

Thematic  
Workshop  
Barcelona  
April  
6<sup>th</sup> to 10<sup>th</sup>

05

thematic workshop



## “Improving Education for Sustainable Development through Action Research”

COMENIUS 1 Thematic Workshop  
April 6<sup>th</sup> to 10<sup>th</sup>, 2005  
Barcelona/Spain

**Comenius III Thematic workshop for Comenius 1 Schools  
“School development in the light of education for  
sustainable development: Challenge for teacher  
education and school”**

## **ORGANISATION**

Austrian Federal Ministry For Education, Science and Culture, Vienna, Austria  
and Departament de Didàctica de la Matemàtica i de les Ciències  
Experimentals, Universitat Autònoma de Barcelona, Catalonia, Spain.

## **Facilitators**

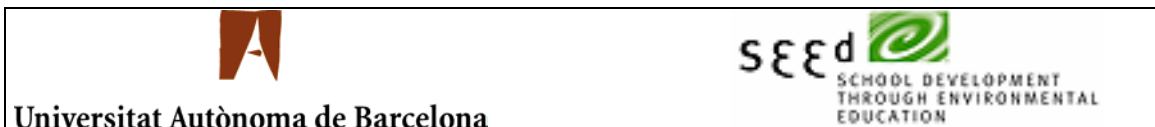
Dr. Mariona Espinet (Universitat Autònoma de Barcelona, Faculty of Educational Sciences), Dr. Michela Mayer (INVALSI/Italy), Dr. Rosa Maria Pujol (Universitat Autònoma de Barcelona, Faculty of Educational Sciences), Maria Mercè Guilera (Universitat Autònoma de Barcelona, Faculty of Educational Sciences), Dr. Franz Rauch (University of Klagenfurt, Center for interdisciplinary Research and Education), Mag. Martin Scheuch (Austrian Forum for Environmental Education), Dr. Johannes Tschapka (Comenius III Network)

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# PROGRAMME



Universitat Autònoma de Barcelona

Austrian Federal Ministry For Education, Science And Culture  
and

Departament de Didàctica de la Matemàtica i de les Ciències Experimentals,  
Universitat Autònoma de Barcelona

Offer a SEED launched Seminar on the UN Decade of Education for Sustainable  
Development

**“SCHOOL DEVELOPMENT IN THE LIGHT OF EDUCATION FOR  
SUSTAINABLE DEVELOPMENT- CHALLENGE FOR TEACHER  
EDUCATION AND SCHOOL”**

**COMENIUS 3 Thematic Workshop for COMENIUS 1 Schools**

Wednesday April 6<sup>th</sup> to Sunday April 10<sup>th</sup> 2005

**Barcelona / SPAIN**

Facilitators:

Dr. Mariona Espinet (Universitat Autònoma de Barcelona, Faculty of Educational Sciences), Dr. Michela Mayer (INVALSI/Italy), Dr. Rosa Maria Pujol (Universitat Autònoma de Barcelona, Faculty of Educational Sciences), Merce Guilera (Universitat Autònoma de Barcelona, Faculty of Educational Sciences), Dr. Franz Rauch (University of Klagenfurt, Center for interdisciplinary Research and Education), Mag. Martin Scheuch (Austrian Forum for Environmental Education), Dr. Johannes Tschapka (Comenius III Network)

**Programme:**

**Wednesday, April 6<sup>th</sup>**

- 16.00 hours: Arrival of participants and check in
- 17.00 hours: Short welcome, building up of the project exhibition by the schools
- 19.00 hours: Opening of the workshop
- 19.30 hours: Dinner
- 20.30 hours: Visit to Barcelona

**Thursday, April 7<sup>th</sup>**

- 9.00 hours: Dr. Mariona Espinet, Dr. Michela Mayer

**Presentation of the general aims of the seminar**

- 9.15 hours: Dr. Franz Rauch & Dr. Johannes Tschapka: **The Action Research Tool Box, a means to improve EE/ESD in schools**
- 10.30 hours : Coffee break
- 11.00 hours: **1 Workshop on ESD/EE: “Contrasting motivations for ESD/EE through photo reflection and group discourse”**  
Coordinators: Dr. Johannes Tschapka & Mag. Martin Scheuch
- 13.00 hours: Lunch
- 14.45 hours: **Comenius1 Projects Group Work:**
- 16.30 Fruit break with music entertainment  
Marta Fonolleda, accordionist
- 17.00 **2 Workshop on ESD/EE: “Contrasting methodologies for ESD/EE through action research”**  
Coordinator: Dr. Franz Rauch
19. 00 Dinner
- 20.00 hours: Visit tour in Barcelona
- Friday, April 8<sup>th</sup>**
- 9.00 hours: **3 Workshop on ESD/EE: “Contrasting values on EE/ESD in schools”**  
Coordinator: Dr. Mariona Espinet, Dr. Rosa Maria Pujol & Merce Guilera
- 11.00 hours : Coffee break
- 11.30 hours: **Comenius1 Projects Group Work:**
- 13.30 hours: Lunch
- 15.00 hours: **Presentation of Greenschools Programme in Catalunya and Agenda 21 for Schools in Barcelona**  
Presenters: Esther Sanglas from Green Schools Programme of Catalonia & Dr.Teresa Franquesa from Barcelona Agenda 21 for Schools
- 16.00 hours: Dr. Michaela Mayer: **What do we know about the quality of European Ecoschools?**  
Teachers from 20 eco-schools in Catalunya will attend the session and will share posters with participants
- 17.00 hours: Fruit break exchange with Spanish teachers
- 17.30 hours: **4 Workshop on ESD/EE: “Contrasting eco-schools quality criteria in our Comenius Project Group”**

This workshop will be done jointly with Spanish teachers  
Coordinators: Dr. Michaela Mayer & Dr. Mariona Espinet

19.00 hours:

**Roundtable: Conclusions from the 4 workshop**

20.00 hours Dinner

21.00 hours: Visit tour in Barcelona

**Saturday, April 9<sup>th</sup>**

9.00 hours: **5 Workshop on ESD/EE: “Contrasting visions of ESD /EE in schools”**

This workshop will be held at the Can Coll Environmental Education Center. Participants will be driven by bus to the center from the venue.  
Coordinators: Dr. Rosa Maria Pujol & Merce Guilera

13.45 hours: Lunch at the Can Coll Environmental Education Center

14.45 hours: Departure to the venue

15.00 hours: **6 Workshop on ESD/EE & Evaluation: “Keep contrast going: Critical friendship in AR for ESD/EE in schools”**

Coordinator: Facilitators team

18.00 hours: Departure to the concert hall

19.00 hours: Cobla concert at the Palau de la Musica Catalana in Barcelona

21.30 hours: Dinner at the 99,99% Origin Restaurant in Barcelona

**Sunday, April 10<sup>th</sup>**

9.00 hours: Feedback to the thematic workshop

10.00 hours: Closing ceremony

10,30 hours: Departure

# PRESENTATION

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## 1. INTRODUCTION

Since the mid eighties Environmental Education in Schools had a remarkable impact on school development in Europe. Dealing with ecological issues encouraged the implementation of project teaching and the development of dynamic qualities in students and teachers such as team building, conflict management, problem posing and solving. Environmental Education enforced trans-disciplinary teaching methods and the involvement of students in planning processes. In the present days ecological approaches have proven to be insufficient for the education of citizens within a changing world. The social and economical dimensions of reality have also shown to be necessary in order to confront everyday complex problems and thus facilitating the development of a sustainable society world round.

A previous workshop on “Improving Environmental Education in Schools through Action Research“ was conducted in Frascati, Italy, in March 2004 with the aim of encouraging participating schools to develop action research strategies within their Comenius 1 projects. Based on the results of the previous workshop, a second one is offered with the aim of strengthening cooperation among schools in areas such as:

- The development of a common understanding on what Education for Sustainable Development in schools means and how it can be used to foster school development in each particular international context.
- The development of reflective strategies within action research processes facilitating school change.
- The increasing of opportunities to exchange practice in EE between Comenius 1 school projects and Eco Schools from the region of Catalunya, Spain.

The workshop is addressed to existing Comenius 1 projects already working in the field of EE and which participated in the COMENIUS 1 Contact Seminar in Reichenau 2002 and/or the thematic workshop in Frascati 2004 and all

members of the Comenius 3 SEED network. These participants will have the possibilities to share their practice to other participants from different Comenius 1 projects and network members, improve their own projects using AR methodologies, and gain better personal understanding on Education for Sustainable Development. The programme will combine plenary sessions, workshops connected to the issue presented, planning Comenius 1 group meetings, and exchange sessions with the local schools.

## **2. FRAMEWORK AND INTENTIONS**

This workshop is the follow up of the first Comenius III Thematic workshop for Comenius 1 Schools held in Frascati on March 2004 “Improving environmental education in schools through action research”. In the previous workshop teachers were given the opportunity to increase their abilities to use action research as a way to encourage change and reflection on change when implementing Comenius 1 projects on Environmental Education in their own schools. Different workshops addressed specific action research processes that were considered important for teachers in schools such as framing problems, collecting data, interpreting results, writing narratives, etc.

In this second workshop several issues need to be addressed to help teachers develop meaningful and useful ESD/EE school projects within a multicultural context such as Comenius 1. One is the need to generate a discourse that deals specifically with what it means to do ESD/EE in schools. This discourse is obviously not homogenous among teachers and contrast will need to be undertaken if teachers’ sharing and learning from it occurs. In addition the UN Decade of Education for Sustainable Development document is very much explicit about the guidelines to encourage change in ESD and challenges can be taken from this document to help teachers in their own schools.

The second issue that this workshop wants to address is the need to go deeper into the use of action research in ESD/EE. One of the most difficult action research strategies is interpreting and reflecting from evidence so that

teachers' ways of acting, thinking, and feeling change. This difficulty increases when the context in which interpreting and reflecting takes place is multicultural as it happens to be in Comenius 1 projects. Encouraging interpretation and reflection within a multicultural context implies the need to be able to make ideas explicit, to take into consideration other teachers' view points, and to let oneself be affected by the difference so that something new can emerge. This process is about creating contrast so that teachers' learning can occur.

In order to facilitate "contrast" a thematic organization of the workshop has been developed:

About why are teachers doing ESD/EE

- Contrasting motivations.... Why are we doing ESD/EE in our schools? What motivation problems did we encounter in our ESD/EE Comenius projects?

About how to teach ESD/EE

- Contrasting methodologies... What educational methodologies are we doing while implementing our ESD/EE in our schools? What methodologies do we want to develop?

About what is important to deal with in ESD/EE

- Contrasting environmental themes... What is the focus of our work on environmental education in school? What themes do we consider important for school contexts? Are there other lost issues?
- Contrasting values: ... What values are underlying our environmental education activities?

