



# European project for the design and validation of a new educational methodology

## BASIC TEXT



Leonardo da Vinci II  
Community action programme  
for Professional Training  
Second phase: 2000-2006



## INTRODUCTION

The Creative Learning Method (CLM) is a European Project financed by the Community programme Leonardo da Vinci, pilot projects section, and its objective is the design and validation of a new teaching methodology, geared towards primary school teachers, to facilitate and increase their capability to learn new teaching strategies to encourage the creation of teaching routes which are not just outlines to fill in but processes to create.

The Project, which was carried out over the course of two years (October 2003- November 2005) and split into various phases of work, involved partners and researchers from numerous European countries: Germany, England, Ireland, Italy, Portugal, Spain, Romania, with the aim of testing the applicability of CLM in different countries and different school systems.

The activities, appointments, research and meetings which characterised the two year's of work and involved all the partners, have been moments rich in confrontation, cooperation, cultural exchange, reciprocal motivation, enthusiasm and new ideas and they have allowed the researchers to get to know the training sphere and the primary school in Europe better, whilst also visiting universities, training centres, associations, schools and local bodies.

The result of all the work carried out is not however an end point but rather a huge and solid platform from which to start other research and projects which should allow the CLM to be used more and more in actual school life, experimenting with it and accomplishing more, and to be tried out so that it can be transferred to other teaching and educational environments.

In the following pages we present the background and the steps the Project has covered, some of the results of the research, the studies carried out and the core of the CLM, in the hope of being able to contribute more and more by bringing creativity to the training centre and "turning on" and motivating people to learn.

A sincere and affectionate thank you goes to all those who, in different ways, have brought a decisive contribution to the Project. First

of all to the researchers, experts, trainers and technicians of the Project partnership for the competence and great openness that they have shown on many occasions and to the Agenzia Nazionale Leonardo Da Vinci (Italy), in particular to Dott.ssa Franca Fiacco who has supported us with great professionalism and... great patience in this undertaking.

## THE BACKGROUND TO THE PROJECT

### HOW THE PROJECT WAS CONCEIVED

As a promoter, Creativ responded to the invitation from the European Community to present projects inside the Community Finance Programme Leonardo da Vinci II by presenting the CLM.

In “short” here is the long journey we have made...

#### **Preliminary phase**

- *Delivery of the preliminary proposal on 4 November 2002.*
- *Receipt of the positive response on 10 April 2003.*

The first evaluation of the preliminary proposals was carried out by the National Agencies of the respective countries commissioned by the European Community.

In Italy the body responsible is the “Istituto per lo sviluppo della Formazione professionale dei Lavoratori” (ISFOL) [Institute for workers’ professional development], a public body responsible for scientific research operating in collaboration with the Ministry of Employment, Regions and Social Services.

#### **Drafting and approval of the final proposal**

- *The final proposal was delivered on 10 May 2003.*

Following the first evaluation phase, Creativ was called upon to develop a wider more detailed project, which was subject to a two-fold evaluation.

The final proposal was evaluated by Italian experts who were independent to the ISFOL and by European evaluators appointed by the European Union (EU).

#### **Final evaluation**

- *Receipt of positive approval on 21 July 2003.*

The CLM received a positive evaluation from both groups of evaluators. This agreement by the judges lead to CLM being included in the *Projects financed by the European Community.*

The Project started on 1st October 2003 and finished in November 2005.

### ***The Leonardo da Vinci Programme***

The Leonardo da Vinci Programme is the action plan of the European Union which seeks to promote *new* practical approaches with regard to professional training policies.

It emerged in 1995 from a desire to improve the quality, originality and European dimension of professional training systems and practice via transnational cooperation.

In Italy it was coordinated by the Ministry of Employment and Social Services and the Ministry of Education, University and Research, which make use of the technical assistance of the ISFOL.

*From art. 150 of the treaty which created the European Community:*

The Leonardo da Vinci Programme contributes to the enforcement of a Community professional training policy, which supports and integrates the actions taken by the Member States ().

With *Decision 1999/382/CE*, the Council of Europe approved a *second phase* of the Programme for the period 2000-2006 so as to continue to promote new approaches in the educational sphere.

