Go-Lab

Global Online Science Labs for Inquiry Learning at School

Collaborative Project in European Union's Seventh Framework Programme

Grant Agreement no. 317601

Deliverable 7.1

Pilot Sample profile – V1

Editors	Xenia Lauritsen (EUN)
	Evita Tasiopoulou (EUN)

Date	30 April 2014
Dissemination Level	Public
Status	Final

The Go-Lab Consortium

Beneficiary Number	Beneficiary name	Beneficiary short name	Country
1	University Twente	UT	The Netherlands
2	Ellinogermaniki Agogi Scholi Panagea Savva AE	EA	Greece
3	École Polytechnique Fédérale de Lausanne	EPFL	Switzerland
4	EUN Partnership AISBL	EUN	Belgium
5	IMC AG	IMC	Germany
6	Reseau Menon E.E.I.G.	MENON	Belgium
7	Universidad Nacional de Educación a Distancia	UNED	Spain
8	University of Leicester	ULEIC	United Kingdom
9	University of Cyprus	UCY	Cyprus
10	Universität Duisburg-Essen	UDE	Germany
11	Centre for Research and Technology Hellas	CERTH	Greece
12	Universidad de la Iglesia de Deusto	UDEUSTO	Spain
13	Fachhochschule Kärnten – Gemeinnützige Privatstiftung	CUAS	Austria
14	Tartu Ulikool	UTE	Estonia
15	European Organization for Nuclear Research	CERN	Switzerland
16	European Space Agency	ESA	France
17	University of Glamorgan	UoG	United Kingdom
18	Institute of Accelerating Systems and Applications	IASA	Greece
19	Núcleo Interactivo de Astronomia	NUCLIO	Portugal

Contributors

Name	Institution
Evita Tasiopoulou	EUN
Xenia Lauritsen	EUN
Georgios Mavromanolakis	EA
Amir Mujkanovic	CUAS
Urmas Heinaste	UTE
Olga Dziabenko	DEUSTO
Algelos Alexopoulos	CERN
Constantinos Manoli	UCY
Sven Manske	UDE
Rosa Doran	NUCLIO
Fraser Lewis	UOG
Henny Leemkuil	UT
Zacharias Zacharia	UCY
Panagiotis Zervas (peer review)	CERTH
Diana Dikke (peer review)	IMC

Legal Notices

Executive Summary

The aim of this public deliverable is to provide its readers with a clear insight on the methodology and organisational structure of the Go-Lab Pilot and the selection process of the participating Go-Lab Pilot Schools. While the process was launched at the end of 2013, collaboration with teachers has already started from September 2013 in preparation of the initial project activities. As the result of these preparation activities, 85 schools have been pre-selected by the National Coordinators already in this early phase. After the launch of the Call for Go-Lab Pilot Schools, the number of applications has reached more than 400 schools in all pilot countries.

The selection of Pilot Schools to participate in the Go-Lab implementation activities is the result of a carefully organised selection process. The final procedures and selection criteria of the Pilot Schools described in this document is the result of a series of meetings with the top management and the National Coordinators of the Go-Lab project. The reaction of the school and teachers communities around Europe and beyond has been very encouraging providing us with great numbers and a pool of motivated teachers that will assist us in the further development of the Go-Lab interventions.

Section 2 of this deliverable “Organisation of Go-Lab Pilot activities” represents the aims and goals of these activities as well as organisation of work within the Go-Lab Consortium.

In Section 3 “Pilot Phase A: methodology”, we are looking into the tasks that the selected Pilot Schools were asked to carry out as well as the selection criteria the consortium defined related to both schools and teachers. The organisation and dissemination of the Call for Go-Lab Pilot Schools is also extensively explained, while information is also provided regarding the first implementation steps and the ways teachers/schools have been invited to contribute to the whole process.

In Section 4 “Pilot Phase A: selected schools”, the full lists of the selected Pilot Schools per country are provided. In the majority of countries the National Coordinators have decided to involve more teachers than the initial plan has foreseen, so a total on 154 teachers are participating in Phase A, in place of 100.

In Section 5 “Pilot Schools sample profiles” and in the form of good practice, we can see the profiles of thirty Go-Lab Pilot Schools including information about their infrastructure and teachers’ characteristics. All information and insights have been provided by the Pilot Schools and their teachers.

Table of Contents

1 Introduction

The aim of the Go-Lab Pilot activities is to implement the Go-Lab inquiry scenarios (test the Inquiry Learning Spaces based on the to Go-Lab inquiry cycle) at a large European scale. The project will be implemented in a total amount of 1000 schools in Austria, Belgium, Bulgaria, Cyprus, Estonia, Germany, Greece, Italy, Netherlands, Poland, Portugal, Romania, Spain, Switzerland and UK. The designed Go-Lab inquiry learning cycle and scenarios will be treated as case studies and will be tested in real conditions at the pilot sites. Active teachers and students engagement is crucial to ensure that each Go-Lab learning tool is planned and developed effectively.

In this perspective, this deliverable provides an overview of the workflow and development leading to the set-up, selection and coordination of the Go-Lab three Pilot phases. The deliverable describes the following tasks carried out in details:

- The identification and clarification of the Go-Lab Pilot School objectives;
- The identification of Pilot teachers tasks and tools to be used;
- The set-up of the Pilot School selection criteria;
- The development of the Call for Go-Lab Pilot Schools
- The efforts carried out to publish and disseminate the Call for Go-Lab Pilot Schools to support WP7 tasks;
- The selection of the Go-Lab Pilot Schools for the Pilot Phase A;
- The authorisation of Pilot Schools by the relevant Ministries of Education (MoEs);
- Creation of Pilot Schools sample profiles to describe “ideal” Go-Lab Pilot schools.

The first approach to form and organise the contribution of Go-Lab Pilot Schools was to identify a profile of the Pilot Schools the project wished to target. This gave the consortium a clear insight on the profiles of schools which can contribute to the finalisation of schools/teachers requirements and selection criteria. In this way, partners formed an idea on the qualities, characteristics and capacities that an “ideal” Go-Lab Pilot School will need to have in order to fulfil its tasks and constructively contribute and participate in the project. The call for teachers became available in December 2013 and resulted in a final list of 154 participating Pilot Schools for Go-Lab Pilot Phase A.

2 Organisation of Go-Lab Pilot activities

As one can see in Figure 1. Go-Lab Pilot Schools summative distribution", Go-Lab Pilot Schools will be selected in course of three (3) different stages while the number of involved schools is also gradually increasing.

2.1 Aims and goals

In Phase I and according to the Description of Work (DoW) 100 schools had to be selected to take part in the Pilot activities. The distribution of schools for the three Pilot phases among the partner countries can be found in Figure 1. Go-Lab Pilot Schools .

Country	Target Nof Schools	Pilots – Phase A	Pilots – Phase B	Pilots – Phase C
Netherlands	40	4	16	20
Cyprus	40	4	16	20
Germany	100	10	40	50
Spain	60	6	24	30
Austria	100	10	40	50
Estonia	40	4	16	20
Switzerland	70	7	28	35
UK	70	7	28	35
Portugal	100	10	40	50
Greece Bulgaria Romania	220	22	88	110
Belgium Poland Italy	160	16	64	80
total	**1000**	**100**	**400**	**500**

Figure 1. Go-Lab Pilot Schools summative distribution per country

Before the selection was launched, partners had started identifying within their networks teachers and schools sharing a special interest in the use and application of online laboratories. At that stage, the consortium managed to identify 85 interested schools. The selection of these schools was in no way definitive or binding to the schools themselves. Despite the fact that teachers expressed their interest in participating in the project and partners remained in contact with them and updated them on project's progress, their official interest to the Go-Lab Pilot activities was not taken into account before they had responded to the open Call for Go-Lab Pilot Schools. Moreover, for certain partners (i.e., European Schoolnet) the selected eligible schools could not be officially declared until the Ministries of Education (MoEs) have approved their participation. More information regarding this issue is provided in Section 3.6 "Approval by the Ministries of Education (MoEs)".

2.2 The consortium task division

The schools are trained and informed about the Go-Lab activities through their national Go-Lab coordinator. The National Coordinators are consortium members that have been selected on the basis of their experience of work with schools and access to relevant school networks and dissemination channels. This way we ensure the full use of the consortium's resources in the involved European countries and reaching the targeted amount of schools (illustrated in Figure 1. Go-Lab Pilot Schools summative distribution per country").

The composition, launch, implementation and dissemination of the Call for Go-Lab Pilot Schools, have been coordinated and implemented with the contribution and support of different work packages (WPs) and partners. More specifically:

- **WP7:** Under the coordination of European Schoolnet (EUN) and with the support of all WP7 partners plus WP9, the structure and content of the Call have been formalised.
- **WP3, WP6 and WP8:** All work packages have contributed to the composition of teachers' tasks by providing information on their requirements and respective needs of teachers' input.
- **WP9:** IMC has worked closely with European Schoolnet and the WP7 partners on the structure and online presentation of the Call as well as on its dissemination through project's and other related media and online channels.

The list on National Go-Lab Coordinators (NCs) per country can be found below:

Austria	**Amir Mujkanovic (d.garbizutin@fh-kaernten.at)**
Belgium	Evita Tasiopoulou (evita.tasiopoulou@eun.org)
Bulgaria	Georgios Mavromanolakis (gmavroma@ea.gr)
Cyprus	Zacharias Zacharia (zach@ucy.ac.cy)
Estonia	Margus Pedaste (Margus.Pedaste@ut.ee)
Germany	Sven Manske (manske@collide.info)
Greece	Georgios Mavromanolakis (gmavroma@ea.gr)
Italy	Evita Tasiopoulou (evita.tasiopoulou@eun.org)
Poland	Evita Tasiopoulou (evita.tasiopoulou@eun.org)
Portugal	Rosa Doran (rosa.doran@nuclio.pt)
Romania	Georgios Mavromanolakis (gmavroma@ea.gr)
Spain	Olga Dziabenko (olga.dziabenko@deusto.es)
Switzerland	Angelos Alexopoulos (angelos.alexopoulos@cern.ch)
The Netherlands	Henny Leemkuil (h.h.leemkuil@utwente.nl)
United Kingdom	Fraser Lewis (fraser.lewis@southwales.ac.uk)

Table 1. Go-Lab National Coordinators (NCs)

The task division made between the 15 countries is shown in Figure 2. Go-Lab National Coordinators". As it is made evident, some National Coordinators are responsible for more

than one (1) country due to their resources, established networks and experience to reach schools and teachers in the specific countries.

Country	National Coordinator
Netherlands	UT
Cyprus	UCY
Germany	UDE
Spain	UD
Austria	CUAS
Estonia	UTE
Switzerland	CERN
UK	UOG
Portugal	NUCLIO
Greece Bulgaria Romania	EA
Belgium Poland Italy	EUN

Figure 2. Go-Lab National Coordinators

3 Pilot Phase A: methodology

The methodology to structure the Pilot activities is based on a set of goals, principles and actions that have helped define responsibilities, actions, quality and unify efforts done to train the participating schools in a relevant and successful way. This means that the methodology serves as a structure to foster successful conduct of pilot school activities for 1000 European schools.

To ensure quality we set up:

a. Criteria to ensure the selected schools have a relevant profile and are interested in the tools and knowledge provided by Go-Lab and

b. the **National Coordinators** who are able to engage schools and to coordinate and conduct training that can produce useful feedback on the developed Go-Lab tools and teaching methodology (to further improve Go-Lab inquiry online science learning resources for schools).

Furthermore, each pilot phase is organised around a set of actions, which is illustrated in Figure 3. Selection procedure for Go-Lab schools"

Step 1. Each pilot phase starts with the launch of a call for Pilot Schools followed by
Step 2. A selection of relevant applying schools;
Step 3. The selection is announced to the relevant MoEs to clarify the selection process and this way making sure that appropriate authorisations are in place;
Step 4. The selected and approved schools are informed and officially invited to participate in the pilot activities.

The Pilot Schools' feedback and suggested adjustments to Go-Lab tools and methodology will be integrated into the project and lead to a new and more refined round of the Go-Lab calls for Pilot Schools.

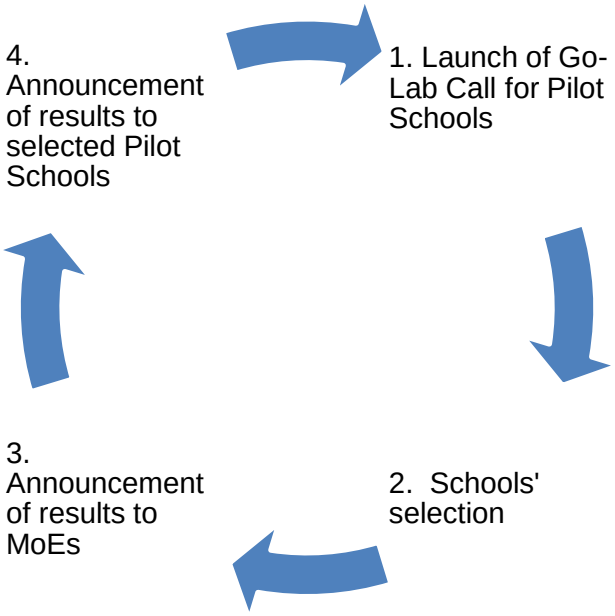


Figure 3. Selection procedure for Go-Lab schools

In more details the specific principles and actions set to conduct pilot school activities are identified as the following steps:

1. Definition of tasks of the Go-Lab Pilot Schools for Pilot Phase A;
2. Definition of principles, which are teacher and school selection criteria;
3. Pre-Pilot phase: preparation activities;
4. Call for Go-Lab Pilot Schools;
5. Selection of Phase A Go-Lab Pilot Schools;
6. Validation of selected Go-Lab Pilot Schools for Pilot Phase A by the respective MoEs;
7. Announcement of selected Go-Lab Pilot Schools;
8. Conduction of Pilot activities;
9. Evaluation and feedback to the project.

At the beginning of the project Go-Lab tools and activities have not yet been developed enough to involve schools in the use and evaluation of these tools. Still it was important to start establishing contacts with schools to reach sufficient Pilot Schools participation at a later phase. Therefore, our initial communication and relationship with potential Go-Lab Pilot Schools was approached informally through the respective National Coordinators (as listed in Figure 1. Go-Lab Pilot Schools summative distribution per country") on an individual basis.

