NATIONAL MEETING ON "SCIENCEDEUC"
FOLIGNO, 19-20 October 2005

FINAL REPORT

The National Consortium for Innovation, formation and educational research (CIFRE), within the programme "Scienceeduc" has organized a national meeting devoted to Directors and researchers experts of the Regional Institutes for Educational Research (IRRE) with the main objective to plan and to organize one operative national network between the Institutes in order to promote and to favour the scientific learning in the primary school.

Thirteen Institutes Representatives over twenty have been participated to the Meeting. The opening Ceremony has been opened by the salutes of the President of the Laboratory of Experimental Sciences of Foligno where the meeting was located, Prof. Pierluigi Mingarelli followed by the President of the CIFRE, Prof. Gianfranco Savelli. Prof. Gianfranco Savelli has introduced the programme "Scienceeduc" as well all CIFRE projects oriented to increase the quality of the scientific teaching and learning in the Italian formative system. Recently the CIFRE, has also participated to the national project "KISS" (How to teach experimental sciences) within framework PON financed by the European Social Fund.

The main objective of the project is to experience new models in order to favour the learning of experimental sciences; for the first time all the most prestigious Italian Disciplinary Associations are participating to the projects sharing with CIFRE methodologies and objectives assuring, if the project will be funded their indispensable scientific contribution in order to promote the scientific education in Italy.

Subsequently Prof. Anna Allerhand, teacher at the LUMSA University in Rome, has presented the project "POLLEN Seed Cities for Science". Prof. Allerhand has analytically shown the genesis of the plan, the objectives and general scheme and pointed out the strategic importance to be a part of an European network sharing with 12 different countries national experiences, monitoring activities and disseminating best practices.

Prof. Giuseppe Valitutti of the University of Urbino has introduced the outcomes of a plan pilot to ministerial financed by the minister of education called "the words of the Science" of which he will be the coordinator.

The main objective of the project are:
• to improve the instruments, the structures and the schools organization to improve the quality of the scientific and technological teaching
• to favour the best documentation and the circulation of the best practice
• to construct an innovative curriculum on the scientific area

This will allow the students:
• to use a correct the articulate scientific language, conquered through the manipulation of objects, organisms and materials;
• to use, also in various contexts, the thought abilities learned during the activities experience them.

For the teachers the plan is expected to:

• create innovative integrated didactic methodologies
• develop the ability to communication in net
• elaborate new didactic materials.

Prof. Vailutti strongly pointed out the importance of an experimental approach for the scientific education in the primary school, in order to motivate the boys and to create a favourable climate for the scientific learning from the very young age, through the construction of conceptual maps.

Prof. Pierluigi Mingarelli, Director of the Laboratory of Experimental Sciences has illustrated the activities of the laboratory in favour of the schools and the territory in order to promote and to increase scientific knowing and the curiosity towards sciences. The Laboratory of Experimental Sciences, from a legal point of view, is a Consortium of schools, currently 17.

The main objectives of the Laboratory are:

• promotion and spread of the scientific culture;
• didactic activities of scientific and technological search, practical experimentation of various scientific theories;
• planning and realization of activity of professional formation;
• support to the didactic activities of the schools of the territory;
• actions to spread out scientific culture;
• promotion of specific initiatives to diffuse a greater knowledge of everyone with scientific disciplines.

After the relation of Prof. Mingarelli, the participants have been able to visit all the laboratories and the equipments of the Laboratory. The first day has been concluded with the visit to the Planetarium, one of the best instrument of information and scientific instruction for the students.

In the second day the meeting a round table has been kept on the topic "the experiences of scientific education in the primary school" in the course of which the experts IRRE and the teachers of some schools of the territory have introduced the realized experiences in order to raise the quality of the scientific education in the primary school.

Prof. Mario Tei has introduced the formation experiences and modernization for teachers of the primary school and the secondary school realized by the IRRE Umbria and the Laboratory of Experimental Science. Has been organizes 6 course anniversaries of 40 hours everyone, of which 14 hours of laboratory with small groups of students in order to concur with the teacher to develop personally all the experiments and to acquire operating and technical competences in the use of the equipments and to create experiments with "poor" materials.

Prof. Mario Marani of the IRRE Puglia has introduced a new programme called "WebQuest" that concurs with teaching to accompany the pupils, indicating lines guides and materials, in the construction of personalized learning pathways allowing a progressive discovery of answers to their questions. The methodology of learning, experienced with several schools can be used for all the disciplines for its interactivity and its effectiveness.

Prof. Spitelli of the first didactic Circle of Spoleto has introduced the plan "Small scientists" realized in his school. It has been dealt to develop the scientific learnings without offer any predetermined answers to the pupils but stimulating their curiosity and guiding them, through to the manual experiments, to discover the truth scientific and to find the answers to their questions. The plan, financed from some local banks, has produced, as the Prof. Panelli, coordinator of the round table pointed out, very interesting results.
Prof. Prozzo of the IRRE Molise has introduced a very interesting plan "Air and water" founded on one surveying on the superficial phenomena of the water, in a laboratory for teaching and pupils, realized by the IRRE Molise with the University of the Molise.

Prof. Cases of the IRRE Basilicata have introduced the experience of the "Days of Science" which have been involved 160 teaching and 167 students of the schools of specialization for instruction (SISSI), studying the relationship between educational research and the search-action in the school, with 6 modules of formation on the experimentation of didactic modules and the successive experimentation in the classes.

Prof. Faneli has emphasized, concluding the round table, the value of the manual activities, of the experimentation, of the curiosity in order to motivate the students in order to render the scientific knowledge accessible and to stimulate the scientific studies.

During the following debate several questions have been raised related to the topics treated during the first part of the meeting. Several questions have been formulated on the involvement of the families and the territory in the "POLLEN" project.

Prof. Allerhand pointed out that the "POLLEN" project is founded on the idea to change the attitude of teaching towards the scientific education and that the plan for the Italian country is founded on the organization of the CIFRE and its net.

Prof. Francesco Gesmundo, Director of the IRRE Puglia has concluded the debate dealing the topic "the engagement of the IRRE for the scientific learning" evidencing one series of activity and potentiality of Regional Institutes for Educational Research in improvement of the scientific learning in the Italian school. The IRRE in the plan "POLLEN" will experience one strong actions of system in order to select and to collect experiences and good practical and to promote the search in the schools.

Prof. the Gesmundo has remembered how all the actions of the IRRE Institutes through the Consortium CIFRE, may contribute to raise the qualitative level of the scientific learning in Italy, also through an inner action to the Ministry of the Instruction, that it has constituted a national committee for the Ose-Pisa surveying, through to which the gaps of the instruction and the scientific learning in the Italian school are emerged. Moreover the IRRE Institutes are engaged in a new project to improve the scientific learning in the secondary school by using the GOMP (Goal Oriented Planning Project) method: this method will applied in 12 new research laboratories in 12 different advanced schools for each region: at the end of the project about 140 new labs will be created in Italy.

The IRRE Institutes are also engaged in favouring the culture of the documentation for the development and the selection of territorial experiences and for the construction of new learning objects.

Prof. Gesmundo has concluded the Seminary insisting on some key words that must characterize the action of the IRRE Institutes in this field: the pluralism of the approaches to the scientific education, the continuity of the actions and the use of the system as a tool to optimize the resources and to rationalize the actions.

THE PRESIDENT

Prof. Gianfranco Savelli

[Signature]