

EUROPEAN & LATIN AMERICAN EXAMPLES OF CROSS-CURRICULAR DISTANCE LEARNING IN SCIENCE

Acronym: X-Cross

In order to integrate multimedia and broadband technologies into the local science agenda of 15 secondary schools (6 European and 9 Latin American) of their participating cities, the **city administrations will work out common strategies to improve the capacity building in using ICT tools for fostering cross-curricular learning of 15 and 17-year-old students/pupils over both and between the two continents (Latin America and Europe)**, also implementing distance learning due to the time difference, helping these young people to face the new challenges of the labour market.

Furthermore, X Cross will **introduce new teaching styles** as specific unit of lesson given by the pupils from a higher to a lower grade [on top they are refreshing their knowledge] and the training programmes of “teachers teaching teachers” and “teachers teaching pupils teaching”, knowing that the appropriate use of ICT can help to accelerate the development and acquisition of some cross-curricular and also subject-specific competencies.

Due to the fact that ICTs are suitable for use in differentiated learning environments, X Cross will **reinforce the education level** in which pupils are expected to take responsibility for the building and transmission of their learning.

The partners of X-Cross are the following cities:

European Cities	Latin American Cities
<ul style="list-style-type: none"> - Free Hanseatic City of Bremen, Germany (Co-ordinator) - City of Segrate, Italy 	<ul style="list-style-type: none"> - City of Miraflores, Peru - City of Pirai, Brazil - City of Vitoria, Brazil

1) OBJECTIVES

The main objectives of X-Cross are:

- To develop the capacity of the local authorities management as well as the educational and technological leadership by training their staff (administrative and teachers) and the media literacy of the students
- The incorporation of e-learning, communications and information technology into school programmes
- Using effective digital audio and video components in a converged learning environment
- Offering media rich teaching and learning experiences
- Encouraging the use of innovative technology to shape and transform teaching styles (teachers teaching teachers, teachers teaching students, students -higher grade-, teaching students -lower grade-).

2) JUSTIFICATION

X-Cross is in alignment with the social cohesion aspect in attaining the **Millennium Development Goals by 2015** and in particular to reinforce the importance of the teaching and school administration fields for improving the quality of education. **Moving the Millennium commitments**

from the global to local level will help to identify easily the achievements, challenges or obstacles encountered in attaining these "Goals".

X-Cross will provide preliminary indicators for **cross-curricular competencies in science at secondary schools, improving the quality of education in 15 secondary schools** (6 European and 9 Latin American), contributing to **deepening and developing bi-regional links and encouraging mutual participation in research programmes**.

Using the existing structures and introducing new ICT tools the partners of the project involved in the Network 13 "Towns and the Information Society" operating by the applicant since 2003 will **reinforce their long lasting relationships in collaborating together another 2 years**.

The project aims to **increase the participation of small and medium-sized cities** on the international chess-board. These cities will apply specific strategies to improve the capacity building of educational and computing technology leaders, directors, teachers, educators and students/pupils.

3) TARGET GROUPS

These are divided into two groups:

Direct beneficiaries	Indirect beneficiaries
<p>5 local authorities (2 European and 3 Latin American).</p> <p>5 administrations represented by 5 main co-ordinators, 5 board of internal experts and 19 IT-staff members</p> <p>45 teachers representing 15 schools (6 European and 9 Latin American schools)</p> <p>Between 375 and 480 students/pupils covering the 5 cities.</p> <p>At long term other secondary schools (including teachers and pupils)</p>	<p>A total of 1.004.809 inhabitants from the five participating cities.</p> <p>240 members of the "Network 13"</p> <p>180 cities as members of the Global Cities Dialogue</p> <p>Ministries for Education and other entities working in this field.</p>
<p>450 = Direct beneficiaries = 555</p>	

Reasons for the selection of the target groups and activities

The project partners agreed on the necessity to launch a joint project on e-learning aiming at **integrating and improving the use of ICT tools in schools** as permanent feature in curriculum, using, among others, multimedia technologies including broadband access to Internet for helping the improvement of the quality of education/learning at all levels.

Relevance of the action to the target groups

Among other aspects, X-Cross will support the **transfer of know-how** and **access to technologies**, in order to increase participation in exchanges between Latin America as well as to strengthen the cultural relations between the members of the "Network 13". Moreover, the project will **enhance capacity building** in the field of Education and knowledge of the target groups, favouring social investment focused on education at all levels and **supporting the adaptation and modernisation of policies and systems of education**.

