SUSTAINING DEVELOPMENT IN EARLY SCHOOL EDUCATION

Progress Report   Public Part

Project information

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Executive Summary

SUSTAIN called "Sustaining Development in Early School Education" aims to gather and share through an on-line collaborative platform good practices from partner countries on developing key competences for lifelong learning in the pupils from the pre-primary and primary school stage from the age 5-12 through the employment of topics addressing the environmental thematic. In a two-year programme (2012-2013) the project partners are engaged in local teacher workshops and trainings, cross-implementation of different classroom practices, sharing experience and teaching materials through a project database, online communication between teachers and classrooms. In 2013 will be carried out a face-to-face International teacher training session with participants from all project countries. Following this experience up-to date teaching materials, tools (on-line database and a booklet) and teacher training program for in-service course will be created to enhance the quality and European dimension of teacher training in the partner countries.

The roots of the international project SUSTAIN lay on the *Natural Learning Concept (NLC)* which has been developed and implemented in Doga schools (TR) over the past ten years. It emphasizes the importance of teaching process that reflects learners' interests, stimulates their creativity and self-direction through creating a stimulating learning environment in which students can explore and come into direct contact with knowledge in welcoming classrooms, opened to the nature and the surrounding world.

Specifically, we aim to create a user-friendly e-platform with refined good practices in a database focusing on key competences for sustainable development integrating international and interdisplinary cooperation available for teachers teaching early age groups. The Good Practices Database interface is integrated in the SUSTAIN Project web site and can be accessed using the link "Database for Good Practices" from the main menu. All Internet users (public access) can browse or search in the Good Practices Database.

The network of partners has been formed in order to accomplish the project tasks especially define the concept of e-platform in the most appropriate way, including experts on a design, software and assessment and content development sphere and entities with experience in European training projects: the consortium, in particular, is made of training organisations that work with many different stakeholders including schools and public institutions and promotes the use of innovative methods in educational settings, a company with schools chain that include its teachers in order to represent their natural learning concept (NLC) which is mainly derived from educating the student 'ecological conscience' and 'open learning system' , a public University that focuses on the teacher training, distance learning, web-sharing. As it is also a higher educational institution, firstly it will have an opportunity to include the results of the project in its teacher training curricula; secondly it will contribute to the project on the technical matters on the one hand, and will have affectivity on teacher training part on the other.

Need analysis were conducted in BG, IT, RO, TR in February 2012 to describe the educational context in terms of education for sustainable development and the state of art in partner countries concerning the model of the key competencies for lifelong learning. Inquiries of the target group needs and experience were carried out with 28 (Italy), 51 (Turkey) 15 (Bulgaria) from pre-primary and primary teachers via "Structured Interview and questionnaires. Romania as the informatics department partner preferred to deliver the questionnaires both online and printed version about 211 teachers to reach the teachers in a wider sampling and impact through using both on paper and electronic format.

In the local workshops, sample lesson plans produced by course participants have been uploaded to SUSTAIN project database (http://www.sustain-project.eu). 11 Lesson Plans from Turkey, 8 Lesson Plans from Romania,1 Lesson Plan from Italy and 10 Lesson Plans from Bulgaria in a determined format into the online database and adapted and implemented practices via being coached by the owner of Lesson plan online. During the process of the test-implementation partners will collect feedback from the teachers engaged in it. To facilitate this process "Questions for structuring

teachers' feedback on test-implementation of the practices" were provided in the Concept Paper. The feedback aims to determine practices which, from the point of view of the teachers, are most relevant to the project objectives; were implemented into practice without major difficulties or modifications and would be preferred by teachers for future implementation with other pupils.

In addition to the teachers' feedbacks, all lesson plans suggested by experts and teachers in the partner countries will be assessed with the application of the "Good practices' criteria", listed in the Concept Paper. The database will contain at least 50 Good practices, described in the format defined by the project experts and equipped with additional resources which allow their practical implementation (videos, graphics, models, links to on-line materials and other).

During the project Doga Schools actively involves the Comenius School Partnership Project teachers in order to disseminate, multiply and find synergies between different projects. The teachers from each partner country will take the responsibility to introduce their activities to pupils in schools during the project meetings. Moreover, it will help the teachers to share their good practices in a European aspect

The International Teacher Training Course Program will be the realized in 5-days ITTC in Beykoz,Doğa Campus as blended training program in June 2012.After collecting the information and opinions from the teachers, the modifications will be made as required and these outputs will pave the way for the International Teacher training Course. ITTC aims to enhance teachers' competence development through introducing new ways of learning to support key competences that are necessary for environmental sustainability, mainly science and digital competence, civic and learning to learn, effective communication skills.

SUSTAIN will be a Teacher Training Course for Comenius Course Catalogue. A proposal will be placed for qualification of the TTC in the COMENIUS Catalogue; at least 2 dates for trainings would be published for the year after the project.

