



## **LE-MATH: Learning Mathematics through new communication factors**

Progress Report

Public Part

## Project information

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## Executive Summary

The project Le-MATH aims to improve the learning of mathematics to pupils of age 9-18 by developing methodologies that teachers can use for this purpose. The project develops Guidebooks and a training course for teachers who teach pupils in the age group 9-18.

The partnership brings together all the related and necessary expertise such as project managers, mathematicians, researchers, theatre experts, communication experts, event organizers, ICT experts, talented student experts, education experts, teaching methods experts, primary and secondary school teachers, university professors, teacher trainers, pupils.

Organizations involved include Universities, Networks, Associations, Foundations, Primary and Secondary Schools, Art Centre, ICT Enterprise.

The aim for the outcome of this project is the development of methodology in teaching and learning mathematics with the creation of two main tools that can be used by teachers. The tools are created in the form of Guidebooks in order to be offered as in-service training courses to teachers who teach mathematics to pupils of age 9-18.

A. MATHeatre: Teaching and learning mathematics through math theatre activities

B. MATH-Factor: Teaching and learning mathematics through mathematics communication activities

The new methods are expected to make mathematics more attractive to young people, teachers and parents and are expected to compete with current trends of interest activities to young people of age 9-18.

**Method A** includes the development of guidelines with specimen teaching material and methodology for teaching Mathematics to 9-18 year old pupils using specially designed theatre scenarios with mathematics as main topic for learning in a direct or indirect approach. Teachers and schools are expected to apply them for improving the teaching and learning of mathematics and to organize theatre festival or competition for developing the interest of pupils for participation and through participation to learn, understand and appreciate mathematics. Developing communication skills and creativity is part of the methodology.

**Method B:** The method brings to the classroom similar activities as those found in Social Media, TV Games and Shows etc and use them as methods and tools for improving the learning and to increase the interest of pupils for becoming more active and creative in the learning of mathematics. The method is developed as a teaching tool for teachers and as a learning tool for pupils where pupils will be encouraged to communicate mathematics in a new approach.

The main outcomes under development are:

- (i) A dual guide book for the two methods produced in the partner languages. First draft published in September 2013 in [www.le-math.eu](http://www.le-math.eu)
- (ii) A training course with related materials on how to apply the new methods of communicating mathematics. Course is announced to run in France in July 2014
- (iii) A European Mathematics Theatre Competition as a pilot testing. Started in September 2013 with Phase 1 ending in February 2014.
- (iv) A European MATH-Factor Competition as a pilot testing. Started in September 2013 with Phase 1 ending in February 2014.
- (v) An on-line Electronic Platform for the EU Mathematics Theatre and the MATH-Factor pilot testing support. Completed and running since September 2013 through the project website.

- (vi) An international live final for the two competitions. Planned for 24-28 April 2014.
- (vii) A publicity using new technologies and media to reach teachers and pupils. Action is on-going.

Plans and prospects for sustainability include:

1. Continue the Social Network Platform and games
2. Run future training courses for teachers teaching mathematics to pupils of age 9-18
3. Open advertisement banners on the website in order to support the hosting and Maintenance, to be published towards the end of the project
4. Invite sponsors for prizes of the competition with exchange of their promotion
5. Partners promise to continue dissemination of the project output and plan future events after the end of the project such as conference events, newsletters of their organizations, email alerts and signatures, etc
6. Future updates of the Le-MATH booklet (after the project ends) will be sold in order to generate income.
7. The “Focus Group at European Level” to be established in the second year of the project will invite more and new members in order to widen its impact throughout Europe and beyond.
8. The impact of the results will be put in a nice final leaflet to be used for informing Ministries of Education and Directors of Primary and Secondary Education for the possibility to include some of these ideas in regular activities in the school curricula.
9. The partnership will examine the possibility of applying for a future Project relating to these new methods.

The website of the project is [www.le-math.eu](http://www.le-math.eu) in which most of the above are already available.