Leonardo da Vinci II (1 January 2000 - 31 December 2006) stems from the experience of the previous Programme (1995-1999) and puts into effect the Community political orientation as expressed by the Council of Europe in Luxembourg, in the communication "Promoting a Europe of Knowledge", in the white book "Teaching and learning: towards a cognitive society" and in the green book "Education, training, research: the obstacles to transnational mobility", together with the setting up of the second phase of the Socrates and Youth programmes for Europe.

The Creativ Project, the CLM, therefore is inserted in the second phase of the programme which envisages the following three objectives:

1. to promote *skills* and *competencies*, especially in young people, in initial vocational training at all levels, in order to enable *employability* and *work-linked* training;
2. to improve the quality of in-service vocational training and access to the same, as well as the life-long acquisition of skills and competencies;

3. to promote and reinforce the *contribution* of vocational training to the *innovative process*, in order to improve competitiveness and entrepreneurial attitudes, also within the prospect of new job possibilities.

### ***Leonardo da Vinci II priorities (2002-2006)***

The European Community fixed a series of priorities closely linked to objectives which act as criteria to select and finance the most innovative proposals capable of achieving them.

The second phase priorities, with which the CLM Project entered and won, are the following:

*Optimising learning.* The projects pertaining to such priorities develop new approaches capable of evaluating learning independently from the context in which it was acquired, new forms of certification and recognition of the learning.

*New forms of teaching and learning and basic skills within the context of education and vocational training (IFP).* Among these priorities belong projects designed to create new methods of learning centred on everyone's specific requirements, projects capable of providing incentives for permanent learning or offering mechanisms, materials, devices and appropriate contexts to provide the teacher-trainers with the necessary support and motivation to implement innovative pedagogical solutions.

*Guidance and counselling.* All the projects respond to these priorities by reinforcing the guidance system, evaluating the available resources and improving the European dimension of the guidance, via an exchange of experiences on methodologies and standards.

To carry out these objectives, project proposals could be presented within the context of the following types of measures:

- transnational mobility of young people and adults;
- pilot projects;
- projects for the development of linguistic competence within the context of vocational development;
- support for the development of transnational co-operative networks which facilitate the exchange of experiences and good practice;



- development and updating of vocational development reference material.

The CLM is part of the Pilot Projects and is a Project which, within a transnational partnership, aims to achieve development and circulation of the *innovation* in the form of professional development relating to the promotion of *new* methods of professional development or professional guidance within the context of lifelong training.

### ***Creativ's proposal***

In the phase of the Leonardo da Vinci II Programme in which attention and interest are directed to improving learning, Creativ together with its partners proposed a Project aimed at improving the quality of the system of educating and training teachers.

The aim was to design and validate a *new* teaching methodology called CLM aimed at primary school teachers, to enable and increase their learning of new teaching strategies, to improve the area of cross competencies and facilitate high motivation for lifelong training with the perspective of an improvement in the teachers and a continual check on their employability.

The new teaching methodology is based on the use of active strategies which involve them fully and which are capable of inspiring people and motivating them to planned learning which leads the users to a greater understanding and motivation to learn.

Among the specific objectives are:

- to find a teaching methodology which can be used by a *significant* number of teachers;
- to develop in teachers *new* motivations, stimuli and “sense of belonging” to a particular category;
- to increase the *spectrum* of teaching strategies for managing the group and their use by the teachers;
- to propose *innovative* working devices capable of supporting the learning and creating significant dialogue.

### ***CLM potential***

The active and absorbing strategies on which the CLM are founded are particularly motivating for purposeful learning because they are centred on “community” learning.

CLM could be extended from the world of the primary school to other contexts such as, for example, *business training* where the continuous updating, team work and management of human resources are strategic factors to accompany technological and organisational change. The intense experience undertaken by Creativ in vocational development, post diploma, post degree, with small companies and in educational spheres also allowed us to collect significant feedback on the possible extension of the CLM.

The Project represents a valid tool for teachers of *every* type and level and for all those who are engaged in educational and training activities (educators, trainers, animators etc.).

