2021 Round 1 Partnerships for cooperation and exchanges of practices

KA210-SCH Small-scale partnerships in school education
Form ID 2021-1-LT01-KA210-SCH-000029546
Deadline (Brussels Time) 30/09/2022

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Context

Project details

Applicant organisation:	Lithuanian Educational Research Association
Applicant organisation OID:	E10278403
Project code:	2021-1-LT01-KA210-SCH-000029546
Project title:	Teachers & Researchers Networking for Inquiry-based learning
Action type:	KA210-SCH
Call:	2021
Field:	School Education
Project start date:	02-01-2022
Project end date:	01-08-2022
Grant awarded:	-
National Agency receiving the report:	LT01 - Education Exchanges Support Foundation
Language used to fill in the form:	EN

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Project summary

Please summarise the information about your project in form of short answers to the following questions.

Please use full sentences and clear language. The provided summary will be made public by the European Commission and the National Agencies.

Background: Why did you apply for this project? What were the needs you have addressed?*
The idea of networking is becoming particularly relevant in the modern age of globalisation and the development of information technology when many functions and processes are implemented through networks. The project "Teachers & Researchers Networking for Inquiry-based Learning" (Project) brought together educational researchers and school teams to enrich the experiences of students with inquiry-based learning by creating a sustainable network of schools and researchers. This international project was initiated by the Lithuanian Educational Research Association (LERA), whose mission is to create and implement advanced, research-based educational practices in schools, to expand cooperation between educational researchers and practitioners. In the field of STEAM education, networking between various educational actors is becoming increasingly important while aiming to develop new educational solutions supporting transdisciplinarity in teachers' practices and broader student competencies as researchers who apply a holistic approach.

Objectives: What did you want to achieve by implementing the project?*
The Project aimed to initiate international teachers and researchers network for designing and implementing Inquiry-based learning (IBL) scenarios. To share the implemented practice with the educational community while describing the researchers' initiated innovative scenarios and teachers' support in their developed IBL projects' implementation. The objectives of the Project: 1. To strengthen cooperation between teachers and researchers and to enable a new generation of students - prospective researchers through IBL project activities. 2. To increase the use of Inquiry as a research method in schools aiming to grow innovative teaching and learning scenarios and approaches. 3. To provide qualitative information about the value of Inquiry-based learning and evaluation criteria for the students' IBL projects' activities and its benefits for everyday educational practice.

Implementation: What activities did you implement in your project?*
LERA brought together teachers and researchers from Lithuanian and Latvian schools to create networking based on the four stages and implement the main Project activities: I. RESEARCH NETWORKING initiative: – Preparation through collaborative learning (first stage of networking) – Testing a new practice (2nd stage of networking) III. METHODOLOGY PILOTING related to: – Creating and deepening new experiences (3rd networking stage) – Evaluation of new practices (4th stage of networking) contained the following conceptual Project Results: TEACHERS & RESEARCHERS NETWORKING PROCEDURES (including Evaluation Tool for Inquiry-Based Learning Projects.) II. MANAGEMENT (quality assurance aiming for sustainable management of innovative activities implementation and dissemination of the developed good practice and project results).

Results: What were the concrete outputs and other results of your project?*
The achieved project's results during January-July, 2022 exceeded the planned ones in the initial period of January-June, 2022: 18 online Network events for 26 participants and 2 online international Network events presenting projects' results; 16 teams (19 teachers and 7 researchers involved in the networking); 18 implemented and shared on the Erasmus+ Project Results Platform IBL projects; 3 Inquiry Learning Spaces (ILS) for IBL projects are available on the Go-Lab platform. 175 students participated; 5 articles (1 article on the coordinator's website; 3 articles on the partners' websites, and 1 article on the national Lithuanian periodical e-journal „Švietimo naujienos" / 'Educational news'); 3 videos on the coordinator's and partners' websites; TEACHERS & RESEARCHERS NETWORKING PROCEDURES (including the Evaluation Tool for Inquiry-based Learning Projects) shared on the Erasmus+ Project Results Platform.

Please translate your replies to English.

Project Description

In this section you are asked to give information about the objectives and topics addressed by your project;

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What was the most relevant horizontal or sectoral priority according to the objectives of your project?*
What were the other relevant horizontal or sectoral priorities addressed by your project?*

- • HORIZONTAL: Common values, civic engagement and participation
- • HORIZONTAL: Inclusion and diversity in all fields of education, training, youth and sport

In case the above selected priorities are different from the ones in the application, please explain why.

What were the most relevant topics addressed by your project?*

- • Quality assurance
- • New learning and teaching methods and approaches
- • Science, technology, engineering and mathematics (STEM)

In case the selected topics are different from the ones in the application, please explain why.
The topic "Pedagogy and didactics" changed to "New learning and teaching methods and approaches". These topics are related to each other, but the recent emphasises more innovations and learning activities based on the new learning scenarios for schooling. The Inquiry-based Learning (IBL) projects implemented during the Project, combined two forms of active learning: project-based and inquiry-based learning.