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# 1. Project Objectives

The concrete objective of the project is the development of methodology in teaching and learning mathematics with the creation of two main methods that can be used by teachers.

The two main methods are:

- A. MATHeatre: Teaching and learning mathematics through math theatre activities
- B. MATHFactor: Teaching and learning mathematics through mathematics communication activities

The new methods are expected to make mathematics more attractive to young people, teachers and parents and are expected to compete with current trends of interest activities to young people.

More analytically:

- The Method A includes the development of specimen teaching material and methodology for teaching Mathematics to 9-18 years old pupils using specially designed theatre scenarios with mathematics as main topic for learning in a direct or indirect approach. The method includes the development of guidelines to teachers on how to design Math Theatre Scenarios, how to apply them and motivate pupils and how to organize theatre festival or competition for developing the interest of pupils for participation and through participation to learn, understand and appreciate mathematics.
- The Method B includes the development of a new teaching tool for teachers and as a learning tool for pupils where pupils will be encouraged to communicate mathematics in a new approach. Pupils will be able to be taught and trained by their teachers on how to explain a math theorem, or a mathematical method or a mathematics application in a way that can be understood, appreciated and enjoyed by non-experts.

The methodology will be developed into the Le-MATH Course to be offered to teachers in Europe who teach pupils of this age range.

Target groups for the above are pupils of age 9-18, teachers teaching pupils of this age, education policy makers and curricula experts, teacher trainers, theatre teachers, science communication experts.

## 2. Project Approach

The work programme completed by 31 October 2013 is summarized below:

### YEAR 1

#### MEETING 1 (22-26 November 2012, Agros, Cyprus)

- Introduction of each partner institution.
- Presentation by each partner country of good practices, research and related project results on Theatre Competitions and Mathematics Communication Competitions.
- Presentation of each work package and related activities.
- Discussion on Work package 1, Management, meetings and training course. Discussion on requirements, timesheets and budget management.
- Discussion on Work package 2, Collection of related good practices in Europe and beyond. Discussion on methodology and implementation plan of this Work Package.
- Discussion on Work package 3, Development of theatre scenarios-stories with math elements and guidelines. Discussion on methodology and implementation plan of this Work Package.
- Discussion on Work package 5, Development of MATHFactor Samples and Guidelines. Discussion on methodology and implementation plan of this Work Package.
- Discussion on Work package 6, Website and platforms design, monitoring and translations. Discussion on design and operation.
- Discussion on Work package 7, Dissemination. Discussion on dissemination strategy and plan. Design of Le-MATH logo.
- Discussion on Work package 8, Evaluation and quality assurance. Discussion on risk indicators of progress and success and on quality assurance statement.
- Planning requirements between meeting 1 and meeting 2
- Planning of meeting 2
- External Evaluation

#### MEETING 2 (23-26 March 2013, Bucharest, Romania)

- Discussion on Theatrical Play Writing Competition on the theme of Mathematics. Design the final version of the announcement.
- Discussion on Work package 2, Collection of related good practices in Europe and beyond. Presentation of the first draft of results.
- Progress of each work package and plan activities to be carried out according to the various work packages need.
- Improvements to the website and online platform development.
- Discussion for dissemination activities
- Planning requirements between meeting 2 and meeting 3
- External Evaluation

#### MEETING 3 (12-15 June 2013, Sofia-Borovets, Bulgaria)

- Discussion on Work package 2, Collection of related good practices in Europe and beyond. Presentation on updated results, online tool and deliverable format.
- Presentation of the first draft of Work package 3, Development of theatre scenarios-stories with math elements and guidelines.
- Presentation of the first draft of Work package 4, Pilot testing and Evaluation.

- Discussion on Work package 5, Development of MathFactor samples and guidelines.
- Presentation of the first draft of Work package 6, Website and platforms design, monitoring and translations. Discussion for improvements.
- Re-schedule the activities of the project.
- Discussion on the dissemination activities
- Final Approval of the contingency plan.
- Formation of the Jury for the Script Competition
- Planning requirements between meeting 3 and meeting 4.
- External Evaluation

## **EVALUATION STRATEGY**

### **I. At the external evaluation level.**

The evaluation of the project is subcontracted to an external evaluator from the University of Austria, Dr Lucas Zinner. Reports of the external evaluation are attached.

