



Erasmus+

SUMMARY REPORT

term 1
2016/2017

PROJECT

Trail of extinct and active volcanoes, earthquakes across Europe

The six schools from Italy, France, Poland, Portugal, Spain and Turkey participate in the Strategic Partnership in school education. It is an interdisciplinary project combining Biology, Geology, Seismology, Physics, Geography, Language, Arts. Our education, trainings for students and teachers in research centers in Europe, and professional development program have been designed to offer both formal and practical opportunities for students to expand their knowledge and abilities of making observation and measurements in seismology, using special equipment to do researches of volcanoes in international groups.



The first term all schools did many activities in classes, lectures, seminars, excursion, workshops about fauna and flora. The competitions for students were announced.

24 teachers participated in training organized in Issore, in France. Italian partner promoted the project during Open House Day. Schools contacted each other by videoconference and students worked on crossword concerning volcanoes.



ERASMUS + project Activities in I term 2016/2017



Seminar in Portugal



Lessons in Italy, Spain, Portugal, Turkey, France and Poland



Open House Day in Italy



Training for teachers in France



Videoconference in Italy and Poland

The meeting in France was evaluated by teachers and their gained knowledge was checked by multiply choice test prepared by French schools.

The results is 50, 37 %. The responses were given by 21 teachers.

Analysis of website statistics showed a decrease in the number of visitors compared to 2015.

20% of all sessions comes from Turkey, 18 % from Poland, 9 % from Portugal, 8 % from Italy, 6 % from France, 5, 8 % from Spain.

New users represent 33% since September 2015. The data recorded 3598 users.

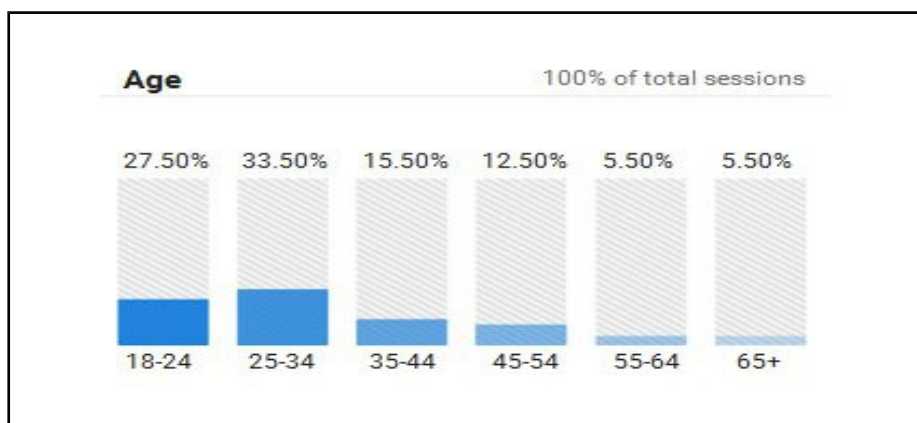
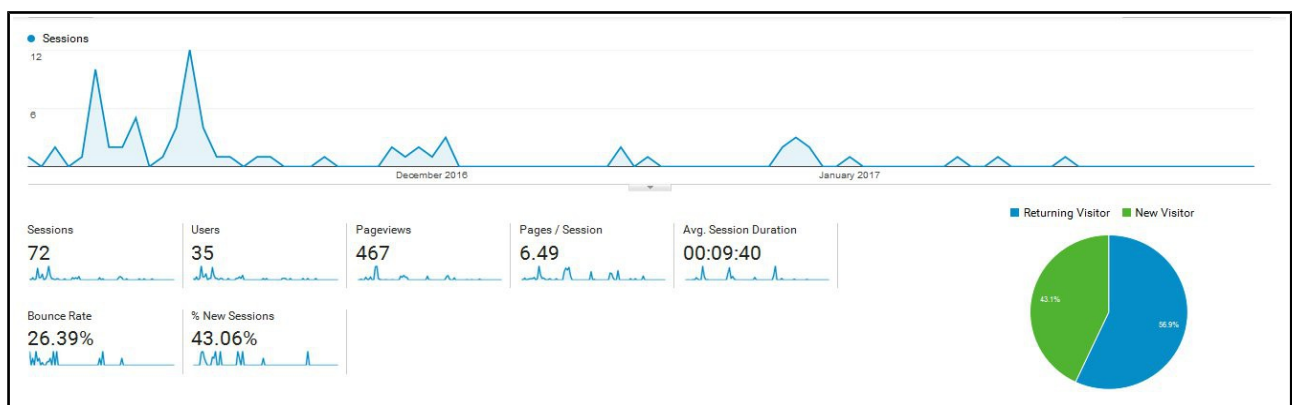
The highest possible interest have been reported in November 2015, and March 2016 so far.