What are the concrete outcomes and achievements of your project, and how do they link back to the project objectives? Were all original objectives of the project met? Please comment on any objectives initially pursued but not achieved and describe any achievements exceeding the initial expectations.*
The networking of teachers and researchers was focused on the renewal of educational practice at schools implementing IBL projects. The networking effectiveness can be considered by comparing project results to the original plan and the achieved results demonstrating networking progress as most quantitative indicators. 1. Educational researchers from Lithuania and Latvia shared their research experience, and initiated the creation and implementation of inquiry-based learning (IBL) projects in schools, which enable students to learn about the world through research activities. The 7-month networking project (January 2–August 2, 2022) connected the research schools into a learning community involving 175 students (exceeding the planned 50) of various abilities and learning needs from different social and cultural contexts in Lithuania and Latvia. The maximum planned number of teams (16) of teachers and researchers were formed for promoting IBL for young people. 19 teachers (compared to the planned 14) and 7 researchers were involved in the networking of the 4 schools and researchers from LERA. 2. 18 Inquiry-based learning (IBL) projects implemented per 4 months evolved innovative good practices that enabled students to learn about the world through inquiry and master their research skills for possible future work. The pedagogical solution—IBL projects—combines the approaches of IBL and project-based learning. 3. Teachers recognized the IBL projects as meaningful for STEAM education because they allowed students to engage in real-world problem solving related to their everyday experiences while answering questions relevant to the local and global community and appropriate to the big ideas proposed by teachers. The researchers summarised various aspects of the implemented IBL projects and developed an Evaluation tool with the comprehensive criteria of a good IBL practice. This tool is valuable for IBL projects' development in schools. The IBL project evaluation tool now shared on the Erasmus+ Project Results Platform as part of the Project Result TEACHERS & RESEARCHERS' NETWORKING PROCEDURES. The 18 developed and implemented IBL projects (16 projects planned) became valuable good practices, and these projects' practices shared on the Erasmus+ Project Results Platform. Inquiry learning spaces (ILS) appropriate to the three (of the eight that planned) implemented IBL projects were created and shared on the Go-Lab platform. The ILS number changed for the following reasons: the teachers needed to invest extra time in the IBL scenario planning and implementation, as many of them increased in duration; and also, during the extra teacher training on ILS creation with Go-Lab, it was clear that the platform is to difficult for many teachers to manage it. The collective achievements provided the created learning community with deep innovative practices and are the qualitative criteria of the networking effectiveness expressed in the Project results.

In what way was the project innovative and/or complementary to other projects already carried out? Please describe how the needs of the identified target groups were addressed and what were the benefits of cooperating with transnational partners.*

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The researchers shared various models of inquiry with teachers, and the teachers chose the models and discussed IBL project topics with the students. IBL projects designed according to the phases (stages) of the inquiry, e.g., the 5E model, which encompasses orientation, conceptualisation, investigation, formulation of conclusions, and discussion. Two surveys conducted to gather information regarding the teachers' expectations and initial plans for IBL projects: • The first survey was carried to understand teachers' previous experiences in IBL, their preferable topics to explore with students. This information helped researchers offer inquiry-based learning models, planning tools, and research methods relevant to the IBL projects discussed during the webinar for Lithuanian and Latvian researchers. • The second survey was carried to learn about the initial plans for IBL projects. 19 teachers completed the form about the first planning steps of IBL projects before the international webinars for Lithuanian & Latvian teachers: - the themes of the 16 IBL projects encompass topics related to the Green Deal: e.g., circular economy, the use of renewable resources, increasing plant watering efficiency, sustainability, human health, environmental safety, a world free of poverty and hunger, and healthy nutrition. - initial distribution of IBL projects by research methods (models): 8 projects based on the 5E model; 2 projects based on the value-based problem-solving model; 2 projects based on the art-based inquiry model; 4 projects placed as Inquiry Learning Spaces (ILS) on the Go-Lab platform. - the IBL projects integrate different subjects, e. g., biology, chemistry, English, Lithuanian, information technology, mathematics, physics, biology, chemistry, etc. Participating groups of students include: primary school students, students from grades 8, 9, 10, and I, II, and III grades of gymnasium; some of the projects encompass non-formal learning activities. Based on this information, the researchers were appointed to consult a concrete school or a team for a specific IBL project. The Lithuanian and Latvian researchers organised workshops for teachers concerning the adapted ABC Learning Design tool that applied for the IBL projects planning. The main innovation was the project-based design applied to the holistic and transdisciplinary IBL projects that teachers and their students developed and implemented in everyday practice instead of usual subject lessons. The researchers from LERA interested in the new pedagogical scenarios variety and how they worked in different schools and students' groups, as the project researchers proposed a new transdisciplinary way for STEAM learning—inquiry-based learning projects. The key benefit of cooperation between Latvian and Lithuanian schools was a variety of the IBL projects scenarios and implementation contexts. Latvian teacher sad: 'I have learned not to underestimate the impact of partners.'

How was the progress, quality and achievement of the project activities monitored and by whom?*

The monitoring was carried out in several directions: 1. Activities' implementation. The plan for all Projects' activities is prepared and shared with all Projects' partners to communicate and synchronise, aiming to monitor the ongoing partners' activities according to the project plan. 2. The other direction includes ongoing strategic monitoring of the Project, i. e. each week, the project manager, two leading researchers from LERA, and partner representatives from the SLA have a meeting to discuss last week's activities and next week's plans. During these regular project management team meetings, a real project implementation plan details and additional activities were planned and implemented. The projects' management and progress monitoring organised by using the: - Activity planning. The plan for all projects' activities is prepared and disseminated to all projects' partners. A detailed plan for the schools was prepared additionally. - An interim report submitted in three months let to monitor the achievements of the short project period, and how the ongoing activities are implemented.

How did you evaluate the extent to which the project reached its objectives and planned results? Which activities did you carry out to assess the overall success of your project?*

The Project achieved results overall exceeded the planned results according to the previously described indicators (see above) and the impact on the community provided in the collected reflections from participants. The benefits of the networking for IBL are illustrated by the qualitative feedback of teachers, students, and researchers relating it to the initial purposes of the network defined: Purpose 1: To bring together schools and researchers interested in IBL and contemporary educational strategies to explore ways of innovation and educational process effectiveness. - Teachers recognised that IBL projects were innovative, effectively implemented, and meaningful for the students and schools. Teachers, reflecting on the experience of the IBL implementation claim that the inquiry develops students' academic knowledge and abilities, as well as key competencies, provides deeper subject knowledge, and develops skills in working with devices and tools. - Teachers admit that IBL projects increase students' learning motivation and engagement. - Teachers argue that IBL reveals or expands the contexts of the application and significance of knowledge in different fields of science in everyday life. - IBL provides opportunities for interdisciplinary integration during formal and non-formal education. - IBL helps to 'discover' new forms and methods of teaching. Purpose 2: To develop, in cooperation between schools and researchers, a variety of IBL ideas and ways of achieving them. - One researcher confirms that teachers can choose the methods of inquiry implementation, employing a variety of research methods, and were free in their roles while implementing inquiry in class and in the roles they assigned to students. - Other researcher discovered the different levels of teachers' readiness to ensure students' autonomy in the inquiry and provide support for students' self-directed learning. - Students, reflecting on their experience implementing IBL projects, also enjoyed the variety of learning spaces and possibilities for personalisation and