For each meeting the external evaluator prepared pre-evaluation and post-evaluation questionnaires, he collected them and presented the outcomes to the partners with discussion.

### **II. At the internal evaluation level**

There were presentations in the meetings aiming at providing and discussing with the partners of an Outline of the content that should be covered in the context of the WP8. This was presented and explained to the partners in order to become aware of the need to observe the goals and expectations of the project and secure quality standards.

A Quality Assurance Statement was prepared and signed by all partners, in order to secure that all partners undertook to promote.

A Contingency Plan for Risks for the project was designed in order to secure proper action in cases of non-expected developments

Some Thoughts were provided to the partners concerning the development of Guidelines for Teachers in the context of the preparation of the fundamental deliverables of the project, i.e. the Methodologies that are going to be the outcomes of WP3 and WP5. These are expected to become the background for the next phase in order to help the partners to identify the extent of achievement of the goals of the project.

## **WORK PACKAGE DESCRIPTIONS**

The work of the project is distributed in nine work packages described below, is well planned and the work load is balanced among all partners. The categories are: Management (Work package 1), Implementation (Work packages 2, 3, 4, 5 and 6), Dissemination (Work package 7), Quality Assurance (Work package 8) and Exploitation of results (Work package 9). Each work package aims to contribute to the efficiency, effectiveness and in-time completion of the project.

### **WORK PACKAGE 1 – MANAGEMENT, MEETINGS AND TRAINING COURSE**

This work package belongs to the Coordinator of the project who is in regular contact with all the other work package leaders and plans the meetings of the project. For the project, six meetings are planned and all meeting dates are set in advance so that all partners organize

their planner. The leader of this work package also prepares the agendas for the meetings. Description of each partner activities and procedure to be followed throughout the duration of the project was agreed in the first meeting. The “Management Group” also is formed and minutes of meetings are disseminated to the entire partnership. This procedure will be followed to carry out the work of the next remaining 3 meetings. These three meetings will take place in the following order, Austria, Cyprus and France.

The coordinator of the project is also responsible to check and approve all deliverables before becoming public and be in constant cooperation with the external evaluator. The latter practice ensures on-time feedback for the management effectiveness of the project. In this work package falls the preparation of contracts with partners and sub-contracts to be signed and secured and of the progress and final report of the project. Keeping full records of the project in a professional filing system and maintaining and audit the budget accounts fall under the responsibilities of the coordinator. Centralized management of the budget and payment after actions are completed is the method used to manage the budget of the project.

This work package also designed the Le-MATH Training Course. The course was initially planned to be registered under the Europa Course Base but this course based in now closed. The Le-MATH Training Course is designed for a five day programme and the materials will be ready by the end of June 2014, when the first session is announced. The content is designed for training teachers teaching pupils of age 9-18 using the guidelines for the methods of teaching and learning mathematics through MATHeatre and MATHFactor methods.

The Le-MATH Training Course announced to run from 30 June to 5 July 2014 in France.

## **WORK PACKAGE 2 – COLLECTION OF RELATED GOOD PRACTICES IN EUROPE AND BEYOND**

The objective of this work package is to collect examples of good practices in the domain of the project from European and non-European countries. This activity has been completed successfully. The Good Practices for MATHFactor has been delivered to the link <http://le-math.eu/index.php?id=511> and the Good Practices for MATHeatre has been delivered to the link <http://le-math.eu/index.php?id=521>, under the [www.le-math.eu](http://www.le-math.eu) domain.

