



PEOPLE - citizenship

CITIDEP-PEOPLE «Project for Schools»



EXECUTIVE SUMMARY



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CITIDEP

PROJECT “PEOPLE-CITIZENSHIP”

EXECUTIVE SUMMARY

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<http://www.citidep.net/>

Introduction



In 2002, the European Union, through its Institute for Environmental Sustainability (Joint Research Centre), launched the project **PEOPLE** - "Population Exposure to Air Pollutants in Europe". PEOPLE invited citizens to participate directly in the evaluation of personal levels of exposure to air pollutants such as benzene, at several European cities. Lisbon and Brussels were chosen for the first year. Results from its benzene pollution measurements were presented at a press conference, 17 July 2003, at the European Union Representation in Portugal, Largo Jean Monet, Lisbon.

In Lisbon, PEOPLE's partners were:

Institute for the Consumer , Presidency of the Council of Ministers [Lisbon Project Coordination].

Regional Administration for Lisbon and Tagus Valley, Ministry of Cities, Land Use Planning and Environment

Department of Environmental Sciences and Engineering, New University of Lisbon

Public Health Regional Center for Lisbon and Tagus Valley, Ministry of Health

City Department for Environment and Green Spaces, Lisbon Municipality

Quercus - National Association for the Conservation of Nature

CITIDEP - Research Center on Information Technology and Participatory Democracy



CITIDEP (*) became one of the Lisbon partners of the PEOPLE project, because of its great potential to promote citizen participation in scientific studies of large social relevance. It was our belief that, in order to raise citizen awareness to both their roles as part of the problem and part of the solution in what concerns air pollution - one of the major explicit goals of PEOPLE -, it was not enough to rely upon the media as the traditional interface with the public.

The process of decision-making about scientific issues in social contexts always involves a critical examination of the relevant scientific knowledge and the consequences of related alternative policies. Therefore, schools are in a unique position to help to abolish some barriers between science and civil society, motivate young citizens to take an active role in social life with respect to science and promote important changes in personal and social behaviors.


Using the net of schools in Lisbon that hosted PEOPLE sampler devices, and inviting other schools in remote locations in the North of Portugal, CITIDEP launched an innovative educational project: **PEOPLE-Citizenship**, whose purpose was to promote an integrated approach to modern science, technology and social education, raising the awareness of young people about air quality and the impact of personal behavior on pollution.



We created a network of 280 students between 5 and 16 years-old with their teachers and PEOPLE experts in air quality, engaged together in the research: collecting samples, learning more about pollution, playing games, arguing multiple aspects of the problem in role-playing, and sharing their opinions in videoconferences. Students from isolated small villages could ask questions to scientists and interact with their colleagues in Lisbon using a video broadcast with an estimated participation of 50 schools and 500 students. Older and younger students visited each other's schools (elementary and secondary), breaking age, geographic and social barriers by playing environmental games designed by them and doing lab experiments together, both in person and through virtual communication.

This brief report presents the major highlights of this very rich experience. We believe it is useful to describe the difficulties (institutional and technological impediments, among others) as well as the successes (innovative tools and methods, high levels of participation and in-depth impact on both students and teachers), so that others can make the best of this experience and eventually build on it.

The project web site is at <http://www.citidep.pt/act/peoplecitidep.html> .

(*)  CITIDEP - Research Center on Information Technologies and Participatory Democracy (Centro de Investigação de Tecnologias de Informação para uma Democracia Participativa), is a private, non-profit, multi-national research institution, whose primary objective is to study participatory democracy, in particular through the research, development and demonstration of new information technologies, of its impacts, and of ethical, social, political and planning frameworks that enable participatory mechanisms in the information society. CITIDEP membership includes a network of 70 researchers from Universidade de Lisboa, U. Nova de Lisboa, U. Católica, U. do Algarve, U. de Coimbra, I.P. de Viana do Castelo, U. Lusófona, U. Estadual de Londrina - Brasil, U. de S. Paulo, Université de Paris, London School of Economics, MIT - Massachusetts Institute of Technology, Harvard U., U. of Massachusetts, U. of California, U. of Arizona, Ohio U., U. of Illinois, U. of Colorado, U. Autonoma del Estado de Mexico, U. de Guanajuato - Mexico, Colegio Mexiquense, University of Ljubljana, Slovenia. (More information is available at <http://www.citidep.net/>)

The Project

Education

Environment

Citizenship



Project Guidelines

PEOPLE's objectives express very clearly that the success of environmental quality policies can only be guaranteed if they are understood and endorsed by citizens, and that all the efforts to raise the awareness and to inform the public are very important because they constitute a major contribution to change the perception and the behaviour of the population towards the risks of air pollution. This approach facilitates simple forms of participatory science and also creates the opportunity of promoting new skills of cooperative learning.

