landing page of the campaign was created on the Scientix online portal and then used to create a Web page template for any third-party website. Scientix provided a detailed Web guide, which included this Web page template, for any project, organisation or school that wished to become a partner of the campaign. By following the instructions in this guide, anyone who wanted to become a partner of the campaign could create a Web page on his or her own website that exactly replicated the content of the original landing page on the Scientix portal.

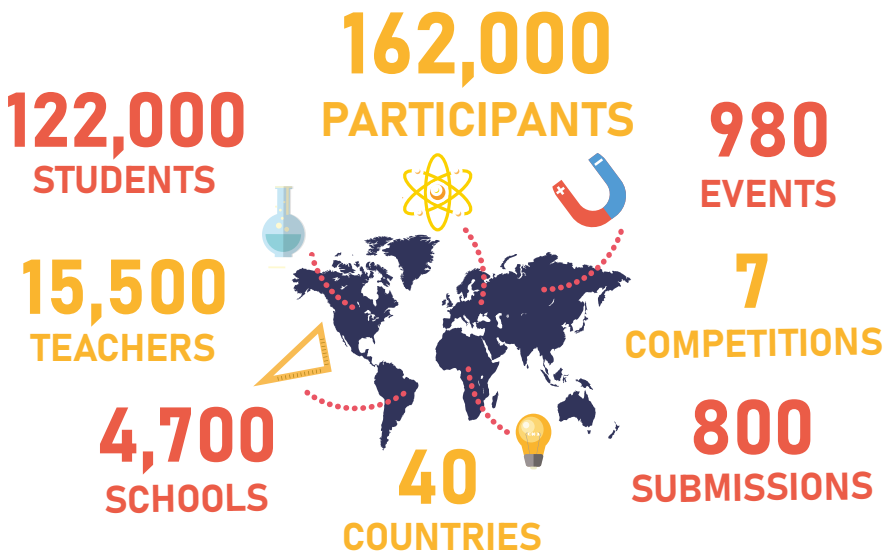


The main development introduced in the STEM Discovery Week 2019 was the increased number of competitions available for teachers. In 2018 there were three competitions organised for teachers, by Scientix, STEM Alliance and Next-Lab projects. In 2019, there were seven competitions available for teachers and one competition, prepared by Carano 4 Children Foundation, designed for primary and secondary school students. The competitions for teachers were held by Scientix (two competitions), SYSTEMIC,

Amgen Teach, BLOOM, Next-Lab, STEM Alliance projects and once again by Carano 4 Children Foundation. The 2019 STEM Discovery Week 2019 was a big success with 980 activities or actions to promote STEM organised between 1 February and the end of April, reaching over 162,000 participants in total, including more than 122,000 students and over 15,500 teachers. Over 4,700 schools were involved. Participants also showed great interest in participating in the competition: Scientix received 491 competition entries.



Discovery Week
22-28 April 2019





ORGANISING SCIENTIX CONFERENCES AND NETWORKING EVENTS

Bringing members of the Scientix family together to meet in person is a great complement to all the online and social media activity. There are opportunities for education, dissemination, networking and underscoring why progressive STEM education is so important to the young people of Europe. Scientix has hosted, organised and supported dozens of local, national and international events. These range from workshops with around 20 participants to conferences with close to 800 attendees. In this section we provide information about the international networking events organised by Scientix.

Scientix Conferences: a major European event for STEM education

Scientix Conferences have built up a reputation that attracts many more would-be participants from across Europe and around the world than it is possible to accommodate.

It held two international conferences during

Scientix 2. Both were landmark events for anyone seriously interested in improving STEM education, including teachers, academics, project leaders, researchers and policymakers. The 3rd conference was then organised in the same direction and was held in Brussels, Belgium, from 4 to 6 May 2018. It had 20 exhibition stands, 25 poster sessions, 56 presentations, 14 workshops and six round table discussions as part of its weekend programme, in addition to keynote speeches and awards. The variety of talks and formats for the workshops is always attractive for participants and also allows them to benefit from a very dynamic programme in which they find their interests.

Scientix Conferences provide their guests with a space to exchange information and experiences in the fields of STEM education. They are ideal forums for everyone who would like to learn more about recent developments in the field, based on research and practical implementation of STEM-related strategies. Representatives of European, national, local and privately funded initiatives in STEM education also get

the chance to present their work to a large multinational group of educators and other stakeholders in STEM education. This helps all practitioners and researchers to get an idea about any shortcomings and benefits of current strategies in STEM education.

Moreover, experience shows that Scientix Conferences are forums in which stakeholders construct networks and collaboration in direct relation to their main areas of interest. More broadly, they are events that bring together stakeholders who all benefit from the existence of the Scientix community in one way or another. They are all committed to raising awareness of Scientix as a platform that can help spread knowledge about successful pilot initiatives and practices in STEM education, in which anyone can also seek necessary support and training.

The success of such event is clear when one looks at the stakeholders' engagement in the Scientix project, which increases significantly before and after Scientix Conferences. Following a call for papers for the 3rd Scientix Conference, which

was published in February 2018, 324 proposals were submitted for presentations, exhibition stands, workshops and posters. Additionally, almost 300 people expressed their interest in observing the conference without a specific contribution to its official programme.

According to a survey circulated among the participants after the conference ended, when asked about different aspects of the conference logistics, programme and networking opportunities, 96 to 100% of the respondents thought they were either good or very good. This extremely high level of satisfaction among participants is an enormous endorsement of the conferences as a well-organised event that is relevant for key stakeholders in STEM education.

The Scientix Projects Networking events

The Scientix Project Networking Events (for science education projects) (SPNEs) bring together project coordinators, managers and other representatives, from European and national science education projects, as



well as people and organisations involved in STEM education.