The process of this work package was divided into five steps:

1. Data collection: A questionnaire for partners was created. It was used for collecting examples of good practices from partners.
2. Data analysis: Materials sent by partners were categorized by the information provided by the partners and by the content.
3. Preparation of e-book: Materials were published in an easy form. The format enables searching according to various criteria.
4. Finalizing and closing discussion: The discussion of the material took place during the Meeting 2 and Meeting 3. It was decided to use the new format of data and the Partner 13, leader of WP6, was in charge of creating the new format.
5. Transfer in the new format: The existing data were converted in the newly created format. Individual partners checked and completed the materials.

## **WORK PACKAGE 3 – DEVELOPMENT OF THEATRE SCENARIOS-STORIES WITH MATH ELEMENTS AND GUIDELINES.**

The objective of this work package is to deliver the Guidelines for MATHeatre method. The partners under this work package studied the related methodologies and results from other projects and studies as reported by work package 2 and they discussed and chose the

content areas for the age groups 9-18, divided into two levels, Level 1 for ages 9-13 and Level 2 for ages 14-18.

Mathematical scripts/scenarios have been collected through the “Theatre Play Writing Competition” and a Manual of Scripts has been published with ISBN number.

The MATHeatre Guidelines, Version 1 are published in September 2013. The Guidelines are now under pilot testing and evaluation through the Phase 1 of the MATHeatre Europe 2014 Competition. The Phase 1 of the Competition has a deadline of 7 February 2014. After assessment, a group of finalists will be invited to the live final in Cyprus in April 2014. Based on evaluation and feedback by the participants and their teachers the project will improve the MATHeatre Guidelines and bring them to a final deliverable form in English by the end of June 2014. After this, the Guidelines will be translated into the partners’ languages. The final guidebook in 10 languages will be printed and will be accompanied by a DVD or USB providing sample theatre plays for the use by teachers and pupils.

#### **WORK PACKAGE 4 – PILOT TESTING AND EVALUATION**

This work package consists of a series of activities aiming at the pilot testing of the MATHeatre and MATHFactor Methodologies. This contains the evaluation of the whole progress, beginning from the First Draft of the Guidelines, to the pilot testing and the Final Report.

Phase 1 until 7 February 2014 is actually the testing and by April 2014 this work package will receive the necessary feedback from the participants and their teachers and prepare a report and evaluation, which will be then used by the project partners to improve the guidelines and methods.

The final stage of the pilot testing will be implemented during the MATHFactor Europe 2014 and MATHeatre Europe 2014 final Competition organized under the EUROMATH 2014 Conference in Cyprus on 24-28 April 2014 ([www.euromath.org](http://www.euromath.org)). The final evaluation and report to be produced by this work package is expected to include problems recorded for the methodologies, for the on-line platform, language and communication problems. The feedback document requested and the evaluation tool will be developed with the help of the external evaluator and the leaders of the work packages 3 and 5.

Feedback, which is expected to help exploit the results better will be received also through the Le-MATH Training Course, where we expect and we hope to have the first group of trainees who will help us improve the course for the future and after the project ends.

#### **WORK PACKAGE 5 – DEVELOPMENT OF MATHFACTOR SAMPLES AND GUIDELINES**

The objective of this work package is to deliver the Guidelines for MATHFactor method. The partners under this work package studied the related methodologies and results from other projects and studies as reported by work package 2 and they discussed and chose the content areas for the age groups 9-18, divided into two levels, Level 1 for ages 9-13 and Level 2 for ages 14-18.

The MATHFactor Guidelines, Version 1 are published in September 2013. The Guidelines are now under pilot testing and evaluation through the Phase 1 of the MATHFactor Europe 2014 Competition. The Phase 1 of the Competition has a deadline of 7 February 2014. After assessment, a group of finalists will be invited to the live final in Cyprus in April 2014. Based on evaluation and feedback by the participants and their teachers the project will improve the MATHFactor Guidelines and bring them to a final deliverable form in English by the end of June 2014. After this, the Guidelines will be translated into the partners’ languages. The final guidebook in 10 languages will be printed and will be accompanied by a DVD or USB providing sample theatre plays for the use by teachers and pupils.