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deeper learning. They claim that participation in the IBL projects diversifies learning environments, provides opportunities to choose and delve into topics of personal interest, helps to discover new meanings of everyday phenomena, and guidelines for future research and study. Purpose 3: To enable schools and researchers to exchange information and experience relevant to the implementation of IBL projects. We can claim also that the distribution of tasks, as well as efficient communication, was ensured concerning the feedback of the Project partners above. Purpose 4: To create an information base for the implementation of IBL projects and ensure their dissemination opportunities. The learning community of teachers, school principals, and researchers that developed the methodology of IBL practice and networking procedures was created during the Project aiming to share new IBL implementation practices.

If relevant, please describe any difficulties you have encountered in managing the implementation of the project and how you and your partners handled them. How did you handle project risks (e.g. conflict resolution processes, unforeseen events, etc.)?

The small partnership project was a new experience for LERA as the coordinator, and it was a challenge to deliver the details of the Project and further report requirements to the school coordinators. It was highly desirable to see the reporting tools and some requirements as earlier as possible, as the initial project period was 6 months only, and we needed to agree on the Project results amount and delivery with the final report. One school started to use the grant during the IBL project planning stage because of experienced internal management difficulties due to COVID-19 interferences. They spent project funds during the next three months. Many teachers needed a longer time at the initial networking stage and longer support to understand and develop the IBL project topics, to plan, and to find new ways of students' formal or informal learning through inquiry. The project activities had to be integrated into the already started semester, so the teachers had to be flexible. Additional webinars were arranged to consider with the schools more planning, implementation, and dissemination details; the work plan for the schools' activities was developed as well. Longer time should be provided for the planning and implementation of the IBL projects as a transdisciplinary activity in schools. Principal inconveniences also related to the partially functioning reporting platform, obstacles in describing the activities of the Project, and the need to download and read the entire report. The financial problem related to the reporting challenges is that schools are budgetary institutions (public bodies) and must close all financial obligations by the end of the calendar year. They experience cofounding constrains in other projects' implementation or remain in debt till the reporting process will be finished.

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Summary of participating organisations

Role of the Organisation	OID of the Organisation	Name of the Organisation	Country of the Organisation	Type of Organisation	Accreditation of organisation (if applicable)	Partnership Entry Date	Partnership Withdrawal Date
Beneficiary	E10278403	Lithuanian Educational Research Association	Lithuania	Other type of organisation		02-01-2022	01-08-2022
Partner Organisation	E10260535	Socialinės lyderystės asociacija	Lithuania	Other type of organisation		02-01-2022	01-08-2022
Partner Organisation	E10048321	Salcininku r. Eisiskiu Stanislovo Rapolionio gimnazija	Lithuania	Other type of organisation		02-01-2022	01-08-2022
Partner Organisation	E10013092	Vilniaus Vytauto Didziojo gimnazija	Lithuania	Other type of organisation		02-01-2022	01-08-2022
Partner Organisation	E10133651	Aizkraukles novada vidusskola	Latvia	Other type of organisation		02-01-2022	01-08-2022
Partner Organisation	E10237846	Vilkaviškio r. Pilviškių „Santakos" gimnazija	Lithuania	Other type of organisation		02-01-2022	01-08-2022

Total number of participating organisations	6

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Cooperation arrangements

What were the strengths that each partner brought to the project? Please describe how the tasks and responsibilities were distributed among the partner organisations.*

The partnership was processed by considering mutual responsibilities and signing partnership agreements. Two types of cooperation agreements were signed between LERA and partners with the contractual responsibilities related to the project activities. The one is with each of PARTICIPATING SCHOOLS. The tasks and responsibilities related to activity A1. Research networking was: - during the A1.1. Scenarios preparation by researchers: selection of 3-4 STEAM teachers for the research project piloting with students; participation in the seminars and reflection on the preferable project scenario and possible project topic; - during the A1.1.3. National webinars in small teams (researchers together with teachers created scenarios for piloting): selection of the scenario and research project implementation planning together with the researcher; - during the A1.1.4. International webinar (researchers presented detailed scenarios): the research project implementation plan presentation for other schools; - during the A1.1.5. International webinars after piloting – each of the 16 groups (planned 7 groups) presented results after the implementation: together with the researchers' presentation of the research project implementation results for the project team. The tasks and responsibilities related to the A3. Methodology piloting: - during the A3.1. Research project (improved to the IBL projects) implementation in school with students as a formal or non-formal STEAM educational activity. Collection of implementation process data and reporting on achieved results. Another Partnership agreement was with the SLA. The tasks and responsibilities related to activity A1. Research networking was: - during the A1.1. Scenarios preparation by researchers: 'ABC learning design' methodology presentation; The tasks and responsibilities related to the A2. Management was involved in the project dissemination activities: The tasks and responsibilities related to the A3. Methodology piloting was the information about the scenarios' implementation in school preparation. The funding was also distributed between partners following the Grant agreement schedule of payments.