4.1) ACTIVITIES RELATED TO THE REALIZATION OF THE PROJECT

Activity	Objective	Leader city	Description	Deliverables	Expected results
Activity A1: Implementing the coordination unit of the project X-Cross	Establishment of a fully operational project (setting up of the coordination structure, staff composition, appointment of all experts, etc.) in order to guarantee the quality of the project and reach its objectives.	Free Hanseatic City of Bremen	The structure of the project will provide the EuropeAid Office with a reliable technical and financial management as single point of contact . The coordination unit will be composed by 1 administrator (HB), 1 project manager (HB) and 1 co-ordinator for each city. Team of experts supporting the creating of the coordination unit.	Management and project-internal Communication Infrastructure Plan; Quarterly Management Report by each city; Half-year expenses report by each city; Yearly audit for each city. Yearly audit for the whole project.	Decentralisation processes; Decentralisation of decision making; Valorisation of the participation; Capacity building.
Activity A2: Providing an Electronic Platform for collaboration and knowledge sharing	Enabling active participation in the project, dialogue and cooperation	Free Hanseatic City of Bremen	All tasks regarding the setting up of an electronic platform enabling exchange and information retrieval as backbone of the communication within the project. The official web site of the project could be: www.x-cross.info or www.x-cross.eu providing general information and interactive services	Online and interactive communication tools: Web site, Portal, Discussion forum, selection and use of an appropriate videoconferencing system, ...	Permanent exchanges; Appropriation of the electronic platform; Provision of adapted services and tools.
Activity A3: Organization of national and international meetings	To create an adequate framework for jointly work on the development of the project and to facilitate the direct personal interchange between the partners. To confirm the sharing out of the tasks corresponding to each participating city and to review the transversal actions, identifying deviation with the joint action plan and its adaptations and revising the project costs according to the consortium agreement.	All participating cities	A Kick-Off meeting, 2 Workshops and a Closing Conference incl. a seminar will be organized with/and for the partners of X-Cross. These meetings are addressing directly the participating cities and their political representatives in order to reach the mentioned objectives	Preparations and organizations of 4 national and international meetings; Proceedings (meetings' documentation); Action Plan and Road map of the project;	Quantity and quality of personal interchange; Diversity of the participants; Active participation, implication and support of the political and administrative personnel of the municipalities, around 40 people trained in a multicultural and interdisciplinary context for the technical realization of the project; multiplier effect; training for the co-operation; exchanges of know-how;...

4.2) ACTIVITIES RELATED TO THE CAPACITY BUILDING INCLUDING THE TECHNOLOGICAL INFRASTRUCTURE

Activity	Objective	Leader city	Description	Deliverables	Expected results
Activity B: Capacity building of the project X-Cross	Establishment of a fully operational project (setting up of the coordination structure, staff composition, appointment of all experts, etc.) in order to guarantee the quality of the project and reach its objectives.	All participating cities	In the context of X-Cross the system d-lecture will be used as basis for enhancing the objectives described in depth at the segment 1.5. of this proposal.	Conception and development of the e-platform including all training sessions provided by the technical advisors and by the actors themselves; technical platform for formation and remote training; exchanges and technological acquisitions of know-how.	Decentralisation processes; Decentralisation of decision making; Valorisation of the participation; Capacity building. Realization of the actions of formation and remote training; permanent dialogues between the cities of the project and with other interested institutions, maybe even regional governments; multiplication of the results; positioning of X-Cross within the field of distance cross-curricular learning in science

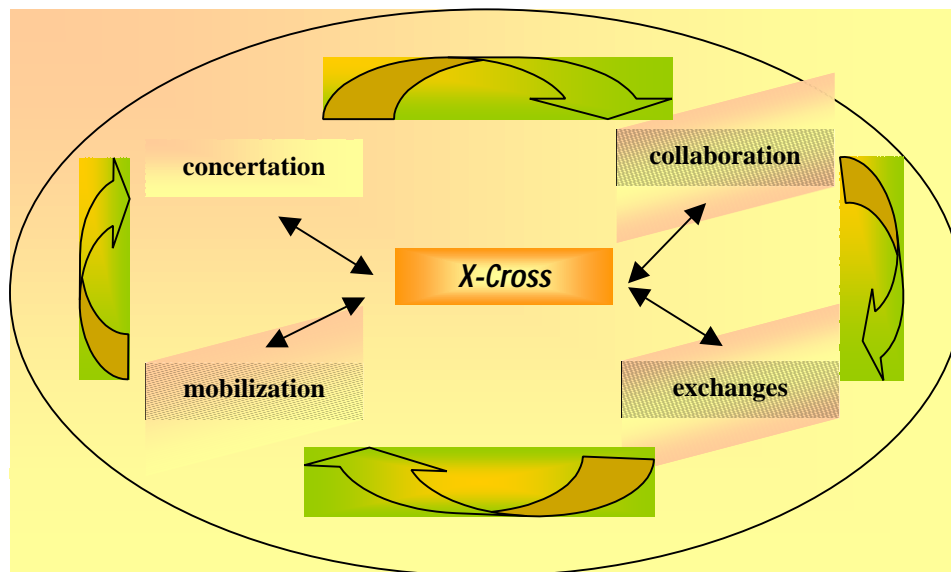
4.3) ACTIVITIES RELATED TO THE PROVISION AND SPREADING OF INFORMATION

Activity	Objective	Leader city	Description	Deliverables	Expected results
Activity C: Dissemination of results of the project X-Cross	Local, national and international promotion of the project and its results	Free Hanseatic City of Bremen	Dissemination tools such as: Web site; Foster external relationships; Participation in local, national and international events; Publications, Submission of conference papers; Newsletter; Public media involvement will be used in order to inform about the activities and outcomes of the project	Newsletter; Newsflash; Publications; Conference papers; Press releases; proceedings;	Permanent information and communication; Visibility; Valorisation of the partners involved in the project; Awareness building; Press reviews; Articles;

5) METHODOLOGY

The overall methods of implementation of the project can be characterized by **concertation**, a close **collaboration** between all participant cities, the permanent **exchange** of methods, know-how, expertise as well as the **mobilization** of information in a continuous process.