The aim of these events is to share and exchange experiences from projects which have the opportunity to present their work, and to facilitate new collaborations and partnerships among projects in science education. Each event is centred on a specific topic or a challenge commonly faced within STEM projects, with the aim of looking for ways to overcome them.

The SPNEs are typically organised in conjunction with the Science Projects Workshops in the Future Classroom Lab (SPWatFCL). While the SPWatFCLs last from Friday dinner to Sunday lunch, the SPNEs have normally run on the Friday (for the whole day).

Eleven editions of the SPNEs were organised during Scientix 2 and five more editions were organised during Scientix 3, including, for the latest ones, a slight change of format. In fact, during Scientix 3, SPNEs ran on the Friday afternoon (to allow participants

to arrive in the morning). Furthermore, the option of organising SPNEs alongside other events (not organised by EUN) and in other locations (other than Brussels) was added.

For each event, Scientix launched a call for proposals to select the most appropriate participants to attend the SPNE. Ten to fifteen participants participated each time and the programme allowed guest projects to present their work before engaging in discussion sessions on the event's topic to exchange on common issues, experiences and suggestions. During Scientix 3, the Ministries of Education STEM Working Group was consulted to give input about the STEM topics they were most interested in, according to their national realities. Their interests were taken into account to define a set of topics for the organisation of these events. Moreover, they were also given the opportunity to contribute and/or propose potential SPNE events.

The most recent SPNEs organised by Scientix in collaboration with other science education projects are listed below:

SPNE	Dates	Topic	In collaboration with
12	5 Dec. 2017	Gender and innovation	Perform and GEDII (UNESCO and UOC)
13	June 2018	Games and toys in education	STEM Alliance (Lego)
14	5 Sept 2018	Research into the classroom	GFOSS – Open Technologies Alliance, Jet Propulsion Theatre, EDU-ARCTIC and ERIS:
15	24 May 2019	Sustainability of projects	Cell EXPLORERS

PROMOTING SCIENTIX COOPERATION AT NATIONAL LEVEL

National Contact Points

In 2014 Scientix established a network of National Contact Points (NCPs) covering 30 European countries. Since that time these varied organisations, including Ministries of Education, science centres, universities and training centres, have provided a much-needed link between the national and European levels of STEM education.

Under Scientix 3, the objectives of continuing the creation and development of some NCPs in specific countries were:

- To support the dissemination of Scientix at national level;
- To organise a number of activities to promote STEM education, depending on the needs and situation of each country.

NCPs for Scientix 3 were selected on the basis of a call for proposals carried out during the first 6 months of Scientix 3. At the end of the third year, 9 organisations acting as NCPs continued promoting STEM activities at national level in collaboration with Scientix.

They have been highly effective in reaching out to national communities of STEM education professionals and getting involved in organising national workshops, webinars and networking events. NCPs organised over 200 activities at national level, dedicated to teachers and promoting science education

- > 30 webinars
- >140 workshops
- 19 conferences
- 35 presentations

These events reached over 13,000 teachers during Scientix 3, corresponding to over 162,000 students reached indirectly.



Slovenia

National Education
Institute Slovenia – NEI

Croatia

Croatian Academic and
Research Network
(CARNet)

Italy

INDIRE (National
Institute for
Documentation,
Innovation and
Educational
Research, of the
Italian Ministry of
Education)



Latvia
The University of Latvia

Poland
Institute of Geophysics,
Polish Academy of
Sciences

Romania
University of Bucharest

Serbia
Serbian Ministry of Education, Science
and Technological Development

Bulgaria
Institute of Mathematics and Informatics at
the Bulgarian Academy of Science (IMI-BAS)

The Republic of North Macedonia
Association for Development and
Digitalization of Education and Cultural
4Heritage-Friends of Education

Ministries of Education STEM representatives Working Group

To further support the development of national strategies on STEM education, Scientix also developed the Ministries of Education STEM representatives Working Group (MoE STEM WG) which is a platform of discussion and exchange for Ministries of Education regarding their STEM education policies. The overall objective of this initiative is to help lay the foundations for medium- and long-term strategies and activities between Ministries of Education (MoEs) and European Schoolnet (EUN) in the field of STEM education, and especially within the Scientix 3 project, following an agenda that addresses the ministries' priorities and main interests. Basically, all the work of Scientix is driven by those ministries' priorities, which as for September 2019 were as follows:

1. The importance of supporting primary schools in the teaching of STEM
2. The limited information on STEM careers
3. Results from projects presented by teachers and teacher collaboration as a way of sharing results with policymakers and among themselves
4. Getting leading schools to work together and share expertise
5. Supporting exchanges in the working group
6. Scientix should support the federation or cohesion (dissemination) of national initiatives.
7. Ways to make research results more accessible to teachers
8. How to mainstream innovative practices, validation and piloting from different initiatives
9. Integrated STEM teaching and learning

with a special focus on: 1) transversal themes; 2) secondary education and VET; 3) addressing pre-service and initial teacher training; 4) whole school as a learning ecosystem).

This platform has grown significantly since its launch in 2016: at the end of September 2019, 23 Ministries (from 22 different countries) had joined the MoE STEM WG in order to promote STEM activities at national level in collaboration with Scientix.