Every two year, a biennial for sustainable development will be held. First it will be organized in Istanbul with the contribution of the art-craft products of the learners in partner countries. A biennial for key competences and sustainable development will be held in Istanbul with the contribution of the art-craft products of the learners in partner countries at the end of the project. Later efforts will be made to make Biennial regular even after the end of the project. Biennials are an important dissemination and exploitation tool to reach more teachers and learners and the main theme of the biennial will remain as the same "sustainable development" but sub themes will be changed every two year in each partner country to raise the awareness of the people about the interrelation between sustainable development and key competencies, and present different perspective to the environmental problems.

Table of Contents

1. Project Objectives

The 2010 report on Skills for Green Jobs emphasizes that every job in future will need a continuous improvement in resource efficiency, and that developing a low-carbon economy will depend more improving existing skills and integrating sustainable development. Therefore, the education has a prerequisite role for promoting the behavioural changes and providing all citizens with the key competences needed to achieve sustainable development. SUSTAIN is a Comenius Multilateral Project that aims to gather and share good practices from partner countries in two year programme to encourage best results, innovative products to improve the quality of education and training through local workshops, online classroom implementation, and face to face International Teacher Training Course. The activities and products of the project aim to provide solutions for supporting the development in early school education.

The project fosters interchange, cooperation, and mobility among project partners and implementer teachers through online connections, local and international trainings to improve the quality of education and training in a European context. The project encourages the best use of results, innovative products and processes and to exchange good practices to support the key competences of the learners in order to improve the quality of education through project outputs. These outputs are;

-To provide training, resources and modern methods to teachers supporting interrelated and holistic development of key competencies for young learners, at an early school age & environmental awareness.

-To equip the teachers with methodological support, teaching tools and good practices (GPs) samples that would enable them to educate the pupils with the knowledge, skills and attitudes to make conscious choices to deal with the challenges and preserve the world.

-To create a synergy between education and the area of environmental responsibility through the use of environment.

-To develop ecological intelligence on children from the early ages where in the future this practice will create awareness on student about ecological balance.

-To lead the students display their abilities and observe the environment will pave the way for students' creativity through prompting the social values and strengthening the practical dimension. On the other hand through the use of environment will develop ecological intelligence on children from the early ages where in the future this practice will create awareness on student about ecological balance. Students can be dampened in four walls classrooms and there is a need for active learning philosophy by using environment as an educational platform.

- Implementer teachers who have already been in the local workshops from partner countries began to upload their Lesson Plans to the Database

- The project database has been fed with the GPs with teachers by using online connections and video conferences that would create the collaborative culture among the teachers with the help of peer coaching to support the collegiality and exchange of methodology and practice among teachers from different countries.

- The project promotes online networking between teachers through peer coaching sessions with video conferences.

- Updating the project database on the issue of key competences and Education for sustainable development (ESD) and make optimum use of existing networks and strengthen the national and cross-border cooperation among implementer teachers at all levels by building partnerships.

- The project platform reinforces the visibility of existing good practices in voluntary activities in this field and organizes peer learning activities to develop the project booklet for educational practices of teachers.

- During the Peer coaching sessions two or more test implementer teachers work together to reflect on current practices; expand, refine, and build new skills; share ideas. In our project, peer coaching seems peer support, consulting colleagues, peer sharing, and caring for refinement of the lesson plans to have the Good Practices.

- New teachers will be inspired during the Face-Face ITTC in a forest area, Beykoz-Doga. During the ITTC a draft booklet and e-platform will be presented to the teachers.

- Moreover, in each project meeting school visits are realized by the project partners and the policy makers are invited to observe the real classroom implementations.

- The project booklet will contain samples of refined good practises of each partner country and illustrating how to act as role models, by integrating the principles of sustainable development in teaching and practice.

- Sustain Biennial with the theme of sustainable development every two year, in order to display the good results outcomes and authentic classroom art crafts through encouraging the teachers and learners via biennial competitions.

2. Project Approach

Tools for Inquiry of Teachers' Needs

Need analysis conducted in each project partner country in order to understand the educational context in school level and the teachers' competence awareness about Sustainable Development (SD) to be able organize the content and structure of local workshop according to the needs of the participants.

The preferred form for the inquiry was structured feedback (moderated interview/discussion with several key questions). This process requires a moderator to the discussion took notes and summarized the comments and suggestions in a short report.

Tools for inquiring the needs of the teachers were designed through compiling the suggested key questions from the project experts of partner countries. 6 questions which determine the awareness of Sustainable Development (SD) and Key Competences (KC) and how often they were implemented were defined. Later the methods for conducting the survey of the need analysis was modified through considering the strengths of the each partner .When RO as the informatics department partner preferred to deliver the questionnaires both online and printed version about 211 teachers to reach the teachers in a wider sampling and impact through using both on paper and electronic format. Doga (TR) implemented sessions in focus group as 51 pre-primary and primary teachers and the head of teachers to let them reveal the implementations integrating with SD themes and KC already exists within the syllabus. BG conducted the structured interview via using the form of a "mind-map" or a "spider diagram" to 15 pre-primary and primary teachers and IT partner conducted structured interview for 28 teachers through integrating maieutic approach through posing the questionnaires.