3.1 Defined main tasks of the Go-Lab Pilot Schools

Before the launch of the Call for Go-Lab Pilot Schools, the WP7 partners have agreed on a set of tasks that the Go-Lab Pilot Schools for Phase A would be asked to perform in order to test the provided tools and activities plus measuring their efficiency and impact. At this point, it is worth pointing out that these tasks are relevant only for Phase A. As soon as the Go-Lab interventions will reach their next level of maturity, tasks will be revised for Phase B in order to target the updated tools and outcomes.

The identified tasks of the Go-Lab Pilot Schools for Phase A are:

a. **Create a learning scenario** that teachers will use and test with their students;
b. **Implement** and **evaluate** a minimum of one (1) Go-Lab activities within the Go-Lab environment. The evaluation consists of teachers and their pupils filling in the indicated questionnaires at appropriate times. A mixed approach might be followed in this case: Teachers can be asked to create an activity on their own using one of the Go-Lab labs and then test and evaluate it plus test and evaluate one (1) existing scenario;
c. Use the Go-Lab Portal to **search for labs** and relevant materials;
d. Contribute to **dissemination activities** (e.g., getting one of their science team colleagues using a Go-Lab activity and spreading out news regarding the Go-Lab competition);
e. Participate in a minimum of one (1) **chat/webinar** with a laboratory provider.

3.2 Selection criteria of Pilot teachers and schools

The selection criteria for the **Go-Lab Pilot teachers** for Pilot Phase A are the following:

1. **Basic knowledge of English (understanding, reading):** Despite the fact that the evaluation questionnaires and numerous of the Go-Lab activities will be available in their national language (translations will be provided by the National Coordinators), teachers should be in a position to understand and communicate in English in order to collaborate with other teachers from other partner countries, project partners and attend Go-Lab organised international events.
2. **Science, technology, engineering, mathematics, physics, chemistry, biology, or primary school teachers**: Due to the strategic nature of the project, teachers are required to be in a teaching position related to one or more of the subjects mentioned above. In this way, they will be able to fully comprehend and use the Go-Lab Portal. Teachers from other disciplines are also encouraged to participate in the project and investigate further its interdisciplinary dimension.
3. **Interest in the use of online laboratories:** While responding to the Call for Go-Lab Pilot Schools, teachers will be asked to express in written their interest on the use of online laboratories plus elaborate on what kind of skills and experience they wish to acquire during their involvement in Go-Lab.
4. **Interest in learning and sharing experiences and good practices**: Teachers will also be asked to demonstrate their interest on collaborative activities and learning as well as using pedagogical methods including any previous positive experience and lessons they have acquired by their involvement in other European projects.

Same as with tasks, at this point it is worth pointing out that these criteria are relevant only for Phase A. As soon as the Go-Lab interventions will reach their next level of maturity, and before the launch of the updated Call for Phase B, selection criteria will be revised in order to target specific tools and outcomes.

Go-Lab Pilot Schools will need to have a **good internet connection** both in terms of stability and available bandwidth. Despite the fact that effort is being made into choosing and using online laboratories with minimum operational and technical requirements, many online and remote laboratories have specific requirements that need to be fulfilled before users are in a position to fully use and experience them.
Frequent access to technical infrastructure (i.e., PCs, computer rooms, etc.) is also very important since classes and teachers need to be able to regularly use the Portal. In this way, teachers will be in a position to integrate the tools to their day to day teaching and fully evaluate the offered activities.

3.3 Pre-Pilot phase: preparation activities

The first year of the project helped define the general purpose of the workshops and presentations for teachers. The consortium distinguished and defined three types of workshops, namely, **I. Visionary Workshops** (year 1), **II. Practice Reflection Workshops** (years 2 and 3) and I**II. Summative Workshops** (year 4). These workshops are decentralised activities to be run in each country that participates in the large-scale Piloting, in cooperation with National Coordinators.

1. The first cycle of workshops was a series of **"Visionary Workshops"** (following a three-step process) organised locally in the participating countries between M3-M8. Visionary Workshops were arranged ad-hoc by National Coordinators (NCs) or collocated with other relevant events (e.g., exhibition, training event, conference). The Visionary Workshops provided direct input from the stakeholders (teachers, teacher trainers, school administrators, curriculum developers, policy makers, etc.) regarding the first ideas of Go-Lab.
   As it was mentioned earlier, the first period of approaching teachers was quite challenging due to the lack of concrete tools that partners could use in order to demonstrate and provide a concrete impression of what the Go-Lab environment will be like. The Visionary Workshops had the purpose of collecting stakeholders' views on the future of science education, establishing a dialogue and contributing to dissemination of information on the Go-Lab project approach, to the recruitment of schools and teachers that could accept to participate in the large-scale Pilots and, of course, to the collection of early stakeholders' feedback on the Go-Lab approach.
2. The second cycle of workshops are "**Practice Reflection Workshops"** that will be a fundamental source of input from experience and will substantially contribute to the project's research achievements such as teachers' needs, perspectives etc. (Validation and Evaluation). In the second and third project years participatory activities will have "formative evaluation" as the main characteristic. By preparing reflection on the parallel piloting activities open to potential "newcomer" schools and to policy makers, we will be able to consider the transferability and scalability issues associated to the implementation of the Go-Lab approach.
3. The third cycle, **"Summative Workshops",** will run after the last implementation cycle in the pilot sites. They will mainly serve as reporting events from participants to the project representatives and national stakeholders, including reflections on next steps necessary for the full exploitation of the project results in national school systems.

The following specifications are intended as a guidance tool for National Coordinators in perspective of guaranteeing sufficient homogeneity in the organisation of activities and reporting of results. However, the specificities of national, local and institutional contexts involved are considered to allow a certain degree of flexibility in the implementation of activities. The proposed format is a half-day workshop articulated in 3 sessions:

Phase A :	• To introduce the project and the participants • To introduce an example - "best practice" in the application of remote labs • To explore the future (brainstorming, open discussion, space for provocatory and divergent hypotheses)
Phase B:	• To design their own scenario
Phase C:	• To discuss key issues to be considered further and inputs for project development • To enlarge the national stakeholders constituency: identifying institutions, schools and people who should be involved to join the Community

Figure 4. Workshop categories

On average 25 participants are expected in each workshop, a threshold level of 15 participants should be achieved in all events, while the participation of more than 40 stakeholders is not recommended in this kind of workshops.
As complementary activity to the workshops, an online survey, will be set up along the lifecycle of the project as a way to involve large number of stakeholders, not necessarily based in the countries and places where the large-scale Piloting will take place. This aims to reflect and envisage the effective integration of the online labs usage in daily school practice.
A short report should be produced within two weeks from the date of each workshop. The report is produced by the partner responsible for the event and if necessary with the support of National Coordinators, in order to overcome possible language barriers. The report will contain a list of participants including their institutional affiliation and their contact details together with specifications on the participatory activities.

3.4 Call for Go-Lab Pilot Schools

As illustrated in Figure 3. Selection procedure for Go-Lab schools" (Section 3) the Call for Go-Lab Pilot Schools is organised in 4 steps:

Step 1. Launch of a call for Pilot Schools;
Step 2. Selection of relevant applying schools;
Step 3. Announcement to the relevant MoEs;
Step 4. Informing the selected schools about their participation.

For Pilot Phase A, the call for Pilot Schools was launched in December 2013. Go-Lab published the Call for Go-Lab Pilot Schools inviting teachers to participate in Go-Lab with their classes. The Call was managed centrally and included an introduction to the project, its aims and participating partners as well as detailed explanations on teachers' tasks, benefits, dates and number of days teachers are expected to spend on the project by the end of Phase A. Translation of the call was optional. Some partners chose to translate the call into national languages in order to reach more teachers, while others decided to leave the call in English, given that the Go-Lab Pilot school activities required the participation of teachers with a basic knowledge of English.
Setting up the call was organised between EUN (content provider and collection of applications) and IMC who was responsible for restructuring the website and publishing the Call and integrating translations in social media.

A screenshot of the "Call for Schools"[1] page on the project website can be found on the next page:

[1] http://www.go-lab-project.eu/call-for-schools

Figure 5. Go-Lab Call for Pilot Schools page

Depending on their country of residence and by clicking on the respective flag, schools are redirected to the part of the Call managed by the respective National Coordinator, which includes additional information and the actual application form. An example of a country page is represented below for the country of Italy.

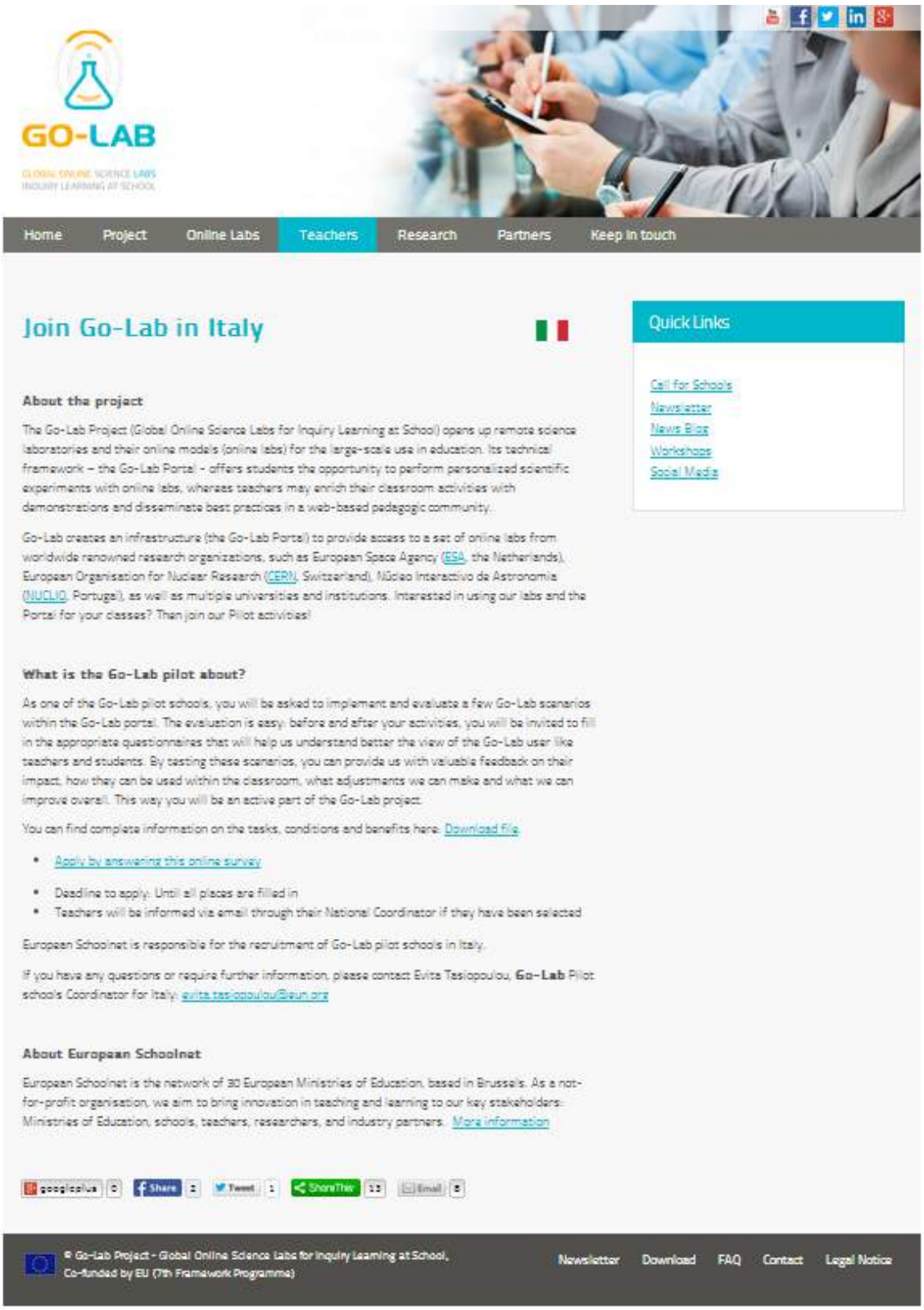


Figure 6. Go-Lab Call for Pilot Schools – Italy

Figure 7. Go-Lab school application form illustrates the Go-Lab school application form which includes limited information, focusing on schools' demographics and teachers' teaching subjects and age of their students.

