EURO4SCIENCE

Exploring science and transdisciplinary learning through forensics

EURO4SCIENCE

FINAL CONFERENCE REPORT

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AUTHOR:

EURO4SCIENCE: EXPLORING "CSI EFFECT" AND FORENSIC SCIENCES TO BOOST THE APPEAL OF SCIENCE TO YOUNG PEOPLE AND REINFORCE INTERDISCIPLINARITY IN EUROPEAN HIGH SCHOOLS

COORDINATOR:

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PARTNERS:

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1. INTRODUCTION

EU4SCIENCE is a European initiative funded by the European Commission (Erasmus+ programme) that is developing innovative practices, tools and methodologies in schools by engaging teachers and pupils of different ages and countries in exciting activities connected to the "CSI Theme". The project aims to enhance the quality of the learning offer and the attractiveness of science-related subjects and careers, contribute to decrease early school dropout and integrate pupils and teachers in a more motivating school environment.

After developing, testing and validating a ***Forensic Science Education Toolbox***, the strategic partnership coordinated by the University of Aveiro (Portugal) continued to organise three ***CSI weeks*** with a range of exciting activities engaging the whole learning community. ***The Forensic Science Education Toolbox***, which will eventually be available in 4 languages (English, Portuguese, Bulgarian and Polish), was devised to provide the didactic and methodological basis for the future organisation of the ***CSI Weeks*** within the project. It consists of a main box with materials and several support documents: *students Guide; teachers' Guide; CSI Cases.* The successfully completed CSI weeks (in Portugal, the UK and Bulgaria) served primarily as an opportunity to present to the visiting students and teachers the results of the performed CSI tasks provided in the Toolbox. Furthermore, the CSI Week programmes contained different activities such as, bioethical debates; conferences and debates with teachers, students, and other stakeholders/organisations; science fair, etc. Last but not least, the organisation of the CSI events provided a great chance for all the participants to develop both culturally and socially.

To conclude, the implementation of the CSI Weeks by the Partner countries constituted the next milestone within the project and their evaluation was presented in June at the ***CSI@school Final Conference*** in Poland, where the entire project activities and outcomes were summarised with a view to popularising the project idea to many more representatives of the project target groups. In this event, partners reported on the activities carried out and shared their experience about using the Forensics Science Education Toolbox, organising the CSI weeks and hosting pupils from other countries. Building on this sharing of experiences, partners presented the final version of the Toolbox, the multilingual web portal, and also reported on the results of the CSI weeks held in Portugal, Bulgaria and the UK.

1.1. STRUCTURE OF THIS DOCUMENT

After this introduction, the deliverable includes the following sections:

1. Agenda and logistics
2. Profile of participants
3. Promotion of the event
4. Feedback on the event
5. Conclusions
6. Appendices

All the above mentioned chapters are fully presented below.

2. AGENDA AND LOGISTICS

The CSI@school Final Conference entitled ***'CSI Agents in School'*** took place on the **3rd of June 2016**. It was held in a lower-secondary school - *Gimnazjum no. 38* in Warsaw which also co-organised the event as a partner school within the project. The following table outlines the agenda of the meeting.

PROGRAMME	
9:00 – 9:15 am	Registration and reception of participants
9:15 – 9:30 am	Welcome and presentation of EURO4SCIENCE
9:30 – 9:50 am	Presentation of the Forensics Science Education Toolbox
9:50 – 10:30 am	Experiences of European Schools
10:30 – 10:40 am	Testimonies of students from Gimnazjum no. 38 – CSI Week in Portugal
Coffee Break	
11:00 – 1:00 pm	Practical Workshop – using the Toolbox
1:00 pm	Closing of the event followed by networking lunch

Below there are some photographs, taken during the event, which illustrate the main stages into which the meeting was structured.

PART I:

Registration and reception of participants

Photograph 1. Entry to the conference room.

Welcome and presentation of EURO4SCIENCE

Photograph 2. Welcome speech by the head teacher of the host school

Photograph 3. Presentation of the project idea

Presentation of the Forensics Science Education Toolbox

Photograph 4. Presentation of the Toolbox by the project coordinator

Photograph 5. Presentation of the Toolbox evaluation results

Experiences of European Schools

Photograph 6. Bulgaria

Photograph 7. The UK

Photograph 8. Portugal

Testimonies of students from Gimnazjum no. 38
CSI Week in Portugal

Photograph 9. Polish students' presentation

Photograph 10. Polish students' presentation

PART II – WORKSHOP

Photograph 11. Introduction.

Photograph 12. Blood analysis.

Photograph 13. Viewing of the Guidebook for Teachers

Photograph 14. Microscopic analysis of polymers

Photograph 15. Fingerprints

Photograph 16. Microscopic analysis of pollens

3. PROFILES OF PARTICIPANTS

The event was attended in total by **46 participants (plus project partners)** belonging in great majority to the group of lower-secondary school teachers. At the event there were also representatives of educational institutions, such as universities, local/regional teacher training centres or municipal educational departments. In general, the event attendees came to the meeting in order to get familiarised with the gist and project results to date (The Toolbox and its evaluation; the Toolbox Guidebooks; 3 CSI Weeks) and to have a chance to participate in the workshop demonstrating how to use the CSI methodology in practice.