For estimating the project grounds, partners prepared short overviews of the national education systems and national curricula for pre-primary and primary school stage.

The analysis of the partners' reports show that the educational systems in all project countries have similar structures and that the aims of the educational process at this early stage of education and upbringing of the children are alike. The basic domains of children's development addressed by the pedagogical work are compatible with the key competences for LLL.

The subject domains in the primary education mostly correspond to the key competences for LLL. The details of the national curricula are extracted in the national reports, produced by the project experts.

Whether directly referring to the framework of the key competences for LLL (as it is in RO) or not, national curricula define in one way or another that the objectives of the training are to deliver achievable knowledge, skills and attitudes that correspond to the age characteristics of the children. Although the European Reference Framework of the key competences for LLL is not widely known by the teachers in most of the partner countries, is can safely be said that the national curricula have embraced the competence oriented education process, which does not focus only on delivering knowledge, but also intends to master skills and attitudes. Certain hindrance to the practical implementation of the competence oriented education is the aging teachers' workforce in some of the project countries. With an average age of 50+ for over 30% of the primary school teachers in Italy and Romania (26% in BG) it is clear that substantial number of teachers in the project countries had graduated their university studies in different educational context. Implementing more modern approaches that master more efficiently development of students' key competences requires additional training and methodology support.

These conclusions were confirmed also through the inquiries of the teachers' needs carried out in the frames of SUSTAIN project. Although the data between the partner countries vary, teachers state their needs and interests towards:

-attending qualification courses (interactive, presenting participatory methods; well-targeted courses that match teachers' particular practice/subject area specifics; courses in communication between teachers and pupils);

-availability of practical tools (methodological guidelines and exemplary lesson plans / textbook / books; shared practices);

-support for classroom implementation of new teaching tools and methods (incl. informal meetings, experiences exchange, etc, as well as technical equipment: computer/s, internet, printer, beamer, etc).

In order to serve as "guideline for the partners to support the choosing of the good practices and development of new contents" the Concept paper has the following contents:
1/ Aims of the document
2/ Standing point (overview of the educational context)
3/ Basic concepts (Natural learning concept and Ecological intelligence, Sustainable development, Key Competences for LLL)
4/ Good practices' criteria
5/ The process of the SUSTAIN project test-implementation

The national reports produced by the project experts are considered as addenda to the Concept paper – presenting details regarding basic information on the educational context and the national curricula in the partner countries. In addition to the initially planned contents, the last variant of the Concept paper contains also criteria for selection of the good practices as well as annexes with the instruments designed to support collection of the feedback on the test-implementation from teachers (ref: Questions for structuring teachers' feedback on test-implementation of the practices) and from project experts (ref: Guidelines for experts' feedback on test-implementation of the practices).

LOCAL WORKSHOPS

Local workshops got together the international project experts that would be engaged in the presentation of the project content and the educational basis of project activities on local level plus pre-primary and primary school teachers in each partner country. Following the need analyses, the Local workshops in partner countries were held to present the model of competence-based learning; the concept of early development of key competences in pre-primary and primary school education for sustainable development. Furthermore, the participants were motivated to test, develop, upload and share their good practices combining with the use of the project database. Two day Local workshops in partner countries were also the initiator of SUSTAIN's process and took into consideration the target's needs. Romania-Turkey and Bulgaria-Italy were matched to participate in the local teacher's workshop of another country on the basis of meeting available expertise and demand. While Romanian experts introduced the e-platform, Turkish expert gave a sample lesson representing Natural learning Concept. Italian expert promoted the reciprocal maieutic approach and Bulgarian expert presented a sample lesson integrating SD topics and 8 key competences. Project database will be fed with minimum 50 Lesson Plans and will be updated and processed regularly by the project experts through testing, checking the content and getting the feedback of the implementers through **peer coaching system** by video conference.
In the workshops, **sample lesson plans** produced by course participants have been uploaded to SUSTAIN project database (http://www.sustain-project.eu) 11 LP from Turkey, 8 LP from Romania, 1 LP from Italy and 10 LP from Bulgaria. These lesson plans for the test-implementation process were produced by the experts and teachers. They are translated in EN and are currently revised before uploading on the e-platform for test-implementation. In a process of coordination are dates for peer coaching sessions from experts to experts and teachers from the partner countries on how to organise interactive video-conferencing lessons and peer classroom connections with the use of the interactive white board and specialised software. Romanian and Turkish teachers initiated the process by engaging in peer coaching via videoconference.
During the process of the test-implementation partners collects feedback from the teachers engaged in it. To facilitate this process "Questions for structuring teachers' feedback on test-implementation of the practices" were provided in the Concept Paper. The feedback aims to determine practices which, from the point of view of the teachers, are most relevant to the project objectives; were implemented into practice without major difficulties or modifications and would be preferred by teachers for future implementation with other pupils.