About what and how to evaluate ESD/EE in schools

- Contrasting eco-schools quality criteria in our Comenius Project Group

### **3. DYNAMICS OF THE WORKSHOP**

Two types of sessions will be used in the workshop: Comenius 1 project meetings, and Workshop sessions. The first ones will be conducted within the Comenius group so that teachers have the opportunity to work on their own projects. These meetings will take place everyday. The second type of sessions will be lead by the experts and based on mixed groups. Thus, participant teachers will have the opportunity to share reflections with other European and/or local teachers.

The dynamics of the workshops sessions has been thought as a place where reflection in the form of contrast will take place. As a general model, each workshop session will include the presentation of the aims, an activity to experience directly the relevant aspects of the workshop, group work based on the research materials brought by the participant teachers, and finally a representation of what has been done using different languages. Some workshop sessions will take place in an environmental education centre and some will include local teachers exchange opportunities.

# WORKSHOP SESSIONS

## PRESENTATION OF THE GENERAL AIMS OF THE SEMINAR

**Coordinator:** Dr. Michaela Mayer, Dr. Mariona Espinet, Dr. Franz Rauch and Dr. Johannes Tschapka.

**School Development in the light of Education for Sustainable Development**



Mariona Espinet  
Michela Mayer  
Rosa Maria Pujol  
Franz Rauch  
Johannes Tschapka



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**Once upon a time ...**

A group of teachers from all European countries met in Reichenau

**PLAN**  
after a year they decide to meet again in Frascati

and after another year a little group of 'survivors' met again in Barcelona

**OBSERVE**  
**REFLECT**  
Have they become wiser? Happier? More competent?

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**Nobody knows...**

but they have just started and international (critical) friendship .... explored different ways to teach and learn.. have become 'intercultural' travellers ... learning to appreciate difference ..... not to be afraid of divergences and conflicts be able to use them as possibilities

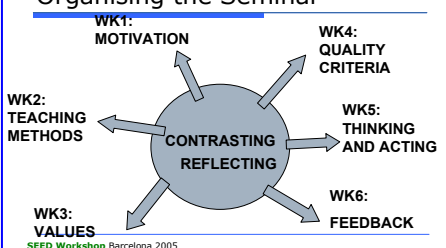
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**Purposes of the Seminar**

- the development of a common understanding on what **Education for Sustainable Development** in schools means and how it can be used to foster school development in each particular international context
- the development of **reflective strategies** within action research processes facilitating school change
- to increase opportunities to **exchange practice** in EE between Comenius 1 school projects and Eco Schools from the region of Catalunya, Spain.

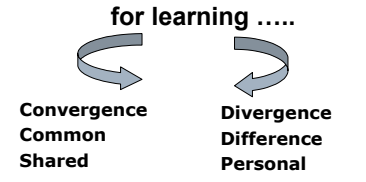
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**Organising the Seminar**



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**Contrasting for learning .....**



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**planning for future ...**

- SEED ENSI
- NETWORKING and PARTNERSHIP
- European Union
- UN DECADE of ESD

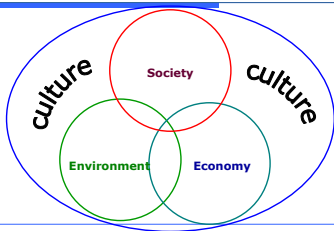
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**The basic vision of the DESD**

is a world where everyone has the opportunity to benefit from education and learn the values, behaviour and lifestyles required for a sustainable future and for positive societal transformation

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## 3 Dimensions + 1



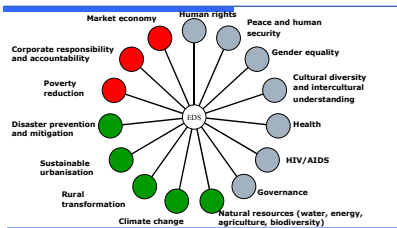
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## Key characteristics of Education for sustainable development

- Interdisciplinary and holistic
- Values driven
- Critical thinking and problem solving
- Multi-method
- Participatory decision-making
- Locally relevant

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## 15 strategic perspectives



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## ESD underlying values

- Respect for the dignity and human rights of all people throughout the world and a commitment to social and economic justice for all;
- Respect for the human rights of future generations and a commitment to intergenerational responsibility;
- Respect and care for the greater community of life in all its diversity which involves the protection and restoration of the Earth's ecosystems;
- Respect for cultural diversity and a commitment to build locally and globally a culture of tolerance, non-violence and peace.

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## 5 main aims for the UN DESD

- Give an enhanced profile to the central role of education and learning in the common pursuit of sustainable development;
- Facilitate links and networking, exchange and interaction among stakeholders in ESD;
- Provide a space and opportunity for refining and promoting the vision of, and transition to sustainable development – through all forms of learning and public awareness;
- Foster increased quality of teaching and learning in education for sustainable development;
- Develop strategies at every level to strengthen capacity in ESD.

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1 MARCH 2005

The UN Decade of ESD has been officially open in *New York*

December 31 2014

What changes we will like to see in our schools, our communities, our countries because of the Decade?

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## A possibility for the next 10 years

- The Decade was proposed in Johannesburg and approved by UN in December 2002
- The Draft International Implementation Scheme proposed by UNESCO as coordination Agency has been approved in October 2004.
- Every country, every region, is involved. ESD must integrate all levels of community: local, national, regional and global because sustainable development itself cannot be pursued at only one level.
- The European countries have approved in Vilnius in March a Regional Strategy with the coordination of **UNECE**.

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## Key roles for education

- Education must inspire the belief that each of us has both the power and the responsibility to effect positive change on a global scale.
- Education is the primary agent of transformation towards sustainable development, increasing people's capacities to transform their visions for society into reality.
- Education fosters the values, behaviour and lifestyles required for a sustainable future.
- Education for sustainable development is a process of learning how to make decisions that consider the long-term future of the equity, economy and ecology of all communities.
- Education builds the capacity for such futures-oriented thinking.

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## **WORKSHOP 0: REFLECTING ON THE ACTION RESEARCH UNDERTAKEN IN OUR COMENIUS 1 SCHOOL PROJECTS**

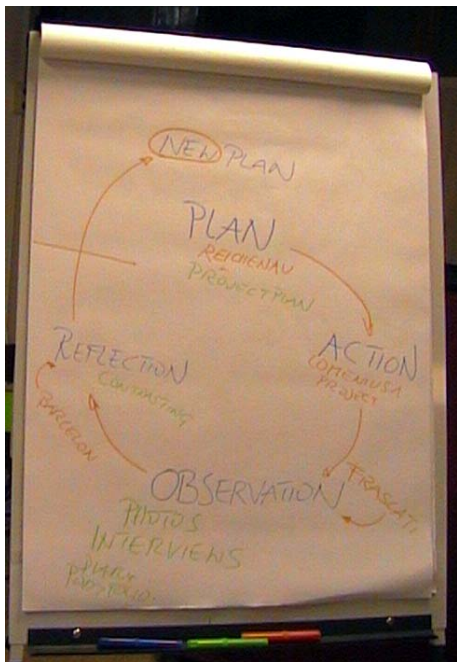
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**Coordinator:** Dr. Franz Rauch & Dr. Johannes Tschapka

### **JUSTIFICATION AND AIMS**

The aim of this workshop is to help teachers construct the story of their own action research project so that they are better able to discover the importance of reflection. This workshop aims at acting as a bridge between the previous Frascati workshop where teachers were encouraged to undertake action research processes. Through the telling of a research story within the context of a group, teachers will have a new opportunity to reconstruct the concept and the processes of action research.

### **DEVELOPMENT: ACTION RESEARCH CIRCLE**



Participant teachers are requested to write the action research work done in their school as part of the Comenius 1 project emphasizing the phases of the action research circle.

- Plan
- Action
- Observation
- Reflection

## **OUTCOMES**

### **What kind of planning has been chosen?**

Planning in the contact seminar which last over years.

Sharing responsibilities.

Motivated group of students from the whole school to plan (subgroup) role of teacher as coordinator.

Group of students and teachers to join the activities. Class planning

Whole school commitment to adopt the planning of the contact seminar

Smaller groups preparing in local context.

Small motivated group. Planned project how to make art and to sell the products for the project.

School should work together with outside stakeholders. Found that opening for the contact seminar.

Presented to other teachers to ask for commitment and a selection of group of teachers to run the project and to plan for the application (core group and peripheral participation)

It was a part of the school plan

Little response in the beginning in the teachers colleagues, building a core group and starting.

Co-operation with different levels of students in the same program with two different kind of students.

COMENIUS 1 application was the basis for the planning. It was the chance to give a guideline for the planning. But you can go in the practical life to go beyond in the planning.

### **What action did take place?**

To get to know each other and to reflect the methodology. Starting with offering an activity to the others (day of the sun) to compare the different approaches and sharing the experiences with the pupils.

Cross curriculum project to involve teachers from different subjects (mathematic, biology,.....)

Learning through experiences with action. As frame work for the Comenius 1 action.

Activity starting is to schnitzel?? With stick and knife to make ORNAMENTS AND SIGNS. What will be learned ??

Activities in the class done in first year by the starting teacher. NGO (WWF) collaborated in the second year to train the teachers and to support the project.

School yard and health .. so a connection between their life and the dealing with nature. It was a lot of actions (a few of actions without reflection. Teacher stepped out of that pressure to start to do smaller activities and more time for reflection...

Teachers did not want to work in the beginning, so the presentation of the partners have been a kick off as the country has been new in the EU finding new methods of learning which was adopted finally by a little group of teachers.

Environmental study on the issue and implemented a six month use of recycled paper and reduce consumption of paper....

### **How did you observe or collect data?**

Short film about biology chemistry and mathematic a collaboration of students and teachers.

Questionnaire of all COM 1 involved schools for the students and teachers. They found out that questionnaires a a bad instrument for evaluation and changed to run interviews.

Using photos and trying to use that photos to reflect. Which kind of reflection should be used to come to a significant conclusion.

Instrument used was critical friends, diary or better a observation sheets, plus new was photos and writing emails between the European school partners

Data collection direct observation and using comments and counting the paper consumption and usage of the recycling process.

Photos and questionnaires and results came from other schools. Writing and painting was also important. In the fourth grade ...teachers did reflection oral in their class.

### **Which kind of reflection upon the data did you use?**

Positive feed back for nature box fund...positive reflection when the lady came to school award for a bird watching issue. "Children what have you done...?" many children accept the work.

How did the school come to that film. So the making of the film was a main learning (speaking up and speaking in a foreign language English)

It is impossible to different environment changes the activities. So the using of methods in other contexts have been changing the whole activity. So it was important to see the differences and the context of the activities. The

involvement of the headmaster is a very important success. It takes some time to involve them.

Four teacher retired plus new headmaster. Lot of actions in a row, but the discussion started which goal do those actions have. It is easier now with all photos and writings to specifying the overwhelming of activities. So reflection is a more important part of school life now.