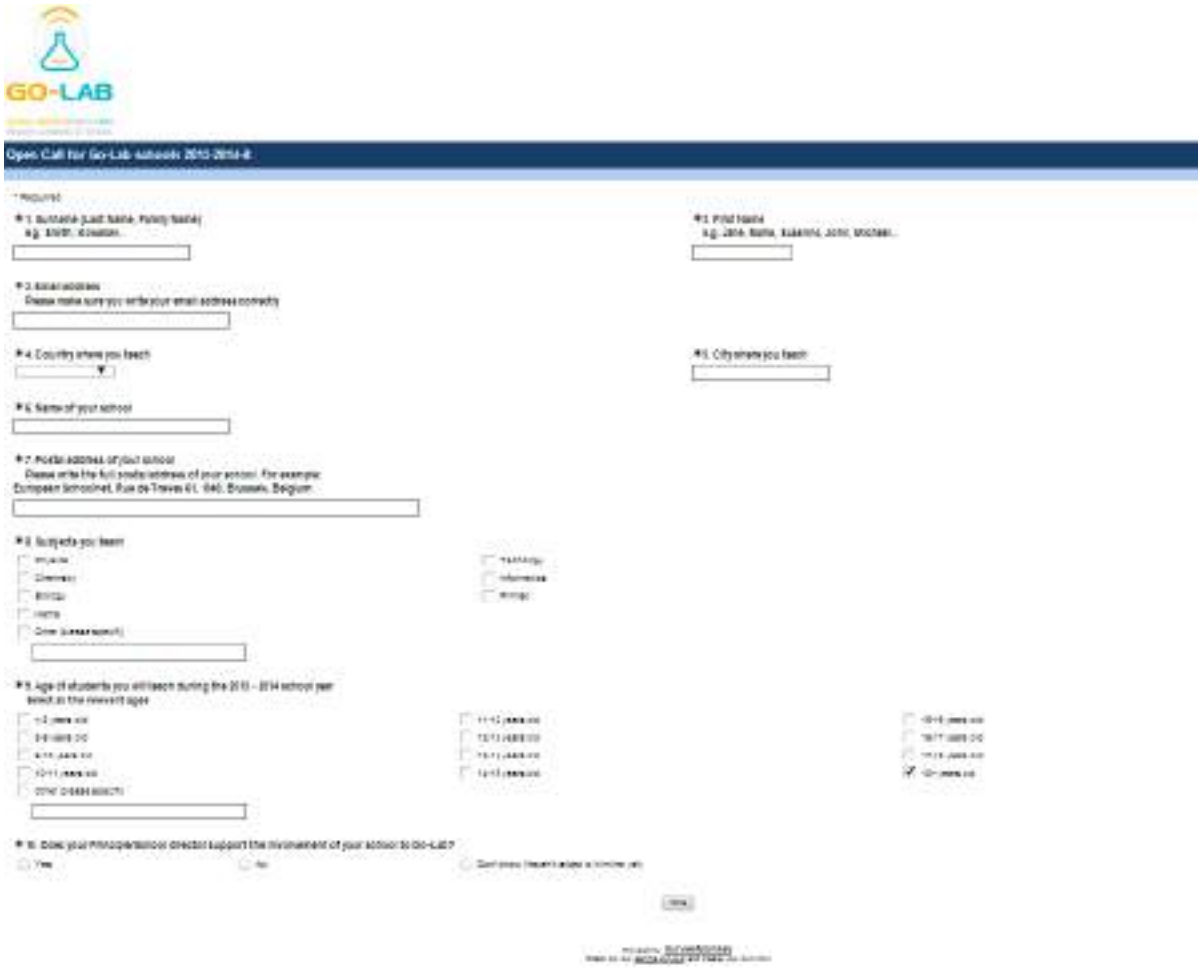


Figure 7. Go-Lab school application form

The Call was published on the Go-Lab portal project website (http://www.go-lab-project.eu/) and was also disseminated through various communication channels (see some examples in the figures on the next page):

- Newsletters (Go-Lab Newsletter, EUN Teachers' Newsletter, ITEC, Scientix)
- Partners' websites and contacts
- Partners' and project's social media channels (Facebook, Twitter)

Dissemination actions targeted mainly schools and teachers of all disciplines, with extra focus given on Science teachers. An indication of the Call's outreach can be found below:

Channel	URL	Timeframe	Target audience (followers, hits)
EUN website	http://www.eun.org/	December 2013 – March 2014	27,000 unique visitors
EUN Facebook page	https://www.facebook.com/european.schoolnet	n/a	5,571 followers

Scientix website	http://scientix.eu/	December 2013 – March 2014	17,115 unique visitors
Scientix Twitter account	https://twitter.com/scientix_eu	n/a	1,680 followers
EUN Teachers' Newsletter	http://www.eun.org/news/newsletters	n/a	4,000 subscribers
Go-Lab website	http://www.go-lab-project.eu/	December 2013 – March 2014	6,948 unique visitors
Go-Lab Newsletter	http://www.go-lab-project.eu/sites/default/files/files/download_material/file/Newsletter%202014_2.pdf	20th December 2013	53 project external recipients
Go-Lab Facebook page	https://www.facebook.com/groups/golab.project	n/a	181 project external followers
Go-Lab Twitter account	https://twitter.com/GoLabProject	n/a	121 project external followers

Table 2. Dissemination for "Call for Go-Lab Pilot schools"

Figure 8. Scientix news about Go-Lab Call for Pilot Schools

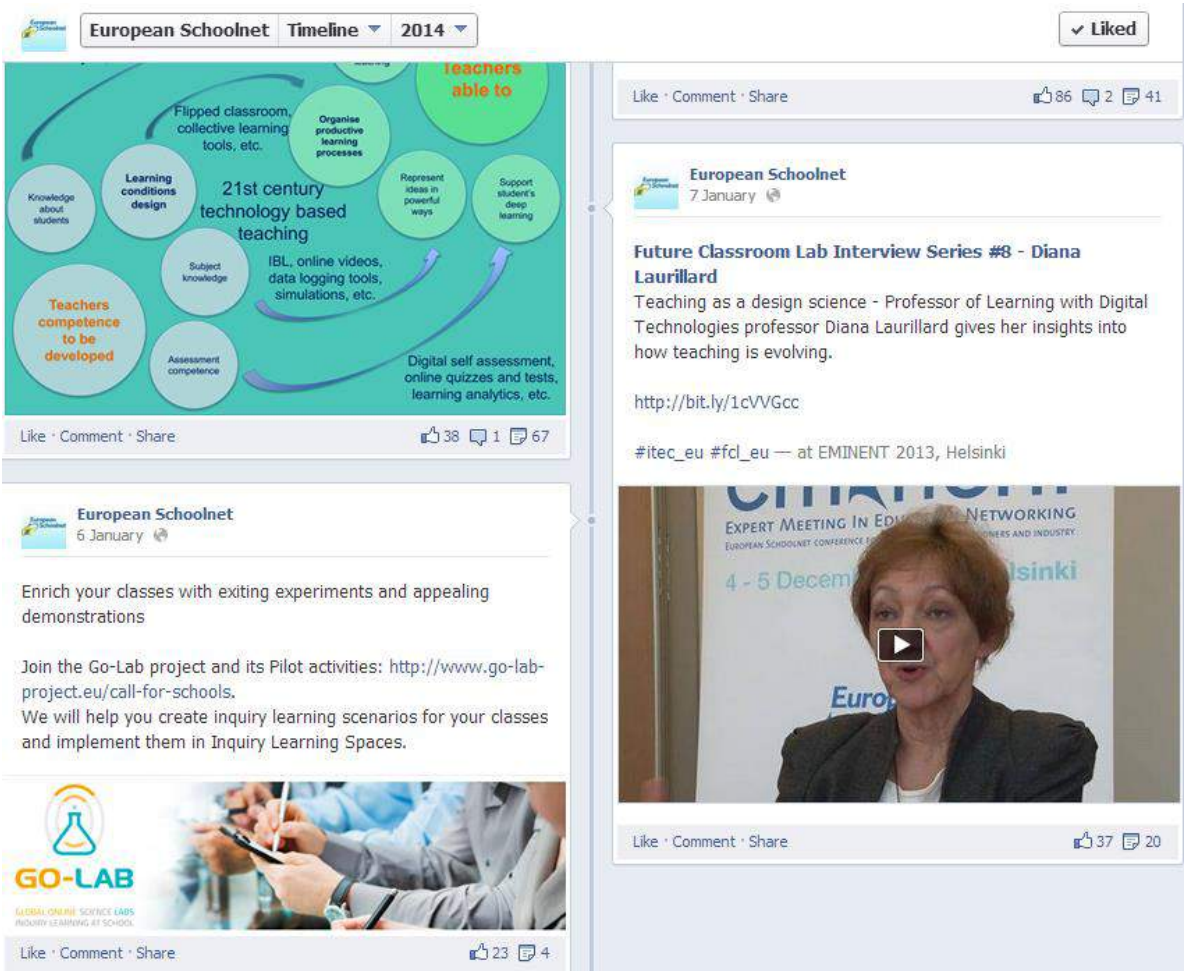


Figure 9. European Schoolnet's Facebook page advertising the Go-Lab Call for Pilot Schools

The overall response to the call and the evolution of the applications between its launch in December 2013 and March 2014 has been quite impressive. Only one (1) month after the launch of the Call and right after the Christmas break, more than 150 teachers have filled in the application form. Their steady increase has continued throughout the following months, providing a total of 437 applications at the end of March 2014. The increase of the applications number can be seen more clearly in the graph below:

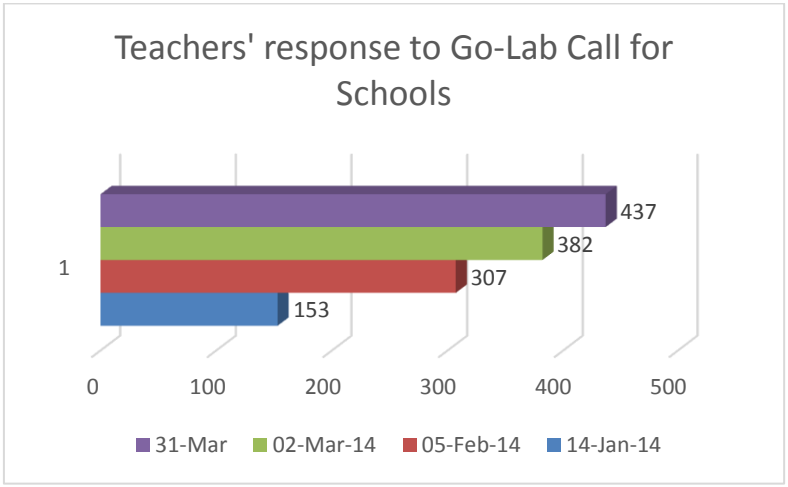


Figure 10. Teachers' response to Go-Lab Call for Schools (cumulative values)

3.5 Selection of Go-Lab Pilot Schools

The selection of Go-Lab Pilot Schools for Phase A was also done in accordance with the procedure illustrated in Figure 3 (Step 2):
National Coordinators have selected with the support of EUN the most suitable candidates based on the set of criteria that was defined within the consortium (see Section 3.2) and the information submitted by the teachers and schools.
EUN provided the National Coordinators direct access to the data of the countries they were responsible for: The schools filled in applications provided through a Survey Monkey form (Figure 7. Go-Lab school application form"), allowing the National Coordinators to follow the process and monitor the collected applications individually, assessing if further actions needed to be taken in order to reach the wished amount of Pilot Schools.

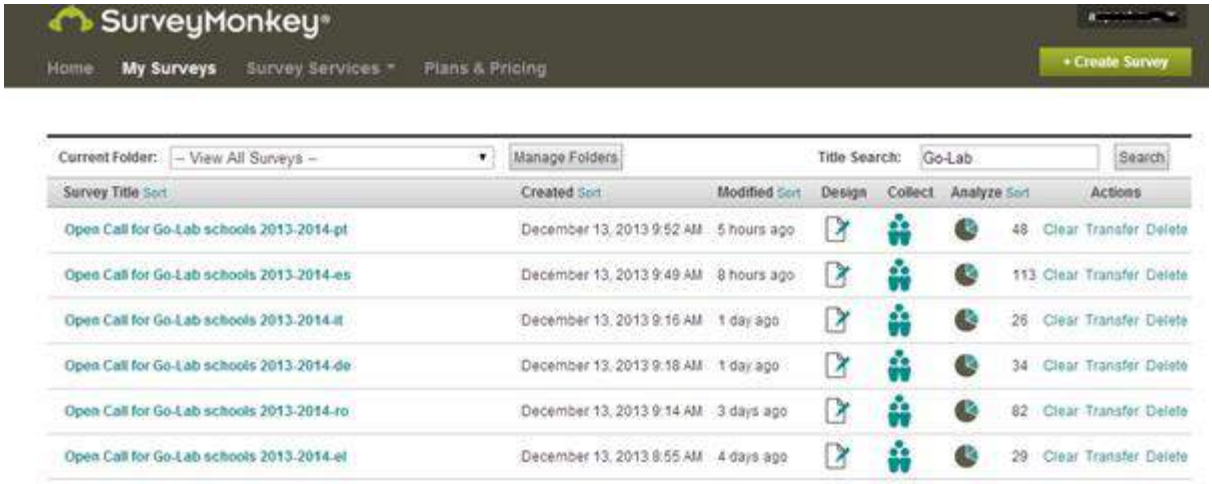


Figure 11. View of filled in survey application in some of the Go-Lab countries

3.6 Approval by the Ministries of Education (MoEs)

As described in Figure 3 (Step 3), the selection of schools should be followed by *the announcement of results to respective MoEs.* According to the DoW (Task 7.2), the engagement of schools as Pilot sites in Go-Lab needs to be clarified with the relevant Ministries of Education in order to ensure buy-in from policy makers and that appropriate authorisations are in place.

European Schoolnet is governed by the MoEs[2] who are full members of the organisation. Ministries represent the decision-making body of European Schoolnet through a number of groups, namely:

- The **Steering Committee**, which is responsible for the political and strategic orientation of European Schoolnet. It adopts the work programme and the budget of the organization;
- The **Board of Directors** which provides input regarding the administrative and financial operations.

For Pilot Phase A, after the selection of the Pilot Schools was completed, European Schoolnet prepared a full memo to the MoEs, explaining the project, its aims, and teachers' tasks and finally including all chosen schools.

The MoEs have been instructed to take a week to go through their respective lists and get back to EUN with their approval or in case of problems or questions.

The Memo can be found in" Annex I – Memo to MoEs".

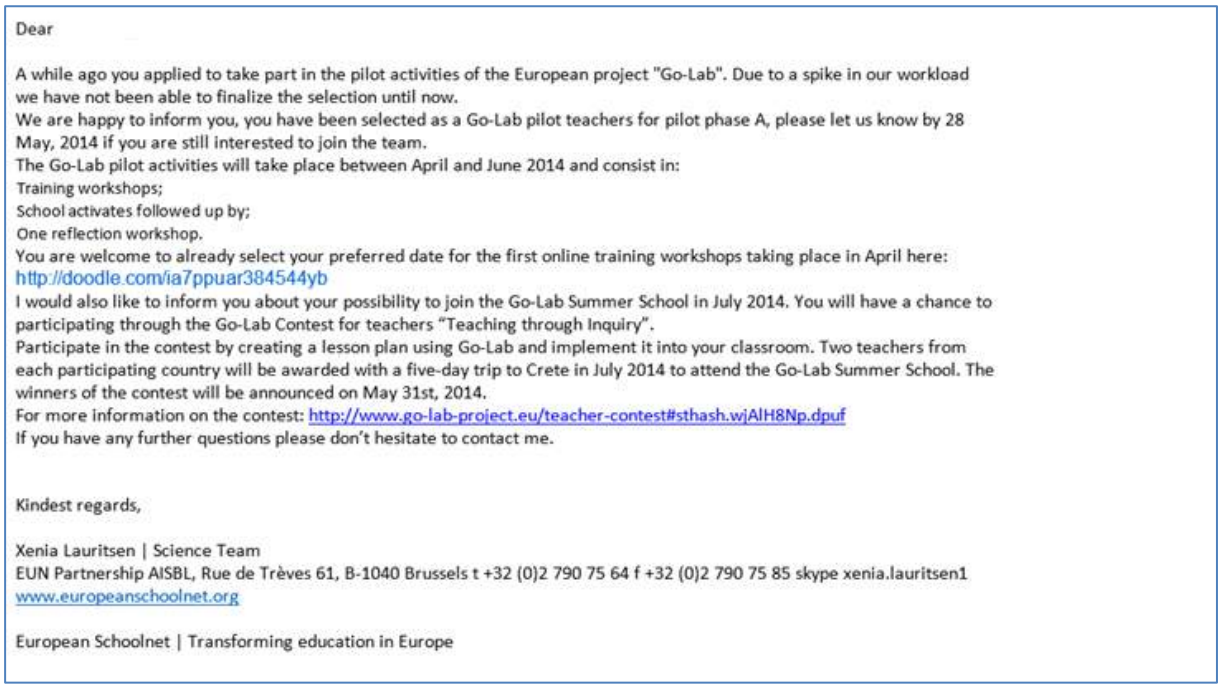
3.7 Announcement of selected Go-Lab Pilot Schools

As also illustrated in Figure 3 (Step 4) the announcement of results to selected schools has been made after the MoEs approval.