DISSEMINATION & EXPLOITATION EVENTS & PRESS:

✓ In the following conferences, seminars Sustain project's aims and activities, Sustaining Development themes, Education for Sustainable Development concepts and approaches and the SUSTAIN collaborative platform was introduced. SUSTAIN files, leaflets and bookmarks are distributed.

„Classroom of the future" event - a collaboration session with Italian school, with the participation of TR expert 23 – 24.January 2012   Fumane, Italy

The International Teacher Training Course in the frames of eSIMTRA project (Ref. No: 505299-LLP-1-2009-1-BG-KA3-KA3MP)- 21-28 April 2012- Rezekne, Latvia

Lesson plans and good practices were introduced in International Applied Education Conference in Middle East Technical University on 13- 15 September 2012 (http://www.appeducation.org/) and the academic paper article was submitted to be published in an Applied Education Journal.

DIDACTA – Congress for education and science. Presentation about EU funded projects, including SUSTAIN-08 – 09.October. 2012-Sofia, Bulgaria

Science on stage Festival. Stand where CCTA's projects were presented including SUSTAIN 26 -28 October 2012-Sevlievo, Bulgaria

During the training course in the Primary School „Ivan Vazov", BG expert presented the SUSTAIN project 28 October 2012 Ruse, Bulgaria

Media & Learning Conference 2012 Brussels, 14 -15 November

Creativity in Language Learning International Conference Brussels, 15-16 November 2012

During a two-day training course in "Zvezdichka" kindergarten, BG expert presented the SUSTAIN project 27 – 28 November 2012   Varna, Bulgaria

✓ In Doga Schools EU LLP projects under the subheadings as Comenius school partnerships and Comenius Multilateral and Comenius Regio Projects are related to Sustainable development, we invite the teachers to visit the project database to implement and adapt the Lesson Plans in their local context. This crossed implementation process will prove the effectiveness and adaptability of the lesson plans. http://www.sustain-project.eu/main/locp

✓ Article in local newspaper published online-26 November 2012

http://www.gazetadambovitei.ro/educatie/308-altele/5400-dambovia-ofer-bune-practici-cu-privire-la-educaia-pentru-o-dezvoltare-durabil-citete-mai-multe

✓ The start of SUSTAIN project was announced in eSIMTRA @newsletter- January 2012 EN version, spread in electronic format by e-mail and published on www.esimtra.eu

✓ The 2nd Local Workshop in Italy with the participants of 13 pre-primary and primary teachers was realized on 9th November 2012 in Partinico. On purpose the 3rd Project meeting was combined with this local workshop so all the partners took place in the Mirto School for the sake of the dissemination.

http://www.sustain-project.eu/diss/events/Mirto%20school%20presentation.pdf

The test-implementation stage within the SUSTAIN project will take part predominantly during the first half of the 2012–2013 school year. The objective of the test-implementation is approbation of existing practices in the partners' countries as well as development of new practices by teachers and project experts which will further be shared with the implementing teachers. The purpose of this process is to determine the best practices among the existing and newly developed – those that answer to a great extent the criteria, listed in the Concept Paper and that are suitable to be included in the SUSTAIN database for good practices as exemplary units. The outcomes of this stage will be published on the SUSTAIN platform and will qualify for the International Teacher Training Course and SUSTAIN biennale.

3.   Project Outcomes & Results

Project web site http://www.sustain-project.eu/

The most important channel of the project dissemination, to inform the public about the project and its activities, is the project website. Therefore, one of the first steps in the project was the SUSTAIN website development. The website is under continuous development until the end of the project and for the moment it contains information about the project background, aims, partners, activities, events and results of the project. It also offers access to the project platform and database.

The project website is available at http://sustain-project.eu/. The content of the website is presented in English and also in the partners' languages: Turkish, Bulgarian, Romanian and Italian.

Tools for Inquiry of Teachers' Needs

The content development of the project was initiated with the need analysis studies with teachers to define the pedagogical features for development of the **key competences** for a sustainable development in education.

Through this inquiry we could understand the educational context in school level and the teachers' competence awareness about Sustainable Development (SD) to be able organize the content and structure of local workshop according to the needs of the participants.

Need analysis were conducted in BG, IT, RO, TR in February 2012 to describe the educational context in terms of education for sustainable development and the state of art in partner countries concerning the model of the key competencies for lifelong learning.

Inquiries of the target group needs and experience were carried out with 28 teachers (Italy), 51 teachers (Turkey), 15 teachers (Bulgaria) from pre- primary and primary teachers via "Structured Interview and questionnaires. In Romania, semi-structured interviews and questionnaire (both on paper and electronic format) were carried out. The questionnaire included the same questions used during the interviews. 211 pre-primary and primary teachers have participated to the study.

The detailed description of the curricula showed many similarities between the partner countries and many topics in which SD education can be introduced. The analysis of the partners' reports show that the educational systems in all project countries have similar structures and that the aims of the educational process at this early stage of education and upbringing of the children are alike. The basic domains of children's development addressed by the pedagogical work are compatible with the key competences for LLL. The inquiries of the teachers' needs carried out in the frames of SUSTAIN project between the partners countries vary, teachers state their needs and interests towards attending qualification interactive courses.

A two-day Local Workshops

Following the need analyses, the Local workshops in partner countries were held to present the model of competence-based learning; the concept of early development of key competences in pre-primary and primary school education for sustainable development. Local workshops got together the international project experts who were chosen through matching the specific learning demands on the part of the teachers and the expertise of particular experts. Romania-Turkey and Bulgaria-Italy were matched to participate in the local teacher's workshop of another country on the basis of meeting available expertise and demand. While Romanian experts introduced the e-platform, Turkish expert gave a sample lesson representing Natural learning Concept. Italian expert will promote the reciprocal maieutic approach and Bulgarian expert presented a sample lesson integrating SD topics and 8 key competences. Furthermore, the participants were motivated to test, develop, upload and share their good practices combining with the use of the project database.

In Two Day Local Workshops in partner countries; in the first day of seminar, the project aims, objectives and activities, Sustaining Development, Education for Sustainable Development - Concepts and Approaches and the Sustain collaboration platform were introduced. On the second day of the project the pre-school and primary teachers attended the presentation of the research

findings related to the current context of the pre-primary and primary education for sustainable development in their countries. However, in Italy the 2nd Local workshop took place on 9th of November with experts from partner countries. The local workshops took place in Partinico, at Mirto School. The choice of involving Mirto as implementing school of the SUSTAIN project is connected with its history. The history of this school, its foundation and location is strictly connected with the SUSTAIN project since it is linked with the Sustainable Development topics of World Citizenship and Democracy, Human Rights, Peace and Justice, Local and Global Responsibility. The decision to host the workshop in the Mirto School on 9th November was strategic for the implementation of the project. In this date, every year Mirto School hosts the Oil Festival celebrating the new olive oil that has been produced. It is an important event linked with the Education to Sustainable Development morning the SUSTAIN team was invited to take actively part to this event and to introduce the Sustain project. This was a valuable opportunity for the dissemination of the project.

CONCEPT PAPER

CCTA prepared the Concept Paper that serves as "guideline for the partners to support the choosing of the good practices and development of new contents".
The purpose of the present Concept paper is to set the frames of the SUSTAIN project basic concepts and processes, and to establish common criteria for estimation of the good practices within the project context.

The document aims to define the partners' common understanding about:
- Ecological intelligence
- Sustainable development education
- Key competences for LLL
- Criteria for good practices within the context of the project
- Test-implementation process

Good Practices/Lesson Plans Database

Two areas were designed in a database. First one is registered area to store the 50 Lesson Plans created by the implementer teachers. Second one, Good Practices Database interface is integrated in the SUSTAIN Project web site and accessible for all visitors. It will be used as a showcase for the Sustain Good Practices including the tested and refined lesson plans by the users. Teachers have been uploading Lesson Plans in a determined format into the database. The project database will be fed with 50 lesson plans by the teachers from the partner countries and they will be processed and refined regularly by the project experts through testing, checking the content and getting the feedback of the implementers. "Practice" would mean a lesson plan or activity description that can be implemented in formal (in-school or out of school) or informal education context. Taking in consideration SUSTAIN project aims and objectives , the criteria described in Concept paper as 'The Good practices' Criteria ' are considered for assessment and selection of the SUSTAIN good practices.
The Lesson Plan Database offers to all SUSTAIN registered users the possibility to upload and share lesson plans. The uploaded lesson plans are candidates to become good practices. The registered users can search in the Lesson Plans Database for suitable lesson plans to be tested in their classroom. Also, they can **comment on any lesson plan** available in the database. As a short conclusion, all the lesson plans provided by the teachers will be stored in a shared database. Although the web interface is presented with two names, in essence, the both interfaces are representing the same tool (Database for Good Practices). The Good Practices Database interface is integrated in the SUSTAIN Project web site and can be accessed using the link "Database for Good Practices" from the main menu. All Internet users (public access) can browse or search in the Good Practices Database.

Figure 1. Good Practices Database - web interface

Figure 1 presents the main web interface of the Good Practices Database. This interface allows users to browse the database by **sustainable development themes** or to search in the database using different criteria as **key competences, level, language, key words, teacher's name, and topic.**

SUSTAIN Database Tutorial

The database tutorial in EN, BG, TR, RO and IT includes detailed instructions for web interface of the database usage. The user manual is provided in electronic form to the partners, experts and teachers.

SUSTAIN Collaborative Platform

Another important outcome of the project is the SUSTAIN Collaborative Platform. This platform represents a customized implementation of phpGroupware software. The SUSTAIN Platform is available to registered users (project working team and pre-school and primary teachers involved in the SUSTAIN activities) and it is used in the frame of the project for documents and experience sharing between partners and between project team and teachers and for collaborative activities between partners. The platform includes in the public space important materials for the project development.