Motivation of students was seen in the time students used for building up products (time as data) like the Christmas cards until evening and outside the school hours.

The sun is different in the different countries and difference in the culture to approach the methods. Italy was for the Norwegian teachers in important learning field to see how observation is important for a project. So sharing this divergence is important to start with new approaches in the own school.

Reflecting needs to get out with the important things to the public which motivates the teachers and give self confidence to the students.

## **WORKSHOP 1:**

### ***Contrasting motivations... WHY ARE WE DOING AN ESD/EE COMENIUS 1 PROJECT IN OUR SCHOOLS? WHAT MOTIVATION DIVERGENCIES DID WE ENCOUNTER IN OUR ESD/EE COMENIUS PROJECTS?***

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**Coordinators:** Dr. Johannes Tschapka and Martin Scheuch

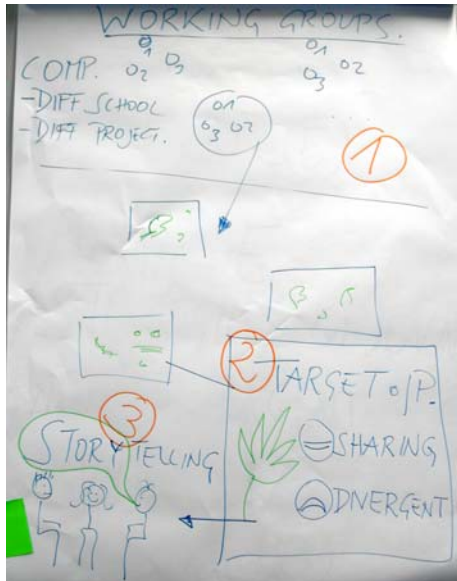
#### **JUSTIFICATION**

One of the main problems stated by Comenius 1 teachers is the difficulty in involving or motivating teachers, students, and families in the project. Also, in the document UN-DEDS it is also asserted that schools need innovation processes dealing with the use of more active and dynamic methods in schools. It is thus important that interested teachers are able to transfer other colleagues, students and community members the motivation to participate. How can this be done? What does motivation mean in the light of ESD? How have our motivation strategies worked?

#### **AIMS**

To become aware of the importance to establish emotional links to people, problems, environment, in order to develop motivation for ESD. To make reflections explicit on the problems and strategies used by teachers to increase motivation in their own schools.

## DEVELOPMENT



Participants work in small heterogeneous groups of 3 members.

a) *First phase:* The teachers were asked to bring objects (stones, leaves, artifact,...) from the park outside, collected during an elongated coffee break. Those objects should symbolize and represent persons involved in their COMENIUS school project.

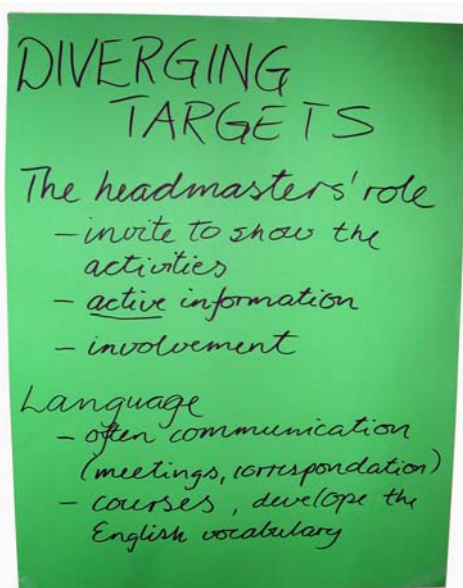
b) *Second phase:* *Let's reflect on our project motivation strategies*

First of all the symbols were put on a paper, the most important points were written along. In small groups (3-4 teachers who do not share the same COMENIUS project and are not in the same school) every one was asked to tell the others about the persons and the symbols. Each teacher will explain to the workshop group members what differences in motivation occurred, which motivation strategies were used, what were the successes and failures, etc.

c) *Let's represent what we have shared on motivation....*

Each workshop group might be encouraged to make one poster on what motivation strategies worked and did not worked. Issues such as "are the emotional dimensions of motivation the most important ones to engage when doing ESD in schools?", "Is the problem or local context important in developing motivation when doing ESD in schools?" etc. Derived from the collected experiences strategy posters for future were made:

## OUTCOMES



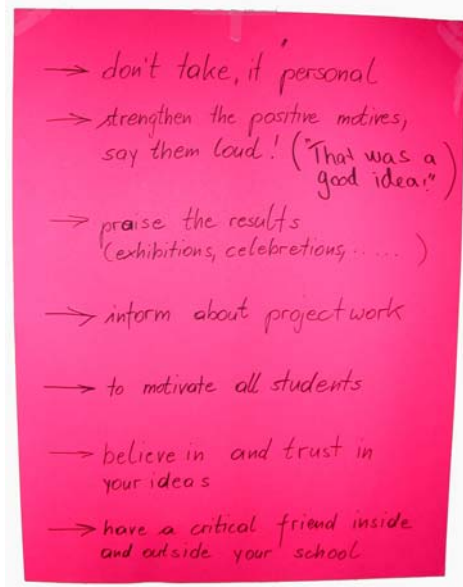
### *DIVERGING TARGETS*

#### *The headmaster's role*

- Invite to show the activities
- Active information
- Involvement

#### *Language*

- Often communication (meetings and correspondence)
- Courses to develop the English vocabulary



- => Don't take "it" too personal
- => Strengthen the positive motives, say them loud ("That was a good idea")
- => Praise the results
- => Inform about project work
- => To motivate all students
- => Believe in and trust into your ideas
- => Have a critical friend inside and outside your school

What to do with differences.

- ignore it
- respect it and learn from each other
- reflect, use time *communicate!*
- ~~Headmaster's~~ <sup>Everyone</sup> takes responsibility for ~~the staff~~ <sup>working with the staff</sup>.
- celebrate all successes!

### What to do with differences

- Ignore it
- Respect it and learn from each other
- Reflect and use time communicate
- Everyone takes responsibility
- Celebrate all success

**DIFFERENCES**

- ♥ can enrich the group  
→ learn from each other
- ♥ don't look at them as limits, but as challenges
- ♥ can be commucative problem → make sure we understand each other!

### Differences

- Can enrich the group – learn from each other
- Don't look at them as limits, but as challenges
- Can be commutative problem – make sure we understand each other

THE WAY TO INVOLVE HEADMASTERS, TEACHERS, FAMILIES AND STUDENTS IS INFORME AND SHOW CONTINUOUSLY ABOUT THE ACTIVITIES AND ACTIONS

- Don't be in a hurry!!  
Environmental education is a long way. We are in it!!  
Be patient!!
- TRAINING TEACHERS IN LANGUAGES
- Don't refuse any idea from anybody-  
Everything can be usefull and interesting

- The way to involve the headmasters, teachers, families and students is inform and show continuously about activities and actions
- Don't be in a hurry!! EE is a long way. We are in it!! Be patient!!
- Train teachers in language
- Don't refuse any idea from anybody  
everything can be useful and interesting

The Headmaster: Has to be at least friendly to the project and it's better if he supports it actively  
⇒ involving him since the beginning and at all the phases of the project.  
⇒ Having meetings/contacts with teachers or headmasters from other schools.

The core group of adults and students: should share the same goals and values linked to the project  
⇒ brainstormings at the beginning  
⇒ regulations during the project

*The headmaster: has to be at least friendly to the project and it's better if he supports it actively*

- *Involving him from the beginning and at all the phases of the project*
- *Having meeting and contacts with teachers or headmasters of the other partner schools*

*The core group of the adults and students: Should share the same goals and values linked to the project*

- *Brainstorming at the beginning*
- *Regulations during the project*

## **WORKSHOP 2:**

### ***Contrasting methodologies... WHAT EDUCATIONAL METHODOLOGIES ARE WE DOING WHILE IMPLEMENTING ESD/EE IN OUR SCHOOLS DURING THE COMENIUS PROJECTS?***

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**Coordinator:** Dr. Franz Rauch

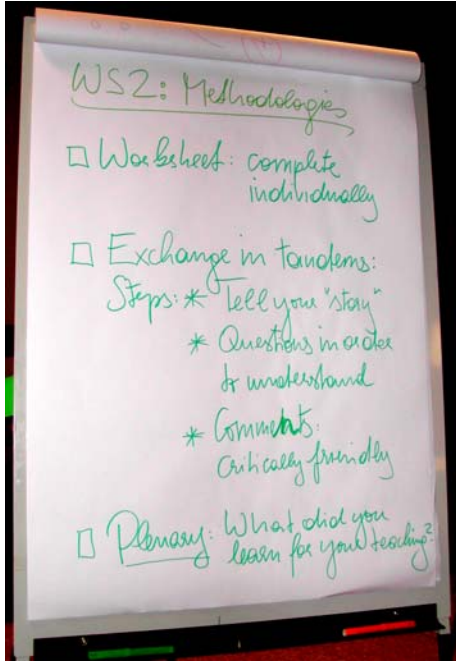
#### **JUSTIFICATION**

One of the most important issues emerging from the UN Decade for ESD document is the need that education should use different methodologies within the teaching and learning processes developed in schools. ENSI's framework for EE for school development has also considered the need for a methodological change in schools if ESD/EE is part of the school curriculum. These methods should be student centered so that the learners are better able to construct by themselves their own world visions. To do this it becomes important to encourage the use of different languages: words, drama, art, debates, experience etc. It is also important to encourage group work so that exchange is possible among learners. Learning processes should be triggered by the settlement of questions or projects identified by the community, etc. However, methodologies are tools that can be used differently depending on the didactical approach used by the teacher: transmissive, inductive or constructivist.

#### **AIMS**

To become aware of the didactical approaches underlying ESD/EE methodologies. Teachers are encouraged to identify didactical approaches so that they can be used to analyse the methodologies used in their own ESD/EE school projects.

## DEVELOPMENT



1<sup>ST</sup>: Complete individually the following questionnaire about their teaching methodologies:

- What were your goals for the Comenius project?
- What methodologies (for instructions, teaching & learning) did you use to reach this goals?
- What did students do?
- What did students learn?
- What did you as teachers do?
- What did you as teachers learn?

### Summary

- What methodologies worked? Why? (Context)
- What methodologies did not work? Why? (Context)

2<sup>nd</sup>: Exchange in tandem own ideas about educational methodologies. Steps:

- Tell the personal "story"
- Questions in order to understand
- Comments, critically friendly

3<sup>rd</sup>: Plenary: what did you learn for your teaching?

## OUTCOMES

### Collecting impressions of the tandem talk - walk

“What did you learn in the tandems and get out of it for your teaching practice?”

We learnt the importance of knowing our expectations to realize the action and to compare what I want and what I can reach consciously. To be aware of when you plan your project with the images you have, but you cannot see the new things with too much projective.