For Phase A, National Coordinators contacted all candidates via e-mail and informed them on whether they have succeeded to participate in the Pilot Phase A. Schools that are not selected in the first Pilot Phase Are given the chance to participate in a Pilot phase B or C (see Section 3.1).

Figure 12 is an example of an announcement letter made to a participating teacher and his/her school:

[2] http://www.eun.org/about/members



Dear

A while ago you applied to take part in the pilot activities of the European project "Go-Lab". Due to a spike in our workload we have not been able to finalize the selection until now.
We are happy to inform you, you have been selected as a Go-Lab pilot teachers for pilot phase A, please let us know by 28 May, 2014 if you are still interested to join the team.
The Go-Lab pilot activities will take place between April and June 2014 and consist in:
Training workshops;
School activates followed up by;
One reflection workshop.
You are welcome to already select your preferred date for the first online training workshops taking place in April here:
http://doodle.com/ia7ppuar384544yb
I would also like to inform you about your possibility to join the Go-Lab Summer School in July 2014. You will have a chance to participating through the Go-Lab Contest for teachers "Teaching through Inquiry".
Participate in the contest by creating a lesson plan using Go-Lab and implement it into your classroom. Two teachers from each participating country will be awarded with a five-day trip to Crete in July 2014 to attend the Go-Lab Summer School. The winners of the contest will be announced on May 31st, 2014.
For more information on the contest: http://www.go-lab-project.eu/teacher-contest#sthash.wjAlH8Np.dpuf
If you have any further questions please don't hesitate to contact me.

Kindest regards,

Xenia Lauritsen | Science Team
EUN Partnership AISBL, Rue de Trèves 61, B-1040 Brussels t +32 (0)2 790 75 64 f +32 (0)2 790 75 85 skype xenia.lauritsen1
www.europeanschoolnet.org

European Schoolnet | Transforming education in Europe

Figure 12. Example of a school selection announcement sent by EUN

3.8 Conduction of Pilot activities

The developed teacher training materials for each pilot Phase Are centralised in a dedicated folder on the Graasp, to ensure the National Coordinators have an overview and access to the materials needed to conduct the pilot training and activities.
The National Coordinators are provided with the necessary support and training to be able to conduct the pilot activities. As the beginning of their activities in February 2014, a 2-day training has been held in Brussels where representatives from all WPs, prepared NCs for their upcoming tasks and interaction with schools. Moreover, on bi-weekly basis, online meetings are being held between the WP7 leader and the NCs in order to keep track on their progress and respond to any possible questions. The Go-Lab Technical cluster partners that are involved in developing the Go-Lab Inquiry Learning Spaces and Graasp facilities are available to give online training and ready to sort out any doubts at short notice.

3.9 Evaluation and feedback to the project.

The Go-Lab Pilot activities have the purpose of exploring stakeholders' opinions and ideas that can help improve the Go-Lab overall outcome. Therefore, the Pilot activities are also a subject to the collection of feedback from the participating teachers and students.
The feedback is collected through online surveys. The data is anonymous and processed in batches, so individuals cannot be identified.

Visionary Workshops

The first cycle of workshops, Visionary Workshops, was organised locally in the participating countries between March - June 2013, in parallel with the process of the development of the Go-Lab pedagogical framework. The Visionary Workshops provided direct input from the stakeholders (teachers and teachers' trainers, students, school administrators, curriculum developers, policy makers, etc.) on the Go-Lab ideas.

The questions that participating teachers have focused on were mainly about the use of remote and virtual laboratories (online labs) in classes and out-of-class activities. The questionnaire consisted of several parts eliciting data about the demographics, use of tools for learning, experience with online labs and opinions about inquiry-based learning.

Practice Reflection workshops

The Practice Reflection workshops will further support the processes of designing the proposed approach with input and knowledge gained through teachers' experiences during this pre-implementation phase.

During the Practice Reflection workshops data for different work packages will be collected. "WP3 Participatory design" will aim to collect information on how teachers perceive the usefulness of ILS and how usable the current design is.

"WP8 Validation and Evaluation" will aim to validate the questionnaires it is planning to use with teachers and students from the beginning of Phase B.

4 Pilot Phase A: selected schools

The final distribution of schools per country is as follows:

Country	No of schools
Austria	12
Belgium	7
Bulgaria	5
Cyprus	4
Estonia	13
Germany	13
Greece	26
Italy	12
Netherland	3
Poland	3
Portugal	24
Romania	10
Spain	7
Switzerland	7
United Kingdom	8
Total	**154**

Figure 13. Distribution of schools per country for Phase A

4.1 Lists of schools per country

The final lists of schools that will participate in Go-Lab Pilot Phase A, per country and in alphabetical order, can be found below:

Austria (12 schools)

	School name	City
1	Volksschule Oberwart	Oberwart/ Burgenland
2	VS Liebenfels	Liebenfels
3	Volksschule Sörg	Liebenfels
4	Hauptschule Herzogenburg, KPH Krems	Herzogenburg
5	BG Blumenstraße, Bregenz	Bregenz
6	ÖKOFIT-HS Gmünd	Gmünd
7	NMS Gaspoltshofen	Gaspoltshofen
8	BG+BRG Mattersburg	Mattersburg
9	Volksschule Sörg	Liebenfels
10	HTL Wels	Wels
11	HTL Mössingerstraße	Klagenfurt am Wörthersee
12	Volksschule Oberwart	Oberwart/ Burgenland

Belgium (7 schools)

	School name	City
13	Thomas More	Mechelen
14	Sint Augustinusinstituut	Bree
15	KTA Brakel	Brakel
16	Middenschool Geel	Geel
17	D Y Patil International School, Belgium	Aartselaar (Antwerp)
18	Campus Zenit	Turnhout
19	Institut Communal Technique Frans Fischer	Schaerbeek (Brussels

Bulgaria (5 schools)

	School name	City
20	High school of mathematics "Baba Tonka"	Ruse
21	Secondary school "Hristo Smirnenski"	Orehovitsa
22	High school "Evlogi Georgiev"	Trastenik
23	PG po KTS	Pravets
24	School "Tshvetan Radoslavov"	Sofia

Cyprus (4 schools)

	School name	City
25	Agios Stilianos, Lakatamia (΄Αγιος Στυλιανός Λακατάμεια)	Nicosia (Λευκωσία)
26	Lukeio Agiou Ioanni (Λύκειο Αγίου Ιωάννη)	Limassol (Λεμεσός)
27	Lukeio Soleas (Λύκειο Σολέας)	Limassol (Λεμεσός)
28	Lukeio Akropoleos (Λύκειο Ακροπόλεως)	Limassol (Λεμεσός)

Estonia (13 schools)

	School name	City
29	Tallinna 21.Kool	Tallinn
30	KehtnaPK	Kehtna
31	Pärnu-Jaagupi Gümnaasium	Pärnu; Pärnu-Jaagupi
32	Tallinna 21.Kool	Tallinn
33	Vormsi Lasteaed - Põhikool	Vormsi
34	Miina Härma Gümnaasium	Tartu
35	Rapla Vesiroosi Gümnaasium	Rapla
36	Kostivere Kool (in english: Kostivere School)	Kostivere

37	Loo Keskkool	Loo
38	Miina Härma Gümnaasium	Tartu
39	Puurmani Mõisakool	Puurmani
40	Tallinn European School	Tallinn
41	Tartu Loodusmaja huvikool	Tartu

Germany (13 schools)

	School name	City
42	Mittelpunkstschule Trebur	Trebur
43	IGS Alexej-von-Jawlensky	Wiesbaden
44	Greselius-Gymnasium	Bramsche
45	Realschule Achim	Achim
46	Georg-Christoph-Lichtenberg Gesamtschule	Göttingen
47	Oberschule Bomlitz	Bomlitz
48	Sekundarschule Hamborn	Duisburg
49	Realschule Hamborn 2	Duisburg
50	Städt. Mädchengymnasium Essen-Borbeck	Essen
51	Privates Don Bosco-Gymnasium	Essen
52	Realschule Benrath	Düsseldorf
53	Bischöfliche Marienschule Mönchengladbach	Mönchengladbach
54	Romain-Rolland-Gymnasium	Berlin

Greece (26 schools)

	School name	City
55	3rd Gymnasio Glyfadas (3ο Γυμνάσιο Γλυφάδας)	Glyfada (Γλυφάδα)
56	Geniko Eniaio Lykeio Sofadon (Γενικό Ενιαίο Λύκειο Σοφάδων)	Sofades, Karditsa (Σοφάδες,Καρδίτσα)
57	Platon Schools (Σχολεία Πλάτων)	Athens (Αθήνα)
58	1st Oloimero Dimotiko Sxoleio Portarias (1ο Ολοήμερο Δημοτικό Σχολείο Πορταριάς)	Portaria (Πορταριά)
59	Gymnasio – Geniko Lykeio Aristomeni (Γυμνάσιο - Γενικό Λύκειο Αριστομένη)	Aristomenis (Αριστομένης)
60	Oloimero Dimotiko Sxoleio Aggelochoriou (Ολοήμερο Δημοτικό Σχολείο Αγγελοχωρίου)	Aggelochori, Thessalonikis (Αγγελοχώρι, Θεσσαλονίκης)
61	Protipo Peiramatiko Gymnasion Agion Anargurwn (Πρότυπο Πειραματικό Γυμνάσιο Αγίων Αναργύρων)	Athens (Αθήνα)
62	2nd TEL Kalimnou (2ο ΓΕΛ Καλύμνου)	Kalimnos (Κάλυμνος)

63	Gymnasio Thermis, N. Lesvou (Γυμνάσιο Θερμής Ν. Λέσβου)	Mitilini (Μυτιλήνη)
64	Lykeio, Ellinogermaniki Agogi (Λύκειο Ελληνογερμανική Αγωγή)	Pallini Athens (Παλλήνη, Αθήνα)
65	Gymnasio, Ellinogermaniki Agogi (Γυμνάσιο Ελληνογερμανική Αγωγή)	Pallini Athens (Παλλήνη, Αθήνα)
66	Dimotiko, Ellinogermaniki Agogi (Δημοτικό Ελληνογερμανική Αγωγή)	Pallini Athens (Παλλήνη, Αθήνα)
67	Gymnasio Koutsoura Lasithiou Kritis (Γυμνάσιο Κουτσουρά Λασιθίου Κρήτης)	Ierapetra (Ιεράπετρα)
68	3rd Dimotiko Sxoleio Serrwn (3ο Δημοτικό Σχολείο Σερρών)	Serres (Σέρρες)
69	12th Gymnasio Aharnon (12ο Γυμνάσιο Αχαρνών)	Athens (Αθήνα)
70	1st Model Experimental School of Athens "Gennadio" (1ο Πειραματικό Σχολείο Αθηνών «Γεννάδιος »)	Athens (Αθήνα)
71	15ο Dimotiko Sxoleio Dramas (15ο Δημοτικό Σχολείο Δράμας)	Drama (Δράμα)
72	Lykeio Pefka (Λύκειο Πεύκας))	Thessaloniki (Θεσσαλονίκη)
73	5th Primary School of Nea Alikarnasos (5ο Δημοτικό Σχολείο Νέας Αλικαρνασού)	Iraklion (Ηράκλειο)
74	Primary school of Chrysohori Kavalas (Δημοτικό Σχολείο Χρυσοχωρίου, Καβάλας)	Kavala (Καβάλα)
75	3rd Gymnasium of Petroupolis (3ο Γυμνάσιο Πετρούπολης)	Petroupoli (Πετρούπολη)
76	87th Primary Public school intercultural education (87ο Δημοτικό Σχολείο)	Athens (Αθήνα)
77	2nd Primary School Triandrias (2ο Δημοτικό Σχολείο Τριανδρίας)	Thessaloniki (Θεσσαλονίκη)
78	5th Primary School of Alexandroupolis (5ο Δημοτικό Σχολείο Αλεξανδρούπολης)	Alexandroupolis (Αλεξανδρούπολη)
79	Highschool of Petria (Γυμνάσιο Πετριάς)	Petria (Πετριά)
80	Karatoula-Magoula Primary School (Δημοτικό Σχολείο Καρατούλας, Μαγούλα)	Karatoula Ilias (Καρατούλα Ηλίας)

Italy (12 schools)

	School name	City
81	IIS Beccaria	Carbonia
82	IIS Santorre di Santarosa	Torino
83	I.I.S.S. G.Torno	Castano Primo (province of Milan)
84	Istituto Torno	Castano Primo (province of Milan)
85	Galileo Galilei liceo scientifico	Perugia

86	IC B. Lorenzi - Fumane VR	Fumane – Verona
87	IIS Galileo Galilei	Jesi
88	Liceo Rinaldini	Ancona
89	Giovanni arpino institute	Sommariva del bosco
90	Liceo Scientifico Statale "G.Galilei"	Pescara
91	Ipia G. Plana	Torino
92	ITT Michelangelo Buonarroti	Trento

Netherlands (3 schools)

	School name	City
93	Stenden Hogeschool,	Emmen
94	Lindecollege,	Wolvega
95	C.C. Groevenbeek	Ermelo