Finland
Finnish National Agency for Education

Estonia
Estonian Ministry of Education and Research

Lithuania
Lithuanian Education Development Centre

Georgia
Ministry of Education, Culture and Sports of Georgia

Luxembourg
SCRIPT
(Department of Coordination of Educational and Technological Research and Innovations), Luxembourg MoE

Poland
Department of Textbooks, Core Curricula and Innovations (PL Ministry of National Education)

Czech Republic
Centre for International Cooperation in Education, Czech Ministry of Education

Austria
Department in the Austrian Federal Ministry of Education, Science and Research

Hungary
Educational Authority, General Department of Digital Repositories

Romania
National Centre for Assessments and Examinations, Romanian Ministry of National Education

Italy
INDIRE (National Institute for Documentation, Innovation and Educational Research, of the Italian Ministry of Education)

Greece
Greek Ministry of Education/GFOSS' (Open Source Software Society)

Turkey
Ministry of National Education, Directorate General for Innovation and Educational Technology

Israel
Israeli Ministry of Education

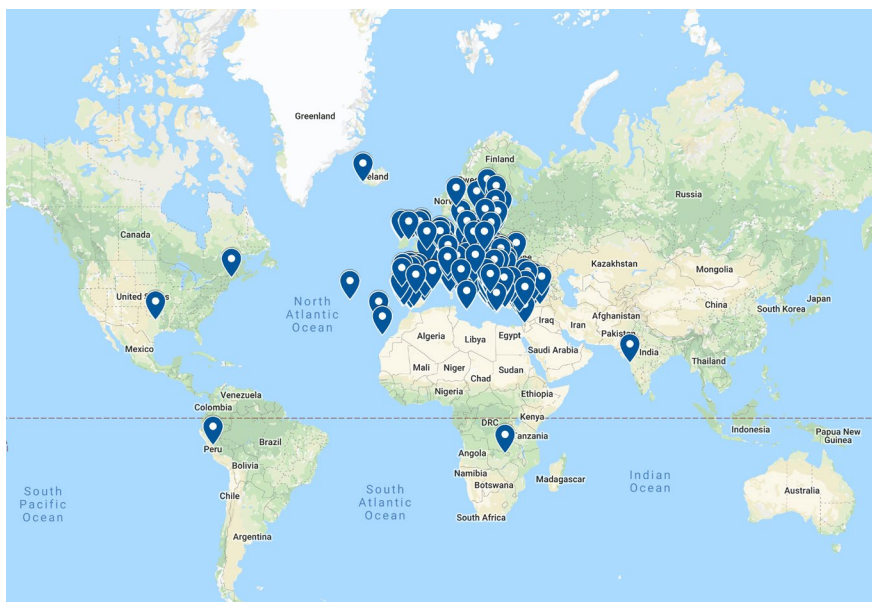
The Scientix Ambassadors

473 Scientix Ambassadors from all across Europe and beyond provide an essential bottom-up dimension to Scientix and ensure that good practices in STEM education reach as many schools and teachers as possible all over Europe.

Initially, they were selected following their successful completion of three editions of

the Scientix Ambassadors Training Course. Following these courses, the Scientix Ambassadors group currently comprises 473 Scientix Ambassadors from 43 countries in Europe and beyond.

The figure below shows the distribution of Scientix Ambassadors around the world, and the following figure below details the number of Ambassadors for each country represented in the Teachers' Panel.