When teacher plan activity, this is an important step, but teachers must be open to receive the unexpected situation. The main point is to be open to new aspects and not only to be flexible. Establish the plan but each teacher is on that issue to be involved, there are not restrictions to go, but you build a lot of different ways and to have this involvement of parents in mind. (for the students, parents, government) Important action the involvement of secondary students is different, because these students are happy to be involved. How do parents be involved ...not as parents, but as adults, to easier the acceptance of the secondary students.

The pupils are motivated to do things this is not the problem. It is quiet easy to ask question what happened and why it happened, but to go to abstraction there we found problems. After some experiments they said we got it, but other pupils don't learn out of the project experiences according to their age abstraction can be a problem. How to measure the learning.. tests or writing can they measure the real learning benefit of the pupils?

How to visualize the connection between EE and the single subject I am teaching in. We do a lot of projects on EE, but how in what way we sell the connection to subjects. the to define the goals of EE. The evaluation we are not good enough to make evaluation on the methods and some of the works we do.

It is easier to model the school curriculum like in Finland to the cross curriculum subjects like EE. Ad teachers we are able to change and to find measures.

As Headmaster it is hard to find methodology on EE. Students are confronted with problems. There is not one single way how pupils learn but it is a problem how to measure this learning. But this is in Sweden a principally problem and headmasters have to support to find ways. We underestimated the need of support teachers need from their headmasters.

We have to start from concrete problems. It might be interesting to look who is starting from the needs of the pupils to see the motivation of the children und to see the impact on their learning, if the demand is coming from the students. Maybe in projects where the support is coming from the whole school community, pupils are a part of it and it has to be balanced.

EE is a topic to bring down on the bottom the questions of contextual learning with the whole bunch of methods. The profession is to have the kind of tool box and to learning an ongoing process. What does learning organization mean? There is not one recipient that PISA OECD survey showed that learning is a permanent process which is school development, an end cannot be reached.

So methodology with reflection is very important to lead into the Education for sustainable development. So how we can compare without growing together as one system all over Europe. How we can think assessment and evaluation from the point of EE and ESD? We have questions into an item and the answers can be different. The answers are seldom trivial as Von Foester , they can different approaches and need different answers and permanent comparison. So questionnaire, interviews are instruments to do evaluation and different approaches (see triangulation ) is an important point to confront people with their improvement instead of measuring by one single measure.

## **WORKSHOP 3**

### ***Contrasting values... WHAT VALUES SUPPORT OUR ENVIRONMENTAL EDUCATION ACTIVITIES?***

---

**Coordinators:** Dra. Mariona Espinet, Dra. Rosa Maria Pujol & M.Mercè Guilera

#### **JUSTIFICATION**

Educational activities are not neutral. When students and teachers meet in the classroom the ESD/EE activities they engage in implicitly or explicitly are guided by important values. These values sometimes may be different from those explicitly stated by teachers, and thus leading to incoherence. Education, more than ever, needs to be oriented through values which are made explicit in action. When values are made concrete they are better able to be examined, debated, proved and applied in educational settings. There is not an agreement about what are the fundamental values for sustainable development. In fact, these values depend on deep Cosmo visions, that is, ways of understanding the nature of our social and natural world. ENSI and also SEED share common values for ESD/EE in schools which have been debated along many years and want to share in this workshop. These values deal not only with the visible outcomes of schools intervention towards the environment (environmental values) but also about the everyday school culture (educational values).

#### **AIMS**

To become aware that ESD/EE activities are not neutral and thus objective but they are based on values and participate in their individual construction. An important task within Comenius 1 project groups is value sharing so that some agreement is possible between participant teachers. The workshop will provide some experience on value analysis in educational contexts and personal value sharing from project photos.

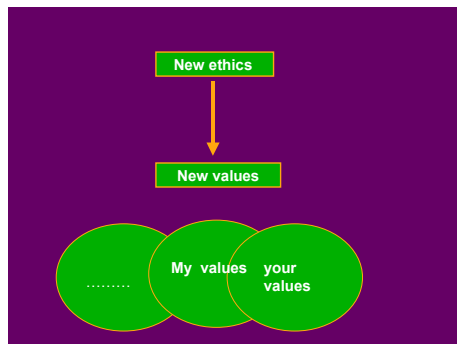
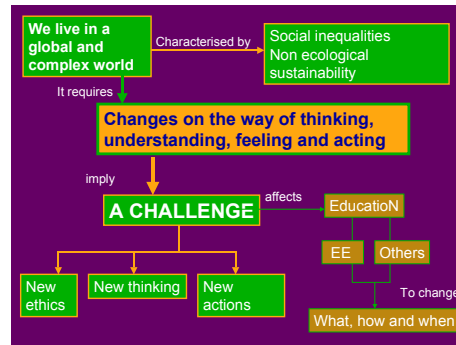
## DEVELOPMENT

### a) Are we proposing values when teaching in schools?

Presenters will provide a photo of an activity in their own classroom and will engage into a conversation on what values are suggested to them by this photo.

**3 Workshop on ESD/EE:  
“Contrasting values on  
EE/ESD in schools”**

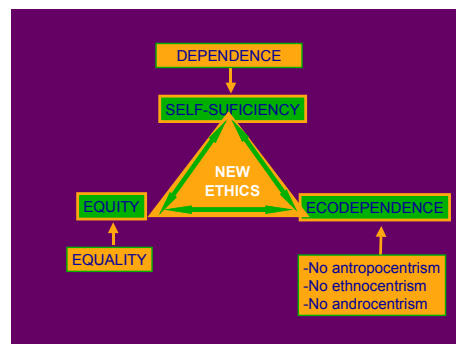
Coordinators:  
Dr. Mariona Espinet, Dr. Rosa  
Maria Pujol & M.Mercè Guilera



**VALUES.....**

- Are implicit
- Can be shared
- May be contradictory
- Can be changed

What values does this photo suggest me?



### b) What values are important for us? Let's construct our ESD/EE values universe.

Participants were given a poster with the photos brought by some of them. With post it paper they will be invited to write down the ESD/EE values suggested by them and post them on the poster marking the relationships, if any. The values that are common to the group was written on the same colour

post-it, whereas the values that offer divergence was written on a different colour post-it.

### c) Teachers tell the story of their photos.

The teachers who own the photos of the posters joined the group using his or her pictures and share his/her story behind the photos with the group members. This teacher's values were written on a different colour post-it and posted on the poster.

## OUTCOMES

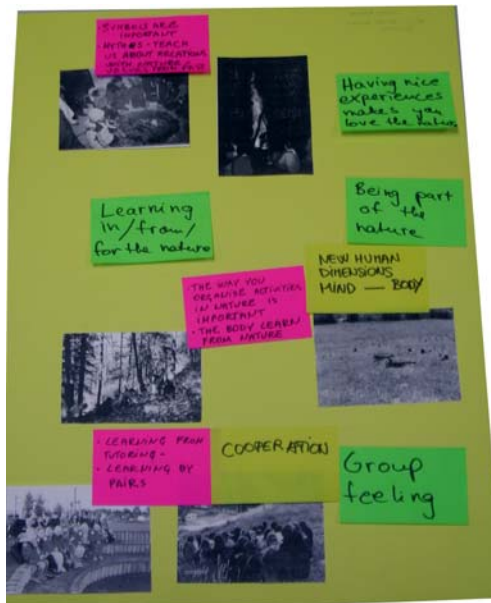


### GROUP (blue and green)

*Teaching old traditions and techniques*  
*Social activity => doing it together*  
*To learn to use the resources in nature*  
*Reflecting and preparing for new actions*  
*Understanding to be a part of nature*  
*To learn through experience to love nature*  
*Focusing on the teachers. They're all standing*

### TEACHER (pink)

*Feeling together peace full moments pupils-parents together*  
*Our roots are important*  
*Traditions and local community work together with school*



**GROUP (green and yellow)**

*Having nice experiences makes you love the nature*

*Learning in/from/for the nature*

*Being part of the nature*

*New human dimensions mind-body*

*Cooperation*

*Group feeling*

**TEACHER (pink)**

*Symbols are important*

*Mythos teach us about relations with nature- values from past*

*The way you organise activities in nature is important*

*The body learn from nature*

*Learning from tutoring*

*Learning by pairs*



**GROUP (green and blue)**

*School garden, a natural location? Is this a laboratory?*

*Learning by doing*

*Some are focused. Some seem to be indifferent some are observing.*

*Appreciating the origin of the food.*

*Don't the pupils tidy up after themselves?*

*Trying out a new dish*

*Some are sceptical.*

**TEACHER (yellow)**

*Involvement*

*Ecological agriculture*

*Maintenance*

*Individual/voluntary activities*

*Involvement of parents*

*Changing eating habits and behaviours*

*Responsibility (school cleaning)*

*Maintenance*



**GROUP (green)**

*No value. It's only a pic-nic*

*Links between generations (past' ed begins for the future + respect of the traditions)*

*Cooperation between parents and pupils to build a colletive structure.*

*Cooperating in small groups.*

*You never know what happens in outdoor school. The children often discover it.*

*Maintenance of a common wel*

**TEACHER (pink)**

*Traditions*

*Moments in nature*

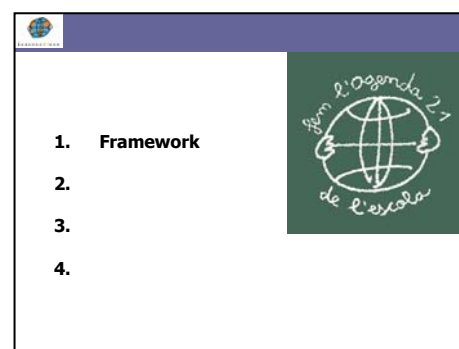
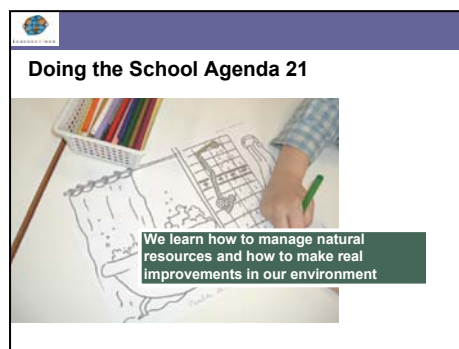
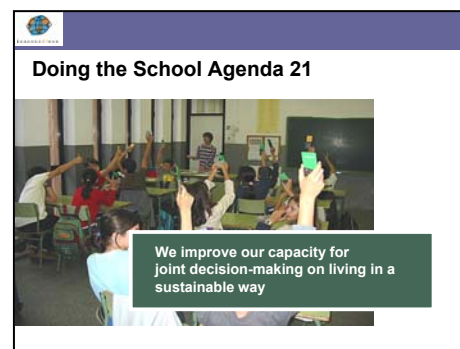
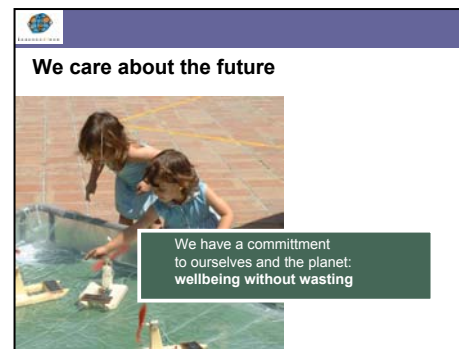
*Working together for the scool.*

*Maintenance and care*

*With the whole community*

# PRESENTATION OF GREEN SCHOOLS PROGRAMME IN CATALUNYA AND AGENDA 21 FOR SCHOOLS IN BARCELONA

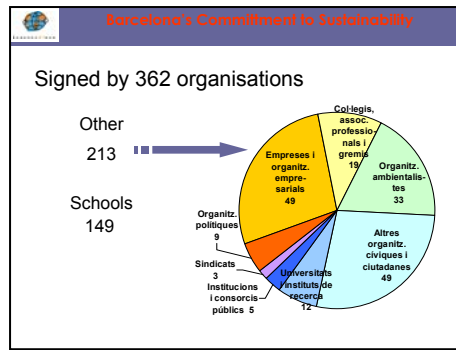
**Coordinator:** Esther Sanglas from Green Schools Programme of Catalunya and Dr. Teresa Franquesa from Barcelona Agenda 21 Escolar.