People in aged 25-34 made up 33% of users, in age 18-24 – 27, 5%.

54, 15% of the users are male, and 45, 85% of women.

Country	Sessions	% Sessions
1. 🇹🇷 Turkey	148	20.22%
2. 🇵🇱 Poland	133	18.17%
3. 🇵🇹 Portugal	69	9.43%
4. 🇮🇹 Italy	61	8.33%
5. 🇺🇸 United States	47	6.42%
6. 🇫🇷 France	44	6.01%
7. 🇮🇳 India	44	6.01%
8. 🇪🇸 Spain	43	5.87%
9. 🇩🇪 Germany	21	2.87%
10. 🇬🇧 United Kingdom	15	2.05%

City	Sessions	% Sessions
1. Wrocław	115	15.71%
2. Antalya	98	13.39%
3. (not set)	43	5.87%
4. Naples	38	5.19%
5. Las Palmas de Gran Canaria	17	2.32%
6. Izmir	17	2.32%
7. Ponta Delgada	16	2.19%
8. Horta	14	1.91%
9. Boston	14	1.91%
10. Istanbul	11	1.50%



Students and teachers worked on topic: fauna and flora volcanoes. The students prepared posters:



Sea animals



- Very rich (vertebrates and invertebrates).
- Presence of numerous cetaceans.
- Attractive for scuba-diving.



Sperm whale



Parrot fish



Dolphins




Octopus




Morena

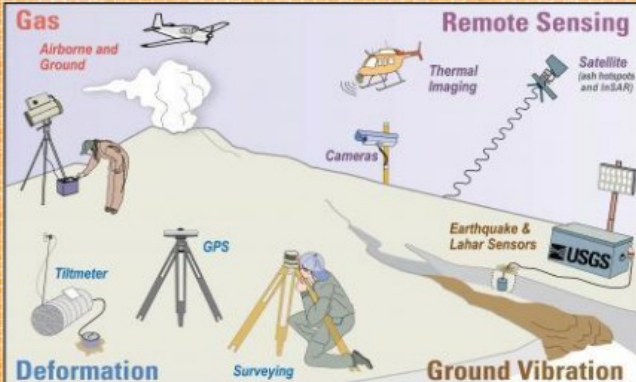
Teachers from Italy, Turkey and Poland published lesson plans on web site:
<http://www.volcano-erasmusplus.eu/lesson-plans/> as a result of their work with students.

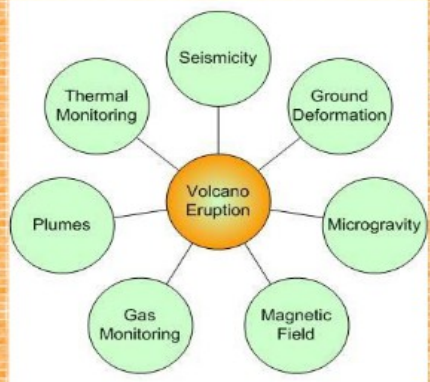
Students learnt about monitoring of volcanoes:



VOLCANO MONITORING TECHNIQUES







Measuring Deformation and Tilt with GPS

Volcano deformation can provide clues about what is happening deep below the surface. Two techniques used to monitor deformation include Tiltmeters and GPS. Like a carpenter's level, an electronic tiltmeter uses a small container filled with a conducting fluid and a "bubble" to measure a change in slope. Tiltmeters measure the amount of tilt in microradians, which is the angle turned by raising one end of a beam one kilometer long the width of a dime (equivalent to 0.00006 degree!). GPS measures the distance between two points to determine if they are moving further apart, as they might if magma was entering the system.

Seismic Monitoring

Earthquake activity beneath a volcano almost always increases before an eruption because magma and volcanic gas must first force their way up through shallow underground fractures and passageways. When magma and volcanic gases or fluids move, they will either cause rocks to break or cracks to vibrate.

Gas Monitoring

Magmatic gas is the driving force of volcanic eruptions. As the magma rises to lower pressure it causes the magma to expand rapidly (think agitated champagne being released from the pressure of the bottle). A primary objective in gas monitoring is to determine changes in the release of certain gases from a volcano, chiefly carbon dioxide and sulfur dioxide. Such changes can be used with other monitoring information to provide eruption warnings and to improve our understanding of how volcanoes work.

Polish students and teachers worked out mind map of success in the project:

