



PAKRUOJIS "ATŽALYNAS" GYMNASIUM

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MINUTES -SUMMARY OF THE TRANSNATIONAL SHORT-TERM JOINT STAFF TRAINING ACTIVITIES

Date(s) of activities – 26th – 30th November, 2018 (25th November -1st December, 2018 – including travelling days)

Place of meeting – Pakruojis, Lithuania

The training activities were organized following the topic

- Teachers Room 1 – “Curricula”

Project Title

Erasmus+ School Exchange Partnerships Project (KA2)

“Strengthening an Interdisciplinary Approach for an Effective Science Teaching and Learning”

Participants

Partner institution 1 (host) – Pakruojis “Atžalynas” Gymnasium, Lithuania

Mr. Kęstutis RAZUMAS (director), Ms. Rasa AUGUSTINAITIENĖ (deputy head, Chemistry teacher), Mrs. Rasa BERTULIENĖ (deputy head, Physics teacher), Ms. Rima LEIMONTIENĖ (coordinator), Ms. Rasa STRAVINSKIENĖ (assistant coordinator), Ms. Daiva MAKauskiENĖ (Biology teacher), Ms. Danutė STOČKŪNIENĖ (Biology teacher), Ms. Aušra VASILEVIČIŪTĖ (Maths teacher), Ms. Alma PETRULAITIENĖ (Maths teacher), Ms. Rita VINSKŪNAITĖ (Maths teacher), Ms. Vita GUDONIENĖ (Chemistry teacher)

Partner institution 2 (coordinator) - Jedlik Ányos Secondary School, Hungary

Ms Réka KULINYI (Maths teacher), Mr Tamás RADNAI (Physics teacher), Mr Lajos BEKE-SZABÓ (Maths and IT teacher), Ms Judit KOHUT (coordinator, teacher of English)

Partner institution 3 – Agrupamento de Escolas Daniel Sampaio, Portugal

Ms. Cristina SANTOS (Maths teacher), Ms. Carla VAZ (Biology teacher), Ms. Paula PAIVA (Physics and Chemistry teacher), Ms. Telma RODRIGUES (Biology teacher), Mr. Fernando REBELO (coordinator).

Partner institution 4 – Akdeniz Mersin Deniz Ticaret Odası Mesleki ve Teknik Anadolu Lisesi, Turkey

Mr. Hüseyin İlhan NACAROĞLU (principal, IT teacher), Mr. Özgür Ali NUR (coordinator, teacher of English), Mr. Taylan ÇİFTÇİ (Maths teacher)

Summary of the activities carried out

Monday, 26th November

Teachers participated in **Session 1** - discussion “Interdisciplinary Approach for Teaching Science from the Perspective of Policy Makers“ which was held in the Ministry of Science and Education of the Republic of Lithuania (Vilnius). The participants had an opportunity to meet the vice-minister Mr. Gražvydas Kazakevičius, the deputy head of Basic and Secondary Education Department Ms. Audronė Šuminienė, methodists Ms. Eglė Vaivadienė, Ms. Ona Vaščenkienė ir Ms. Aušra Gutauskaitė from the Nature, Science and Technology Section of the Education Content Department from Education Development Centre (the biggest institution affiliate to the Ministry of Education and Science of the Republic of Lithuania providing educational support in the field of pre-school, primary and general education). There was an ongoing project “Integrated Natural Science Education Curricula in Forms 5-8” presented, the necessity to strengthen practical activities in the field of science education discussed.

Tuesday, 27th November

Session 2 - workshop “Comparing Curricula for Teaching Maths, Biology, Physics and Chemistry“ was organized for Science and Maths teachers. They worked in international groups for presenting the curricula for teaching Maths, Physics, Chemistry, and Biology (for students age 15-18) and finding common topics. The results of their findings were presented after the workshop for to have the information on what topics should be covered for organizing short –term interdisciplinary activities in the frame of this project.

Wednesday, 28th November

In **Session 3** – informal discussion “Ideas for Interdisciplinary Activities“ teachers were invited to generate ideas for interdisciplinary activities.

Thursday, 29th November

There was an observation of 3 interdisciplinary activities - Mathematics + Biology, Physics, Chemistry organized by teachers of the host institution and project based Science learning activities (experiments) organised for the teachers (**Session 4**) as well as a feedback session on the integrated lessons the participants observed.

The teachers were invited to a Maths and Biology lesson “Osmosis“ (teachers Ms. Rita Vinskūnaitė and Mrs. Daiva Makauskienė, form 11), Maths and Physics lesson “Types of Mechanical Waves“ (teachers Mrs. Alma Petrulaitienė and Mrs. Rasa Bertulienė, form 12), Maths and Chemistry lesson “Water Salinity“ (teachers Ms. Aušra Vasilevičiūtė and Mrs. Danutė Stočkūnienė, form 10)

Teacher Ms. Vita Gudonienė presented her experience on methods she uses for teaching Chemistry. The experiments were carried out by Vilniaus University Faculty of Chemistry and GeoSciences students as a part of introducing the ways of findings methods to involve students into engaging extra curricula activities for Science teaching and learning.