Poland (3 schools)

	School name	City
96	III Liceum Ogolnoksztalcace im. M.Kopernika	Kalisz
97	ZS nr 77	Warsaw
98	Zespol Szkol Integracyjnych no 1	Bialystok

Portugal (24 schools)

	School name	City
99	EBS Dr. Vieira de Carvalho	Maia
100	Escola Secundária Adolfo Portela	Águeda
101	Escola João Pedro de Andrade	Ponte de Sor
102	Escola Secundária Padre António Vieira	Lisbon
103	Escola Profissional de Almada	Almada
104	Escola Secundária Dra Laura Ayres	Quarteira
105	Escola Básica e Secundária de Santa Maria	Vila do porto
106	Agrupamento de Escolas Dr. Serafim Leite	S. João da Madeira
107	Escola Secundária José Saramago – Mafra	Mafra
108	Escola Básica 2,3 D. Luís de Mendonça Furtado	Barreiro
109	Escola Secundária Ferreira Dias	Sintra
110	Agrupamento de Escolas de Infias – Vizela	Vizela
111	Escola Básica 2,3 D. Luís de Mendonça Furtado	Furtado
112	Escola Profissional de Almada	Almada

113	Escola Básica João Pedro de Andrade e a Escola Secundária de ponte de sor	Ponte de Sor
114	Agrupamento de Escolas de Vizela	Vizela
115	Odete Cotovelo, Pedro Gual - Agrupamento Dr. Serafim Leite	Leite
116	EB2,3 de Amarante	Amarante
117	Escola Secundária Maria Lamas	
118	Escola Básica 2,3 e Secundária Matilde Rosa Araújo	Araújo
119	Escola Básica 2,3 de Vilar de Andorinho	Andorinho
120	Agrupamento de escolas D. Carlos I	Sintra
121	Agrupamento de Escolas Marinhas do Sal -	Rio Maior
122	Escola Secundária de Ponte de Sor	Ponte de Sor

Romania (10 schools)

	School name	City
123	Liceul Tehnologic Vintila Bratianu	Dragomiresti Vale
124	Colegiul Tehnic Mihai Bacescu	Falticeni
125	Scoala "Constantin Parfene"	Vaslui
126	Andrei Saguna College	Brasov
127	Technological High School Teodor Diamant	Boldesti- Scaeni, Prahova
128	Colegiul National “Liviu Rebreanu”	Bistrita
129	National College Inochentie Micu Clain	Blaj
130	Gymnasium School No 190- "Marcela Penes""	Bucuresti
131	Gymnasium School No.97	Bucuresti
132	Adriana Anusca	Blaj

Spain (7 schools)

	School name	City
133	Pasaia-Lezo Lizeoa	Pasaia, Gipuzkoa
134	Pureza de María Bilbao	Bilbao
135	Centro de Formacion Somorrostro	Muskiz
136	IEFPS Don Bosco Dept. Electronica	Rentería, Gipuzkoa
137	Karbo	La Coruña
138	Colegio Urdaneta	Bilbao
139	Berritzegune Nagusia	Bilbao

Switzerland (7 schools)

	School name	City
140	Lycée des Glières	France - Annemasse
141	Gymnase Provence	Lausanne
142	HEP Vaud	Lausanne
143	Ecole Moser	Geneva
144	Diverses (doing replacements until sept 2014)	Lausanne
145	Ecole Moser	Genève
146	Collège Sismondi	Geneva

United Kingdom (8 schools)

	School name	City
147	Antrim Primary School	Antrim
148	Manchester Academy	Manchester
149	Fulneck school	Leeds
150	Pawlett Primary School	Pawlett
151	Battle Abbey School	Battle
152	Loreto Grammar School	Altrincham
153	Fairfield High School For Girls	Manchester
154	Sutton Grammar School	Sutton

4.2 Statistics

The Go-Lab Repository (https://golabz.eu) offers teaching resources in physics, chemistry, biology, mathematics, technology and informatics. In order to make sure Go-Lab's full resource capacity in all fields is well utilized by its stakeholders, it is important that the selection of teachers correspondently has the expertise to benefit and teach the diversity of teaching materials offered by the Go-Lab project. At the same time, teachers' disciplines and interests will also have an impact on the further development of Go-Lab and on selection of future online laboratories. Figure 14 represents the overall subject distribution of participating teachers.

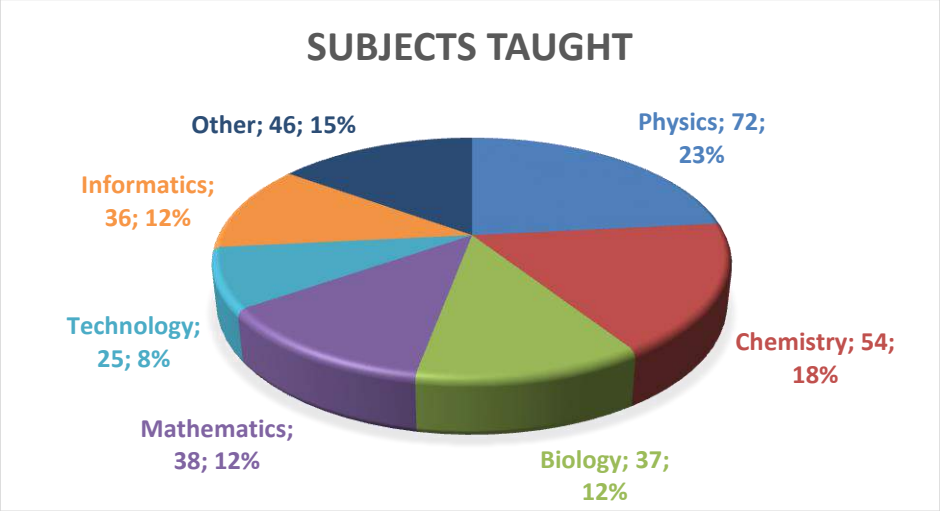


Figure 14. Overall subject distribution of participating teachers

As we can see above, Physics seems to be the dominant subject (23%) of our teachers with Chemistry (18%), Mathematics (12%) and Biology (12%) following closely. It is worth mentioning that a large number of teachers (15%) teach also or solely another, usually non science related subjects, i.e., environmental studies, English, history, geography, and arts, which is particularly interesting regarding the interdisciplinary use of our tools. Such interest also proves that environments like the one that Go-Lab is currently developing have a lot to offer to teachers from all kinds of disciplines and backgrounds.

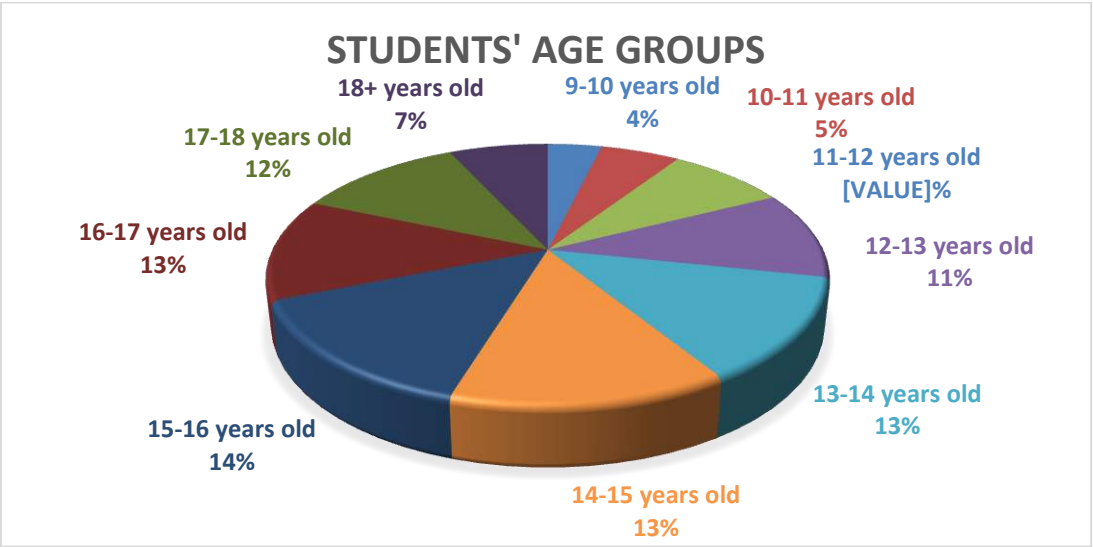


Figure 15. Overall distribution of students' age groups

The majority of students participating in the Phase A are between 13-17 years old with 15-16 years old to correspond to 14% of the overall. Primary school students correspond to 4% (9-10 years old) and 5% (10-11 years old) respectively. Older students, at the end of secondary education, are represented by 7%.

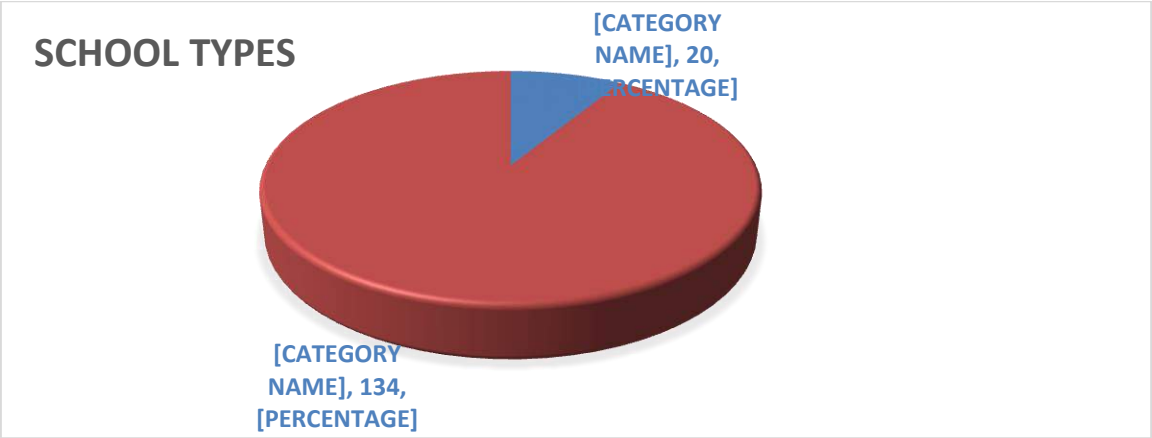


Figure 16. Distribution of schools by school types

The majority of schools (91%) participating in Go-Lab Pilot Phase A are secondary schools with only a 9% corresponding to primary schools. While this is not a problem at this phase of the implementation, effort to include more primary schools will be made throughout the following Phases.

5 Pilot Schools sample profiles

As we have seen earlier, schools and teachers interested in participating in Go-Lab Pilot activities, need to fulfil a certain set of criteria in order to be able to contribute to the evaluation of the Go-Lab Portal. Despite the fact that the wide use of the Go-Lab Portal by schools from all around Europe is one of the main aims of the project, at this Pilot phase the need to have on board schools matching a certain profile is quite essential.
Pilot Schools and teachers need to be in a position to fully experience, test and finally evaluate the use, integration and impact of the Go-Lab Portal. To do so, schools need to have in place some minimum infrastructure related to computers and their internet connectivity plus teachers interested in the use of online laboratories.
Below and in the form of good practice, we can see the profiles of thirty Go-Lab Pilot Schools including information about their infrastructure and teachers' characteristics. The focus on the schools' infrastructure is basically related to the nature of the project and its close relation to the use of online and remote laboratories. Due to this fact the availability of basic computer facilities and a stable internet connection is essential. All information has been provided by the Pilot Schools and their teachers.

Austria

Elementary School Liebenfels, Hauptplatz 17, 9556 Liebenfels, Carinthia, Austria

Infrastructure

The Elementary School Liebenfels is a public elementary school that teaches until 4th grade with currently eight classes. A class is run as Expositur (elementary school Gradenegg). The school is equipped with Wi-Fi. In each class there is a laptop and a projector, which allows modern education. In two classes teaching with the use of iPads is supported. The Elementary School Liebenfels is the first elementary school in Carinthia that uses iPads in classroom learning scenarios. The school is very interested in innovative projects.
The school's possibilities to carry out experiments and tests (physics and chemistry) are due to the financial resources very limited. There is also no physics or chemistry lab. Virtual laboratories could provide a good opportunity to offer more test and experiments to their students.
The school has no former experience using virtual laboratories. As a pioneer school, the school has used iPads to support the teaching in classroom and has attended the scientific day at the Gymnasium in Tanzenberg. The school has no experience in participating in science education projects at national or EU level.

Science teachers' profile

Sonja Morak is an elementary school teacher in Liebenfels. Sonja graduated from Alpen-Adria-Universität Klagenfurt in 2010. Currently she teaches 6 to 10 year old children in various subjects using modern educational technologies. Over the last two years Sonja has had the opportunity to use iPads in her classroom that support her educational aims. She is interested in new learning technologies and she values contemporary and modern teaching methods.

To learn more about the school, visit: http://www.vs-liebenfels.ksn.at.

Figure 17. Elementary school Liebenfels

Primary School Oberwart, Schulgasse 4, 7400 Oberwart, Burgenland, Austria

Infrastructure

The Primary School Oberwart teaches pupils from age 6 – 10 and contains 16 classes with 15 - 25 children in each. Normally a teacher stays with its pupils for four years, teaching each single lesson. Consequently all teachers teach science.

Austria has a huge population speaking Hungarian and Croatian, therefore the focus of the school is the acquisition of languages. It has 4 Hungarian classes, one Croatian class and 6 English classes, but also 4 music classes and 1 class without any particular focus.

The school has high speed internet, WLAN, while each class has at least 3 notebooks and in three classes they use digital whiteboards. Additionally, this is the fourth year the school has participated in the e-Twinning project, each year the school has won a National and a European price for its efforts. The school has no experience in using online science laboratories.

Science teachers' profile

Two teachers will participate in Go-Lab. One of the participating teachers teaches the first tablet class at her school and in Austria, meaning that each child has its own tablet to work with. They use Samsung Galaxy Note 10.1 tablets. She is furthermore the author of seven school books, four (4) about Biology and three (3) about Physics. Those books target children aged 10 to 14, but she believes that many things can be adapted for younger children.
The second teacher also occasionally uses a digital board as whiteboard and her pupils also regularly use Samsung tablets.