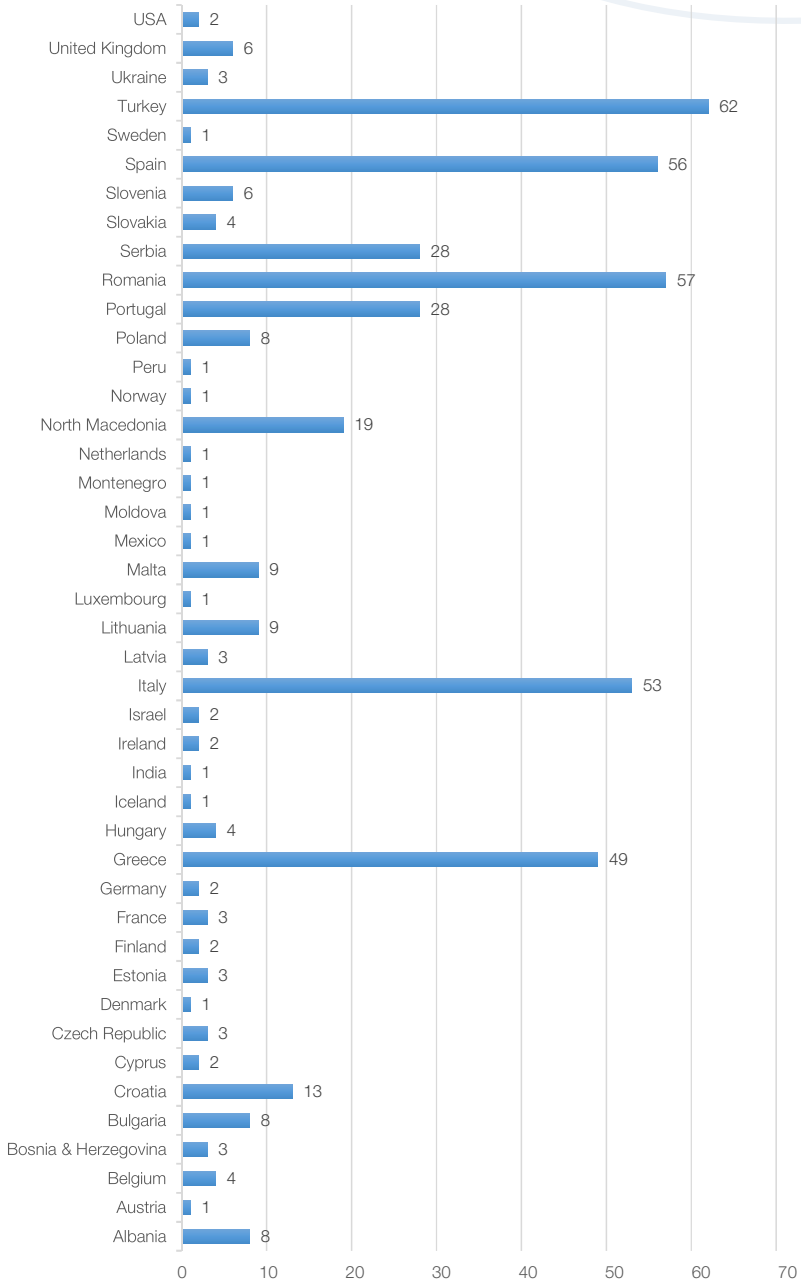


Scientix Ambassadors by September 2019

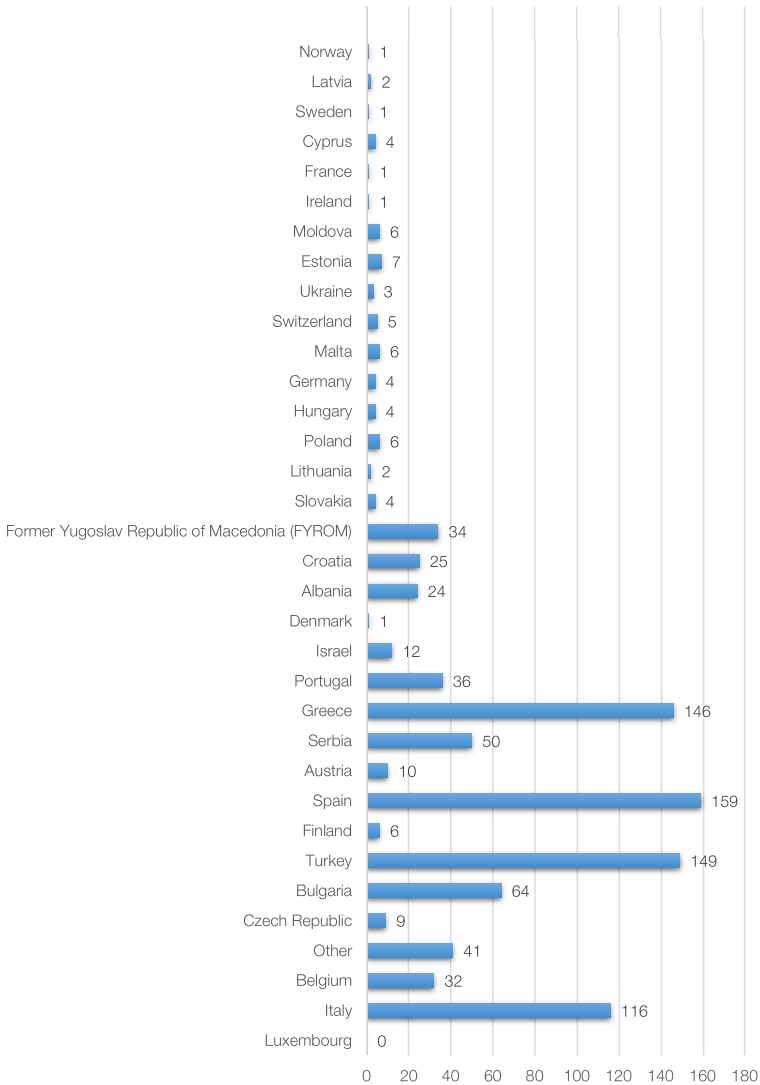
Scientix Ambassadors in Scientix 3 are teachers from anywhere in the world, willing to support the dissemination of Scientix and the exchange of practices and knowledge among all STEM education stakeholders. Their activities are essential for the promotion of quality science education, as they help the sharing of Scientix activities

at national level and play an active role in supporting innovation in STEM education in their countries. They have done a great job during Scientix 3: **Scientix Ambassadors disseminated the project on more than 2,430 occasions in 43 countries in Europe and beyond.**

Scientix Ambassadors by September 2019



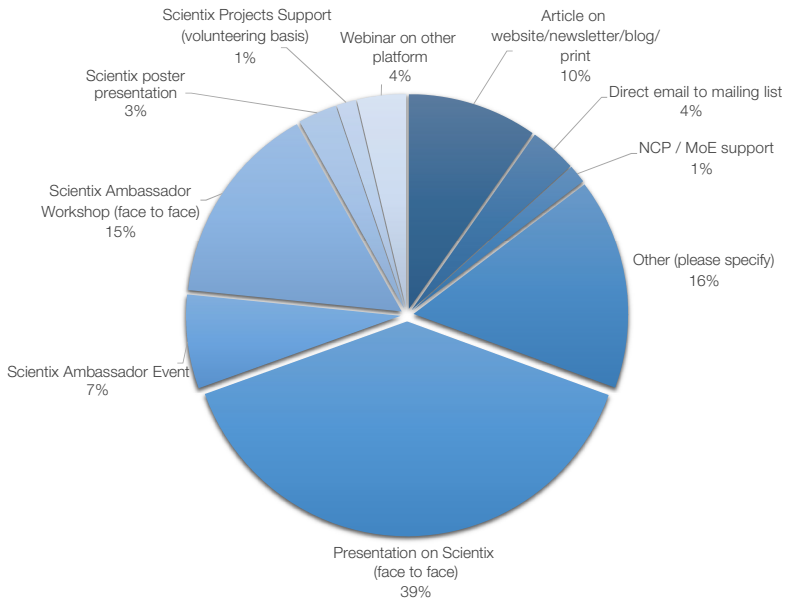
Scientix 3 Ambassadors' dissemination activities per country (April 2018 to September 2019)



In terms of type of activities reported, the figure below shows that Ambassadors mostly reported having carried out presentations about Scientix (almost half of the activities reported), followed by Scientix Workshops (an additional 15%). “Other”

activities include distribution of flyers, informal conversations with various stakeholders, meetings, radio interviews and many more, showing the multitude of occasions that Scientix Ambassadors take advantage of to share information about the project.