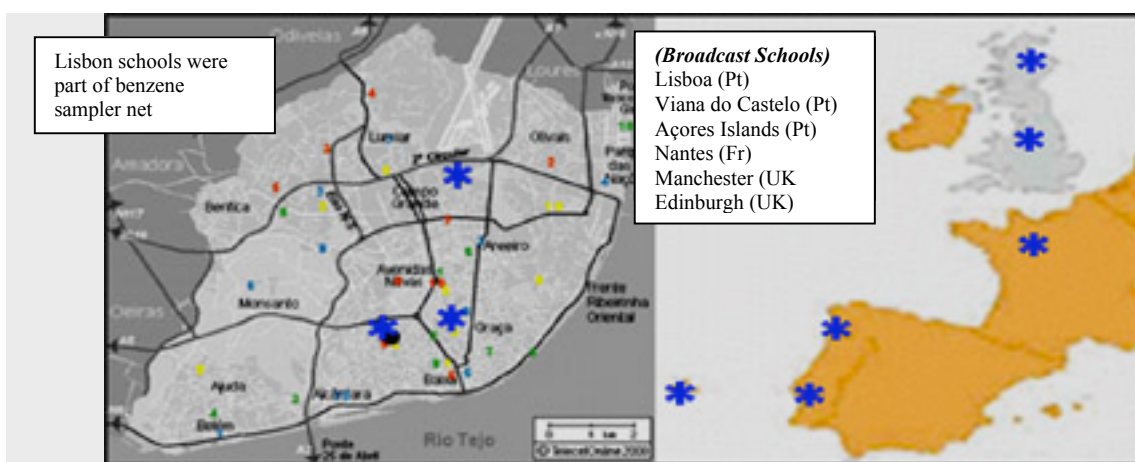
This is why in Lisbon, CITIDEP decided to implement a large educational project: «*People-Citizenship*». Using the net of schools that hosted PEOPLE sampler devices in Lisbon, with the support of other PEOPLE partners, and inviting other schools in remote locations in the North of Portugal, this innovative educational project enlarges and integrates other previous CITIDEP activities in the field of education and citizenship (such as the «Citizenship Kit»).

For CITIDEP, the involvement of the schools and their students, participating directly in monitoring air quality and learning about the direct responsibility of citizens in social problems and their solutions, is fundamental. In this case, PEOPLE project became a tool of pedagogical innovation taking full advantage of new technologies.

Schools Network Data

- 9 elementary and secondary schools from Lisbon and the North of Portugal (Viana do Castelo area).
- 280 students aged between 6 and 16 years old working together
- 9 months of activities (from October 2002, until July 2003).
- Videoconference and Video Internet broadcast with an estimated participation of 50 schools and 500 students.
- Scientific and technical support of experts in air quality and information technology, a Superior School of Education, PEOPLE's partners and uARTE (Ministry of Science and Technology division of IT support to schools).

Map of schools' network



Internet (web broadcast) and videoconference allow access of remote areas and Portuguese student communities abroad.

Road Map of Activities

The Benzene issues were brought into curricular and extra curricular objectives in spite of the difficulties of teaching this subject. The first step was to synchronize PEOPLE's timetable with the student's school year and to choose methodologies. A pilot-school – «Pedro Nunes High School» – took the responsibility of the organizing and coordinating the network of teachers and scientists. After some meetings, teachers from different schools, with environment experts, drew the activities plan for High Schools and for rural Elementary schools, based on Tânia Fonseca's proposal.