On the whole, the participants were primarily interested in acquainting themselves in more detail with the project idea, the practical aspects of the proposed STEM education and wished to learn about how to introduce the presented methodology into their lessons.

4. PROMOTION OF THE EVENT

The CSI@school Final Conference held in Warsaw was preceded by performing targeted promotional activities conducted through several dissemination channels (primarily email and social media). The event dissemination consisted in sending via email a communication (with a conference information brochure attached), drafted especially for this purpose, to lower-secondary schools and educational institutions for teachers, not only in Warsaw and from the region around Warsaw but also to provinces adjoining the Warsaw area. In addition, there was an event created on the company Facebook (Fb) page and a special announcement placed on a website dedicated to public events organised in Warsaw: http://evenea.pl/, both containing the links to the enrolment for the event.

As a result of the promotion activities the information regarding the meeting was promoted on several websites and Facebook profiles targeted at teachers and various representatives of educational institutions e.g. the Education Office in Warsaw (one of the governmental school supervisory bodies in the Polish education system), the Office of Education of the City of Warsaw, edulandia.pl, supernauczyciel.pl or the Faculty of Education of the Warsaw University. Some of the

evidence samples of the announcements placed on the aforementioned sites are presented below:

The website of *The Education Office in Warsaw*

The website of *The Office of Education of the City of Warsaw*

www.edulandia.pl

www.supernauczyciel.pl

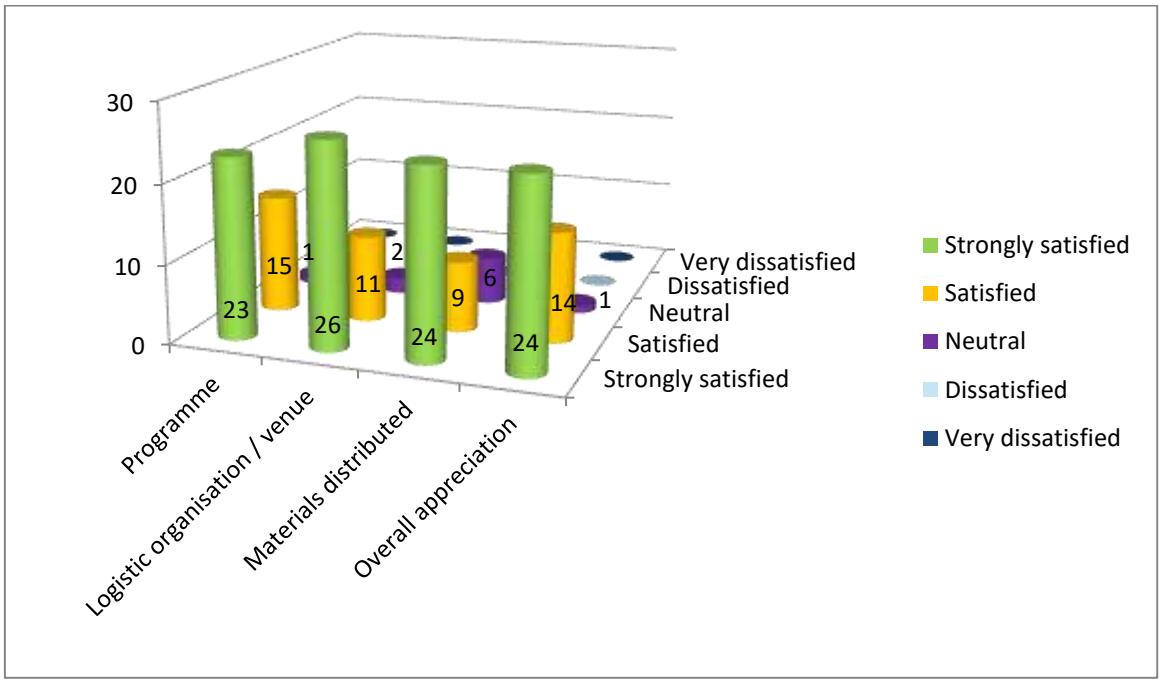
Furthermore, the outreach of the event dissemination activities was also expanded thanks to the engagement of the partner school, which helped to propagate the news on the conference through their channels by emailing their own contacts or word of mouth – for instance, the school head teacher sent official invitation letters to the governor and officials of the Education Department of the City of Warsaw from the district where the school is located.

5. FEEDBACK ON THE EVENT

To be able to assess the impact of the event on the audience, the attendees were asked to complete an evaluation questionnaire inserted in the folders distributed to each of them entering the venue. After the conference the forms were collected so that the data could be compiled and carefully analysed. It is important to mention that the completion of the evaluation forms was voluntary. The detailed outcomes of the questionnaire analysis are presented below.