**ACTION 21**  
2002-2012

City Council action plan  
+  
Organisations and Company action plans  
+  
Schools action plans  
+  
Citizen action plans  
=  
Barcelona action plan for Sustainability



What happens in the world affects our school ...  
... what happens in our school affects the world.

Earth      Barcelona      School

Agenda 21      Local Agenda 21      School Agenda 21

Thinking globally and acting locally

**To improve the world: begin at home!**

**Improving Barcelona**

LOCAL AGENDA 21

- Each city decides whether to involve itself
- It commits to a local action plan
- All local council and stakeholders participate
- Municipality

**Improving our school**

SCHOOL AGENDA 21

- Each school decides whether to involve itself
- It commits to a school action plan
- School community participate
- School and its environment

**1. Framework**

- shared objectives
- school involvement in the city affairs
- city council involvement in the school affairs

**1. Framework**

**2. Learning through action**

**3.**

**4.**

**A21E**

1. MOTIVATION  
Asking ourselves

2. DIAGNOSIS  
Analysing

3. ACTION PLAN  
Decision making

4. INTERVENTION  
Acting

5. EVALUATION  
Reviewing


**Motivation**

Raising awareness of everyone in the school community

- asking ourselves about the environment
- considering the connexions between school and the world
- expressing and widening our perceptions

**Diagnosis**  
Identifying weaknesses and strenghts in our centre in relation to the environment and sustainability

- Considering the philosophy of the centre
- Thinking about how and what we learn and teach
- Pointing out and understanding the environmental problems of the centre and the surroundings



**Diagnosis**

**what** What is the centre's set of ideas/ideology with regards to environmental issues? Are our behaviour coherent with it? Are the programmed contents related to the environment?

**how** Are the teaching and learning proposals coherent with the environmental philosophy of the centre?

- Social Climate: What type of relationships are established between people?


**where**

- Physical and functional issues: How can water, energy, resources, waste, mobility... issues be improved?
- Relations with the surroundings: Are we stimulating contact with the immediate surroundings? And with other social realities?

**Action Plan**  
Formalises an action plan and put it into practice.  
Gives priority to most urgent and/or feasible problems.

**Incorporates changes:**

- structural
- organisational
- individual and collective habits and values




**Evaluation**


**Follow-up of the process**

**Evaluating the extent of objectives achieved**

**Adjusting objectives and actions**



**A21E**




1. Asking ourselves again  
1. Asking ourselves  
2. Analysing  
3. Decision making  
4. Acting  
5. Reviewing

**1. Framework**

**2. Learning through action**

**3. Open and continous process**

**4.**



**3. Open and continous process**


- each school define its own committments
- looking at continous progress
- buildign knowledge by sharing experiences

**1. Framework**

**2. Learning through action**

**3. Open and continous process**

**4. Networking**



**4. Networking**

- exchange
- everybody learning from everybody else
- mutual stimulus
- mutual recognition

**What does the City Council offer Schools?**

Permanent service of information: phone & e-mail

Central library & resources center

Methodological guides

Specific work proposals

Framework

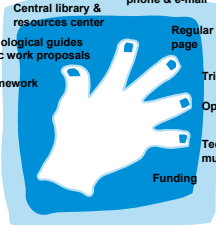
Funding

Regular communication: e-newsletter, web page

Trining and pedagogical advice

Opportunities for networking

Technical support from several municipal departments





### Our numbers

01-02	02-03	03-04	04-05
69	96	114	149
centres	centres	centres	centres
72	103	129	163
projects	projects	projects	projects

### What we do

- Make good use of organic waste
- Greening our School
- Water!
- Fair-trade, responsible consumption
- Adding changes
- Improve our environment
- Control the noise level
- Is the school sustainable?
- A garden in the playground
- Natural Materials
- Do you recycle with RRR Strategy?
- We collect the rainwater
- Consolidating environmental education
- Adopting a square
- Paper, my friend!
- Youngsters with environmental consciousness
- Renewable energy
- Recuperating green areas
- A modular vegetable garden
- School ecoaudit

### What we do

#### Main subjects

Resources and waste	36
Water	7
Energy	7
Biodiversity	34
Sustainability and Environmental Quality	15
Educational project re-thinking	4
Noise	3

### Making a more sustainable School

**Participatory reviewing process of approaches and educational practices that lead to a set of improvements in our immediate environment**

### STRATEGIES

**Shared vision:**  
**Citizen Commitment to Sustainability**  
 Challenges and objectives assumed by the City and the set of institutions and social and economic participants

**framework**  
**voluntary**

### STRATEGIES

**Participation:**  
 sustainability culture: shared process

- more consensual actions
- new ideas and alternatives created
- conflict prevention and resolution
- model practises for the kind of society we want

### STRATEGIES

**Through real problem action:**  
**opportunity for learning**

- learning to find out
- learning to choose
- learning to do

### STRATEGIES

**Coordinate forces and initiatives:**  
**everybody learning from everybody else**

- network creation and stimulation
- continous attention and information
- assesment and support
- exchange
- cross-cutting work, cooperation

### Schools involve themselves

*"The biggest sin is to do nothing because you think there is'nt much you can do"*  
 E.Burke (1729-1797)




## “ESCOLES VERDES” PROGRAMME (GREEN SCHOOLS PROGRAMME)


Supported by:  
DMA (Ministry of Environment and Housing)  
DE (Ministry of Education)  
SCEA (Catalan Society of Environmental Education)  
[www.mediambient.gencat.net/cat/inici.jsp](http://www.mediambient.gencat.net/cat/inici.jsp)



## GREEN SCHOOLS PROGRAMME


▪ OBJECTIVE:  
TO PROMOTE LOCAL SUSTAINABILITY

- Schools: Each school must have their own Agenda 21
- Improvement of the surrounding area of the school
  - Linked to Agenda 21 of the village




## PROGRAMME EVOLUTION

▪ Year 98-99 / Year 99-00	12
• Pilot programme 12 schools	
▪ Year 00-01	60
• 8 training seminars 48 new schools	
▪ Year 01-02	120
• 8 training seminars 60 new schools	
▪ Year 02-03	127
• 1 training seminar 7 new schools	
▪ Year 03-04	167
• 6 training seminars 40 new schools	
▪ Year 04-05	233
• 9 training seminars 57 new schools	



## GENERAL PRINCIPLES


- INDIVIDUALITY (Tailor made): Each school chooses their own way to improve the themes at the pace they work at
- FLEXIBILITY: It's possible to change the programme while it is developing
- POSITIVENESS: The objective of the programme is improve not to repair
- SOCIETY: The programme aims to motivate local parties to improve the town or city's development.
  - A school can only participate in the programme if some of the nearby schools participate too
  - It has to be a social change, not just a change in the school



## ENVIRONMENTAL DIAGNOSIS

- What is the EA in the school? Initial situation
- The school is analysed taking into consideration:
  - Educational context:
    - School life and school atmosphere (Degree of communication, participation ...)
    - Spaces and resources (building; paper use ...)
  - Curricular context
  - Influence at local level
  - Communication


Needs the participation of all the parties involved



## COHESION ENVIRONMENTAL PLANNING (PCA)

▪ Objective: Coordinate all the improvements made in the school

*A list of all the objectives that a school wants to achieve in the short and long term: **the PEC, but on an environmental level***



## METHODOLOGY

Carrying out the environmental diagnosis (audit) of the school

Diagnosis


Writing down the Action Programme (PA)

Action Programme


Elaboration of the Cohesion Environmental Planning (PCA)


Cohesion Environmental Planning (PCA)

- Each school can choose the number of actions they want to carry out  
- The first year is annual, then it becomes biannual



## CENTRES EVOLUTION


YEAR 1	YEAR 2	YEAR 3	YEAR 4
Training seminar: formulate the diagnosis and the PCA	1st ACTION PROGRAMME	 2n ACTION PROGRAMME	



## PROGRAMME DEVELOPMENT

```

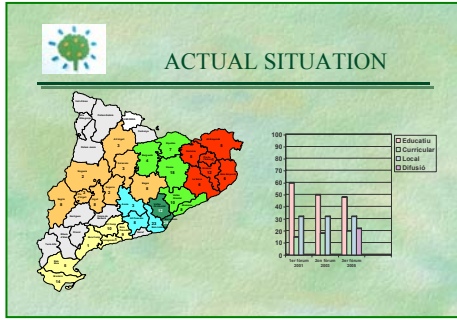
    graph TD
      A[Enrolling on the program] --> B[Environmental diagnosis]
      B --> C[Action Programme]
      C --> D[Assessment and development of PA]
      D --> A
      B --> E[PCA Elaboration]
      E --> F[Awarding/Renewing award]
      F --> B
  
```



## FOLLOW-UP SCHOOLS

BEGINNING	YEAR	END
FOLLOW-UP COMMITTEE MEETING	PERSONAL MEETING HELPLINE FORUM / SYMPOSIUM	FOLLOW-UP COMMITTEE MEETING

All the schools participating in the programme within the same geographical area and local government participants



- ### ACTUAL SITUATION OF THE INDICATORS
- The resulting indicators of the programme are in an experimental phase
  - The indicators are taken from the programme itself (following the philosophy of the project)
  - The qualitative results encompass
    - importance at an environmental level
    - effectiveness and implementation

- ### UNIQUE ASPECTS OF THE PROGRAMME
- The programme has been conceived and built upon the contributions of all parties involved
  - The training seminar for the teachers
  - There is a framework that serves as a reference for future action plans
  - It is a tailor made programme
  - Each action programme becomes more and more complex

### Technique direction

Catalan Society of Environmental Education

ENVIRONMENTAL EDUCATION CENTRES INVOLVED

## **WORKSHOP 4: CONTRASTING ECO-SCHOOLS QUALITY CRITERIA IN OUR COMENIUS PROJECT GROUP**

---

Coordinators: Dr. Michaela Mayer & Dra. Mariona Espinet

### **JUSTIFICATION**

A recent SEED publication has been printed on Quality criteria for ESD in schools. Quality criteria is an instrument which summarises an *ESD philosophy*, that must be constructed and accepted jointly by all school stakeholders, and that cannot be considered as a tool for 'quality control', but as an opportunity for 'quality enhancement', open to on going debate in a participatory way. With this view, quality criteria should give orientation and inspiration but should not be confused with 'performance indicators' or the like. In fact, a set of criteria may be considered as a 'translation' of a set of shared values formulated in terms that are more explicit and closer to the practice but not as prescriptive and limited as performance indicators. As such, the proposed list of criteria is aimed at facilitating discussions within the school and with all stakeholders to clarify the main aims and changes to orient school development to ESD and to develop the school's own list of quality criteria, adapted to the school's own situation and the school's plans for change.