To learn more about the school, visit: http://vs.oberwart.gv.at/

Figure 18. Primary School Oberwart

Belgium

Institut Communal Technique Frans Fischer, Brussels, Belgium

Infrastructure

Institut Frans Fischer has, in Eenens building, three (3) chemistry, one (1) physics and one (1) biology laboratories.

In the Ruche building they also have an Advanced Technology Centre in Chemistry which opened back in 2012 with an investment in equipment of 900.000 €. This centre is quite unique, so many schools and students from the entire area are coming to visit and use it.

The Advanced Technology Centre contains, among other equipment, the following:

- Producer of demineralized water resins
- Sewage treatment plants with activated sludge
- Bio indicators
- Reverse Osmosis
- Fluid Dynamics
- Versatile bioreactor
- Laboratory of solar radiation energy
- Temperature control
- Pilot waste management
- Safety Training kits

Moreover, school has seven (7) computer labs (with a total of 258 PCs) including internet connection.

Five (5) classrooms are equipped with interactive boards while two (2) classrooms have access to historical and geographical software.

The school also has one documentation and information centre plus a science library.

Science teachers' profile

The teachers' team of Institut Frans Fischer is actively involved in a variety of activities and are continuously in the lookout for new challenges. Overall the team has to demonstrate the following experience/achievements:

- One (1) teacher is involved in the Chemistry Network
- Two (2) teachers have worked on Global Excursion – ViSH project
- School coordinates for the 5th year in the row a COMENIUS Multilateral Partnership with other European schools
- School has been actively involved in U4 Energy, Spring Day, Passport TIC and "Soft qui peut" projects
- School is involved for many years in "Je serai Einstein" and "Je serai Einstein ou Marie Curie, ESERO"
- School participates in Energy Path project
- Awards: 1st and a 2nd prize in Prix pour l'Enseignement de la Fondation Reine Paola and the Trophée de l'Innovation en Education 2008 – all categories
- Visit to European Schoolnet's Future Classroom Lab

Figure 19. Institut Frans Fischer

Middenschool Geel, Antwerp, Belgium

Infrastructure

Middenschool Geel is a public secondary school with 650 students. The school is well equipped with ICT facilities: it has high speed internet, interactive whiteboards and classrooms with computers. The school has long experience in innovation in education and continuously stimulates teachers to explore and experiment with new ways of teaching.

Science teachers' profile

The participating teacher has many years of experience in teaching geography, science, biology and techniques. She also has some experience in using online laboratories, available on the website of Technopolis (http://www.technopolis.be/nl/index.php). The teacher has more than ten years of experience in using the Cognosco method. In Cognosco students learn by participating in group activities and working/learning independently.

The teacher already has some experience in participating in science education projects at the EU level (e.g., ASPECT and inGenious).

Figure 20. Middenschool Geel

Figure 21. Middenschool Geel

Cyprus

Lyceum Soleas

Infrastructure

Soleas Lyceum is a public school in a rural area of Nicosia. The school has one (1) technology laboratory, one (1) physics laboratory and two (2) computer labs with high speed internet connection (Ethernet and wireless). The main tasks of the school administration are to encourage students' participation in European and national programs or other competitions, sports championships and recreational activities. Therefore the school has an active participation in the European projects Comenius and Euroscola. Additionally Soleas Lyceum cooperates with the Aristotelio College of Thesaloniki on the program ENO (EnvironmentOnline).

Figure 22. Lyceum Soleas

Lyceum Akropolis

Infrastructure

Akropolis' Lyceum is a public school in Nicosia. Within the framework of European and international educational programs set by the Cyprus Ministry of Education and Culture, the school continues to participate in several programs in order to give the opportunity to more students to engage and undertake tasks such as the organization and participation in committees and conferences. Specifically, in the past year the school participated in the following programs: THIMUN (The Hague International Model United Nations), YRE (Young Reporters for the Environment), ECOSchools and Euroscola. The school also has a computer lab and internet access.

Figure 23. Lyceum Akropolis

Saint Stylianos primary school

Infrastructure

Saint Stylianos is an urban primary public school in Lakatamia, Cyprus. The school is equipped with a computer and technology lab, and participated in different European projects such as Comenius, eTwinning and European Network of Health Promoting Schools.

Figure 24. Saint Stylianos primary school

Saint John Lyceum

Infrastructure

Saint John Lyceum is an urban public school in Limassol, Cyprus. It is equipped with three (3) computer labs and a (1) physics lab. The school has been very active in the past with teacher training and organizing conferences. It is actively involved in the cultural life of the city, voluntary activities and student competitions. During the school year 2013-2014, the school participated at the “European Job Days. Youth Movement in 2013” while during the 2010-2011 school year it took part in EUROPASS. In addition, the school participated in European and global programs such as Spring Day for Europe 2010 – Strasbourg, Semep, Comenius EU-HOU (Hands On Universe – Europe), Global Education, Comenius-Regio and eTwinning. Finally, Saint John Lyceum participated in international competitions such as the Co2nnect and the Stockholm Junior Prize.

Figure 25. Saint John Lyceum

Estonia

Rapla Vesiroosi Gymnasium, Rapla County, Estonia

Infrastructure

Rapla Vesiroosi Gymnasium is equipped with high speed internet, some interactive whiteboards, physics, science, chemistry class with some regular equipment, computer and robotics lab, classrooms with computers and projectors. The School is very innovative and eager to participate in many different projects and programs. For example UNESCO, Comenius, Archimedes, BSP Baltic Sea Program.

Science teachers’ profile

Rapla Vesiroosi Gymnasium will have two (2) participating teachers of which the first is a primary school teacher in science, math, Estonian, English. She has some experience in working with online laboratories. Teacher number two teaches physics and biology at the secondary and gymnasium level. She has some experience of working with online laboratories. Both of them are innovative and eager to use different methodologies and technologies. They have participated in science education projects at national and EU level (for example, Comenius and BSP).

To learn more about the school, visit: http://rvg.edu.ee/

Figure 26. Rapla Vesiroosi Gymnasium

Miina Härma Gymnasium, Tartu, Estonia

Infrastructure

Miina Härma Gymnasium is both a primary and secondary school and gymnasium for students from 7 to 19 years old. The school is equipped with high speed internet, interactive sideboards, as well as science labs and data projectors in every classroom. The school has participated in different educational projects in the EU (like Comenius).

Science teachers' profile

The teachers participating in Go-Lab are chemistry and physics teachers. They don't have much experience with online laboratories because they prefer to make use of real labs. They are interested in Go-Lab to supplement laboratory activities with online activities due to their limited access to real laboratories.

Teachers use graphic tablets in the laboratory and are interested in using new technologies. One of the teachers has been involved in organizing some teacher training courses in Estonia and participated in different international teacher training courses. The last one was ESA (European Space Agency) teacher training course.

Puurmani Mõisakool, Jõgevamaa, Estonia

Infrastructure

Puurmani Mõisakool is a primary school with 9 forms and students from 7 up to 16 years. The school uses fibre optic cable which ensures internet speed above the standard. The school has a classroom with twelve (12) computers, an interactive sideboard, TV and some iPads. The school has elementary equipment to carry out chemistry and physics classes.

The management of the school is supporting everything innovative but there is no pressure on the teachers to use innovative solutions.

Science teachers' profile

The teachers of Puurmani Mõisakool have no former experience working with online laboratories or innovative teaching methodologies and technologies. They also have no former experience in participating in science education projects at any level. Despite their lack of experience, the school and its teachers are very eager to expand their horizons and introduce innovative teaching practices to their everyday teaching.

Figure 27. Puurmani Mõisakool

Tallinn 21.School, Tallinn, Estonia

Infrastructure

Tallinn 21.School is a primary, secondary school and gymnasium for students from 7 to 19 years old. The school has high speed internet, interactive whiteboard, science labs and data projectors in many classrooms. The school has participated in different educational projects in EU (like Comenius).

Science teachers' profile

Tallinn 21.School has one (1) participating chemistry and physics teacher. The teacher does not have any experience with online labs because she prefers to use real laboratories. She is interested in Go-Lab in order to supplement laboratory activities with online activities due to limited access to laboratories. She uses different teaching methods in her lessons to stimulate and motivate the students. She is very interested in the opportunities the Go-Lab project will offer her since she would like to try to use more new technologies in her teaching.

She has organised a number of teacher training courses in Tallinn with Vernier Lab Quest and had participated in different training courses for teachers, for example, in Birmingham (IBDP program).

Germany

Realschule Hamborn II, Duisburg, Germany

Infrastructure

Realschule Hamborn II (RHII) is a middle school that was founded in 2002 and will soon become a secondary school with differentiated levels of schooling. RHII is one of the best prepared schools for providing scientific education with well-equipped subject rooms, two (2) laptop classes with smart boards starting in 5th grade and an explicit scientific focus. All laptops have access to the school's network, therefore fast data transfer and access to different and versatile learning material is ensured.

RHII takes part in the project "Schule21" which includes basic IT and communication-skills training and serves directly or indirectly improving the quality of school work. RHII is also a "MINT-Schule" (STEM-certified school) since 2010 and was reaccredited in 2013 announcing that the infrastructure and education continues to improve. There is also a student exchange program with the Collège Martin-Luther-King in Calais since 2006.

Science teachers' profile

The teachers are highly motivated and qualified when it comes to STEM-education in physics, chemistry, biology, mathematics, technology and computer-science. Because of the laptop-classes, teachers and students have experienced innovative teaching methodologies and technologies and are interested in getting to know how to work with online-labs. Two teachers from this school participated in one of the official teacher trainings Collide conducted in November 2013.

Georg-Christoph-Lichtenberg-Schule, Göttingen, Germany

Infrastructure

Georg-Christoph-Lichtenberg-Schule (IGS) is a comprehensive school, where pupils don't get marks until the 8th grade. Until the 10th grade they are differentiated according to their performance level. The school won the German School Price in 2011 and still has students with the best qualifications. In the IGS chemistry, biology and physics are taught together until 10th grade and are separated in 11th grade. Science and math is interdisciplinary lit in the classroom and a holistic thinking is promoted among the students. All scientific rooms have been renovated and brought up to the latest state of the art.

The IGS is part of "international education", a network of 18 schools in England, the Netherlands, Belgium, France, Spain, Italy, Poland, Romania, Slovakia and Germany, to give students the chance to learn about different cultures and living in Europe.

Science teachers' profile

Teachers are highly motivated to show cross-correlations between scientific fields (physics, biology, chemistry) and how it affects our world and our thinking as well as teaching mathematics and computer science. Teachers are used to use online resources but have no experience with online labs. There is a high interest in giving students the chance to conduct a wide range of experiments without an expensive setting at school.

To find out more about the school, visit: http://www.igs-goe.de/home/

Greece

Ellinogermaniki Agogi (EA), Athens, Greece

Infrastructure

Ellinogermaniki Agogi (EA) is an educational organization of private law, officially recognized by the Greek state. The schools of Ellinogermaniki Agogi are equipped with broadband high speed internet, interactive whiteboards, physics and chemistry labs, computer and robotics labs and a domed 40cm telescope (Figure 28. Ellinogermaniki Agogi).

Science teachers' profile

EA's teachers have long experience of participation in EU funded educational projects and initiatives. EA is an institutional member of EDEN (European Distance Education Network), STEDE (Science Teacher Education Development in Europe) and of ECSITE (European Network of Science Centers and Museums) networks. EA was the first Greek educational organization, which applied open distance learning in secondary education in the year of 1993. Since 1998, the organization has established a devoted department, the Research and Development (R&D) Department for the design, development and implementation of innovative research activities in education, expanding the collaboration with universities and pedagogical institutions across Europe. The R&D Department acts as interface between the pedagogical research, the technological innovation and the school community.

Figure 28. Ellinogermaniki Agogi

Italy

Instituto Torno, Castano Primo, Italy

Infrastructure

Instituto Torno has three (3) Chemistry, one (1) Physics and one (1) Biology laboratories for approximately 1200 students. These laboratories are being used for the courses of Liceo Scientifico, Tecnico (Biology and Chemistry for the environment), and also for Commerce and Foreign Languages for Marketing which are provided to six (6) different types of upper secondary school courses.

Laboratories' equipment is at high standards since funding in Italy for technical schools is much more generous than the one for Liceo (more academic). In the case of Instituto Torno

though Liceo Scientifico also benefits from the laboratories and shares their use with the technical side of the school.

Instituto Torno has three (and is in the process of purchasing more) interactive boards plus four (4) computer labs.

Science teachers' profile

Science teachers in Instituto Torno are working hard on providing their students with new stimuli and creative STEM teaching. School has a long list of prizes to show off which demonstrates the level of innovation and engagement teachers put into STEM related activities. In more details and focusing on Physics there are:

- Contests about energy (with Piera Colombo who teaches Maths and Physics)
- Acrosport (acrobatics to teach balance and centre of gravity)
- Mathematical models of fun fairs
- Dramatization of scientists life and work (with Odysseus project)
- Participation in science fairs (Milan, 27 September 2013)
- Science fairs inside the school - contests to select the best dynamometer built by students

Corrado Gamberonci and Ruth Lowenstein who have participated in the UniSchooLabS project (http://unischoolabs.eun.org) have also recently published a paper about UniSchooLabS in the AIF (Association of Teachers of Physics) journal.

Teachers use tablets and electronic books in a few classes and they have an intranet (First Class) to communicate with students. This intranet has contributed a lot to the constructive communication with students since it allows teachers to address specific classes/students in a direct way.

This year the school is taking part in a Nuclear physics project led by University of Milan with Professor Flavia Groppi aiming to measure background radiation and Radon fall-out. Anna Fornara and Ruth Lowenstein will work on mathematical models used in Physics and will finally create a lab with practical activities connecting the use of Maths in Physics.

Ruth Lowenstein is also participating at the University of Milan Physics Department "First year laboratory course" (running for the seventh year) where she will work on adding more computing based structured assessment and will also create an introductory course of lab techniques aiming ease the transition of Secondary students to the University level of academic demands.

Figure 29. Instituto Torno

Istituto di Istruzione Superiore Galileo Galilei, Jesis (AN), Italy

Infrastructure

IIS Galileo Galilei is a public secondary school with two profiles humanistic-economic-social and biotechnology. The school is equipped with broadband high speed internet, interactive whiteboards and very well equipped computer, chemistry, biology and physics laboratories. The school has a long experience in Comenius and Leonardo da Vinci projects. The scientific department has experience in R&D while students have won several awards for their research projects.