Nº	<i>HIGH SCHOOL ACTIVITIES</i>	<i>Chronology</i>
1	Research on Benzene as a pollutant	Before October 02
2	Learning Session (1 st videoconference)	15 October 2002
3	“Learn with the environment, playing!” (<i>Game</i>)	January 2003
4	Particles on the paper/Elastics and pollution	10 February 2003
5	2 nd Videoconference and broadcasting (CHAT)	18 March 2003
6	“The air exists, although we can't see it”	April 2003
7	Speaker about air-quality and tobacco & Role-Play; Summit “PEOPLE'S Future”	June/July 2003

Building learning communities

Preparation in High Schools

Analyzing common environment problems, 10^o grade students are presented situations related to recycling, garbage... Air pollution was missing.

Therefore, groups of students began a search for hazardous chemical products, including BENZENE. After researching potential effects of air pollution on human health, weather conditions, and biosphere they became much more sensitive about the health-threatening effects caused by the use of benzene, namely produced by tobacco smoke and gasoline. Practical applications of this information were discussed, such as air quality standards. After arguing with one another, they began also to be concerned about the economical consequences and social problems involved. This made them to decide to write a report and present it to younger colleagues in their high school.

After this report, they established the first contact with environment specialists to directly query scientists, in the first videoconference. Arguments were prepared by students to refute some environment policies. They were excited to see the experts face-to-face and to have the opportunity of clearing up their questions and worries.



One week later, when the schools received PEOPLE's samplers, students had the chance to help scientists and to apply what they had learned in the videoconference. One of them - Madalena, chosen as a volunteer by her colleagues, carried a sampler to measure benzene exposure all day.

Following PEOPLE's data gathering with the cooperation of a scientific team, those 10th grade students were challenged to think how could they pass the message to the elementary students involved in this project, in order to increase consciousness in young people. They presented strategies and discussed their advantages and disadvantages. After some debates and a lot of argumentation, they made a proposal: Students agreed to create an environmental game, because it would be «the best way to get closer to children». They designed the game, asked for the materials and built it.

After the first contact with the 1st degree pupils, playing the game with them, the older students prepared a special day to teach them some chemistry

and constructed some “hands-on” activities that would help the children to understand the existence of the air. These activities contributed to destroy some misconceptions in sciences and improved their scientific knowledge.

Before the role-play, high school students discussed the results of PEOPLE’s investigation and made a deeper reflection about the social issues of each role-player’s character.

Preparation in the rural elementary schools

In this project participated two schools of elementary schools in Viana do Castelo. The ‘EB1 school of Monserrate’ is located in Viana do Castelo and has around 200 students and the ‘EB1 of Eiras’, located in Arcos de Valdevez, a small rural and least-developed county of the district, with only 9 students. The latter is an isolated school with only one class and one teacher.

Three classes participated in the videoconference, a total of around 70 children, from the school of Monserrate. In the preparation for the videoconference, the classes used all the work they had already been carrying out in the field of environmental and ecological education. In one class, they dedicated all of their work to the issue of benzene and the pollution of the ocean waters, through a case study of the sinking of the “Prestige” oil tanker near the Portuguese coast.

Despite the distance and isolation of the school of Eiras, the teacher and the pupils carried out very interesting activities linked to environmental education and by using computer technologies they were able to share their experience and to make contact with the realm of other more centrally located schools. This helped to decrease the access inequality of the periphery.



In the classes of EB1 (elementary school) Monserrate, with the teacher Conceição Líquito, children started from the “Prestige” problem, directly related to the professional activity of some of the pupil’s fishing families, to work on a very large number of issues in the different disciplines. The study of “Prestige” provided the opportunity to study the oceans, the rivers of Portugal, the cardinal points, the marine biodiversity, etc. The main objective was to involve them in researching, selecting information, producing texts, using questionnaires and divulging data based on a theme they were very motivated about. They administered questionnaires to their family members about

smoking and they themselves decided to encourage their smoking relatives to give up smoking.

Pollution remained a constant theme throughout, beginning with sea pollution, going on to look at air pollution, and taking up the problem of the forest fires, which comes up every summer, including in the mountains of the area. They were shocked with the issue of the ozone layer and decided to try to change the behaviour of some of their family members towards pollution.