### **AIMS**

To become aware of the individual criteria used, implicitly or explicitly, to evaluate the quality of a project, an activity, a school plan, and to compare the criteria with the others. The aim is not to reach a complete agreement but to distinguish between a common set of criteria, and specific local criteria, important for each school.

# DEVELOPMENT

## What do we know about the quality of European Eco-schools ?




**Michela Mayer**  
**Finn Mogensen**



SEED WORKSHOP Barcelona 2005


## Why an interest in eco-schools?



- Schools are at the center of the Ensi - Environment and School initiatives network
- In our definition 'eco-schools' are schools that have chosen Education for Sustainable Development as a central part of their mission and their educational plan.
- They aim to offer students a context for developing active citizenship and participation, embracing the complexity of the combined social, economic, political and environmental dimensions of sustainable development.
- Such kind of schools are increasing in number and improving in quality under different names at European and international level

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## The conceptions underlying the Quality Criteria used by eco-schools



- A conception of Environmental Education oriented toward Sustainable Development
- A conception of school organisation and of School Development
- A conception of Quality and of evaluation of Quality

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## In enSI what we mean for quality?



- Quality as cultural and value based characteristics
- Quality as related to emotions and perceptions and not only to facts
- Quality as connected to creativity and to not 'standard' solutions to the problems
- Quality as different from quantity

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## What are the characteristics of an evaluation consistent with EE and ESD?



- Deep changes in the conception of EE and ESD require research and evaluation
- Awareness of the limit of our knowledge, of the unpredictability of both environmental and learning process ask for accurate and deep understanding of what we are trying to do
- A culture of complexity and participation requires an evaluation that takes into account this complexity

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## The 3 'paradigms' of Educational Evaluation



- Positivist:** evaluation is essentially a measurement; the objectives of educational processes are defined beforehand by experts or by the authorities; the evaluator is a technician.
- Interpretative:** there are multiple realities, subjectively constructed; the role of the evaluator is to negotiate between different points of view in order to reach a consensus; methods are almost exclusively qualitative.
- Socio-critical:** knowledge is socially constructed, and functional to the changes underwent in a society. Evaluation is a tool for change, and is based on shared criteria. Methods are both qualitative and quantitative. Participation of all the stakeholders is fundamental. The evaluator must declare his/her point of view and pay attention to the emergencies. (Linakou and Flogaitis, 2000)

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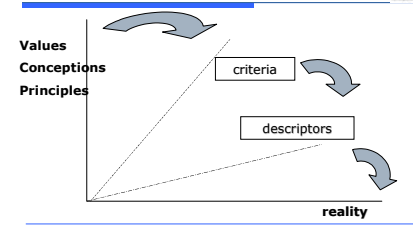
## Quality criteria in a socio-critical paradigm



- Quality criteria should not to be confused with 'performance indicators'
- A set of Quality criteria may be considered as a 'translation' of a set of shared values formulated in terms that are more explicit and closer to the practice
- Quality criteria give orientation and inspiration, they are not a tool for 'quality control', but an opportunity for 'quality enhancement'
- Quality criteria are open to on going debate and participation

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## Quality Criteria as bridges

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## What differences among eco-schools?



The names used give us some hints:

- **Eco-schools** or **Green schools** are often dealing with the school use of resources, involving students in saving and recycling activities.
- **Forest schools, nature schools**, are oriented to learning in contact with nature and nature conservation
- **Sustainable schools, or school for Sustainable Development**, look forward a change in teaching/learning methods and in the school organisation, using the school initiatives as a tool for the internal change.

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## What images of a sustainable future?



- **Science and techniques** driven future: sustainable development is a matter of 'management and control', the aim of EE is the forming of citizens who respect the rules, the main changes are in individual behaviours and in lifestyles
- **Relation with nature** driven future: sustainable development is a matter of individual choices, mainly related to new relations with nature. The main changes concern individual attitudes and behaviours.
- **Social change** driven future: sustainable development is a social and cultural challenge. The main aim of EE is to prepare people to actively participate in the social change, accepting complexity and uncertainty, and the values of democracy.

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## What images of the teaching-learning processes?



- **Teaching as transfer of correct information and strategies:** active methodologies and concrete experiences enhance motivation and foster meaningful learning. The teacher is responsible for learning and for the correctness of the information.
- **Learning as an individual challenge, teaching as a facilitation process:** Experiential learning in a natural environment allows to link emotions to values to rational thoughts. Students are responsible for their learning, the teacher facilitate the contrast among different perspectives.
- **Learning as a social process, teaching as an introduction in the democratic dialogue:** Local 'situational' knowledge and critical reflection are tools for clarification of values and for a 'propositive' critical thinking. Teacher is an agent for personal and joint knowledge construction. Learning as a part in decision-making process and making visions for future actions

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## What images of School Development?



- **School as an 'ecological' enterprise.** Improvement of the school efficiency from a technical-economical – ecological perspective. School and community make the best use of budget and expertise. The research is technological, the attention is on quality control.
- **School as a family.** Improvement of the internal and external relationships, and of the sense of identity. The school is a 'core social centre' for the community. The research is on the social aspects, the networking is aimed to the exchange of good practices.
- **School as an educational research community,** learning from practice and accepting conflicts and critiques. The school act as a centre for local sustainable development. The research is an action research and the attention on quality enhancement.

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## 3 main scenarios for the development of ESD schools



What images of sustainable futures?	Science and technique driven future	New relation with nature driven future	Social change driven future
What images of the teaching-learning processes?	Teaching as transfer of correct information and strategies	Learning as an individual challenge, teaching as a facilitation process	Learning as a social process, teaching as an introduction in a democratic dialogue
What images of School Development?	School as an 'ecological' enterprise	School as a family	School as an educational research community

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## Quality criteria for ESD-schools



- **A document for international debate by the SEED and the ENSI networks by Soren Breiting, Michela Mayer and Finn Mogensen**
- Aimed at facilitating discussions within the school to clarify the main aims and changes and to develop the school's own list of quality criteria, adapted to the school's own situation and the school's plans for change.
- 3 groups of criteria:
  - Quality criteria regarding the quality of teaching and learning processes
  - Quality criteria regarding the school policy and organisation
  - Quality criteria regarding the school's external relations

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## The quality of teaching and learning processes



- Criteria in the area of the teaching-learning approach
- Criteria in the area of visible outcomes at school and in local community
- Criteria in the area of perspectives for the future
- Criteria in the area of a 'culture of complexity'
- Criteria in the area of critical thinking and the language of possibility
- Criteria in the area of value clarification and development
- Criteria in the area of the action-based perspective
- Criteria in the area of participation.
- Criteria in the area of content matter

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## Quality criteria regarding school policy and organisation



- Criteria in the area of the school policy and planning
- Criteria in the area of the school climate
- Criteria in the area of school management
- Criteria in the area of reflection and evaluation of ESD initiatives at school level

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## Quality criteria regarding the school's external relations



- Criteria in the area of community cooperation
- Criteria in the area of networking and partnerships

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## Criteria in the area of critical thinking and the language of possibility: the example



- Working with the problem of the use of pesticide half of the class was asked to take one position and identify and analyse arguments for the use of pesticides while the other part of the class took the opposite position.
- They were asked to search for relevant information which could support their specific position and advocate for the position they were investigating in a panel debate in the classroom.
- The 'informers' from the local community (a traditional farmer, an organic farmer, a manager from a local supermarket, a representative for a consumer organisation and the chairperson from the local branch of the ramblers' organisation) were invited to be present at the panel debate. Afterward, the students were asked in groups to discuss and take a stand on the issues.
- In this process, the students were not only asked for their stance on the use of pesticides and arguments for it, but also what alternatives and possible actions they could identify – using arguments from the previous learning processes.

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Criteria in the area of critical thinking and the language of possibility:  
**the rationale**



- Students are every day exposed to information which is complex, full of uncertainty and often contradictory and seldom neutral concerning values or political aspects. This entails that knowledge is not an objective phenomenon which is the same from all perspectives and at all times.
- To grow up to be active and participating citizens, the students therefore need to be able to think for themselves, not take all kinds of information and argumentation for granted but instead to reflect on and go behind assumptions underlying knowledge claims, opinions and ways of seeing things.
- On the other hand, critical thinking is not to be conceived as negative scepticism of all and everything. A critical thinker is not a "no man" but a human being who strives to couple the critical process of reflection with an empathetic and optimistic vision of 'potentiality' searching for solutions and positive direction.

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Criteria in the area of critical thinking and the language of possibility:  
**the criteria**



- Students work with power relations and conflicting interest e.g. in the local situation, between countries, between present and future generations.
- Students are encouraged to look at things from different perspectives and to develop empathy by identifying themselves with others
- Students are encouraged to give arguments for their positions
- Students are encouraged to look at examples of what is (or was) useful and fruitful in other situations, in order to imagine new possibilities and alternative actions
- .....

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**Future challenges :**  
**the use of Quality Criteria for an ESD school development**



- A System of Quality Criteria is an instrument which summarises and specifies the School Environmental Education philosophy.
- In order to really be a frame of reference and a binding element of a programme or a school, it must be jointly constructed and accepted by all the participants.
- The SEED-ENSI proposal as a *non-exhaustive* list of 'quality criteria' to be used as a starting point for reflections, debates and further development.

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The areas proposed by the document on Quality Criteria set (15 areas) will be divided between the mixed groups (2-3 areas each group). Each group is asked to propose a group of criteria related to the area.

- a) First the teachers of each school are invited to think about criteria that will apply in their own school, taking care of their specific needs and development plans.
- b) Then they are asked to discuss and contrast their criteria with the others teachers of other schools in the same group, and to reach an agreement on some criteria that are relevant for all the schools. Criteria can be enriched with short examples, pictures or descriptions of 'what they mean for good quality'.
- c) The group at the end prepares a poster where the common set of criteria are inside the circle and the school- specific criteria all around.