Science teachers' profile

The teachers who will participate in Go-Lab have long experience in participating in EU funded educational projects and initiatives.

To learn more about the school, visit: www.iisgalileijesi.it

Figure 30. IIS Galileo Galilei

Netherlands

Lyceum de Grundel, Hengelo, The Netherlands

Infrastructure

Lyceum de Grundel is a school for the higher levels of secondary education (havo, atheneum and gymnasium). The curriculum consists of two (2) phases. In the first phase (first 3 years) all students follow the same subjects. In the second phase they have to choose a profile (in which the subjects are different). They can choose from the following options:

- Nature and technology;
- Nature and health;
- Economics and society;
- Culture.

Except from the traditional subjects, there is also an examination subject "Nature, life and technology". A lot of attention is also given to Science in the curriculum. The school collaborates with institutes for continuing education such as the University of Twente in Enschede. Furthermore, it participates in Jet-Net (Youth and Technology Network in the

Netherlands). This is a joint venture between Dutch companies and pre-college schools in the Netherlands. Jet-Net companies help schools enhance the appeal of their science curriculum by using a great variety of activities and also allow students to gain a better understanding of their future career prospects in industry and technology.

The school has a fast internet connection and two (2) computer classrooms with thirty two (32) computers each.

Science teachers' profile

The physics teachers that are participating in the evaluation have some experience with ICT based education and simulations.

To learn more about the school, visit: http://lyceumdegrundel.nl

Figure 31. Lyceum de Grundel

Christelijk College Groevenbeek, Ermelo, The Netherlands

Infrastructure

Christelijk College Groevenbeek is a school for all levels of secondary education (except gymnasium). It also has a bilingual track in which part of the lessons are given in English (amongst them the lessons in Science). The curriculum consists of two (2) phases. In the higher levels in the first phase (first 3 years) all students follow the same subjects. In the second phase they have to choose a profile (in which the subjects are different). They can choose from the following options:

- Nature and technology;
- Nature and health;
- Economics and society;
- Culture.

The first phase consists of two years. After that students have to choose a profile from the following options:

- Economics;
- Care & well-being;
- Agriculture and natural environment;
- Engineering.

The school has a good ICT infrastructure and every classroom has a digital smart board. Also the school is experimenting with iPad classes. This year there are two of such classes. Furthermore, all the teachers have an iPad on loan.

Science teachers' profile

The physics teachers who will participate in the evaluation are also science teachers in the bilingual track. They have no experience in using online labs but want to make use of the Splash environment.

To learn more about the school, visit: http://www.groevenbeek.nl

Figure 32. Christelijk College Groevenbeek

Poland

ZS NR 77, XXXV Liceum Ogólnokształcące z Oddziałami Dwujęzycznymi im. Bolesława Prusa

Infrastructure

ZS NR 77 is a public secondary school and gymnasium with internet, interactive sideboards, and classroom with computers. The school promotes bilingual education for which some subjects are taught in English (e.g., biology).
In 2012-13 the school participated in an international project on globalization and collaborated with the University in St.Louis Meryville in the United States. The link below shows the report:
http://www.ceo.org.pl/pl/o-nas/news/miedzynarodowa-edukacja-obywatelska
In 2006-2008 the school participated in the project IT for US - Information Technology for Understanding Science. The aim of the project was to raise the qualifications of teachers, obtain equipment for schools (easy to use interface laboratory with three high-quality built-in temperature sensors, sound and light). Additional external temperature sensor (included) enhances the capabilities of the device, allowing, for example, measuring the temperature of liquid. To find out more about the project please visit: http://www.itforus.oeiizk.waw.pl/polish/index.php?mgid=20

Science teachers' profile

The teacher participating in Go-Lab, Renata Sidoruk-Sołoducha, is a biology teacher with experience in working with innovative teaching methodologies and technologies. She has participated in the two projects mentioned above and has cooperation with UNEP GRID

WARSAW POLAND. The outcome of this cooperation was to increase her knowledge in the application of information technology (ICT) and geospatial (GIS) science education in middle school and high school plus environmental education.

To learn more about the school, visit: http://www.prus.edu.pl/

Figure 33. ZS NR 77

Portugal

Agrupamento de Escolas de Amarante, Amarante, Portugal

Infrastructure

The school Agrupamento de Escolas de Amarante teaches students between the ages of 6 – 18 years old. The school is well equipped with ICT: high speed internet, some classrooms with interactive sideboards, science laboratories, and one computer per classroom with one projector. The head of the school is very supportive and open to any teacher's innovative initiatives at national and EU level.

Science teachers' profile

The participating teacher is a physics and chemistry teacher with computer expertise and trained in the use of online laboratories. The teacher is responsible for his colleagues needs and supports their training or any other way to improve their teaching skills. The teacher is an expert in ICT and has participated in several national and international trainings. He uses Inquiry-based Science Education (IBSE) scenarios with a STEM perspective and he has experience in participating in several national and international projects.

To find out more about the school, visit: http://www.agrup-eb23-amarante.pt/

Figure 34. Agrupamento de Escolas de Amarante

Agrupamento de Escolas Matilde Rosa Araújo; Cascais; Portugal

Infrastructure

Agrupamento de Escolas Matilde Rosa Araújo is a primary, middle and secondary school and has high speed internet, interactive sideboards and classrooms with computers. The school is open to innovative activities and projects at both national and EU level.

Science teachers' profile

The teacher participating in the Go-Lab Pilot Phase A teaches physics and astronomy and has formerly participated in the projects: PhET, IASC, Sun4all, and Faulkes telescope. The teacher uses IBSE methodology and several online and hands-on resources. The teacher also develops e-learning resources that can be found here: http://portal.discoverthecosmos.eu/user/14930

To learn more about the school, visit: http://www.agmra.pt

Figure 35. Agrupamento de Escolas Matilde Rosa Araújo

Escola Básica João Pedro de Andrade, Ponte de Sor, Portugal

Infrastructure

The Primary School Joao Pedro de Andrade is a Portuguese public school with 400 students from the 4th to 7th grade. The school is equipped with broadband high speed internet, computer and interactive whiteboards.

Science teachers' profile

JPA's teachers have experience of participation in national and international projects and initiatives. The school has participated in the project Viva Science in 1999 and in the competition Cassini Scientist for a Day with one student who won the competition. The school also joined the Eco School program, ABAE.

The participating teachers are interested in e-learning training in order to integrate innovative practices that can motivate their students in new ways.

Figure 36. Escola Básica João Pedro de Andrade

Spain

Pasaia-Lezo Lizeoa, Pasaia (Gipuzkoa), Spain

Infrastructure

The school provides education from Primary to Secondary School (including Basic Education for Students with Special Educational Needs).

Thanks to the national program Escuela 2.0, the school is fully equipped with ICT tools such as high speed internet and computers. Some science laboratory equipment is also available.

The school management supports teachers in participating in activities that foster innovation and enhance technology related teaching in class. The administration also encourages participation in education projects and initiatives at national and EU level.

The students of the school actively participate in local STEM contests and international exchange programs.

Science teachers' profile

The teachers assigned to Go-Lab Pilot activities are mostly physics and technology teachers. They do not have experience in working with online laboratories. They are interested in being involved in such activities where they can learn new teaching practices, like the ones Go-Lab is offering. Teachers actively participated in trainings organized by Ministry of Education of Basque Government and national education initiatives.

To learn more about the school, visit: http://www.lizeoa.com/ (euskera)

Figure 37. Pasaia-Lezo Lizeoa

P. Andrés Urdaneta School, Loiu (Bizkaia), Spain

Infrastructure

P. Andres de Urdaneta School is a religious primary and secondary school founded and ruled by Agustino´s priest, teaching and running the school according to Augustinian mindset. The school was founded in 1970. Now it has more than 2.000 students aged 2-8 years. The school is fully equipped with ICT tools such as high speed internet and computers. There is a Chemistry science laboratory. The school has a lack of Physics laboratory. In general, administration supports teachers in participating in innovative trainings and education projects on national and EU level. Through school activities students participate in national STEM contests and in FIRST *LEGO*® League robot building competition.

Science teachers' profile

The teachers assigned to Go-Lab Pilot activities are physics and technology teachers. Some of them actively use the simulations in class instruction and have experience in working with remote laboratories. The University of Deusto provides access to WebLab-Deusto remote experiments on a federal basis. The teachers have a good experience with innovative teaching and are open to learn new methodologies in contemporary education.

The school has participated in EU funded educational projects and initiatives such as the Comenius project, eTwinning and KA3 LLP "OLAREX" leaded by University of Deusto.

To learn more about the school, visit: http://www.colegiourdaneta.com/

Figure 38. P. Andrés Urdaneta School

Switzerland

The Ecole MOSER

Infrastructure

The Ecole MOSER established in Switzerland (Geneva and Nyon) and in Germany (Berlin) is a private institution founded by Henri Moser in 1961 and, since 2001, directed by his son Alain Moser. The school serves educational needs of growing international and multilingual community, giving its students an opportunity to achieve Switzerland's Federal Academic Baccalaureate (Maturité), which is accepted by all Swiss universities without further tests. This grade is also accepted by universities across Europe and the United States.

The Ecole MOSER is currently educating 1,200 students aged 7 to 18 years old. It possesses educational and technical equipment enabling students to grasp and cope with the complexity of modern world. By means of immersive teaching of languages and student exchange with partner schools, the Ecole MOSER broadens young people's minds and prepares them for today's intercultural Europe.

The Ecole Moser is fully committed to collaborate with the Go-lab Project in promoting and deploying inquiry learning with online labs at school. Science teachers are helping Go-Lab in defining and developing the resources that are going to strengthen their students' interest and consolidate their competences in sciences. In addition, to enhance classroom experience, the Go-lab solutions will complement the Moser Online platform.

To learn more about the school, visit: http://www.ecolemoser.ch/

Figure 39. The Ecole MOSER

Collège Sismondi

Infrastructure

Located in Geneva near the European headquarters of the United Nations, the Sismondi Collège, established in 1975, is one of 11 public high schools preparing students aged 15 to 19 years old to obtain the Certificate of Maturity, which provides access to all Swiss universities. It is a particularly international school currently educating about 850 students of nearly 60 nationalities and employing over 120 teachers and technical staff.

The Sismondi Collège is working closely with Go-Lab to develop, implement and validate pedagogical approaches and technical solutions for inquiry learning with online labs. The main interest of the School is in the area of Physics. In addition, the Sismondi Collège is also interested to exploit *Graasp* (which is the basic system for the Go-Lab Portal) for supporting informal exchanges of educational resources between teachers.

To learn more about the school, visit: http://www.go-lab-project.eu/partner/coll%C3%A8ge-sismondi#sthash.IdaYkCUu.dpuf

Figure 40. Collège Sismondi

United Kingdom

Fulneck School, Pudsey, Leeds, West Yorkshire, UK.

Infrastructure

Fulneck School is a historic independent day and boarding school, educating young people from 3 - 18 years old. The number of students varies around 450.

There are three dedicated ICT suites in the senior school, as well as two ICT suites in the A level centre (16 to 18 years old), one in the science building and free computer access for students in both Senior and Junior libraries. The school is equipped with Wi-Fi and high speed internet connection, though the students' access to Wi-Fi is still restricted due to child protection issues. All ICT suites, except the science and libraries, are equipped with interactive whiteboards. There are 6 science laboratories with a 20 laptops trolley, laptops which are all connected to Wi-Fi. To support computer learning, there has been a discussion at school governors' level to a BYO (Bring Your Own) computer option, at least for the A level students.

Despite being a school that is steeped in history, Fulneck School has shown a strong will to develop and innovate, rejuvenating its teaching style and its delivery of the national curriculum. The learning platform Edmodo has been integrated into the school life to provide learning and learning support beyond the classroom. The head of school is very supportive for any activities that broaden students' mind; she approved the participation of students in a cross curricular Geography-Physics field trip to the British active volcano of Montserrat; she encouraged the participation in the European funded InGenious project.

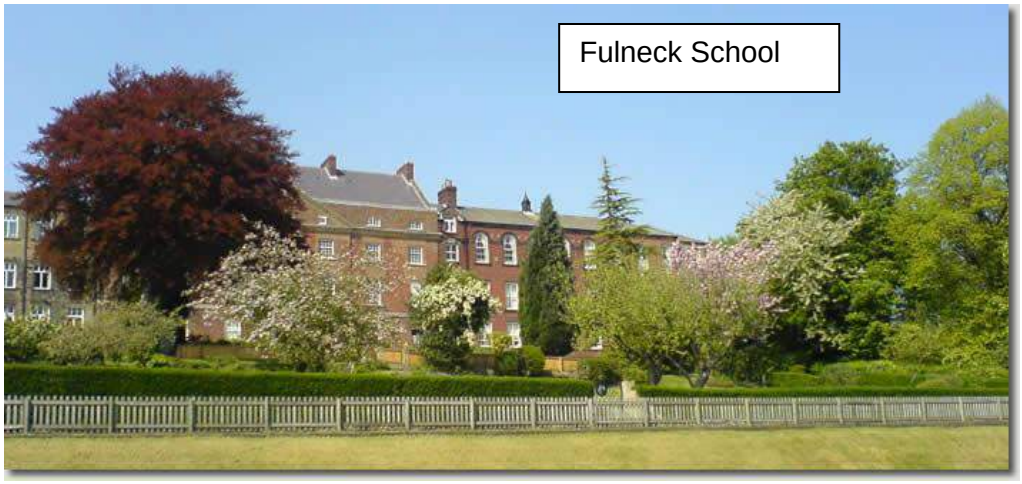
The school is currently in the process of registering with Erasmus+, aimed to promote and support teachers training across the European Union. Lastly, the Science department receives the European Science in School magazine that highlights the best in Science and teaching across the EU. One of the teachers at Fulneck is a reviewer of the journal.