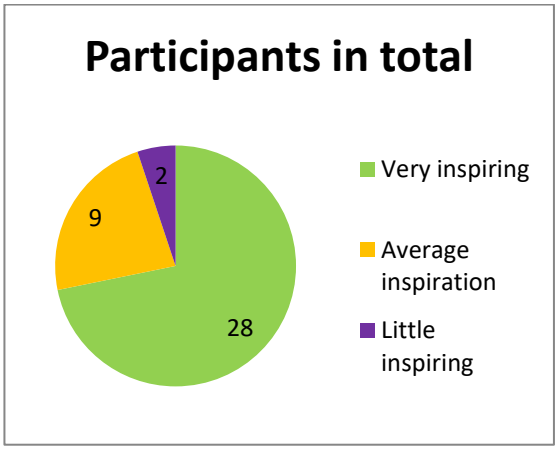
The present section is therefore based on the compiled data from the previously completed surveys which allowed the partners to rate the participants' satisfaction level as well as to provide additional comments/remarks on the specific topics/issues under evaluation.

Please rate your satisfaction with the conference and its various aspects:



As it can be seen on the presented diagram, the attendees rated the conference quite or very high – there were only single neutral responses, most of which referred to the materials distributed at the event – it might have been caused by some of the teachers expecting to receive some Toolbox sets or parts at the conference, since after the meeting several of them asked about the possibility of getting/acquiring the ready-made toolboxes. None of the participants expressed dissatisfaction with the conference aspects under evaluation.

Have the presentations inspired you to introduce at your school any innovative practices to make science education more attractive to the students?



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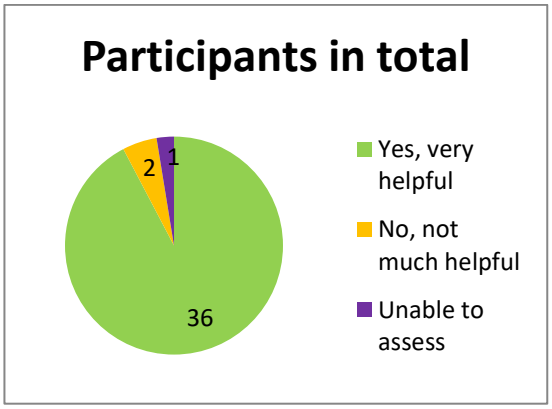
Have you found the practical workshop helpful for implementing new activities during classes of science subjects?



When it comes to the participants' feeling of inspiration after the conference and their assessment of the practicality of the workshop part, they rated both very high, finding the presentations very inspiring and the demonstration of sample Toolbox tasks very useful for their teaching practice. There were only single negative responses - a very small ratio in comparison with the total number of the surveyed attendees (in both cases 2 out of 37).

This next paragraph provides the information given by the participants based on the specific open questions contained in the questionnaires where they were asked to provide additional comments /suggestions regarding the conference. They were as follows:

+ 'I find all the materials very well prepared and the used solutions (being cheap and simple) perfect to use at school.'
+ 'I really appreciate the experiment with the blood type (…) and the iodine (…).'
+ 'Presented experiments were inspiring and achievable in a school lab.'
+ 'A very interesting initiative.'
+ 'Manuals are very helpful.'

– 'The presented toolbox activities are only for small groups of students.'
– 'There was no demonstration on how to apply maths in the CSI methodology.'
– It would be of great use to prepare ready-made Toolbox elements, as some of them are quite difficult to replace.'
– Translating unnecessarily elongates the time frame.
– I would like to have had more exercises shown that I could use in physics or chemistry.'

As far as the participants' commitment is concerned, the participants expressed a lot of interest in the topics covered at the meeting, which was, first of all, confirmed by their high attendance at the event. They listened carefully to the presented content, especially during the workshop section. Given the time for open questions/remarks, they did not display inhibitions to address the speakers/presenters with their queries. They were very actively involved in commenting on the presentations and in participating in the Toolbox activities presented during the workshop**, which**

can be all seen in the sample photographs below:

6. CONCLUSIONS

To sum up, the CSI@school Final Conference received very favourable feedback. The participants found it very useful and inspiring as they could find out more about an innovative approach towards teaching the sciences and could also gain some practical knowledge about how to apply the proposed methodology in the school environment. Their genuine interest in the presented issues was visible in their active participation in the event, especially in the sections which involved performing some CSI activities or providing feedback/questions.

However, in spite of the overall fairly positive assessment, there are still some matters that might be worth further analysis and examination. There were some neutral or even negative responses provided in the evaluation forms submitted by the conference attendees. Furthermore, there were also some issues pointed out in the section devoted to open comments/remarks.

In conclusion, the detailed analysis of all the questionnaires has certainly allowed having a deeper insight into various aspects related to the content presented during the Final Conference within the project. On balance, the event was very much appreciated by all the respondents. Nevertheless, as indicated in the report there are still some matters which need to be addressed and dealt with, so that the project final output can be successfully implemented into schools and thus best facilitate the learning process in the STEM education. The present results of the conference evaluation have definitely helped to identify some issues that can be successfully tackled or eliminated in the future.

7. APPENDICES

7.1. EVALUATION QUESTIONNAIRE FOR PARTICIPANTS

7.2. PARTICIPANTS' SIGNED ATTENDANCE LIST