#### **WORK PACKAGE 6 – WEBSITE AND PLATFORMS DESIGN, MONITORING AND TRANSLATIONS**

The objective of the package is the design and development of the project website, the design of the platform which will support the online registration of schools, online submission of videos, online assessment and other communication features. The monitoring of all the communication with the platform and the coordination of all necessary translations falls under this work package.

The website is used as an information and dissemination tool. Nowadays, the website promotes highly the entity it represents and also it is extremely important to assure its good appearance and dynamism. The project website [www.le-math.eu](http://www.le-math.eu) is one of the main dissemination tools and information exchange platform among the project partners and other interested parties. All relevant information is gathered and updated in a user-friendly approach. The content of the website is available in the partner languages. All important materials and public deliverables, the project newsletters, the videos for MATHFactor and MATHeatre Competitions, the training course announcement and its materials such as the Guidebooks, Mathematics Theatre Play booklet, the results of the Script Competition and the MATHeatre Scripts Book, etc., can be found on the website. Future materials will also be uploaded to the website and the announcement of the 2015 competitions for exploitation purposes.

The project platform utilises web based technology and allows participating organizations/participants to register, creating an account online. The platform is automatically generating an online account for the organization/participant and provides also documentation such as : Guidelines, forms, manuals, terms and conditions, etc.)

Once an organization or an individual produces their initial video (MATHeatre or MATHFactor presentation), they will upload it through the platform to their account and complete the online application. The platform will automatically check for length of the video and validate the online application, providing a receipt indicating a serial number and the time and date the application was processed. The platform will automatically decline any uploads made past the closing deadline.

The social network tool will continue to be supported under this work package with the Facebook competition ending at the end of 2013.

This work package supports also the management of the necessary translations for various products of the project, mainly for the Guidelines for MATHeatre method and the Guidelines for MATHFactor method, as well as the different pieces on the website. Translations of final products will begin after the English version is finalized with the agreement of the partnership.

## **WORK PACKAGE 7 – DISSEMINATION**

Dissemination activities for a project of this nature are immense importance and should be continues throughout the life span of the project. The project logo, website and dissemination plan was designed at the very beginning of the project and goes hand in hand with the project activities.

The dissemination plan developed and agreed among the partners.

Dissemination takes difference formats such as:

- electronic newsletters,
- local announcements and activities in the partner countries,
- Emailing to a large email data base of European and non-European primary and secondary level schools.
- Social Media used such as Facebook and games through the Facebook page of the project
- distribution of leaflets to schools and conferences

- banners in related websites
- presentations and workshops in conferences,
- publications in conference proceedings
- encouraging national level competitions of MATHeatre and MATHFactor preparing for the European.
- announcement sent to European schools through the LLP National Agencies of participating countries
- announcements sent to Ministries of Education
- announcements sent to Embassies of EU and non-EU countries in Cyprus, the country of the coordinating organization
- After April 2014 there will be similar dissemination and promotion of the results of the two competitions MATHeatre Europe and MATHFactor Europe 2014
- After April 2014 the project will update its website and begin promotion of 2015 competitions
- At least one further newsletter will be sent to the email data base , which by then it is expected to contain all schools in Europe and neighbourhood countries
- Promotion of the Le-MATH training course has started and will continue to be promoted as the first Le-MATH training course is planned to be organized from 30 June to 5 July 2014 in conjunction with the final project meeting 6 in France.
- For exploitation purposes the partnership plans to announce the MATHeatre Script writing completion 2014 after April 2014. This activity has proven useful for the creation of useful materials for the training course, enriching the use MATHeatre Guidebook and popularizing the project.
- A press conference will be arranged just before the live finals of MATHeatre and MATHFactor Europe 2014 in Cyprus.
- The dissemination spread sheet tool developed for this project will continue to be updated by all partners.