The pupils produced texts based on specific terminology used in what concerns to air pollution (carbon dioxide, greenhouse effect, benzene and others). This activity allowed the acquisition of vocabulary in a playful way.

In the Portuguese Language they searched for information on the Internet and in newspapers, they read literary works such as “Ulysses” of Homer, they widened their vocabulary in various areas, they wrote texts, made summaries, talked and listened. They also told stories about people’s fears in the Fishing Quarters of the town when the weather is bad and the sea knocks at their door. They then went on to tell imaginary stories thus developing their imagination.

In Mathematics they invented and resolved problems that involved live beings whose lives were in danger because of the forest fires. The making of the poster about the “Prestige” allowed them to resolve the problems based on the calculation of areas and perimeters, systematizing the measures of length.

In the final stage the pupils went to the ESE-IPVC (School of Education of Viana do Castelo) to participate in the 18 March videoconference.



Children participation in the videoconference

The high point of the videoconference in Viana was the game. The pupils participated actively and after the videoconference they wrote small texts in which they expressed their most memorable sensations and emotions, and sent them individually by email to our team.

They were excited about this visit. On the eve of the visit one of the children said: "I'm going to ask my mum to give me a bath". It is evident that the participation of these pupils in these events has consequences that are often unforeseeable yet just as important as the academic and technologic learning, developing of skills related to researching themes, selecting information, reading and the capacity for oral and written expression. All of this work enabled the teacher to work with the curriculum in an integrated way and to develop skills in a transversal way.

In a world which is in constant metamorphosis, in which technological innovations are sprouting up all the time and where we feel good or bad surrounded by machines, it is of paramount importance to develop the capacity in each child to act in a participative manner. Schools can now offer more work tools. All of this is only possible if the teacher is given adequate training in computing. But it would make no sense to work in this way without also developing the need in the children to be participative and to act in a critical and responsible way in society.

We do believe that the introduction of IT in the classroom may serve to motivate young students and contribute towards their development as critical and participative citizens.

Participating Schools:

- **ES Pedro Nunes, Lisboa** (Tânia Fonseca [Project Head], Helena Melo, Isabel Medina, Helder Silvério)
- **Colégio S. João de Brito, Lisboa** (Angela Canêlhas, Domingos Aurélio, Maria Justina Correia, José Manuel Costa, Madalena Cabral, Silvia Sepulveda)
- **ES Sta Maria Maior, Viana do Castelo** (Paulo Tomé)
- **EB2+3 de Miraflores** (Manuela Carrasco)
- **EB2+3 de Fernão Lopes, Lisboa** (Fatima Gasparinho)
- **EB1, 29 do Jardim do Torel, Lisboa** (José Carlos Gomes)
- **EB1 de Monserrate, Viana do Castelo** (Conceição Liquito, Conceição Martins)
- **EB1 de Eirado-Eiras, Arcos de Valdevez** (Beatriz Gomes)

And representing the following entities:

- **E.S.E. do I.P. de Viana do Castelo** (José Portela, Domingos Belo Costa, Luis Fabião)
- **uARTE** (João Correia de Freitas, Alexandra Vieira, Helena Guerreiro)
- **DES/ME** – Ministry of Education, Highschool Dept. Head (Anabela Neves)
- **Project PEOPLE** (DRAOT-LVT: Luisa Nogueira; FCT-UNL: Hugo Tente; Instituto do Consumidor: Ana Miranda, Ana Cabral; CITIDEP: Pedro Ferraz de Abreu, Tânia Fonseca, Isabel Medina, José Carlos Gomes, José Portela)

Activities Summary

Activity 1: Research on Benzene as a pollutant

This activity consisted of research performed by students on Benzene as a pollutant. The students performed general research over this topic, using the Internet as its primary research, complimented by several articles and/or a bibliography provided by their teachers.

The primary objective of this activity was to raise the awareness of the dangers associated with the use of products containing benzene and the need of stronger legislation to regulate the quantities that a human being can be exposed to without endangering their health and a lesson on the quality of the air that we breathe and its importance.

Activity 2: Learning Session

The main objective of this activity was an interchange between environmental specialists and the high-school students involved in the project. It was held in the format of a videoconference between Lisbon and Viana do Castelo, to allow all interested parties to take active participation in the discussion with their questions and opinions. All the scientific references used in this meeting were available in the websites of PEOPLE and CITIDEP.