Friday, 30 November

Session 5 “Agreements for the Implementation of the Shared Ideas in Partner Schools” aimed at involving teachers to work in transnational groups for to share the lesson plans teachers brought as their homework and generate new ideas for the short-term interdisciplinary activities. The second part of the session was related to creating lesson plans (combining 2 disciplines, for instance Mathematics and Biology, etc.), discussing the methodology and how the activities could be incorporated into the

partner schools' educational processes. The following lesson plans were presented: "Sink or Float" for teaching Physics and Mathematics (Hungary), "Fermentation Processes" for teaching Biology, Chemistry and Maths (Portugal), "Differences of Daylight in Erasmus+ Countries" for Physics, Biology and Maths (Hungary) and "Equinox in Partner Countries" ??? for an integrated activity of Maths, Physics and Biology (Lithuania).

During the session Telma Rodrigues and Fernando Rebelo from Portugal introduced Google Classroom as an app which could be used for a more effective cooperation and communication among Science teachers.

Teachers participated in feedback session "Evaluation of the Training Activities" (**Session 6**). The participants were involved in a feedback circle activity based on a World Cafe method. They were asked to answer two questions being divided in two groups. In addition, the participants filled in questionnaires. The questionnaires were aimed to measure the quality of the activities, the impact of courses on improving teachers' skills/competence, and the significance / impact of the training event on the project participant. The summarized results of the answers are being presented in the annexes of this document (please, find Annex 1 and Annex 2 below).

Social Activities

There was a visit to NE Museum (Vilnius) organized, an educational trip to Lithuanian Maritime Museum (Klaipėda), and educational programme at "Glasremis" (Glass Factory in Panevėžys) organized for the participants. The aforementioned activities were organized with an intention to provide teachers with opportunities to know the culture and history of Lithuania better as well as get some new insights and ideas which could be useful for teaching Biology, Physics, and Chemistry.

Conclusions and agreements

The summarized feedback and evaluation shows that the teachers highly evaluated the organization and the content of the activities, emphasizing the opportunity given for exchanging ideas and experiences (91,7 % of them strongly agreed with this statement), stating that the activities helped them to acquire new theoretical knowledge and practical skills related to the interdisciplinary approach for teaching Science (67% of the teachers strongly agreed and 33% agreed with that). Summarizing their opinions towards the organization and the content of the activities, in general 92% of the respondents stated that the activities met their expectations.

Stating that as a consequence of this training the respondents built up new contacts/expanded their professional network, was the main point while evaluating the impact of activities on teachers' skills / improvement of competences (100% of the respondents strongly agreed with the aforementioned statement). In general 92% of teachers stated that participation in the activities resulted in their improved awareness of ways for developing new interdisciplinary activities and they became more motivated to strengthen this approach for teaching Science,

Improved teamwork abilities and knowledge about partner countries and culture (100% of the teachers said they strongly agreed) were especially highly emphasized when they expressed their opinion on the significance/impact of the activities to the participants. The teachers also mentioned that the training event in Lithuania resulted in their improved communication in foreign language (92% of the respondents strongly agreed) and practical skills (67% strongly agreed and 33% agreed), higher self confidence (75% strongly agreed and 25% agreed with this statement).

1. Regarding the further implementation of the shared ideas for strengthening the interdisciplinary approach for teaching Science

- Teachers will use Google Classroom App for sharing lesson plans, communicating on them with the colleagues (responsible- Portuguese team, deadline for creating a group – a week after the meeting and not later than 7th December).
 - Each partner school will prepare and share 3 lesson/activity plans which should meet the following requirements: a) the plans should cover all four subjects - Maths, Biology, Physics, and Chemistry and be prepared having in mind the common topics partners discussed); b) should be delivered on the same template changes or agreements on which will be made on Google Classroom; c) at least one of the lesson plans should include a video-tutorial of max. 5 min. (responsible – all schools, deadline – the 8th February).
 - Each partner school will implement and test 3 lesson plans considering that a) there should be at least 1 lesson plan from each country used; b) the feedback on the lessons/activities should be given using a template which will be discussed on Google Classroom; c) the lesson plan implementation process should be followed by making short – max. 5 min. long videos for documenting the process or getting feedback on the activities – at least 1 of them per school (responsible – all schools, deadline – the 17th March).
2. For ensuring effective communication and cooperation, monitoring and evaluation processes, the following agreements were made:
- The acronym partners will use to refer to the project title is INTEReST.
 - The most suitable name for the website of the project is www.interest-erasmus.net and the palette of the main colours to be chosen should be green, blue and yellow (responsible for designing the website – Lithuanian team, deadline for the initial version of the webpage – 1st January, 2019)
 - The logo of the project should be created (responsible – Turkish and Portuguese teams, deadline - the 30th January, 2019)
 - The Google drive should be used for keeping the needed files, photos, materials in a more organised way to help partners communicate and share ideas, outcomes etc. The Google Drive(s) will be attached to the Google Classroom as an extra tool whenever it's needed. (responsible – Portuguese team, deadline – end of December, 2018)
 - For starting the evaluation procedures, the transnational learning/training events, local activities should be evaluated. Tools to be used for evaluation – feedback videos (interviews), questionnaires after the learning/training events, final questionnaire with the focus on a control group, monthly mini-reports (responsible for the evaluation - all partners, responsible for the design of the questionnaire - Portuguese team, until the end of the project but not later than June, 2020).
 - The project materials mainly for the promotion of the project can be pens, notebooks, T-shirts (responsible – Hungarian team, deadline – 17th March, 2019).
 - The exact dates for the next transnational learning/training event will be from the 18th to the 22nd March, 2019 (17th March – arrival day and 23rd March – departure day) and will follow the topics described in the application form - Sustainability Week (for students) and CLIL (for teachers). Homework for the participants will be assigned by our Hungarian partners. Maximum number of students – four in total coming from each country should be considered. There will be no restrictions for the number of teachers participating in the training event.