Type of activities reported by Scientix Ambassadors (April 2018 to September 2019)



The continuous work of Scientix Ambassadors to make the project known to national audiences is indeed significant, in terms of effort and size. Over the course of one year, Scientix Ambassadors have been present at international, national and regional events to promote the project, have organised events themselves, have published articles online and in educational magazines in their countries,

had newspaper, radio and television interventions to talk about Scientix, have used Scientix resources to train other teachers in innovative methods of bringing science closer to the pupils and have been relentless promoters of the Scientix project, supporting the idea of an international community of exchange of good practices in the area of science education. A few examples are illustrated in the figure below.



Examples of dissemination activities carried out by Scientix Ambassadors



this great project and feel that I have learnt a lot and become a better educator. All the best for the rest of the projects planned! I am very grateful for the opportunity."

**- Maggi Pulis Stephanie,
Scientix Ambassador from Malta**

"I have worked with pleasure because I believe in the Scientix activities, I believe in the value of Scientix and I hope that Scientix will continue to support every person who loves culture and collaboration. I look forward to continuing to do even more and do better"

**- Lidia Nazzaro,
Scientix Ambassador from Italy**

"Scientix has been an exceptional opportunity for me to grow as a teacher and as a professional. I'll keep supporting the project with all my activities in the next months!"

**- Silvia Scandura,
Scientix Ambassador from Romania**

"I have to say that the Scientix project was/is a real great great experience for me. It was a great pleasure to work with all EUN team members and all the Scientix ambassadors for all these years. I wish the Scientix project to continue! I would be very happy also to continue our collaboration. I am ready for support."

**- Stavros Nikou,
Scientix Ambassador from Greece**

Their work is also essential for expanding and consolidating a community whose core values reside in sharing good classroom practice, especially in the area of STEM, and making sure that students are equipped with the skills needed to become successful adults.

Here below are some quotes from Scientix Ambassadors about their participation to Scientix

"Many thanks for the opportunities offered and great experience gained through Scientix initiatives and events. I have had a very enriching experience and feel grateful that it lasted for around 3 years. I will keep promoting

"I'm very happy to be part of Scientix ambassador team and it's a great pleasure to disseminate the STEM education any way I can"

**- Vasileia Dllaveri,
Scientix Ambassador from Greece**

"I am proud to be part of Scientix, as I have said many times before. It is very satisfying to be able to contribute in whatever way I can with this great community, so that it continues to grow and awaken interest in Science in society. I am at your disposal and you can count on me for what I can do well from my role as science teacher in a public education high school."

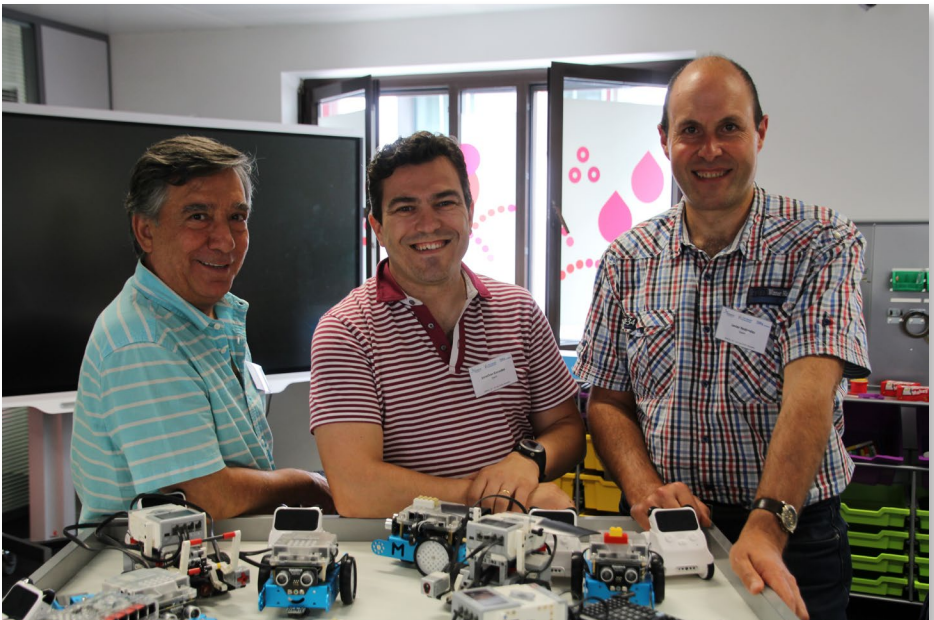
**- Guadalupe Santos,
Scientix Ambassador from Spain**

"For me Scientix is a motor and inspiration in my work every day and thanks to you I have been able to meet wonderful professionals with whom I have formed a group of excellent teachers from whom I learn and whom I admire and love. I hope to continue with my work as long as you need me"

**- Bárbara De Aymerich,
Scientix Ambassador from Spain**

"Thanks to you and to the entire Scientix team. You are leading a very important project for the entire european community. It's an honor to be allowed to contribute."

**- Massimo Saccoman,
Scientix Ambassador from Italy**





CONTRIBUTING TO STEM RESEARCH

Providing the latest results of the research in STEM education and encouraging involvement in research into aspects of STEM education have been a growing element in Scientix projects.

The Scientix Observatory

To help the development and dissemination of different science education projects and document good practices in various aspects of STEM education, Scientix has set up the Scientix Observatory. This provides short synthesising articles, focused on one or several related themes or initiatives, or the state of play of different topics related to science education.

These observatory papers are generally divided into three main types:

1) The first one is related to the [Scientix Projects Networking Events](#) (SPNEs). These events bring together project coordinators, managers and other representatives from European and national science education projects to present their initiatives and to facilitate creating new collaborations and partnerships. The aim of SPNEs is to share and exchange experiences from projects,

allow them opportunities to present their work, and to facilitate the creation of new collaboration and partnerships. During the events, participating experts are encouraged to reflect on their professional experiences and to share best practices and personal opinions that would later help in the process of formulation of key ideas to incorporate in Scientix Observatory publications. 4 SPNEs were organised during Scientix 3. In all of them, workshops were carried out from which abundant data were compiled. Three Scientix Observatory papers were published following the 12th, 13th and 15th SPNE. The exchanges carried out during the 14th SPNE on the topic of Research in the Classroom were further elaborated and, through the collaboration with the BRITEC – Bringing Research into the Classroom project, were collected in a larger report.

2) One of the objectives of Scientix is to share ideas and good practices from national level and ensure their international diffusion. While during Scientix 2, a number of observatory papers were published from Scientix Ambassadors, during Scientix 3, the Romanian National Contact Point offered to carry out a limited study resulting in a Scientix observatory paper.



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BRINGING RESEARCH INTO THE CLASSROOM

THE CITIZEN SCIENCE APPROACH IN SCHOOLS
A SCIENTIX OBSERVATORY REPORT - APRIL 2019



Bringing Research into
the Classroom report



A. Popovici, O. Istrate, C. Mironov, B. Popovici (2019)
Teachers' Perspective on the Premises and Priorities of STEM Education

TEACHERS' PERSPECTIVE ON THE PREMISES AND PRIORITIES OF STEM EDUCATION

Authors: A. Popovici, O. Istrate, C. Mironov

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The work presented in this document has received funding from the European Union's Horizon research and innovation programme – project Scientix 3 (Grant agreement N. 730009), coordinated by European Schoolnet (ESN). The content of the document is the sole responsibility of the organizer and it does not represent the opinion of the European Commission (EC) and the EC is not responsible for any use that might be made of information contained.

Teachers' perspective on
the premises and priorities
of STEM Education



3) Scientix Observatory paper are also longer reports on key issues in STEM education, carried out in collaboration with other projects or industry partners.

Within Scientix 3, three Scientix Observatory paper (of the third type) were produced as described below. The first two were

the result of a collaboration with Texas Instruments:

- The Scientix Observatory STEM Education Policies in Europe Policy report included contributions from MoEs, especially Austria, Belgium, Denmark, Spain, France, Greece, Hungary, Italy, Lithuania, Malta, Portugal, Romania, Slovakia and Turkey.

SCIENTIX
The community for science education in Europe

SCIENCE,
TECHNOLOGY,
ENGINEERING AND
MATHEMATICS

Education Practices in Europe
SCIENTIX OBSERVATORY REPORT - DECEMBER 2018

European Schoolnet | TEXAS INSTRUMENTS



- The Scientix Observatory STEM practices in Europe report draws on the analysis of 3,780 responses (representing over 4,500 classes) to a STEM Education Practices Survey, answered by educators in 38 European countries. Its aim was to provide a grassroots, European-wide perspective on how STEM teachers organise their

teaching, in terms of resources and pedagogical approaches used, on the current state of teachers' professional development and support, and on their opinions and attitudes, particularly in relation to their school environment and their openness to cooperation with STEM industries.



SCIENTIX
The community for science
education in Europe

-  **SCIENCE,**
-  **TECHNOLOGY,**
-  **ENGINEERING AND**
-  **MATHEMATICS**

Education Policies in Europe

SCIENTIX OBSERVATORY REPORT - OCTOBER 2018


 **European Schoolnet**

 **TEXAS INSTRUMENTS**

Education Practices in
Europe



- The third Scientix Observatory paper was the result of two main actions: 1) the 14th Scientix Projects Networking Event (SPNE14), organised by Scientix with the collaboration of four other organisations and projects – GFOSS, Jet Propulsion Theatre, EDU-ARCTIC and ERIS, which took place in Athens on 5 September 2018 and saw the participation of 25 educational projects and organisations; 2) collaboration with the KA2 project BRITEC, which works on bringing research into the classroom.


Nistor, A., Angelopoulos, P., Gros-Velazquez, A. et al. (2019)
STEM in primary education

STEM IN PRIMARY EDUCATION

A. Nistor¹, P. Angelopoulos², A. Gros-Velazquez¹, M. Grenon³, S. Mc Guinness⁴, D. Mitropoulos⁵, M. Ahmad⁶, M. J. Coelho⁷, I. M. Greca⁸, E. Kalamitaki⁹, A. Korpa¹⁰, A. Lazouza¹¹, I. Lefkous¹², T. McNeill¹³, G. Negenovovic¹⁴, H. Ousefi¹⁵, C. Palaso¹⁶, H. Tran¹⁷, T. Tsakaris¹⁸, T. Tsochatzidis¹⁹

European Schoolnet⁽¹⁾, GFOSS - the Open Technologies Alliance⁽²⁾, Cal EXP-OBERS, NUJ Galway⁽³⁾, Astronomy & Society Group of Salford University⁽⁴⁾, COEJES - Centre de Compétences Marie Curie Paris⁽⁵⁾, Universidad de Burgos⁽⁶⁾, Avatika College⁽⁷⁾, Mandarin International Elementary School⁽⁸⁾, Ellengemans Aangep (9), University of Macedonia⁽¹⁰⁾, Lunar Mission One⁽¹¹⁾, Primary School "Mihajlo Pupin"⁽¹²⁾, Universe Awareness⁽¹³⁾, Network for learning safety at schools⁽¹⁴⁾, Technological Educational Institute of Central Macedonia⁽¹⁵⁾

Abstract




There is general agreement among practitioners that the manner in which science is taught at the level of primary schools influences students' perceptions and attitudes towards science, and their uptake of STEM subjects and careers later on. Primary school teachers can play a central role, but they often feel insufficiently prepared to approach STEM subjects in their classes. Their challenges have been discussed between 20 STEM education stakeholders and 22 primary school teachers participating in the 13th Scientix Projects Networking Event. As a result, three key strategies were proposed to tackle the most challenging aspects of delivering effective STEM teaching in primary classrooms: raising the quality of teacher training, increasing easy access to high quality teaching resources and raising the STEM culture in primary education. This observatory presents a set of actionable recommendations for project/organisations looking to address these challenges.