The Platform was the main channel use by the partners to distribute materials to pre-school and primary teachers from the two days local workshops.

The Sustain Platform may be accessed directly at http://phpgw.sustain-project.eu/ or from the project website using the Collaborative Platform link.

Test Implementation- Peer Coaching

In the workshops, sample lesson plans produced by course participants have been uploaded to SUSTAIN project database (http://www.sustain-project.eu) 11 LP from Turkey, 8 LP from Romania, 1 LP from Italy and 10 LP from Bulgaria. These lesson plans for the test-implementation process were produced by the experts and teachers. They are translated in EN and are currently revised before

uploading on the e-platform for test-implementation. In a process of coordination are dates for peer coaching sessions from experts to experts and teachers from the partner countries on how to organise interactive video-conferencing lessons and peer classroom connections with the use of the interactive white board and specialised software. Romanian and Turkish teachers initiated the process by engaging in peer coaching via videoconference. Lesson plans of the implementers uploaded to the database are tested to improve and make necessary modifications through exchanging the ideas with online connections, discussions on their e-platform and gathering the reports by the projects experts on using key competences in school curricula. The processing system of the compilation and enriching of the lesson plans will advocate for larger, European wide adoption of good practice. As a result, up- to date teaching tools, materials and teacher training will be created utilizing the results of the lesson plans.

Environment, Using waste (RO) & To protect nature! (RO) Lesson plans were implemented by two implementer teachers in Turkey via videoconference. Rubik's Cube (Thinking Skills Course) (TR) Lesson plan was also implemented by an Italian teacher.

1. Via emailing the implementer teachers asked questions to the creator of the lesson plans in order to reflect the lesson plan to their classes.
2. After implementing the lesson via video conference **conf.dogakoleji.com/euprojects** the teachers talk about the implementation in detail regarding their experience during the test-implementation,
3. Implementer Teachers answer the questions for structuring teachers' feedback in the Concept Paper.
4. The teacher who produced the lesson plan revised the lesson plan according to feedback from the teacher who implemented her/his lesson plan in his/her class.

4.   Partnerships

Based on the data for poor performance in 2006 PISA, we address the acquisition of key competencies that are relevant to the social and environmental aspects sustainable development at an early age. The project consists of four partners and all do have specific and important contributions during the implementation process. When considering the statistical results of PISA (Programme for International Student Assessment), apart from Turkey, these partners (Romania, Bulgaria, Italy) do have a relatively low success on 5-12 years educational assessment, hence the project intended to produce tools and recourse helping the teachers to develop key competences for sustainability in countries where there is an explicit need to reformulate the education process and methodology from the early age. Each partner includes teachers into the project where they are trained as well as given the opportunity to demonstrate their good practices that are being pooled and scrutinized regarding their weak and strong points.

In that sense, **UVT Valahia University** is a State University, that organizes teacher training / distance learning courses, together with the experience gained in Socrates-Comenius projects (as coordinators and partners), the university staff involved gained an important experience on working with virtual instrumentation, collaborating platforms and web-sharing instruments. UVT will also play a crucial role in exploiting the use of the project database in the trainings of all the university students in the Teachers Training Departments.

Doga Schools is a chain of schools with experience from kindergarten to high schools. Doga schools also enrich its multicultural face with Comenius School Partnerships /Regio and Comenius Multilateral Projects; the links with these projects where Doga Schools will involve the primary school teachers as the SUSTAIN implementers to introduce the project content to their partners in each project meeting and video conferences.

(**CCTA) Center for Creative Training Association** is a non-profit association, established with the aim to work for public benefit in the field of education & aims to contribute to the positive change in the field of education and training.

 "Centro per lo Sviluppo Creativo 'Danilo Dolci'" (CSC) is an Italian nongovernmental association and its educational structure have a significant promotion on social and civic awareness. This organization' main works are to educate peace, non-violence, cultural, social and civic promotion and promote grass root participation of all in the developments. Nonetheless as CSC's main interest is education, it works with many different stakeholders including schools and public institutions and promotes the use of innovative methods in educational settings.
We have been working with RO and BG partners with the **Transversal KA3 ICT Project which was funded in 2010 NTSE- NTSE - Nano Technology Science Education Project No: 511787-LLP-1-2010-1-TR-KA3-KA3MP**

The consortium is strong both in terms of cultural diversity and richness and relevance of the expertise of the institutions.
The basic strategy of this consortium is choosing leaders from EU and EU candidate countries for each WP regarding to their speciality. This increases productivity and efficiency of teamwork. Strong and active communication through different channels are the solid foundation of this teamwork. Important instrument for building a strong international team is the regular international meetings and also flash meetings. From the collaborative space we can follow all the administrative and implementation progress.

Between the partners, the communication plan provides periodical video conferences between BG and TR to see different implementations, google plus group and regular reporting on the project processes and decisions.
Also, as outside bodies;
- ✓ CCTA works with researchers from Bulgarian Academy of Science

- ✓ CCTA operates the biggest non-formal network of schools in Bulgaria, with over 250 active partner schools

✓ Doga Schools & Istanbul University established "The Children's University" in April 2009 through cooperation young students' initiative to encourage in Turkey to study and work in science.

The project is implemented by various European Union and candidate EU countries with a long experience in European projects offering a multidisciplinary and multicultural character that provides significant added value to the project. The partners have the variety of expertise that enables to reach different target groups, stake holders and potential users through the outcomes.

Partners, with wide networks of potential users, will exploit the teaching space in their own institution, within teaching programs, workshops, and educational events. Declaration of exploitation results will describe the exploitation (ongoing and further) of the project and good practices by the consortium and beyond. It will summarize the activities carried out, the target groups reached in terms of numbers, the type of the target groups and educational settings. It will be translated and uploaded to the project database after the submission of the project final report by the project experts to share with the target groups in meetings and conferences. Also twice a year this reporting will be used as a supportive tool to renew and refresh our good practices on our database and sustain the impact of the project on our target groups.

5. Plans for the Future

Lesson Plans-Good practices Database (January 2012- until mid-May 2013)

Teachers will upload Good Practices in a determined format into the database. The project database will be fed with 50 good practices by the teachers from the partner countries and they will be processed and refined regularly by the project experts through testing, checking the content and getting the feedback of the implementers. Lesson plans in total will be completed to 20 from Doga and 10 from each partner; at least 10 of them will be revised for peer coaching.

The 2nd TEST-Implementation Period
(January 2012- until mid-May 2013)

The 2nd test-implementation stage within the SUSTAIN project will take part predominantly during the first half of the 2012–2013 school year. The objective of the test-implementation is approbation of existing practices in the partners' countries as well as development of new practices by teachers and project experts which will further be shared with the implementing teachers. The purpose of this process is to determine the best practices among the existing and newly developed – those that answer to a great extent the criteria, listed in the concept paper and that are suitable to be included in the SUSTAIN database for good practices as exemplary units.
Test-implementation period will also continue during the second half of the 2012–2013 school year and beyond the frames of the eligible project period. The outcomes of this stage will be published on the SUSTAIN platform and will qualify for the SUSTAIN biennale, but will not be considered for the other major project outcomes with the view of the pre-set project implementation periods and deadlines for delivery of the project outcomes.
During the process of the test-implementation partners will collect feedback from the teachers engaged in it. To facilitate this process "Questions for structuring teachers' feedback on test-implementation of the practices" were provided (see section Annexes below). The feedback aims to determine practices which, **from the point of view of the teachers**, are most relevant to the project objectives; were implemented into practice without major difficulties or modifications and would be preferred by teachers for future implementation with other pupils.
Project experts in each country will summarise teachers' feedbacks and will use them as one of the sources for preparing reports on the test-implementation. Experts' reports will contain also: overview of the test-implementation in each country, practices from other countries which were subject of approbation; new practices produced and implemented by the teachers; thematic overview of the practices, etc. "Guidelines for experts' feedback on test-implementation of the practices" are available to help experts to structure their reports in the Concept Paper.
Experts will consider teachers' feedback also for establishing the contents for the *SUSTAIN database with good practices*. In addition to the teachers' feedbacks, all lesson plans suggested by experts and teachers in the partner countries will be assessed with the application of the "Good practices' criteria", listed in the Concept Paper. The database will contain at least 50 Good practices, described in the format defined by the project experts and equipped with additional resources which allow their practical implementation (videos, graphics, models, links to on-line materials and other).

Approbation with the Teachers- One Day Teacher Seminar

Following the local workshops and processing system of the good practices (uploading, implementing and testing through peer coaching), one day teacher seminar will be completed until 30th April 2013 by the partners. The content and aim of the project, the platform and the tested good practices will be shared with 10 new teachers in one day teacher seminars in partner countries. The aim of this seminar is to get their recommendations to make necessary changes and adaptations on existing good practices to correspond the needs of the pre-primary & primary school teachers as well as to train them in the methodology and teaching resources' achieved. During one day seminar UVT will test the efficiency of the platform and database through connecting the teachers in partner countries (TR, BG and IT).

Teacher Training Module for Blended Learning- 27th May to 2nd June 2013

The International Teacher Training Course Program will be in 5-days ITTC in Beykoz Doga Campus as blended training program. Before the face to face teacher training in a forest area, the participants will be encouraged to register the platform of the project and read the uploaded good practices and reports to get an idea about the content. The partners will appoint one project expert and 3 new teachers to the ITTC to get fresh judgment and professional opinion on good practices and project booklet.

Dissemination Seminars - October 2013

Each partner will hold one-day dissemination seminars and invite at least 20 people of the target groups in their countries in October 2013 before the finalization of the project. Each partner will deliver the promotional leaflets; introduce the method, project, and outputs (booklet & promotional leaflets, bookmarks).