## **WORK PACKAGE 8 – EVALUATION AND QUALITY ASSURANCE**

To guarantee high quality of results and smooth project implementation a set of indicators is introduced. Within this work package, emphasis is put on activities regarding monitoring and evaluation of the project development, meetings and progress of results, including dissemination activities.

The work package leader has up until now a close cooperation with the external evaluator. A Quality and Evaluation Plan has been set out so as to ensure high quality standards of the project outputs and efficient cooperation among the partners.

The contingency plan is developed, agreed and approved by all partners and will be re-discussed during meeting 4, just before the completion of pilot phase 1 in order to see whether there are any missing risks.

The internal evaluation report will be completed by meeting 6, which will also be the basis for future improvements and support for a successful exploitation or cooperation of the partners in future projects. The internal evaluation will also be covering the piloting of the Le-MATH Training Course in June-July 2014.

More specifically, the indicators for monitoring upto 31 October 2013 include,

1. Number of visits to the project website: **41.355 visits**  
**(Daily average reaching 219 in the month of October 2013. In some single day the visits excited 400)**
2. Number of reach of the Social Network Platform: **642.600**
3. Number of online applicants to the competitions: **88 registrations**
4. Number of audience of the competitions:  
**360 at the 2013 pilot in Sweden, 2014 pending**

5. Number of interested members of the focus group: **N/A**
6. Statistical Results and outcomes of the external evaluation reports:  
**separate reports available**
7. Number of press releases published: **1 press release in 10 languages**
8. Number of presentations: **28**
9. Number of meetings where Le-MATH is presented: **14**
10. Number of conferences where Le-MATH is presented: **6**
11. Number of press conferences: **N/A**
12. Number of pre-registrations (training courses): **N/A**
13. Languages published (project website):  
**10 languages (EN, EL, DE, ES, FR, BG, CZ, RO, SE, HU)**
14. Number of likes (social platform): **506 likes (on 31/10/2013)**
15. Number of links (partner's website and other): **42 websites**
16. Number of email (call of dissemination): **64203 emails**
17. Number of registrations at project platform: **105**

## **WORK PACKAGE 9 - EXPLOITATION**

For the purposes of sustainability and further dissemination of the project the exploitation plan is currently under development with the target to have it completed and agreed within meeting 4 of the project in January 2014. Original plan was to discuss it in meeting 4 and then finalize it by mid December 2013 but since meeting 4 is moved from November 2013 to January 2014 the plan has changed.

Among the elements that will constitute the exploitation plan are activities that will help to generate financial resources for the project after EU funding ends. Such elements include:

- Offering the training course developed under the Work Package 1.
- Through part of the registration fees for the annual European Student Conference in Mathematics – EUROMATH starting from 2015
- Accept advertisement banners on competition website platform for the 2015 competitions
- Find sponsors for offering prizes to the MATHeatre and MATHFactor Competitions of 2015 and beyond.

All these will be regulated and planned for implementation before the project ends, so that the website will remain operational and updated after the end of the funding period.

Preparation of the contracts for website advertising will be prepared under this work package and will be ready before the project ends.

The call for participation in the first Le-MATH training course is prepared and announced.

The date and the venue of the EUROMATH Conference 2015 will be announced before the project ends.

The leader of this work package is also the coordinator of the project and will undertake the responsibility to implement the exploitation plan after the project ends. An exploitation agreement will be prepared and signed by the partnership either during meeting 4 or meeting 5.

The partnership is preparing a large scale data base with the contacts of all primary and secondary schools in Europe and beyond and will be used as a tool for dissemination and effective exploitation.