Science teachers' profile

In Secondary school, six full time science teachers run the Science department. Each teacher is a subject specialist and three sciences are taught, namely Physics, Biology and Chemistry. The science department is a highly motivated group of teachers who have all recently registered for an online course on "Innovative practices for engaging STEM teaching" run by the European Schoolnet Academy. Innovative teaching methodologies have also consisted in the use and development of Edmodo, as well as other learning software such as MyMaths and Educake. In Physics, cooperation with the Institute of Physics has been used to stay up to date with knowledge and technologies, as well as the yearly trip to CERN. For two years, the school has subscribed to using the online Bradford Robotic Telescope, an autonomous astronomical telescope located at Teide Observatory, Tenerife. This would represent the online laboratories experience of Fulneck's students.

At a national level, the students have been involved in the selection of the Royal Society Young people Science book prize. They are also connected to a network of "Seismic Schools", supported by the BGS (British Geological Survey) and the university of Leeds, and have access to the seismic recording of a Lehman seismometer installed in one of the Physics laboratories.

To learn more about the school, visit: http://www.fulneckschool.co.uk/



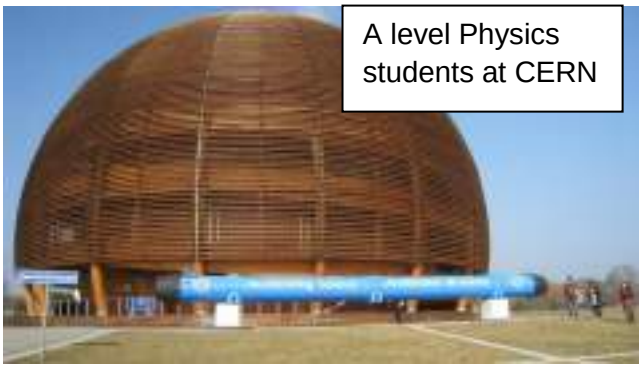


Figure 41. Fulneck School

6 Summary

The selection of Pilot Schools for Phase A to participate into the Go-Lab implementation activities is the result of a carefully organised process. The final procedures and selection criteria of the Pilot Schools described in this document is the result of a series of meetings with the top management and the National Coordinators of the Go-Lab project.
This deliverable included the organisation of the Call for Go-Lab Pilot schools, the adopted methodology, the list of selected Pilot schools & related statistics plus the profiles of approximately thirty (30) Pilot schools. The process of preparation of Pilot Phase A included the definition of schools' tasks and selection criteria, the launch of the call, the school selection, and the announcement of the selection results to the MoEs.
A set of requirements applying to both interested schools and their teachers were defined by the consortium with the purpose of ensuring that the selected teachers and schools will be in a position of fully participate to the planned Pilot activities and contribute fully and efficiently to the testing and evaluation of the Go-Lab concept and technical infrastructure. Teachers' interest or previous experience in using online laboratories plus the adequate availability of sufficient computers and reliable internet connection to schools, are the basic and minimum requirements to be taken into account. Experience or knowledge of IBSE is also an important factor as long as the frequency of computer access and use within the classrooms.

At the beginning of April 2014 a total of 437 applications have been received. From those, 154 schools have been selected to participate to Pilot Phase A, giving us 54 schools more than the required, according to the DoW, 100 Pilot schools. The sample profiles of 30 of those schools have also been collected in order to provide an insight on the experience, motivation and infrastructure capacities of the Pilot schools. The experience from this process will allow us to refine the Call for Go-Lab Pilot Schools and relaunch the Call for Phase B which will start at September 2014 including a total of 400 Pilot Schools. Special attention needs to be given on the adaptation of Pilot Schools expected tasks.

Annex I – Memo to MoEs

Go-lab Pilot Schools Phase A – status update

Table of Contents

Summary

The Go-Lab Project (Global Online Science Labs for Inquiry Learning at School) develops activities and tools to provide school access to online laboratories in order to enrich classroom experience. The efficiency and impact of the tools and activities developed are tested and measured through the involvement of Pilot Schools. This report gives an overview of the proposed schools to be engaged as pilot sites in the first pilot phase of the project. The Go-Lab consortium will sign agreements with these teachers for the work to be carried out between February-June 2014 (Phase A of the Go-Lab Pilot) with the possibility to continue with the same teachers if the collaboration is successful and provided that teachers are willing to do so.

This report gives relevant Ministries of Education the opportunity to clear the selection process and this way making sure that appropriate authorisations are in place.

Pilot Schools will be selected in the course of three (3) different stages while the number of involved schools is also increasing. For each pilot stage a similar detailed report will be compiled for relevant Ministries of Education. The selection of the first group of schools started in the beginning of 2014 and was based on National Coordinators' accumulating experiences from the interaction with school communities and expressed school interest provoked by local project publicity.

The Go-Lab project coordinates the collaboration with Pilot Schools in 15 different European countries.

Country	Target Nof Schools	Pilots – Phase A	Pilots – Phase B	Pilots – Phase C
Netherlands	40	4	16	20
Cyprus	40	4	16	20
Germany	100	10	40	50
Spain	60	6	24	30
Austria	100	10	40	50
Estonia	40	4	16	20
Switzerland	70	7	28	35
UK	70	7	28	35
Portugal	100	10	40	50
Greece Bulgaria Romania	220	22	88	110
Belgium Poland Italy	160	16	64	80
total	**1000**	**100**	**400**	**500**

Figure 42. Go-Lab Pilot Schools

It should be mentioned that many of the consortium partners are already collaborating with many of the Pilot Schools (and teachers) in their corresponding countries of responsibility and that the consortium also has established an effective collaboration scheme with specific schools and communities, by offering them the opportunity to get inspired by the innovative activities in the framework of the Go-Lab project.

The Tasks to be carried out by the Go-Lab Pilot teachers

Pilot Schools will be asked to perform a variety of tasks within the Go-Lab portal in order to test the provided tools and activities plus measuring their efficiency and impact. While the specific tasks are still not finalised because of the development of Go-Lab portal still being in progress, a set of suggested tasks can be found below:

a. **Create a learning scenario** (space) that they will use and test with their students
b. **Implement** and **evaluate** a minimum of three (3) Go-Lab activities within the Go-Lab environment. The evaluation consists of teachers and their pupils filling in the indicated questionnaires at the appropriate times. A mixed approach might be followed in this case: Teachers can be asked to create an activity on their own using one of the Go-Lab labs and then test and evaluate it plus test and evaluate two (2) existing ones.
c. Use the portal to **search for labs** and relevant materials
d. Contribute to **dissemination activities** (e.g., getting one of their science team colleagues using a Go-Lab activity and spreading out news regarding the Go-Lab competition)
e. Participate in minimum one (1) **chat/webinar** with a laboratory provider.

Minimum requirements for Go-Lab schools:

Go-Lab schools will need to have a good internet connection both in terms of stability and available bandwidth. Despite the fact that effort is being made into choosing and using within, Go-Lab, online laboratories with minimum operational and technical requirements, many online and remote laboratories have specific requirements that need to be fulfilled before users get to fully use and experience them.

Frequent access to technical infrastructure (i.e., pc's, computer rooms, etc.) is also very important since classes and teachers need to be able to regularly use the portal. In this way, teachers will be in a position to integrate the tool to their day to day teaching and fully evaluate the offered activities.

Teachers selected per country

As shown in Figure 42 Pilot Schools will be selected in the course of three (3) different stages. According to the figure, the consortium is expected to include 100 schools to take part in the Phase A pilot activities. Meanwhile the consortium received a high amount of applications for which 154 schools will be invited to take part in the Pilot activities. Their details are all listed in this report.

Figure 42 also indicates the amount of schools to be involved in pilot phases B and C. This second group of schools will participate in the second cycle of Practice Reflection workshops together with the 154 schools that will have participated in the first implementation cycle, thus facilitating the formation of communities with both more and less experienced innovators. The full sample of 1000 Pilot Schools will be operational from April 2016 and will form the field basis for the third cycle of implementation and other project activities. The sample of all pilot sites will be initially formed and then continually monitored to meet certain criteria of balance and representativeness, in order to reflect a variety of conditions, cultures and contexts of educational innovation. The specifications for the selection and the characteristics of the participating Pilot Schools will be documented in the Pilot sample profile report, which will be delivered in April 2014, D7.1 (100 schools), October 2015, D7.2 (500 schools) and April 2016, D7.4 (1000 schools).

Phase A - Teachers selected in Belgium, Poland and Italy

The following table includes the names of the schools and involved teachers, and subjects they have experience in teaching, as well as the age of their students.

Country	Last Name	First Name	City	Name of school / educational centre	Physics	Chemistry	Biology	Science	Maths	Technology	Informatics	Other	<8-11 yrs old	12-14 yrs old	15-18 yrs old	18+ yrs old
Belgium	Verreycken	Wim	Mechelen	Thomas More Zandpoortvest 60 2800 Mechelen	x	x	x		x	x	x				x	x
Belgium	Cuppens	Wim	Bree	Sint Augustinusinstituut Sint Jacobstraat 12, 3960 Bree	x							Astrono my			X	

Country	Last Name	First Name	City	Name of school / educational centre	Physics	Chemistry	Biology	Science	Maths	Technology	Informatics	Other	<8-11 yrs old	12-14 yrs old	15-18 yrs old	18+ yrs old
Belgium	Van Boven	Hans	Brakel	KTA Brakel Kasteelstraat 32, 9660 Brakel							x	STEM-project coordination			x	X
Belgium	Baki	Fatiha	Geel	Middenschool Geel, Technische Schoolstraat 15, 2440 Geel, Belgium			x			x				x		
Belgium	Hartog	Karin	Aartselaar	D Y Patil International School, Belgium Kontichsesteenweg 40, 2630 Aartselaar, Belgium	x	x	x					Geography		x		
Belgium	Van de Paer	Lucas	Turnhout	Campus Zenit de Merodelei 220 2300 Turnhout						x						
Belgium	Bartholeyns	Jean-Pierre	Brussels - Schaerbeek	INSTITUT Institut Communal Technique Frans Fischer, Rue Eenens 66, 1030 Brussels,		x	x									
Italy	**Gatti**	**Lucia**	**Carbonia**	**IIS Beccaria, IIS Beccaria, Via Umbria, 27, 09013, Carbonia, Italy**		**x**	**x**								**x**	

Italy	Zambrotta	Maria	Torino	IIS Santorre di Santarosa, IIS Santorre di Santarosa Corso Peschiera 230 10100 Torino Italia		x								x	X	
Italy	Gamberonci	Corrado	Castano Primo (Mi)	I.I.S.S. G.Torno, I.I.S.S. G.Torno, Piazzale don Milani, 1 - 20022 Castano Primo (Mi) - Italy	x					x	x				x	
Italy	Loewenstein	Ruth	Castano Primo (province of Milan)	Istituto Torno, Piazzale Don Milani 1 20022 Castano Primo Milano	x			x		x		English			x	
Italy	Ambrosi	Daniela	Perugia	Galileo Galilei liceo scientifico, via XIVsettembre, 79 - 06122 Perugia PG Italy		x	x					earth science astrono my			x	
Italy	Urschitz	Tullia	Fumane - Verona	IC B. Lorenzi - Fumane VR, Via Pio Brugnoli, 36	x	x	x		x					x		
Italy	Pavisic	Cristina Isabel	Jesi	IIS Galileo Galilei, Viale del Lavoro 38, 60035 Jesi (AN), Italy		x									x	
Italy	Polenta	Laura	Ancona	Liceo Rinaldini, Liceo Rinaldini, via Canale 1, 60122, Ancona, ITALY	x				x						x	X
Italy	Macchia	Stefano	Sommariva del bosco	Giovanni arpino institute, via giansana, 37 - 12048 Sommariva del Bosco - CN					x	x			x	x		

Italy	Guidi	Giorgio	Pescara	Liceo Scientifico Statale "G.Galilei, Liceo Scientifico Statale "G.Galilei", via Balilla 34, 65123 Pescara, Italy "	x				x				x	x	x	x
Italy	Giordano	Nicoletta	Torino	Ipia G. Plana Robilant 5 - 10100 Torino		x						material science			x	x
Italy	Cramerotti	Giuliano	Trento	ITT Michelangelo Buonarroti,Via Brigata Acqui 15, 38122 Trento, Italia			x					Earth science		x	x	
Poland	Maslowska	Malgorzata	Kalisz	III Liceum Ogolnoksztalcace im. M.Kopernika, III Liceum Ogolnoksztalcace, ul. Kosciuszki 10, 62-800 Kalisz, Poland	x										x	x
Poland	Sidoruk-Sołoducha	Renata	Warsaw	ZS nr 77, Zwycięzców 7/9, 03-936 Warsaw, Poland			x				x			x	x	
Poland	Zajaczkowska	Malgorzata	Bialystok	Zespol Szkol Integracyjnych no 1, ul. Lagodna 10, 15-757 Bialystok, Poland		x						English		x	x	

Phase A - Teachers selected in remaining countries

(Tables are not included since they are a repetition of tables already provided in Section 4.)

Future steps

Contracts between the Go-Lab consortium and Pilot Schools will be finalized once the pre-selection of teacher and schools have been approved by relevant Ministries of Education. These contracts will last until June 2014 and a second call for teachers for Phase B will be launched in June 2014.

Between March - June 2014, Phase A Pilot teachers will have to take part in at least one Practice Reflection workshop. The aim of these workshops is to support the processes of designing Go-Lab Portal with experience and knowledge gained through the implementation.

All Phase A Pilot teachers are encouraged to take part in the Go-Lab contest. The Go-Lab contest is part of the initiatives undertaken in the Go-Lab project which aims to inspire teachers from European countries and to encourage them to implement lesson plans which involve the use of online labs. In the framework of the contest teachers will have the opportunity to combine their imagination and creativity in order to design their own lesson plans and implement them into the classroom.

The contest is targeting teachers from different European countries and invites them to build lesson plans that follow the Inquiry Based Science Education (IBSE) approach and involve the use of online labs that target students between 10 and 18 years old.

The contest will take place in the following countries:

Austria, Belgium, Bulgaria, Cyprus, Estonia, Germany, Greece, Italy, Poland, Portugal, Romania, Spain, Switzerland, the Netherlands, United Kingdom

Two teachers from each participating country will be awarded with a five-day trip to Crete in the summer of 2014 to attend the Go-Lab Summer School. The winners of the contest will be announced on May 31st, 2014.

More information

Please do not hesitate to contact: Evita Tasiopoulou, Science Projects Manager at EUN and Go-Lab coordinator for EUN: Evita.Tasiopoulou@eun.org.