The aim of extending the CLM to other groups, sectors and geographical areas was already considered when partnerships were being chosen, characterized by a significant number of people being involved and coverage of many areas of Europe.

## CREATIV'S INPUT IN THE LEONARDO DA VINCI II PROGRAMME

Creativ entered the Leonardo da Vinci II Programme as a promoter, *ideas developer* for CLM and was solely responsible for its fulfilment.

To achieve the desired results Creativ collaborated with 12 partners (6 Italian and 6 European) who participated in the Project in different tasks and activities according to their competence and specific capabilities.

As main promoter Creativ took on the following roles:

- *general* coordination of the partnership from a cultural and financial point of view;
- development and editing of the *new training method*, via the work of different *researchers* (it actually conducted a series of consultations and then validation with groups of Italian primary school teachers);
- monitoring the *validations* carried out in Spain, England, Germany and Romania;
- organisation of *dissemination* either *in itinere [travelling]*, via meetings with various sorts of subjects, the use of a website specifically designed for the Project, or finally, via meetings, conferences and editorial presentations.

Creativ's team for the CLM:

- Giulio Carpi
- Lara Montanari
- Enrica Iotti
- Andrea Farioli
- Ivano Zoppi
- Monica Bolondi
- Antonella Tosi
- Annarita Bergianti.

### CREATIV'S PARTNER IN THE CLM PROJECT

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Creative Learning Method's map of Europe

The 12 partners with whom Creativ achieved the CLM were chosen according to specific criteria. The participation of a significant *number of bodies: universities and training and research centres* for the setting up of the project phase and for the development and final formalisation of the CLM; *bodies in the teaching world* to understand the needs of the recipient group, for an active involvement of the

same subjects in the implementation phase and to therefore guarantee a decisive impact on the whole public education system; *or* also adapting the CLM in contexts with particular socio-cultural deficits and counselling on the topic of promoting the rights of the child; *Publishing houses*, which have as their company *mission* cultural promotion, capable of reaching the recipient group in an effective and efficient manner; *regional bodies* which, with their consolidated experience in European projects, would co-ordinate and manage the Project.

## Europe

### ***Centro de Enseñanza Superior en Humanidades y Ciencias de la Educación “Don Bosco” Madrid (Spain)***



The Enseñanza Superior en Humanidades y Ciencias de la Educación “Don Bosco” (CES Don Bosco) centre is a private training establishment conceived in Madrid in 1953; on 27 June 1974, by ministerial order it was changed to a University school and in 2000 it became officially the “Don Bosco” teacher training university, associated to the Complutense University of Madrid. The CES Don Bosco has always been involved in the promotion of research activities in order to improve the availability of *teacher training*, becoming an authoritative world educational reference point not only for national and European teachers, but also for those outside Europe, thanks to collaboration with UNESCO and the Salesian University Institutions (IUS).

In the Leonardo Project it played a fundamental role right from the *collection and analysis* of the training needs for teachers inside the EU, passing on to the processing and evaluation of the set Project, and an important and useful job involving numerous Spanish teachers via consultation and validation meetings. CES Don Bosco’s commitment to the project continued until the development and revision of the Project which allowed the final publication of the CLM and the organisation of a national meeting for the official presentation of the results collected.

Inside the body, amongst all those who have contributed, the representatives and coordinators of the activities have in particular been:



- M<sup>a</sup> Pilar Andrés Vela
- Maravillas Izcue Ancin
- M<sup>a</sup> Josefa Zaballos Crespo
- Josè Antonio Fernandez Bravo.

### ***Landratsamt Enzkreis province (Germany)***

The province of Enzkreis is situated in the south of Germany, in the region of Baden-Württemberg, between the two big towns of Karlsruhe and Stoccarda. It has a surface area of 574 Km<sup>2</sup> and about 190,000 inhabitants, divided into 28 districts.



The province of Enzkreis is twinned with Reggio Emilia and in this province there lies the district of Illingen which is twinned with Castelnuovo nei Monti, Neulingen with Rubiera and finally the district of Eisingen is twinned with San Polo d'Enza, the home town of Creativ: all this supports tourist and also cultural exchanges, which are very important in the development of the Leonardo Project.