### 3. Project Outcomes & Results

The major achievements and results of the project during the reporting period are:

1. Partnership Meeting 1, 22-26 November 2012, Agros, Cyprus – **Agenda and Minutes**
2. Partnership Meeting 2, 23-26 March 2013, Bucharest, Romania – **Agenda and Minutes**
3. Partnership Meeting 3, 12-15 June 2013, Borovets-Sofia, Bulgaria – **Agenda and Minutes**
4. Le-MATH Training Course Programme  
(<http://le-math.eu/assets/files/Course/Le-MATH%20Course%20Announcement.pdf>)
5. Le-MATH Manual of Good Practices  
**MATHFactor** <http://le-math.eu/index.php?id=511>  
**MATHeatre** <http://le-math.eu/index.php?id=521>
6. Guidelines for MATHeatre Method, Version 1, September 2013  
(<http://le-math.eu/platform/assets/files/MATHeatre-Guidelines.pdf>)
7. Guidelines for MATHFactor Method, Version 1, September 2013  
(<http://le-math.eu/platform/assets/files/MATHFactor%20guidelines-V1-September2013.pdf>)
8. Sample videos from MATHeatre Cyprus 2010  
(<https://www.youtube.com/playlist?list=PLpPvt2LgHCYcS2sg6efUdOMRcfbcSla45>)
9. Sample videos from MATHFactor Cyprus 2013  
(<http://www.youtube.com/playlist?list=PLpPvt2LgHCYd8U50uxH9KKWpby80BPpX4>)
10. Sample videos from MATHFactor Europe 2013  
(<http://www.youtube.com/playlist?list=PLpPvt2LgHCYfQWF5535vVN9RNEcRkfSWu>)
11. Le-MATH Project website in 10 Languages ([www.le-math.eu](http://www.le-math.eu))
12. Social Network System.  
**Facebook page** (<https://www.facebook.com/pages/Le-Math/304176316366089>)  
**YouTube Channel** (<http://www.youtube.com/channel/UC56Cozx6K6T8A2JjZyP9RMq>)
13. Online support platform (<http://le-math.eu/platform/>)
14. Website Translations in EN, EL, DE, BG, HU, SE, RO, CZ, ES, FR
15. Press Release Translations in EN, EL, DE, BG, HU, SE, RO, CZ, ES, FR
16. Project Logo
17. Leaflet/newsletter Promoting Le-MATH Project  
(<http://le-math.eu/assets/files/LeMath%20Leaflet%20I.pdf>)
18. Banners
19. Le-MATH Newsletters
20. Le-MATH Bookmarks
21. External Evaluation Reports
22. Quality Assurance Statement
23. Contingency Plan

## 4. Partnerships



Project Meeting 1, Cyprus



Project Meeting 2, Romania



Project Meeting 3, Bulgaria

The consortium includes a number of organizations such as universities, networks, associations, foundations, primary and secondary schools, art centre, ICT Enterprise. There are ten participating countries and a total of 13 partners from Europe.

The consortium is big enough to ensure maximum visibility and dissemination of the results. It is designed to bring together all the related and necessary expertise such as project managers, mathematicians, researches, theatre experts, communication experts, event organizers, ICT experts, and talented student experts, education experts, teaching methods experts, primary and secondary education teachers, university professors, teacher trainers and pupils.

The primary and secondary school teachers are the available means to test the results of the project, whereas the networks, the associations and the foundation, namely, Cyprus Mathematical Society, Thales Foundation, LeoLab, Junior Mathematical Society in Miskolc and the European Office of Cyprus can ensure that the results and products of the project can reach a number of recipients and interested parties. The Universities and the art centre shared their experiences for the best results and products and the ICT Enterprise, com2go developed the website and the platform.

Most partners have a long history in cooperation and have even worked together in the past for similar projects. People involved in the partnership are well experienced and are working

on a daily basis on Mathematics matters, including education and competitions. As a consequence they are highly motivated by their need to develop the new methods for teaching and learning mathematics. The coordinator of the project has previous experiences in coordinating European projects as well as planning and running training courses, competitions and conferences.