How did you ensure sound management of the project and good cooperation and communication between partners during project implementation?*

Project Management consisted of five interrelated stages: preparation, organisation, management (leadership, time, scope, budget, risk, change, team management), and integrated processes quality monitoring & assessment, and communication & dissemination. At the PREPARATION stage, the LERA & SLA generalised the vision and suggestions for the project proposed by all partners and defined the aim, the objectives, and the results of the project. The possibilities and resources of each Project partner were considered. Based on this analysis the role and the tasks of each partner in the Project were identified and the budget was calculated. This stage has finished by signing the Partnership agreements with each partner. The ORGANISATION stage encompassed building effective collaboration and implementation of the principles of teamwork and administrative arrangements among partners. During the kick-off meeting, partners were on the administrative arrangements and launched the procedures for stipulating them. The organisation stage has finished by approving the plan of the school's activities for the period January – June 2022 and the Communication & dissemination plan. The MANAGEMENT stage includes effective time, scope, and budget management to reach all results with the approved budget according to Grant Agreement. The general principles for time management are as follows: all Partners need to estimate the time limits, keep to the schedule, and be aware of deadlines. Management also includes work with people, leadership, conflict solving, risk and change management, reporting, etc. Risk management is included in the plan – in case of unplanned situations some space is left for flexible planning.

Implementation

Overview of Activities

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Activity title	Venue of the activity	Activity start date	Activity end date	Activity duration(days)	Grant amount allocated to the activity (EUR)
Research networking	International network initiation between Lithuanian & Latvian research association.	02/01/2022	30/06/2022	180	30 000
Methodology piloting	Lithuanian, Latvia,	02/01/2022	02/07/2022	182	25 000
Management (quality assuarance and dissemination)	Lithuania	01/02/2022	02/07/2022	152	5 000
				Total	**60 000**

Project Lump Sum	60 000

Research networking

Describe the content of the proposed activity.
LERA brings together school teachers in order to develop IBL scenarios and prepare them for implementation in class. SLA analyse quality of networking and prepare procedures for networking implementation.

Describe the target group for this activity. Who is going to take part and who is going to benefit from the results
The main target group are teachers of basic _AND_ secondary schools, and students as emerging researchers, who will be introduced to the Inquiry-based learning activities, as well as tools for inquiry;

Explain how is this activity going to help to reach the project objectives.
Webinars and participatory workshops will be organized by researchers for the teachers experts in order to bring them together while sharing experience, _AND_ developing IBL scenario creation _AND_ implementation methodology. The workshops will help to raise teachers', as well as students' interest in a long-term cooperation between schools and researchers. Inspirational webinar "Inquiry for learning in novadays school" will encourage teacher to start with the development of another learning process enabling students to discover Inquiry as a researcher's activity that highly motivate
The aim of the webinar: · to inform and interest teachers about the IBL and modern tools for this kind of learning scenarios; · to organise discussions how to raise the interest of students in Inquiry and research activities; · to organise discussions how to involve students into inquiry of their learning. Online webinars will be organised by LERA, UL. The materials and design of the webinar will be created by LERA and it will be adapted for the national audience by UL partner organization. Teachers will be invited to the final Event (Forum) in the end of the Project as the presenters.

Describe the expected results of the activity.
There will be 13 on-line Network events for 16 participants - teachers' experts' in IBL, research _AND_ innovation; and researchers from participating countries: 1 international webinar; 10*national participatory workshops in Lithuania _AND_ Latvia; _AND_ 2 international?/ national final events.

Please explain how did you determine the grant amount allocated to this activity?
14 teachers experts in IBL are involved into the Research activities, _AND_ 7 researchers are leading in the research based scenarios development.

Was the grant amount allocated to this activity sufficient?

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Yes

Please describe the content of implemented activity if activity deviated from the content of the proposed activity

LERA brought together Lithuanian & Latvian schools' teachers and researches by the following stages and activities: 1. Preparing by learning together – 1st stage of networking where the purposes of the network, the establishment of relations based on trust, the timeline of activities, identification of functions and responsibilities of researchers and teachers, communication channels, certification of acquired competencies were defined (1 event). 2. Testing a new practice – 2nd stage of networking. The main activities were: • webinars – aiming to interest teachers about inquiry-based learning (IBL) and project based approach, the researchers: shared their experiences, knowledge and discussed inquiry process in school environments (1 event); conducted several surveys to gather the information about IBL projects; based on analysed information, various models of inquiry have been presented to teachers (2 events); • training – researchers learned to use the Go-Lab platform from University of Deusto (Spain) (1 event) and ABC learning design methodology from University College of Namur-Liège-Luxembourg (Belgium) colleagues (1 event). 3. Developing and deepening new experiences – 3rd stage of networking (for more information please see in METHODOLOGY PILOTING). The main activities were: • workshops - researchers trained teachers how to create the IBL projects' plans by using „ABC learning design" tool adapted by LETA experts (4 events); • webinars: - each team had regular meetings discussing issues arising during IBL projects' implementation (8 events); - teachers presented 4 detailed plans (per school) according to ABC learning design for IBL projects' implementation (2 events). 4. Evaluation of new practices – 4th stage of networking. In order to measure the impact and effectiveness of IBL approach, researchers prepared (1) "Evaluation Tool for Inquiry-Based Learning Projects and (2) procedures for networking implementation.

How satisfied were you with the results of implemented activity? Please rate it on a scale from 1 to 10, 1 being the worst grade and 10 being the best.
10

If you wish, give additional comments about the satisfaction for this activity
The project activities were performed in full amount, & despite the difficulties, which teachers experienced in the Go-Lab platform management, another unexpected exciting result was achieved - the students-participants of several IBL projects were involved in the preparation of the Project results. For example, resources prepared by students: • Fotobook: https://www.storyjumper.com/book/read/134303342/62ac33396caea • The book of poems: https://www.storyjumper.com/book/read/137413962/62a6038f191c6?fbclid=IwAR38hIZRnoAqIv_0zNjnDPbnxQ4F91bOwlnlsM2Y The elements of the students' R&D activities were also over the project plan and many of the Project team members' expectations, e.g., such IBLP as: "Sustainable watering of plants", and "Construction of a hydrogen generator". Several students' reflections are provided in the guide: TEACHERS & RESEARCHERS NETWORKING PROCEDURES.