Key words: Science, Technology, Engineering and Mathematics Education (STEM education), primary education, recommendations, teacher training, resources


Introduction

Scientix, the community for science and mathematics education in Europe, initiated by the European Commission (Research and Innovation DG), set up the Scientix Observatory to help the development and dissemination of different science education projects and document good practices in various aspects of STEM education. The Observatory provides short synthesised articles, focused on one or several related themes or initiatives, or the state-of-play of various topics related to science education.

The work presented in this document has received funding from the European Union's Horizon 2020 research and innovation programme - project Scientix, a Global Agreement No. 101019016, supported by European Agreement No. 101019016. The content of this document is the sole responsibility of the organisers and does not represent the opinion of the European Commission (EC), and the EC is not responsible for any use that might be made of information contained therein.

STEM in Primary Education


M. Jiménez Iglesias¹, J. Müller², I. Ruiz-Mallén³, E. Kni⁴, E. Orrego⁵, M. Herra⁶, S. Filopaki-Matras⁷, M. von Lasar⁸, M. Tranter⁹, A. Valenzuela-Zapata¹⁰, A. Garcia-Bermejo¹¹, A. Alcaraz-De-Sotillo¹², A. Alexopoulos¹³, B. Bakurovan¹⁴, M. Barz¹⁵, B. Benamoun¹⁶, Prof. Franz X. Bogner¹⁷, V. Calisto¹⁸, E. Cadenas¹⁹, E. Dodrinas²⁰, E. Dourson²¹, E. H. Kocak²², H. Kocak²³, K. Kolvenberg²⁴, I. Martens²⁵, S. Ronsaji²⁶, E. Silloni²⁷, M. Torsassi²⁸, C. Vizzari²⁹

GENDER AND INNOVATION IN STE(A)M EDUCATION

(1) European Schoolnet (2) IN2LOD (3) UNESCO (4) University of Bristol (5) ICTA-JAM (6) Ecole - Horizon (7) NEMO Science Museum (8) ECU Track MUSE (9) SEMPRE - view (10) EGEN (11) European Commission (12) University of Bayreuth (13) IJL - Digital (14) Invenio (15) Ecole - HERRA (16) European Training and Research Association for a Cooperative Key to Inclusion (17) High School (18) KU Leuven Assessment (19) EEM (20) Sini-Liivenekoige (21) NEMO GENIA ZIRDIS SCHOOL (22) NSI Sissiale

Abstract

Gender aspects continue to play an important role in science education, conditioning study choices or shaping beliefs about one's own capacities and those of others. Performing arts based initiatives are on the forefront of innovative science education approaches and have participatory, dialogic and dialectic qualities to engage students in democratic, inclusive and reflective ways of learning. Both these dimensions can be brought together in order to explore how arts-based science education can contribute to address gender bias and stereotypes in educational and team-collaborative settings.




Key words: Science, Technology, Engineering and Mathematics Education (STEM education), Science, Technology, Engineering, Arts and Mathematics Education (STEAM Education), gender stereotypes, arts, gender bias, collaboration.

Introduction

Scientix, the community for science and mathematics education in Europe, initiated by the European Commission (Research and Innovation DG), has set up the Scientix Observatory to provide a regular overview of the state of play of different themes related to STEM education. The themes and initiatives examined vary in duration, scope, audience and methodology yet all of them include elements of the project management and STEM education areas.

This article draws, to some extent, from the discussions between project coordinators, managers and representatives together with science educators participating in the 12th Science Projects Networking Event (SPNE12) organized by Scientix. [PDF-Form](#) and [Geo](#)

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Gender and Innovation in STE(A)M Education


Carroll, S., Grenon, M., Nistor, A., James, V., McGuinness, S. et al. (2019)
The sustainability of STEM Education Projects

THE SUSTAINABILITY OF STEM EDUCATION PROJECTS

Carroll, S.¹, Grenon, M.², Nistor, A.³, James, V.⁴, McGuinness, S.⁵, Ben shiri Haimi, L.⁶, Cahill, G.⁷, Caser, F.⁸, Curtis, S.⁹, Duan, K.¹⁰, Fleming, J.V.¹¹, Garcia Galaborda, S.¹², M. Garcia Terrafels, E.M.¹³, Gormaine, K.¹⁴, Gillen Bishop, C.¹⁵, Hayes, M.¹⁶, Hsu, M.M.¹⁷, Kirmas, H.¹⁸, Mangina, E.M.¹⁹, Molino, F. M. M.²⁰, Mouji-Ménage, F.²¹, O'Grady, A.²², Pastor Fina, F.²³, Peleg, R.²⁴, Prior, S.²⁵, Santos Antunes, I.M.²⁶, Sotoca, E.²⁷