First Videoconference (15 October 2002)



Viana do Castelo Superior School of Education



Lisbon Pavilion of Knowledge

Activity 3: Environmental game: “Learn with the environment, playing!”

This activity was a learning exercise for elementary school students, developed and implemented by high-school students in order to teach the younger kids about environmental issues in the form of a game.



The game consists of a board with various “houses”, some data and cards with questions about the air pollution and the environmental issues



The game was conceived during class time by the older students and allowed a greater level of involvement in their own learning, as well as more responsibility for understanding of others. This experiment can be seen as a successful case of cooperative learning between students of two different degrees in the curriculum

Activity 4: Particles on the paper/Elastics and pollution

This activity was a learning exercise about sciences. The 7^o and 8^o grade students had to choose a place to put the paper and the elastics to study the level of pollution that existed on their school and houses.

From a simple experience of observing if the papers were dirty and the elastics were cut, they could explain way and discuss with the colleagues about their assumptions.

Activity 5: II Videoconference and web broadcasting with chat for students from the 2nd and 3rd grade

This activity was conducted with elementary school students in the first grade in the form of a dialogue between students in various schools and experts involved in the project. The activity was divided into two parts.

The first part was learning sessions in the form of a videoconference with Viana do Castelo and transmission over the Internet.

Second Videoconference (18 March 2003)



In the second part it was presented a demonstration of scholar works about pollution developed by the 2nd and 3rd degree students in their classrooms and workshops.



S. Joao de Brito College students showing their works

An interactive game was prepared for the younger students:

Children from 4 elementary schools in Lisbon and in Viana do Castelo, were challenged to answer and solve some problem-situations related to pollution, with the help of many other children that were following the event by “chat”. Participation estimated:

About 30 peripheral schools
500 students target 6-10 years old

Each correct answer to a question about air pollution, previously discussed with the group, helps “to clean the City” in the picture.



This activity gave the opportunity to abolish barriers between students and scientists, but also to reduce the distance between Portuguese schools through virtual communication. It was possible to integrate students from isolated regions of the country, contributing to break age, geographic and social barriers.

Activity 6: The air exists, although we can't see it

This experimental activity was conducted with students in the 1st, 2nd and third grades of elementary school and monitored by the high school students. This time, children from the elementary schools visited their older colleagues in High school, and used its more advanced resources.



The activity consisted in some easy experimental activities in the Pedro Nunes High School «Chemistry Lab», in Lisbon, with the objective of exercising the basics of scientific practice. These teaching procedures increased observation skills, experimentation and critical thinking over experimental work.

Activity 7: Speaker about air-quality and tobacco & Role-Play Summit “PEOPLE’S Future”

«Benzene, Tobacco and Health»

A Clinical Psychologist expert of the “Portuguese Smoking Quit Line” from the «National Institute of Preventive Cardiology», Carla Carina Quaresma, gave a presentation about «The risks of tobacco’s exposure to health», target to an audience of 10th and 12th grade’s students involved in the PEOPLE project. Those students had made an applied investigation about «How to change attitudes towards tobacco’s addiction in teenagers», integrated in the curricular discipline of «Psychology». Beginning by the observation and the analysis of their own school’s population, with the help of some tools (scales to evaluate attitudes), they were invited to understand and criticize several dimensions of the personal and social tabbagistic behaviours.

The principal aim of this presentation was to relate the health problems caused by tobacco with the knowledge about Benzene that they had studied; and thus help students to change attitudes and patterns of dangerous behaviours.

Role Playing: “ Summit “PEOPLE’S Future”

This activity involved the participation of two different high-school students in a «role-playing» activity dealing with the environmental issues proposed by PEOPLE’s project. The objectives were to describe, to demonstrate and to reflect on their knowledge about the social and scientific implications of science. They were also asked to express their representations of problems through a synthetic summary of this activity.



The role-playing involved the use of the real data collected by PEOPLE. The students in the role-play had chosen a real actor in the debate over the environment and, using the knowledge that they had acquired of that entity, debated the social and environmental issues from the perspective of their actor’s character.