Methodology piloting

Describe the content of the proposed activity.
LERA website (lera.lt) in English, _AND_ Lithuanian, will be used will be used as a project website for several purposes: • To publicize information about the project activities; informational about project's aims, partners, results, news will be publicised regularly. • To create a virtual environment for collaboration of researchers and practitioners, as well as international networking. Online discussion rooms will be created, and they will be used for international meetings as well as national discussions among researchers, practitioners, policy makers and wider community. Most recent and urgent research results (especially related with Green Deal) from participating countries will be presented for practitioners and wider public. • To disseminate the methodology of IBL scenarios for innovation in school, of research tools to be used by researchers, teachers and students, youth. The Go-Lab platform will be used to attract teachers, students, youth to use IBL methods for the improvement of students' learning. By doing research together with teachers, students will develop their capacities of inquiry, some of them will be passionate to choose researchers' career. Students should have practice of doing research and be aware that they can change their learning environment. Created new scenarios will be published and used by teachers as emerging researchers, as well as student will be participants as the scenarios will be provided in an user friendly way.

Describe the target group for this activity. Who is going to take part and who is going to benefit from the results

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The main target group are teachers of secondary schools in Lithuania and Latvia, and students from various formal and non-formal education settings, who will be introduced to the IBL and research concept and its activities, researches career innovative trends of, as well as tools for inquiry.

Explain how is this activity going to help to reach the project objectives.

Teachers and researchers developed and implemented innovative educational projects will be based on various learning scenarios of IBL and become ready-to-use material available for everyone who teaches STEM, and ICT in particular. 7 scenarios designed by teachers for teachers and for students will be produced in the end of the project and shared between participating schools' teachers and published on the international Go-Lab platform. 14 teachers in total involved through the online events will be able to confidently use the tools, resources and inquiry-bases education method used in the project in order to implement IBL activities in school.

Describe the expected results of the activity.

Inquiry-based learning scenarios developed and implemented in the classrooms. In total 14 classrooms are concerned to participate in such pilot-type phase of the project. By following up with teachers experts after the implementation in the classroom of the activities, further analysis of the effectiveness of the IBL activities in class will be performed. An evaluation will be done in order to measure the impact of such an approach, and its descriptive model with focus on sharing these for the teachers in each participating country will be shared between tea chdrs in the network. This will laying the groundwork for the wider IBL use for teaching students researchers skills at various subjects in schools, especially STEM.

Please explain how did you determine the grant amount allocated to this activity?

14 teachers from Lithuania _AND_ Latvia will work on the design and implementation of the IBL activities in class and sharing the developed scenarios through the international Go-Lab platform in the national languages for wider teachers community. 7 researchers will work on the development of the evaluation tool for all teachers who interested to implement IBL in their class in Lithuanian, Latvian, and English languages. 3 publication will be made for sharing the tool appropriately on the national and international level.

Was the grant amount allocated to this activity sufficient?

Yes

Please describe the content of implemented activity if activity deviated from the content of the proposed activity

Methodology piloting was the 3rd stage of the networking creation. During this stage, teachers with their students implemented 18 created IBL projects. The quality of implementation of IBL projects was ensured by respecting different criteria: based on the phases of the inquiry cycle, the different learning needs of students, the variety of forms of assessment, the versatility of learning, and inquiry activities. Teachers of each school and 2 researchers formed teams; they planned online meetings and discussed issues arising during the implementation (8 events). The preconditions for the planning process and successful student inquiry activities implementation are presented in the 'Procedures for networking'. 18 IBL projects have been implemented in formal / non-formal education, in various students' age groups - primary school (e.i. Aizkraukle Regional Secondary School) and different gymnasium classes, involving students with fewer opportunities. IBL projects integrated different subjects: biology, chemistry, physics, mathematics, information technology, history, Lithuanian, English, physical education, etc. The duration of these projects varied from 4 to 8 weeks. The selected topics of IBL projects in the context of today's society globalisation naturally incorporated green practices (e.g. A world free of poverty and hunger; The use of renewable resources; Increase the efficiency of water use (Global Goals 6.4), etc.). IBL projects as a practice of changing the organisation of the education process at school used ICT-based solutions in all stages of their implementation. Teachers and students fixed activities of the IBL projects' implementation process and prepared reports as well as presentations (in video, and PowerPoint formats) with the achieved results. Teachers and students have presented all implemented IBL projects during the final conference (2 events) organised involving Lithuanian & Latvian teachers, students, researchers, and wider public.

How satisfied were you with the results of implemented activity? Please rate it on a scale from 1 to 10, 1 being the worst grade and 10 being the best.

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If you wish, give additional comments about the satisfaction for this activity

IBL project implementation was not only a way of fostering a 'learning process differently'. Yet, it was a way of realising

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students' creativity, citizenship, community spirit of the whole school, and social well-being. The following reveals the educational value of implemented IBL projects: expanded and deepened students' inquiry competencies, developed subject's competencies, promoted the growth of students' personality, formed prerequisites for students to create educational content themselves, encouraged students to look at research problems not declaratively, rather through their experience diffusion. The 18 scenarios' are prepared and available for everyone who teaches STEM with ICT. These IBL projects are shared between schools' teachers and on the Erasmus+ Dissemination platform; additionally, 4 Inquiry learning spaces (ILS) are created on the international Go-Lab platform. 19 teachers are experienced confidently to use various tools, and resources and applying the IBL approach in their schools. Teachers are confident also in choosing ways of inquiry implementation, applying various research methods, and free in their roles while implementing inquiry in class, and roles they have given to the students. However, the different levels of teachers' readiness to ensure students' autonomy in the inquiry and provide support for students' self-directed learning are found. By following up with teachers after the IBL projects implementation in formal/non-formal activities, researchers have performed an analysis of the effectiveness of the IBL projects and their activities, and to measure the impact. This analysis is presented in "Evaluation Tool for Inquiry-Based Learning Projects" as a part of 'Procedures for networking' shared on the Erasmus+ Dissemination platform. It is laying the groundwork for the wider IBL use for teaching students' inquiry competencies in various subjects, especially transdisciplinary STEAM education.