Project Booklet
draft: 25th May 2013
printed: October 2013
The project booklet will cover the processed one or two good practices from each partner country. The content and the structure of it will be defined in the 4th PM. The draft copy of the booklet will be spread to the trainees of the ITTC to get the fresh judgment and professional opinion of the teachers.
E-NEWSLETTER 20th May 2013
2nd e-newsletter: informing about the ITTC + examples from the test-implementation + photos & links
NOTIFICATION FOR SCHOOL VISIT
This dissemination material has to be produced after the school visit to inform wider audience and to promote it.
LINKS WITH THE COMENIUS SCHOOL PARTNERSHIP PROJECTS
During the project Doga Schools will actively involve the Comenius School Partnership Project teachers in order to disseminate, multiply and find synergies between different projects. The teachers from each partner country will take the responsibility to introduce their activities to pupils in schools during the project meetings. Moreover, it will help the teachers to share their good practices in a European aspect.
Biennial for Sustainable Development - October 2013
Every two year, a biennial for sustainable development will be held. First it will be organized in Istanbul with the contribution of the art-craft products of the learners in partner countries. The main theme of the biennial will be sustainable development and the sub themes will be defined by the project partners in 4th PM such as biodiversity, water shortage, recycling and reuse etc.
Teacher Training Course for Comenius Course Catalogue - 2014…..
A proposal will be placed for qualification of the TTC in the COMENİUS Catalogue; at least 2 dates for trainings would be published for the year after the project.
SUSTAIN Biennial – November 2015
A biennial for key competences and sustainable development will be held in Istanbul with the contribution of the art-craft products of the learners in partner countries at the end of the project. Later efforts will be made to make Biennial regular even after the end of the project.

6. Contribution to EU policies

With this project we promote the early acquisition of key competences in the ages 5 to 12 for the sustainable development. It creates a synergy between education and the area of environmental responsibility, enhancing students' active citizenship.

The most frequently quoted definition of "sustainable development" is proposed by the founder of Worldwatch Institute Lester Brown (WCED, 1987), according to whom "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Teachers qualified with the principles underlying Education of Sustainable Development in their approaches to teaching and promoting key competences add extra value on student performance. Students and teachers gain personal fulfilment through an open, attractive, nature-based learning environment, facilitating students' acquisition of key competencies and ultimately their role in a knowledge-based society. They also learn from early age about the EU dimension of environmental challenges and the practice of Europe-wide communication.

In 2005, the member States of *United Nations Economic Commission about Europe (UNECE) 2* adopted a Strategy for Education for Sustainable Development (ESD) in order to promote sustainable development. The Strategy is a practical instrument that aims to encourage UNECE member States to incorporate ESD into their formal education systems, in all relevant subjects, and in the non-formal education.

Since this Strategy for ESD presents **key themes** of the sustainable development, it was considered appropriate to be accepted as one of the theoretical pillars of the SUSTAIN project.

The joint forces of the consortium will also create a considerable EU Added Value: The Turkish coordinator as a content provider, established Natural Learning Concept and implements in Doga Schools for ten years. This NLC gives importance to Ecological Intelligence which refers to the ability to adapt to our environmental niche. Ecological refers to an understanding of organisms and their ecosystems (knowledge about how things, nature and natural laws), and intelligence lends the capacity to learn from experience and to deal effectively with our environment (recognizing and understanding the countless ways manmade systems interact with natural ones). Ecological intelligence allows application of what students learn about how human activity affects ecosystems so as to do less harm and to live sustainably in our niche — these days the entire planet. Ecological intelligence blends the knowledge with empathy for all life. Natural Learning Concept aims to raise persons who are effectual for the environment with this empathy and who have broader perspectives in cultural, social and scientific fields. The RO Partner UVT will create the database and inform the project experts and shares extensive experience on the technical details before the local workshops. RO partner will create e-platform and database by getting partners' recommendations; the database will be used by the Online TTC participants as extra reading and reference about the modules. The BG partner CCTA will lead and develop inquiry in the educational context and the content of the local workshops. The IT partner CSC will lead the contribution of the partners to make fully structured International Teacher Training Course (ITTC) ready to be submitted to Comenius Catalogue and to be offered as a qualification course for in-service teachers in early school education all over Europe.

During the project, the project database is being fed with the good practices of the teachers which is implemented and tested periodically by the project teachers in different countries through online connections and video conferences between the creator/owner of the good practices and the implementer teachers. Thus the GPs really emerge as cooperative endeavour gathering the expertise of teachers from different countries. This approach in elaborating the GPs makes them more usable in different national contexts. The local trainings were carried out by partners' project experts who are called as the international experts through matching the countries' needs with the experts particular know how. Jointly consortium creates an EU Added Values such as; local workshops, e-platform, testing the good practices stored in the project database, up-to date teaching tools, materials, and teacher training course will be created to enhance the quality and EU dimension of teacher training.