Annex 1

Erasmus+ School Exchange Partnership Project (KA2) “Strengthening an Interdisciplinary Approach for an Effective Science Teaching and Learning” Short-term joint staff training event (teachers)

“Teachers‘ Room 1 - Curricula” 26th -30th November 2018 EVALUATION

What were the most important experiences?

- Meeting all of you
- Sharing experiences (education, cultural, emotional/social)
- Improving skills (language, Science, methodology) on personal and school level
- Planning and setting targets
- Cooperative work and interdisciplinary thinking
- Knowing new places
- Identifying with others
- Learning how to survive very cold weather
- Sympathy of our hosts

Which new knowledge, skills and competences did you gain or improve?

- Integration of Maths and Sciences (Biology)
- Communication and linguistic skills
- Coordinating and comparing curricula of different countries – also + Hungarian curricula is very modern, teaching of Logics, Philosophy in Portugal
- Awareness of cultural differences
- Enhancing the way of thinking towards teaching and learning
- Learning new methods of self-evaluation (Lithuanian team’s sample)
- New ideas for school equipment (Turkish team liked the technical solution to keep the chairs linked to each other)
- Getting to know the host country’s culture/history

Annex 2

Erasmus+ School Exchange Partnership Project (KA2)
“Strengthening an Interdisciplinary Approach for an Effective Science Teaching and Learning”
 Short-term joint staff training event (teachers)

“Teachers‘ Room 1 - Curricula”

26th -30th November 2018

EVALUATION

The aim of this questionnaire is to measure the quality of the activity, the impact of the training on improving teachers‘ skills / competence, and the significance / impact of the training event on the project participant.

Criteria and statements	Strongly disagree (1)	Disagree (2)	Neutral/Neither agree or disagree (3)	Agree (4)	Strongly agree (5)
Organization and the content of the activities					
The appropriate places for the activities were chosen				6 (50%)	6 (50%)
The appropriate time and duration were chosen		1 (8,3%)		11 (91,7%)	
The activities helped me acquire new theoretical knowledge and practical skills related to interdisciplinary approach for teaching Science				4 (33,3 %)	8 (66.67%)
To activities created spin-off effects for the launch or development of new educational (curriculum development, development of subject integrated /interdisciplinary) activities in my school			1 (8,33%)	4(33,34%)	7(58,33%)
There was an opportunity for exchanging ideas and experiences given		1 (8.3%)			11(91,7%)
The activities met my expectations			1 (8,33%)	2 (16.67%)	9(75%)
The impact of activities on teacher skills /improvement of competences					
As a consequence of the training, I have					
Improved my knowlegde of my professional field		1 (8,33%)		9 (75%)	2 (16.67%)
Learned from good practice abroad				6 (50%)	6 (50%)
Improved my awareness of ways for developing new interdisciplinary activities for teaching Science			1 (8,33%)	1 (8,33%)	10 (83,34%)
Shared my own knowledge and skills with colleagues and other people				3 (25%)	9 (75%)
Been able to experiment and develop new learning practices and teaching methods/new ideas			1 (8,33%)	4 (33,34%)	7 (58,33%)

Become more motivated to strengthen the interdisciplinary approach in teaching Science			1 (8,33%)	1 (8,33%)	10 (83,34%)
Built up new contacts/expanded my professional network					12 (100%)
Improved my knowledge of education systems in other countries				2 (16,66%)	10 (83,34%)
Significance / impact to the participant					
Thanks to this training activity, I have also improved my:					
Analytical skills			1 (8,33%)	4 (33,34%)	7 (58,33%)
Practical skills (planning, organising, project management, etc.)				4 (33,34%)	8 (66,67%)
Communication in foreign language skills				1 (8,3%)	11 (91,7%)
Teamwork abilities					12 (100%)
Emotional skills (e.g. having self confidence)				3 (25%)	9 (75%)
Knowledge about partner countries and culture					12 (100%)