The final ten minutes will be devoted to read and react on the posters produced.

## OUTCOMES



### PARTICIPATION

#### Common criteria

*Special activities, special days that involve students teachers and parents.*

*Institution of a council in the school.*

*A box "post our suggestions" in the hall where the students put your ideas to realize a better school.*

*Parents at school: Association, seminar... activities - education course) with students and teachers or alone.*

#### Specific criteria

*Participation activities of local Associations or others.*

*Consult for the EE by parents, teachers, students.*

*Tazebao in the hall where students can put postik with their ideas about local-global questions.*

*Shared coordination.*

*Take decisions not by the higher number but by negotiation.*

*Open classes.*

*Common activities interclass.*

*Teachers choose that they want to teach. The passion is their teaching guide.*

*Students are autonomy responsible when they organize some activities and they evaluate themselves.*



### PARTICIPATION

#### Common criteria

*Students, staff, parents are involved in all school activities*

*How:*

- *In school committees*
- *In promoting common activities*
- *In creating active communication*



### PERSPECTIVES FOR THE FUTURE

#### Common criteria

*That our projects go on in the next year.*

*Visible signs for results and ecological behaviour*

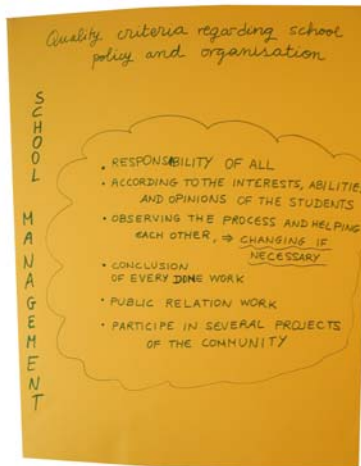
#### Specific criteria

*More time for planning and reflecting on the results.*

*Project and contents are meaningful towards progress.*

*Students take part in new ways of learning and the use of new technologies.*

*Find the balance between standards and individual learning.*



## QUALITY CRITERIA REGARDING SCHOOL POLICY AND ORGANISATION

### Common criteria

*Responsibility of all.*

*According to the interest, abilities and opinions of the students.*

*Observing the process and helping each other => changing if necessary.*

*Conclusion of every done work.*

*Public relation work.*

*Participate in several projects of community.*



## TEACHING – LEARNING

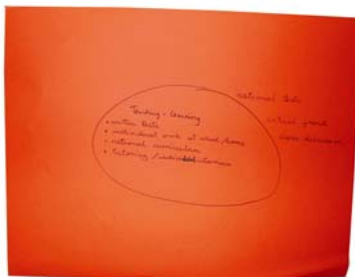
### Common criteria

*Be sure of the presence of sustainability in the syllabus.*

*Involving students in their planning and learning process.*

*Focus on values and the developing of right attitudes.*

*Activities based on real life facts.*



## TEACHING – LEARNING

### Common criteria

*Written tests.*

*Individual work at school/home*

*National curriculum.*

*Tutoring /individual interviews.*

### Specific criteria

*National tests.*

*Critical friend.*

*Class discussion*

## **WORKSHOP 5:**

### ***Contrasting environmental themes... DEALING WITH COMPLEXITY WHEN DOING ESD/EE IN SCHOOLS***

---

**Coordinators:** Rosa Maria Pujol, M. Mercè Guilera & Mariona Espinet

#### **JUSTIFICATION**

The themes and actions selected in EE/ESD school projects are quite the same across schools and countries: waste management, landscaping, water, energy, biodiversity, etc. However, the important focus of this work should not be much the concrete theme and action undertaken but the perspective used. In fact, what becomes interesting is to approach ESD/EE themes and actions from complexity so that world phenomena are interpreted under the light of the interactions and relations of their elements, analysing the multicausality and multieffect, being aware of hazard and uncertainty, taking the limits, circumstances and bonds as opportunities, etc. In relation to projects and actions, it would be important not to stress so much the results of actions but the process undertaken to construct such actions. What becomes truly educational of an ESD/EE action is students' empowerment while working together, analyzing phenomena, and making decisions to change the social and natural environment.

It is also important to avoid inserting ESD/EE into the curriculum as a subject or a separate theme and instead considering it as being cross curricular affecting the way all subjects are taught. The DESD document is quite explicit about this when stating that education for sustainability should be interdisciplinary and holistic so that learning about sustainable development is included in the complete curriculum and not as an isolate subject.

#### **AIMS**

To become aware that any theme is useful for ESD/EE as long as it is tackled from the perspective of complexity and it deals with relevant problems of the community.

## DEVELOPMENT

This workshop was conducted at the outdoors, the Can Coll Environmental Education Center located in the Collserola Metropolitan Park.

### *Program:*

9 h. Arrival and Welcome from the Can Coll Environmental Education Center

9.30 h. Presentation of the workshop and group organization

10.00 h. Local Environment Complexity Game

11.00 h. Constructing interpretations of Can Coll using different languages

12.15 h. Performing representations of Can Coll

13.30 h. Conclusions

13.45 h. Lunch


14.45 h. Departure to the venue Marti Codolar

**5 Workshop on ESD/EE:**

**“Contrasting visions of ESD /EE in schools”**

Coordinators: Dr. Rosa Maria Pujol & Merce Guilera

COMENIUS 3 Thematic Workshop  
for COMENIUS 1 Schools  
Barcelona / SPAIN



**WHICH CONTENTS?**

THE CONTENTS MIGHT :

- \* Be significant
- \* Show the world in a complex way
- \* Make explicit and check the own attitudes and behavior

**SIGNIFICANT**



**SEE THE WORLD IN A COMPLEX WAY**

**NOT SEEING THE WORLD AS A PICTURE**

 NOT SEEING:  
STATIC EQUILIBRIUM  
PASSIVITY

**SEEING THE WORLD AS A HISTORY**

SEEING:  
DINAMIC EQUILIBRIUM  
CHANGES  
HAZARD  
INTERVENTION POSSIBILITY







### THE WHOLE AND THE PARTS RELATION

chemist  
biologics  
consumption  
politics  
Social

### 2. STABLISHING SPACE RELATIONS

MACRO      MESO      MICRO

### 3. STABLISHING TIME RELATIONS

before  
now  
after

Romans  
Middle Age

### 4. STABLISHING INTERACTIONS BETWEEN NATURAL ELEMENTS

### 5. STABLISHING INTERACTIONS BETWEEN SOCIAL ELEMENTS

Production  
Transformation  
Commercialization  
Distribution  
Consumption

### 6. STABLISHING INTERACTIONS BETWEEN SOCIAL AND NATURAL ELEMENTS

### 7. CONSIDERING THE MULTICAUSALITY AND MULTIEFFECT

### 8. CONSIDERING THE COMPLEMENTARITY

I need to eat and I eat → AUTONOMY

I can eat because there are: → DEPENDENCE

Energy flow      Material cycle      Social chain

### 9. CONSIDERING THOUGHTS AND EMOTIONS AS COMPLEMENTARY

paint      manual      sculpture

poetry      dance      draw

**SOBRE EL OLIVAR**  
Sobre el olivar,  
se vio la lechuga cantar  
volar y volar.  
Campo, campo, campo.  
Antonio Machado

**Ja no escalfa el foc d'ahir  
Ni el foc d'avui  
s'ha de fer foc nou**

**Martí Pol**

*Yesterday's fire doesn't warm  
Neither today's fire do  
We need a new fire*



1. KNOWING A SIGNIFICANT PLACE IN BARCELONA

making an itinerary

- Make 4 groups
- Choose an itinerary on the map
- During the itinerary you will find RED POINTS
- In each point there will be an envelope, open it and go to the next point following the instructions writted down on it

2. MAKING STORIES OF THIS PLACE

Represent the story on a poster

- Put the significative elements on a poster
- Stablish relations between them

3. REPRESENTING THE STORY USING DIFFERENT ARTISTIC LANGUAGES

Doing a dinamic performance

- music
- Song
- Theatre
- poetry
- .....

Participants formed small groups of five and were given a map of Can Coll and an envelope. The map showed three different local paths and locates the same number of stops in each path. The envelope contains the so called “Complexity view cards” with actions to be undertaken when the group reaches a stop. The groups are invited to follow one of the three paths or to make their own path along the walk. The game was about reaching the stops and conducting the actions suggested through the cards. From one stop to the next the group picked up one “Complexity view card” and tried to do it. These suggested actions was related to complexity and involved capturing elements from the landscape. The capturing could be done by picking up natural elements, drawings, sensing, words, etc.

## Complexity view card:

Find something that is related to the interaction between:

- Nature and society
- Passion and logic
- Nature and nature
- Society and society

Find something that was here back in 1959 and another that will be here in 2050.

Find something that can be seen as a photo of one moment and another that can be seen as a part of a story.

Find something that you cannot find in your country.

Find something that can be read as itself and as a part of the whole.

Find something that let us to relate different scales together:

- under scale (micro)
- same scale (meso)
- higher scale (macro)

Find something that might be the cause of many effects, and another that might be the effect of many different causes.

Find something that is the result of unexpected action.

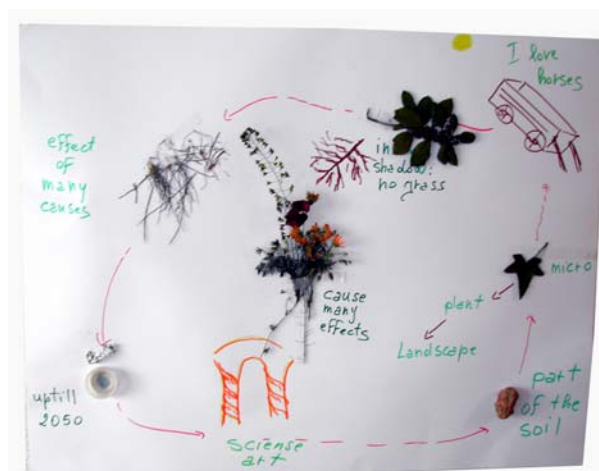
Find something that can be studied, at the same time, from:

- natural sciences and social sciences
- science and art

After the game, the groups were asked to construct an interpretation of Can Coll landscape with the captured elements and their relationships. Groups were invited to perform the landscape interpretation to the other groups. It was important that groups focus on the way they make decisions and the dynamics of constructed actions.

## OUTCOMES

First story...