The students’ teachers were responsible for assisting the students with documentation and articles as informational resources covering their chosen character. A group of observers and a group of evaluators were acting and monitoring this activity all the time.

Role-playing conceptual skills

Exploration of feelings

- *Experiencing higher-status roles in order to change the perceptions of others and one's perception*

Attitudes, values and perceptions

- *Identifying social values of culture*
- *Clarifying and evaluating one's own values and value conflict*

Problem-solving attitudes and skills

- *Openness to possible solutions*
- *Ability to identify a problem, to generate alternative solutions and evaluate consequences*
- *Analyzing criteria and assumptions behind alternatives*
- *Acquiring new behaviors*

Subject matter

- *The feelings of participants according to their roles and values*
- *Dilemmas and decisions about environmental issues*

«With Role-Playing the development of students' decision-making ability is based on their existing and developing issue knowledge, so that students provide themselves with an issue-relevant conceptual input to the decision-making process.» (RATCLIFFE, M.)



The concept of 'role' is one of the central theoretical underpinnings of role-playing model. Students discussed the subject, selected the roles and chose the «Role players» that enacted those social roles in this activity:

Oncologist doctor
Smoker's association
Environmentalist

Gas bomb worker
Owner gas bomb
Car industrial association

During the role-play, students debated, in many levels of analysis, the social, scientific, environmental and ethics problems involved in the use of benzene and the how the individual behaviour contributes to air pollution. They also presented some alternatives and new policies to be considered.

EB – Escola Básica (Elementary School)

ES – Escola Secundária (High School)

ESE - Escola Superior de Educação (Higher Institute of Education)

Conclusions and further perspectives

PEOPLE project clearly identified higher levels of exposure to benzene with tobacco smoking and emissions from automotive. The study focuses on carcinogenic pollutants presenting long-term effects on human health. Benzene was selected in the pilot phase of the project. PEOPLE campaigns proceed in Madrid and Rome and other cities that have already signed their interest: Belgrade, Dublin, Paris and Budapest. The project will be extended to other toxic pollutants in the longer term, with emphasis on particulate matter.

An important facet of the project is awareness-raising campaigns in participating cities organised with the involvement of citizens, scientists, decision makers and the media. The enthusiastic participation of the volunteers and schools in Lisbon, through the PEOPLE project, clearly shows that these children and young people are, indeed, the best messengers of the PEOPLE results, and the best guardians of environment and public health.

This project brought to the classroom the issue of air pollution by BENZENE and was integrated in the high-school curriculum of chemistry and environment on the elementary school curriculum for the first time in Europe. «PEOPLE-Citizenship Project» as a learning/investigative process contributed to help students to be active about the environment, to construct new situations from their learning, to be researchers when exploring the materials and the context of their learning issues, to be intentional, searching spontaneously and with good will to achieve the proposed aims.

Students were invited to cooperate and dialogue with each other and with their teachers, to exercise critical reflection about their own cognitive processes of learning and decision making, and to be extensive when they generate judgments and assertions, tributes and implications based on what they learned.

A substantial part of the student's education should be by cooperative inquiry into important social and academic problems. Cooperative learning procedures – ways of building learning communities – assist learning across all curriculum areas and ages, improving self-esteem, social skills and solidarity, and academic learning from the acquisition of information. This model of teaching has roots in both personal and social dimensions of education, because individuals learn to solve personal dilemmas with the assistance of the social group, but also it allows individuals to work together in analyzing social situations and in developing decision-making abilities. «Education in a democratic society should teach democratic process directly.» (H.THELEN).

Inside and outside school curricula, technology and creative methods were used to break barriers. Students from isolated small villages could ask questions to scientists and interact with their colleagues in Lisbon, through modern ICT. Older and younger students visited each other, playing educational games designed by them and doing lab experiments together. All these activities allowed children and youngsters to learn the negative effects of air pollutants, at the same time that they were discovering their personal and social responsibilities towards the risks of damaging environment. This network enhanced the participation on scientific data gathering and promoted new forms of public participation in the discussion about science, human behaviour and social responsibility.

The project that was carried out during the school year 2002-2003 may be seen as one of the first steps towards engaging with the information society taken by students in mandatory schooling. However, there were also many difficulties and impediments that must be considered in the future.