Management (quality assuarance and dissemination)

Describe the content of the proposed activity.
At the PREPARATION stage, the LERA _AND_ SLA generalized the visions and suggestions for the project, proposed by all partners, and defined the preliminary aim, objectives and outputs of the project. The possibilities of all the partners were analysed. On the basis of this analysis the role and the tasks of each partner in the outputs of the project were identified and conformed to them. The structure of management is rather simple: Project coordinator (LERA) will be responsible for strategic project management and more external communication, project manager (SLA) will be responsible for the evaluation of the project results in both countries and dissemination of the descriptive model for other schools.

Describe the target group for this activity. Who is going to take part and who is going to benefit from the results
Consortium of Project partners is composed from Lithuania, Latvia 7 educational researchers and 14 teachers from Lithuania and Latvia. The project is composed in a way where Lithuanian organizations will take a lead designing methodology of the innovative scenarios and awareness campaign strategy development.

Explain how is this activity going to help to reach the project objectives.
All the materials and tools will be used collectively, and it will be translated to national languages and English. The workshops and final events will be organized in both countries using similar content but adapting it to national context and involving national stakeholders.

Describe the expected results of the activity.
At the end of the project Partners collectively will publish educational project scenarios with the emphases on educational research to be shared with other teachers in their countries. Methodology of scenario evaluation will be developed that will let to collect the best implemented practice for future. "Learned lessons" of the project will be generalised and taken into account in the further projects of the initiated network. LERA _AND_ SLA will prepare tool for the IBL scenarios evaluation, accompanied by samples of questionnaires/interviews in English). Each partner - schools' teachers will use the tool to analyse and improve the designed and implemented scenarios for publication / uploading on the online platform (Go-Lab will be used as a sharing platform). LERA _AND_ SLA by consulting with other partners will evaluate those scenarios with the emphases on Inquiry as a research type. This scenarios will be delivered and discussed during the closing project events. The findings of the evaluation and scenarios will be shared with EERA and national research association as well as with schools on the national level.

Please explain how did you determine the grant amount allocated to this activity?
The preliminary budget for the project activities was calculated. All the partners were informed about the activities they will lead, contribute to, and financial award for that. Moreover, they had to inform the staff in their organisations about the project, its objectives, activities and schedule. After having received the confirmation from the partners, we started the detailed preparation of the project proposal. All the partner organizations should have provided the necessary information for the project proposal. The proposal was discussed with the partners and improved on the basis of the feedback from

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partners. This stage will be finished with the contract agreement signing.

Was the grant amount allocated to this activity sufficient?
Yes

Please describe the content of implemented activity if activity deviated from the content of the proposed activity
As mentioned, Project partners distributed responsibilities and leadership for the activities. Participants have been informed by the project coordinators and on the level of their organisations about the project start, its objectives, activities and schedule. During the first webinars, the activities, time, etc. were again presented to the teachers and discussed in details. All materials of the arranged events, prepared project materials in Lithuanian and English languages were placed on a shared Google Drive platform. This stage finished with the contract agreement signing and agreed obligations. The further networking processes mostly served for the goal of communication between partners. For the dissemination and impact several directions were planned: • direct & target groups: - schools' teachers (working with 14-18 year old pupils). This impact aimed to introduce and to motivate teachers with IBLP for formal and informal education teachers. - schools' – partners' pupils not participating in IBLP. The aim was to introduce with an inquiry process and possibilities to create them at school. For this results of the projects' were presented in national conferences, for schools community. The reflections presented in details in the TEACHERS & RESEARCHERS NETWORKING PROCEDURES. • indirect & target groups: - education experts aiming to encourage them to proceed with inquiry activities in education practice collaborating with teachers. Reached quantity - is about 200, as the information placed on the LERA's website in Lithuanian and English languages, and this can be accessed by Lithuanian and foreign researchers and stakeholders. - large education community aiming to introduce with IBLP as one of an important inquiry methods for future school. Used tools reaching: social media, LERA & partners' websites, publications. - education policy makers and other stakeholders reaching: closing project's event articles, social networks, published IBLP.

How satisfied were you with the results of implemented activity? Please rate it on a scale from 1 to 10, 1 being the worst grade and 10 being the best.
9

If you wish, give additional comments about the satisfaction for this activity
The reflections about impact in a qualitative form of analysis are provided in detail in the Networking procedures: • schools teachers • schools' – partners' pupils • education experts/researchers The feedback of education policymakers and other stakeholders: - Vilkaviškis District Municipality Budgetary Institution took an interest in this project due to the participating school (Vilkaviškio r. Pilviškių "Santakos" gimnazija) located in their area. Target groups - district educational institutions. The role of this institution is an observer (participated in the A1.1.2. activities), which contributed to dissemination and multiplication. And their Teachers professional development centre certified Project teachers as the participants of the sharing events & teachers developers & Presenters of the IBLP. - The usefulness and meaningfulness of the Project are also shown by the fact that after the first article in social media, Lithuanian education policymakers were interested in the Project. It is pleasant to recognise that Project Teachers performed real learning designing of a new educational process for STEAM learning - IBLP projects. This is one more of indicator of Project quality in the development of innovative teaching practices and new didactics for STEAM education.