Inspired by the Québec Education Programme 9 cross-curricular competencies grouped in **4 categories** (intellectual, methodological, personal and social, communication-related) can be considered for the science matter, either mathematics, biology, chemistry or physics, that will be selected democratically by the partners.



Graphic: X-Cross Methodology

The proposed methodology is based on a strategy of collaboration and a **strong degree of participation of all members**, considering that specific conditions are also required to effectively use technology for learning, teaching and educational management.

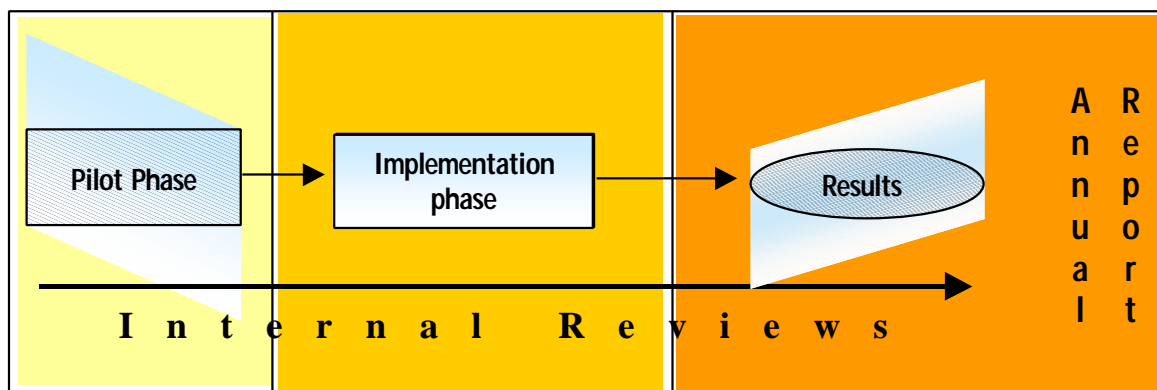
Moreover the method proposed aims to:

- Allow the awareness for the action
- Build a vision and proactive leadership from the education system
- Skill educators in the use of technology for learning
- Create content standards and curriculum resources
- Student-centered approaches to learning; Assessment of the effectiveness of technology for learning
- Access to contemporary technologies, software and telecommunications networks
- Technical assistance for maintaining and using technology resources
- Community partners who provide expertise, support and real-life interactions
- Ongoing financial support for sustained technology use
- Policies and standards supporting new learning environments

Each phase of the project should make the participants aware of their potentials in term of human capacity and in term of institutional means respecting the cultural, social, sociological, institutional differences and policies of each partner.

As far as procedures for **internal evaluation** are concerned, internal reviews will be carried out which will examine and evaluate the effectiveness of the activities taking in account the objectives and expected results. Based on the results of these internal reviews, an annual report will be elaborated in close collaboration with the partners of the project and will be submitted to the European Commission at the end of each project's year.

In addition to this procedure of internal evaluation that is rather institutional, the "feedback" of all persons involved in the project – in particular the administrative and educational staff and the pupils - are the best means of permanent evaluation, throughout the project.



Graphic: Internal evaluation

6) EXPECTED RESULTS

- **Target groups:** For the administrative staff, this project will permit an opening to new horizon and to learn on the way how new technologies should be integrated into smart classrooms as well as to pave the way for useful discussion on this hot topic. Moreover the technical and management capacities of the target groups will be improved, increased and optimised via the training sessions, the exchange of information, the working sessions and by learning by doing.
- The project will provide a high number of **publications and other outputs**, such as: internal reviews, action and infrastructure plan, all reports on intermediate stages of the project; conception and development of the e-platform; press releases, editing the web page; guideline of the project.
- **Multiplier effects:** Once established the know-how get from preparing the e-platform, using the platform and from adapting it will be given towards the colleagues and furthermore from the colleagues to the working place, from the involved schools to new ones and from the involved administrations other departments that may profit from these skills.

Short- and long-term impact:

- **The financial aspect:** Cities invest at long term for their educational institutions and therefore this aspect is a non critical one regarding the European cities. For both continents the time after X-Cross "only" human resources are needed to pursuit successfully the pilot project into a real-world context allowing a student-centred learning environment.
- **Institutional level:** The political level is strongly involved in this project even it is not clearly shown. But all local actions need a "patron" and as the high political representatives are concerned by this matter, there is an ownership of X-Cross since the submission phase of this project. (see Pisa study also at the national level).
- **Policy level:** The use of ICT will be introduced into the curriculum of the teacher. The pedagogical approach should be revised and improved and computing and technology leadership has definitely be supported and integrated at the city administrative and educational level.