(1) National University of Ireland Galway, (2) European Schoolnet, (3) Ministry of Education, Center of Educational Technologies - Science Division, Israel, (4) Carlow Institute of Technology, (5) Météo tomorrow - Turkey, (6) Linnet Institute of Technology, (7) University College Cork, Ireland, (8) Universidad de Burgos, (9) Dundalk Institute of Technology, (10) Nanotec for Schools, (11) Korkmaz Yedigöller Highschool, (12) University College Dublin, (13) Schools Tunes into Maths, (14) University of Linnet, (15) University of Alicante - Conselleria d'Educació de la Generalitat Valenciana, (16) ESQnet / Weizmann Institute of Science, (17) Escola Secundária Campus Mós, (18) NEMO GENIA ZIRDIS

Abstract

As many STEM education projects rely on short-term funding periods, achieving sustainability can be a challenging aim for project coordinators. Sustainability of a STEM education project can be described as the project's ability to maintain all or some activity once funding has ended. Scientix, the community for science education in Europe, organised the 10th Science Projects Networking Event (SPNE10) in collaboration with Cal EXP-OBERS and the National University of Ireland Galway. At this event, 26 experts in STEM education came together to discuss the sustainability of projects and to propose recommendations for best practice. This observatory report outlines the key discussion points raised by the attending experts and identifies six key aspects relating to sustainability and their related challenges: continuation of activities, sustaining impact, community engagement and collaboration, leadership, planning and evaluation, and finances. The paper concludes by proposing concrete actions that coordinators could undertake to maximise the sustainability of their projects.

Keywords: sustainability, projects, STEM, education, barriers, opportunities, planning, leadership

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The Sustainability of STEM Education Projects



THE NEXT PHASE OF SCIENTIX

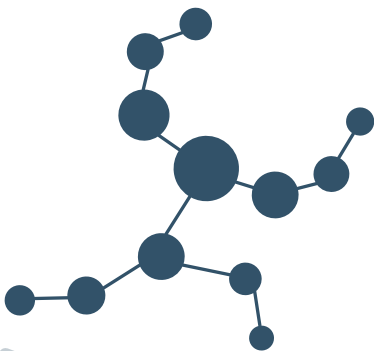
Via the NCPs, the MoE STEM Working Group and Scientix Ambassador networks, Scientix reaches diverse audiences including teachers of STEM and other subjects, school managers, teacher trainers, researchers, policymakers, students and parents throughout Europe and beyond.

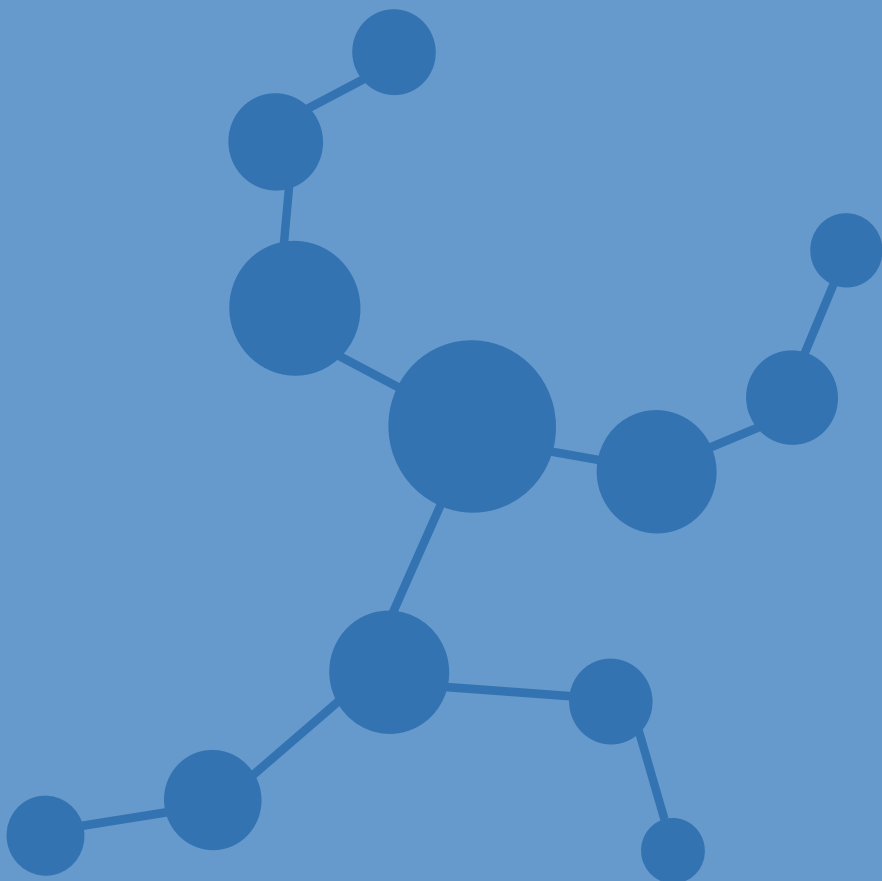
Scientix has undoubtedly made a significant impact on teachers, their teaching practices, and consequently their students, throughout Europe, for example, by encouraging more sophisticated ways of teaching, such as inquiry-based learning, and providing access

to interesting resources in teachers' national languages. Besides, events organised by the Scientix team are consistently praised for their professionalism and friendly, open atmosphere.

The expansion of the Ambassador programme is one of the key successes of Scientix. The increase in Ambassador numbers during Scientix 3 has many encouraging implications, in particular extending the reach of Scientix to more remote localities less often included in national or international projects.

Of course, there are still some challenges for Scientix to work on and Scientix is proud to announce that it will keep working on growing its community for another three years and will continue to support STEM education projects and resources. With the support of the European Commission, Scientix will continue to promote quality science education via its various channels of communication, its training opportunities and its networking events, helping teachers to inspire young minds to study and understand STEM but also to consider careers within them.





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