Impact and Follow-up

How did the participation in this project contribute to the development of the involved organisations? What was the project's impact on the participants, target groups and other relevant stakeholders?*
The impact on the community and the benefits of the networking for IBL scenarios development could be illustrated by the feedback of teachers, students, and researchers relating it to the initial purposes of the network defined: Purpose 1: To bring together schools and researchers interested in IBL and contemporary educational strategies to explore ways of innovation and educational process effectiveness. - Teachers recognised that IBL projects were innovative, effectively implemented, useful and meaningful for the students and schools. Teachers, reflecting on the experience of their students' claim that IBL develops students' academic knowledge and abilities, as well as key competencies, provides deeper subject knowledge, and

develops skills of working with devices and tools. - Teachers admit that IBL projects increase students' learning motivation and engagement. - Teachers argue that IBL reveals or expands the contexts of the application and significance of knowledge in different fields of science in everyday life. - IBL provides opportunities for interdisciplinary integration during formal and non-formal education. - IBL helps to 'discover' new forms and methods of teaching. Purpose 2: To develop, in cooperation between schools and researchers, a variety of IBL ideas and ways of achieving them. - Researchers discovered the different levels of teachers' readiness to ensure students' autonomy in the inquiry and provide support for students' self-directed learning. - Students enjoyed the variety of learning spaces and possibilities for deeper learning. They claim that participation in the IBL projects diversifies learning environments, provides opportunities to choose and delve into the topics of personal interest, and helps discover new meanings of everyday phenomena, as well as guidelines for future research and study. They actively presented the IBLP at the Final Project event. Purpose 3: To enable schools and researchers to exchange information and experience relevant to the implementation of IBL projects. The feedback of the Project's partners above shows that the distribution of tasks, as well as efficient communication was ensured during the Project's implementation. Purpose 4: To create an information base for the implementation of IBL projects and ensure their dissemination opportunities. The learning community of teachers, schools' principals, and researchers, which developed the methodology of IBL practice and networking procedures, aiming to share new practices and lessons learned from IBL implementation. Summarising the experience of networking during the Project, the researchers raised issues related to the implementation of IBL at schools, and suggestions how to make the cooperation between schools and researchers more meaningful and efficient. Their insights are provided in the NETWORKING PROCEDURES, Recommendations for further networking & IBL implementation. They are made for the 3 groups - TEACHERS, RESEARCHERS & PRINCIPALS.

How did you make the results of your project known within your partnership, in your local communities and in the wider public? Who were the main target groups and what channels did you use to share your results with them?*

Teachers and students presented their IBL projects during the 2 international final conferences for Project's participants and wider public. The announcement about the final conference with registration was listed in the LERA's and schools' websites. The information base to presenting IBL projects consist of: supporting materials, project documents for the schools shared on the Google disk (accessible for Project's participants); 3 IBL projects shared on Go-Lab platform; 18 IBL projects shared on the Erasmus+ Project Results Platform (accessible for the broader community and all stakeholders). The partner Social leadership association shared Project information on their website and FB webpage: https://socialinelyderyste.lt/projektai/ https://fb.watch/jhVm7TTWdg/ Each school also provided an information about the Project activities on their websites: https://pilviskiai.lm.lt/gimnazija/projektai/ https://vvdg.lt/gimnazija-dalyvauja-tarptautiniame-projekte/ https://www.rapolioniogimnazija.lt/ https://www.aiznovid.lv/projekti/aktualie-projekti/erasmus/ They also shared the new IBLP implementation experience at the local conferences between schools. Regular announcements about the new shared project results are delivered via email to all LERA subscribers and in close Facebook group of Project participants. The project community is open to share the various implemented IBL projects scenarios and experience, and the mentioned above results are disseminated and will be kept always on the LERA website (see more below), as the projects' content. Other partners are also disseminated their good practices and project materials on their institutional websites and / or social media: Šalcininkai Eišiškių Stanislovo Rapolionio gimnazija website: https://www.rapolioniogimnazija.lt/naujienos/aktualijos/2022/05/erasmus-projektas-mokytoju-ir-tyreju-tinklaveika-tyrinejimu-gristam-mokymuisi. As it was mentioned, on the national level of policy in Education the detailed Project results' presentation and analysis published in the periodical "Švietimo naujienos" (Educational news): https://www.svietimonaujienos.lt/mokymosi-tyrinejant-projektai-tyreju-ir-mokyklu-tinklaveikos-rezultatas/

What was the impact of the project at the local, regional, European and/or international levels? Do you have plans to continue using the results of the project or continue to implement some of the activities after the project's end?*

The main impact of this Project is the preparation of teachers and researchers for the networking procedures encompassing the tool evaluation of the IBL projects' implementation. The project's impact is at the following levels: local—new experience, knowledge, and competence development, and educational practice in the educational process; creation of an IBL project base; regional European and/or international—sharing good practices and a project base; further research; and development of new IBL projects. Lithuanian and Latvian teachers emphasized that they discovered that the projects are a new opportunity to teach students in an interesting, meaningful, and different way. Also noticed was the greater involvement and engagement of students in such learning and their acceptance of responsibility for the results, which revealed creativity. Teachers argue that IBL reveals or expands the contexts of the application and significance of

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knowledge in different fields of science in everyday life. IBL provides opportunities for interdisciplinary integration during formal and non-formal education and helps to "discover" new forms and methods of teaching. The further use of the results reflects future plans and indicates research directions: - Each school has IBL projects and plans created by colleagues and could use them. Researchers plan to meet with the principals of the participating schools to discuss the possibilities for further integrating IBL projects into the educational process. - During the project, many points of the IBL projects' implementation were identified. The identification of the latter and the created products (as e.g., the IBL evaluation tool) open opportunities for researchers to prepare new projects for improving the implementation of IBL projects in schools. - It is appropriate to study how IBL projects can be integrated into the educational program from the beginning of the academic year rather than "jumping" unexpectedly into already prepared ones. In this case, teachers could prepare more purposefully and meaningfully; projects could be of longer duration; they could be carried out as certain students' semester works that more significantly respond to the subject program and students' needs, etc. - To develop the inquiry-based learning competencies of teachers during specific qualification training programs. The large-scale project makes sense to implement as schools are always open to cooperating with the researchers, and universities could be involved more as institutions validating new science-based and research-based methodologies for changing schools.

Did you use Erasmus+ platforms for preparation and implementation of the project, and do you plan to further use them for follow-up? If yes, please describe how.