- Material resources are scarce. Contents with good pedagogical quality produced in Portuguese are also scarce.

- Teachers proved to have lots of difficulties in the use of IT in an educational context. Both the level and quality of public technical support to schools is decreasing to the point of compromising the work of students and teachers. F.i. last videoconference nearly failed, frustrating months of preparation, when kids could not hear anything for a full hour, because funds for technicians were cut. This is the result of a **wrong policy of divesting in public education**. Poor, remote schools can't afford private sector ICT service prices.

- Finally, we should note that Project "PEOPLE-Citizenship" had **zero funding**. All was done (including some institutional support) through CITIDEP network solidarity, the kind cooperation from PEOPLE's partners and uARTE, but most of all thanks to highly motivated teachers (often paying expenses from their pockets), and the adoption of this project as the degree work of one teacher – Tânia Fonseca. That is **nice and important, but not sustainable/replicable** without at least some external support in the future.

The information society must be an inclusive society. Future plans must envisage providing the means and resources, which will enable every citizen to develop a participative attitude towards society and the challenges that it poses. It is imperative that the generation currently at school, graduate with reinforced skills in the use of information and communication technologies. These skills must not be translated into an uncritical or passive usage, but on the contrary, they should result in the exercise of a fully engaged citizenship.

We believe that this was a meaningful project and we hope that others can make the best of this rich experience and eventually build on it.

CITIDEP

CITIDEP is a private, non-profit, research-and-action institution, open to all nationalities, whose primary objectives are to foster citizenship, preserve our heritage, and protect the environment, studying and promoting processes of participatory democracy, especially through:

- Research, development and demonstration of new information technologies, of its impacts, and of the ethical, social, political and planning frameworks that enable participatory mechanisms in the information society;
- Services and products related to its social objectives, in (all) countries.

To make this contribution to science and society, CITIDEP faces the challenge of combining research on technology and engineering with research on social sciences and humanities, keeping a focus on participatory democracy and information technologies; and the no lesser challenge of linking such research to concrete measures in support of the civil society.

In order to achieve its goals CITIDEP, as a “research and action” institution, proposes to:

- Implement interdisciplinary and transdisciplinary projects;
- Offer research grants, and host and advise grantees;
- Collaborate with Schools to develop new curriculum materials on these issues;
- Sponsor and collaborate with other institutions in the holding of conferences and seminars;
- Contribute to research and development of computer-based tools in support of participatory democracy;
- Inform public opinion and raise public awareness, through the media and its own publications, national and international;
- Provide services that help to promote participatory democracy;
- Collaborate with public institutions, at international, national, regional and local level;
- Support individual citizens and community groups in processes of public consultation, namely in environmental impact reviews.

<http://www.citidep.net>

Project Team

A team of teachers, supported by a group of experts on air quality and on education, engaged together under the coordination of *Tânia Fonseca*, teacher of Physics and Chemistry in Lisbon.



Tania Fonseca



Pedro Ferraz de Abreu



Isabel Medina Silva

CITIDEP Coordination Group



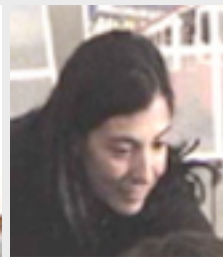
Domingos Costa



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Ana Cabral



Luisa Nogueira



Hugo Tente



uArte + ESE Media Technicians

Main Experts and Technical Support

We are also grateful to Emile de Saeger, Head of PEOPLE at IES/JCR, for his strong support to our Project, as well for the public recognition given to it at the formal presentation of the PEOPLE's results, by European Union **Commissaire Philippe Busquin**:

“A Lisbonne, PEOPLE a été associé à un projet didactique pour sensibiliser les élèves et les enseignants à la problématique de la pollution de l’air dans les villes. Ce projet, appelé « PEOPLE – CITIZENSHIP », regroupait 9 écoles, 19 enseignants et 280 élèves. Pendant 9 mois, ce projet a animé les cours et les activités parascolaires. Il s’est clôturé par une vidéo-conférence diffusée dans 50 écoles et une audience de 500 étudiants.” **Busquin, July 2003**