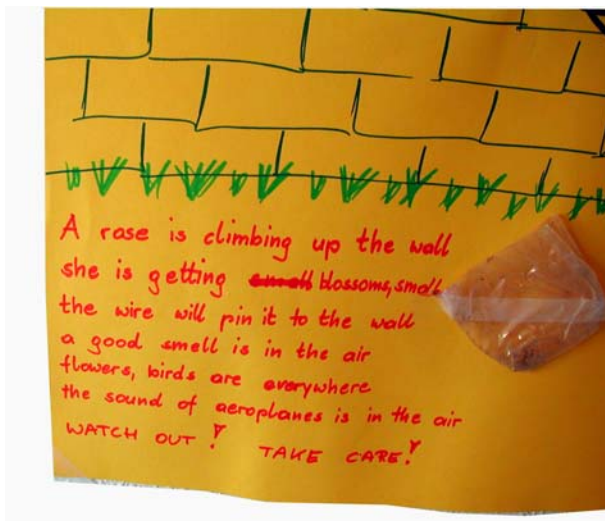
=> Representation using dance



Second story



=> Representation using poetry



### Third story



=> Representation using dance



# EVALUATION AND ITS RESULTS

## FEEDBACK

Feed Back COMENIUS thematic workshop, April 2005 Barcelona:

1) I received information about the COMENIUS thematic workshop from:

COMENIUS 1 project co-ordinator

Colleagues of schools

SEED

Advice/information of the National Agency

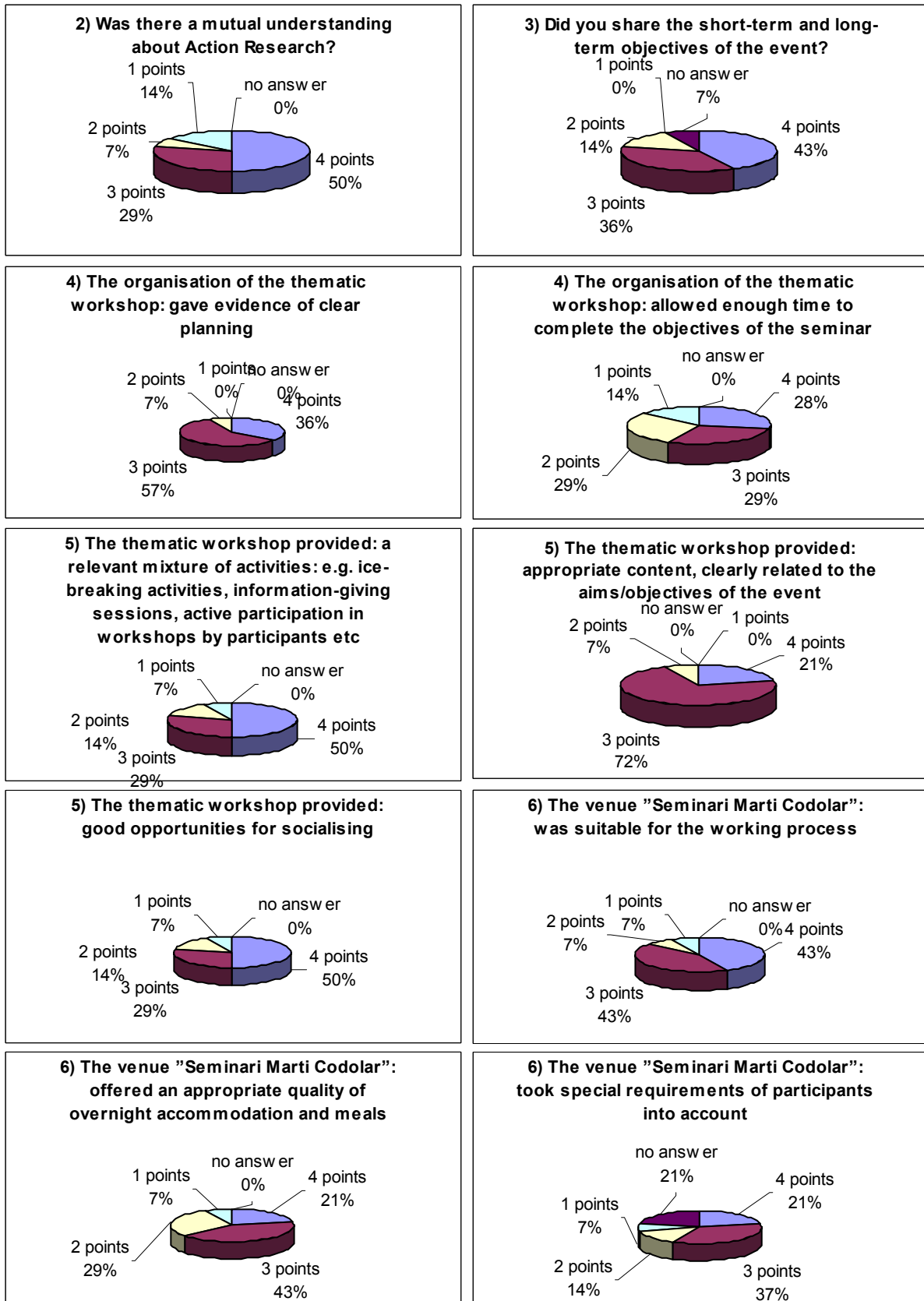
others .....

	4 points	3 points	2 points	1 point
2) Was there a mutual understanding about Action Research?				
3) Did you share the short-term and long-term objectives of the event?				
4) The organisation of the thematic workshop				
gave evidence of clear planning				
had realistic time scales				
allowed enough time to complete the objectives of the seminar				
5) The thematic workshop provided				
appropriate content, clearly related to the aims/objectives of the event				
a relevant mixture of activities: e.g. ice-breaking activities, information-giving sessions, active participation in workshops by participants etc.				
good opportunities for socialising				
6) The venue "Seminari Marti Codolar"				
was suitable for the working process				
offered an appropriate quality of overnight accommodation and meals				
took special requirements of participants into account				
7) Did you improve your communication with foreign languages?				
8) Did you improve your awareness of the usefulness of intercultural exchange?				
9) Did the thematic workshop empower you for your COMENIUS 1 project?				
10) Did you gain a mutual understanding of the SEED offers?				
11) Will you use the SEED website community for your project?				
12) Personal experiences through the Comenius 1 thematic workshop:				
I acquired new knowledge				
I was inspired to learn something new				
I got to know new aspects of teaching and learning				
others .....				
13) Did you have experience with self evaluation or action research (A R) beforehand?				
14) Do you use an A R or self evaluation process in your project?				
15) Is there already a team in your school supporting self evaluation?				
16) Is your head or principal involved in your project?				
17) Does your school promote Education for Sustainable Development?				
18) Was your national SOCRATES - agency supportive for you?				

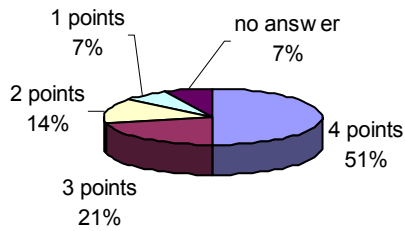
Thank you for answering this questionnaire.

The organisational team.

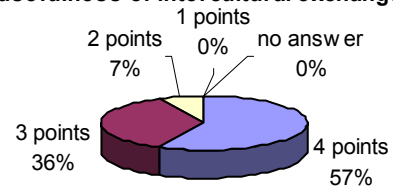
## RESULTS



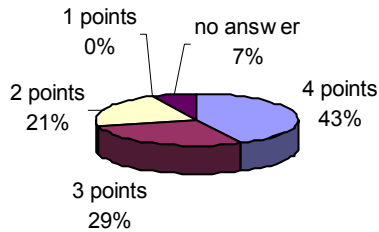
7) Did you improve your communication with foreign languages?



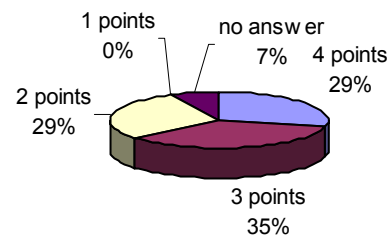
8) Did you improve your awareness of the usefulness of intercultural exchange?



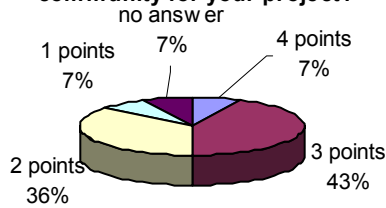
9) Did the thematic workshop empower you for your COMENIUS 1 project?



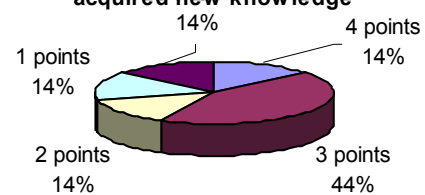
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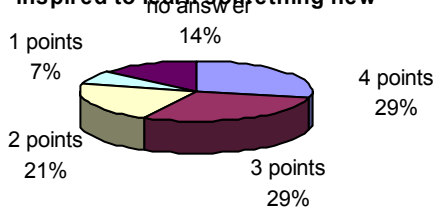
11) Will you use the SEED website community for your project?



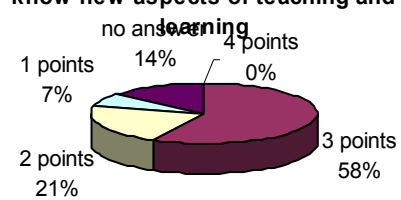
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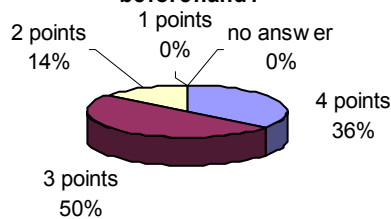
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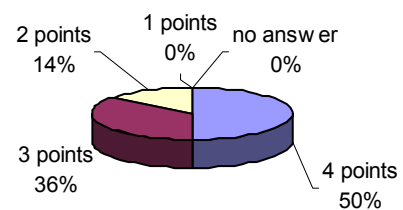
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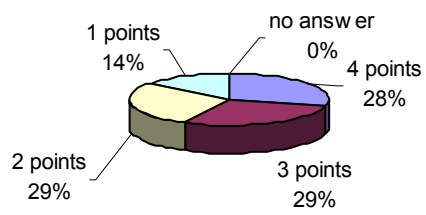
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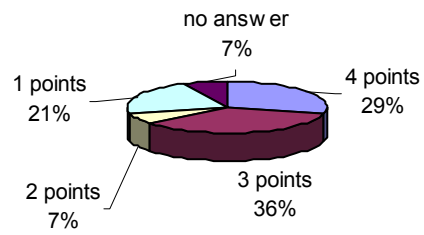
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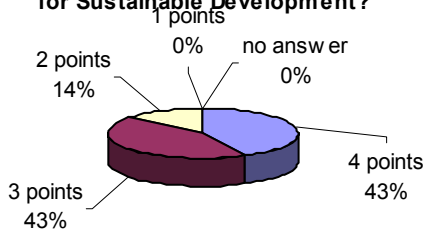
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**16) Is your head or principal involved in your project?**



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