The Erasmus+ platform would be a good tool for collecting results and adding institution profile implementing new projects and developments in research and innovation, and looking for the new normal in education and educational technologies. Unfortunately, the new platform does not yet provide comfortable services for project reporting as well as its implementation. The Erasmus+ Project Results Platform is already operational, and the project's outcomes can be effectively disseminated to various stakeholders. As it was mentioned above, the following results are already shared there: The guide "TEACHERS & RESEARCHERS NETWORKING PROCEDURES" (including the Evaluation Tool for Inquiry-based Learning Projects) 18 implemented IBL projects' good practices created in four schools: Aizkraukles nuovada vidusskola (Latvia): 1. Why sort waste? 2. Reverse vending machine (deposit return system) and usage of it in our neiborhood 3. The Circle Economy: food and waste, 3 IBL 4. The Circle Economy: textil and waste 2 IBL 5. The Circle Economy: waste as resources 2 IBL 6. The Circle Economy business models 2 IBL Vilkaviškio Pilviškių „Santakos" gimnazija (Lithuania): 7. Using bile and enzymes to remove stains 8. Sustainable watering of plants; Use of Microbits for sustainable plant watering. Learning through inquiry in the Go-Lab platform 9. Unused clothes trip; The Journey of Unused Clothes: A Study of the Effects of Fabrics by Chemical and Mechanical Means. Learning through exploration in a virtual environment - GoLab Vilniaus Vytauto Didžiojo gimnazija (Lithuania): 10. Dependence of the oxygen content in the blood on the time of wearing the medical mask. 11. Dependence of blood oxygen level on physical exercises. 12. Measurement of the noise level in various gymnasium rooms. 13. Construction of a hydrogen generator. 14. Where is the most CO_2 in the gymnasium? Šalčininkų Eišiškių Stanislovo Rapolionio gimnazija (Lithuania): 15. Organic chemical composition of cultivated plant seeds. Learning through inquiry in a virtual environment - GoLab 16. Significance of organic matter accumulated in seeds. 17. Amount of organic matter accumulated in seeds and growth of seedlings. 18. Healthy nutrition and solving hunger problems.

Erasmus+ promotes an open access requirement for all materials produced through its projects. In case your project has produced tangible deliverables, please describe if and how you have promoted free access to them by the public. How have you ensured that the project's results will remain available and be used by others? In case a limitation was imposed for the use of the open licence, please specify the reasons, extent and nature of this limitation. How have you ensured that the project's results will remain available and be used by others?*

The Lithuanian Educational Research Association (LERA) is a non-commercial organisation, and its website is open for the association's members and also for all scientists in the field of education in Lithuania and it is available for the European Educational Research Association members appropriately. The current project's webpages are created in two languages, Lithuanian and English where all material as well as results are published here on the LERA website: https://lera.lt/leta-projektai/mokytoju-ir-tyreju-tinklaveika-tyrinejimu-gristam-mokymuisi-2022/ https://lera.lt/en/lera-projects/teachers-researchers-networking-for-inquiry-based-learning-2022/. The website is always updated according to the recent project developments. The above mentioned main Project outputs - 1 article on the coordinator's website and 1 article on the national Lithuanian periodical e-journal „Švietimo naujienos" / 'Educational news') - are provided there as well as 3 Project videos. The new ideas generated in the project are developed in the LERA Committee of the Teachers Professional

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Development and are discussing with the MoES representatives for prospective implementation & during the national LERA VI scientific conference 'ŠVIETIMO PRAKTIKA IR TYRIMAI TURBULENTINIAME PASAULYJE', 2022 October 13 – 14 days.

European Language Label

The European Language Label is an award set up by the European Commission as part of the Erasmus+ programme. Its objectives are to recognise excellent projects in the area of multilingualism, to help sharing their results, and to promote public interest in language learning.

European Language Labels are awarded in each EU member state and in third countries associated to Erasmus+. The labels are awarded either on annual or biannual basis, depending on the country. You can learn more about the European Language Label on the Europa web, here:

European language initiatives   0

Thanks to having completed a Key Action 2 small-scale partnership project, your organisation has the opportunity to apply for the European Language Label.

Please note that applying for the European Language Label will not influence the evaluation of your final report in any way. All the information provided in replies to questions in this section will be used exclusively in the selection procedures for the European Language Label.

Would you like to apply for the European Language Label?
No

To address the above requirements, please reply to the following questions:

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Annexes

The maximum size of a file is 15 MB and the maximum total size is 100 MB.
The maximum number of all attachments is 100.

Declaration on honour

Please download the declaration on honour, print it, have it signed by the legal representative and attach.

Other documents

Please attach any other relevant documents.
If you have any additional questions, please contact your National Agency. You can find their contact
details here: List of National Agencies   0

List of documents

No	Name	File size (kB)	Type of document
0	Declaration-on-honour-2023-03-15.pdf	0 425	Declaration on honour
	Total size (kB)	**425**	

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Checklist

Before submitting your report form to the National Agency, please make sure that:

- All necessary information on your project has been encoded in Beneficiary Module;
- The report form has been completed using one of the mandatory languages specified in the Grant Agreement;
- All the relevant documents are annexed:
- Declaration on Honour, signed by the legal representative of the beneficiary organisation;
- The necessary supporting documents as requested in the grant agreement;
- You have uploaded the relevant results on the Erasmus+ Project Results platform: http://ec.europa.eu/programmes/erasmus-plus/projects/
- You have saved or printed the copy of the completed form for your records.

Conditions for the Final report submission

Final report can only be submitted if:

- ☐ All mandatory fields in the report have been filled in
- ☐ Reported Budget is greater than zero, see Budget   0
- ☐ Declaration on Honour has been uploaded
- ☐ Checklist has been fulfilled

PROTECTION OF PERSONAL DATA

Please read our privacy statement to understand how we process and protect

your personal data   0