### Summary Table of Partners

Partner Number	Country	Legal Name	Type
P1	CY	Cyprus Mathematical Society	Association
P2	CY	Thales Foundation	Foundation
P3	CZ	Charles University in Prague, Faculty of Education	University
P4	AT	Loidl-Art	Art Centre
P5	BG	VUZF University	University
P6	RO	“CALISTRAT HOGAS” National College Piatra-Neamt	School
P7	SE	Lyckeskolan	School
P8	ES	LEOLAB	Training Centre
P9	HU	Junior Mathematical Society Miskolc Hungary	Association
P10	CY	European Office of Cyprus	Network
P11	FR	Collège Saint Charles	School
P12	EL	Institute of Communication and Computer Systems	University
P13	CY	Com2go	ICT Company

## 5. Plans for the Future

### YEAR 2

#### 9-12 January 2014, Bad Goisern, Austria – Partnership Meeting 4

- Beginning assessment procedure for Phase 1
- Exploitation Plan to be agreed
- Further Promotional Activities
- Preparation for the Competitions in Cyprus and piloting activity
- Promoting the development of a focus group for sustainability
- External Evaluation

#### 23-27 April 2014, Nicosia, Cyprus – Partnership Meeting 5

- Run the MATHFactor Final Competition
- Run the MATHeatre Final Competition
- Press conference
- Plan improvements for the Guidelines
- External Evaluation

#### 29 June-2 July 2014, Guipavas, Town of Brest, France – Partnership Meeting 6

- Run / Review the piloting assessment
- Finalizing the guidelines and guidebooks into the English version
- Translations into the 9 project languages in addition to English
- Printing Results
- Announcement of 2015 Competitions
- Announcement of 2015 Training Courses
- External Evaluation
- Preparation of Final Report

### Le-MATH Training Course

#### 30 June-6 July 2014, Guipavas, Town of Brest, France

Day 1: Arrivals

Day 2: Introduction to the Le-Math Project; aims and objectives; history. Introduction to Science and Math Communication; current trends. Presentation of the Manual of Good Practices; review and discussion. Definitions of the two methods, MATHFactor and MATHeatre. Discussion of the expected practical work and course assignment

Market Place set up for the participants and presentations of their background

Day 3: Definitions for the two methods, MATHFactor and MATHeatre, continue.

Presentation of the MATHFactor Guidelines and related documents. Presentation of related video. Practical work and evaluation practice. (Social event)

Day 4: Presentation of the MATHeatre Guidelines and related documents. Presentation of related video. Practical work and evaluation practice. (Social event)

Day 5: Preparation by participants for their assignment, either a MATHFactor presentation or a MATHeatre play with other participants. Rehearsals and practice

Day 6: Rehearsals and practice continue. Presentations of course assignment.

MATHFactor competition within the course group. MATHeatre competition within the course group. Peer Evaluation: Trainees take the role of jury. Awarding of certificates

Closing of the course. (Social event)

Day 7: Departures

## 6. Contribution to EU policies

### Education and Training 2020

This project is fully compatible with the strategies of the EU – “Education and Training 2020”, for enhancing creativity and innovation, including entrepreneurship at all levels of education and training. The pupils will be given the opportunity to develop their creativity and skills and express their talent. Linking mathematics and communication will help them to become MATHeatre actors and become Math Communicators through the MATHFactor activity.

Running a competition at European Level will contribute to the increase of language learning, communication between European citizens and cultures, cooperation and networking between countries and organization, circulating ideas, promote understanding and volunteering among European, increase mobility and contribute to the educational goals of “Europe 2020” and “Education and Training 2020”. Bringing European and International pupils together ages 9-18, will contribute also to cultural understanding and promotion of understanding diversity among Europeans and non-Europeans from early ages.

### **Benchmarks for 2020 – “Decrease low achievers in basic skills (mathematics and science) to 15%”**

Low achievers have the opportunity to express and link their talent in theatre and communication with the maths activities of this project.

### European Cooperation on Schools

The activities contribute to the improvement of key competencies in mathematics and science.

### **Youth on the Move – “Decrease early school leavers”**

The project increases motivation in young pupils, an activity that contributes to keep them in school longer as school can also be fun.

The purposed “Focus group at European Level” will help policy makers and will contribute to the EU “Youth on the Move” to respond to the challenges young people face and to help succeed in the knowledge economy.