The province of Enzkreis, thanks to the established collaboration between the public bodies and its experience in European projects has been involved in the Leonardo Project in the collection of teacher training needs and in the circulation of results, organising dissemination activities and a national conference in their own districts.

It also completed a series of consultation and validation routes for CLM with a group of German teachers and a meeting with other possible users of the method.

Within the establishment, amongst all those who have participated, the main representatives and coordinators of the activities were:

- Jurgen Horstmann
- Daniela Ruedenauer.

### ***Muintearas (Ireland)***

Muintearas is a body which is carrying out a social promotion cultural project. The centres are in Tír an Fhia, Leitir Móir, Co. Galway (Ireland), but they are also involved in activities in all the areas using Gaelic (Gaeltachtaí) and others besides. The aim of the Muintearas project



can be described in many different ways but each of them is *orientated towards people*: achieving equal opportunities in terms of education and work for people who live in Gaelic speaking areas, offering opportunities in development and training for men and women, improving the quality of life for those who find themselves living in disadvantaged situations, enabling the full participation of parents in the education of their own children, giving them incentives to use the Gaelic language in these areas and every aspect of community life, on the basis of law and justice; increasing the awareness and the credibility of the agencies which operate on behalf of the Gaelic speaking areas and generally supporting every community which lives in the Gaelic speaking area to reach their own potential whether it be financially socially or culturally.

Within the Leonardo Project, the body has worked towards the collection of training needs for teachers and in the circulation of results by organising dissemination activities and a national conference in their own districts.

It also supplied valid support to the Cultural team during the meeting in Dublin.

Within the body, amongst all those who have participated, the main representatives and coordinators of the activities were:

- Seán Ó Coistealbha
- Andreas Vogel.

***Paulinas Editora***  
***Lisbon (Portugal)***



The Istituto Pia Società Figlie di San Paolo was founded in 1915 in Alba (Cuneo) by Don Giacomo Alberione to spread the Gospel and promote human values via communication strategies. The daughters of St Paul can be found in 50 nations; in Portugal since 1950, carrying out editorial activities via Paulinas Editora which has its main office in Lisbon, with the production of books, minimedia, audiovisual material. The Istituto can be found in the country with 7 main points of sale: Lisbon, Porto, Faro, Funchal, Setubal, Portalegre, Prior Velho.

With the CLM, Paulinas Editora had the task of making people aware of the Project via meetings with teachers to check that the products corresponded with their requirements and also circulated the results of



the Project via the organisation of meetings and seminars in their own sales points. In addition during the circulation phase, Paulinas Editora translated and printed the text relating to CLM into Portuguese, in order to guarantee the method was correctly explained in the country, circulating the material through two editorial presentations.

Within the establishment, amongst all those who have participated, the main representatives and coordinators of the activities were:

- Sr. Eliete Duarte
- Sr. Delfina Repetto
- Sr. Mariana Pereira
- Sr. Fernanda Sousa
- Sr. Francesca Carminati
- Isabel Páscoa
- Paula Delgado.

### ***Pauline Books & Media London (UK)***



The daughters of St Paul have been working in Great Britain since 1955, carrying out editorial activities by producing books, minimedia and audiovisual material.

They have a presence in England with a production centre in Langley and 4 sales points: London, Liverpool, Glasgow and Newcastle.

In the Leonardo Project, Pauline Books & Media had an important role in the development phase of the CLM, via the organisation of consultation and validation meetings with English teachers, when the products were completed, by translating and publishing texts relating to CLM, the cd-rom linked to it, the report containing the research on the training needs of teachers, and dissemination activities, and by organising some editorial presentations.

Amongst all those who have participated within Pauline Books, the main representatives and coordinators of the activities were:

- Sr. Mary O'Connel
- Sr. Angela Grant
- Sr. Gregoria Mignoli
- Alfredo Cenini
- Anna Colli
- Research Group of the Hexham & Newcastle Diocese.

### ***Generatie Tanara Foundation***



The Generatie Tanara Association is a non-governmental organisation, without political or religious ties and is non-profit making.

The aim of the Association is to promote and implement the rights of the child, in accordance with the United Nations Convention, and to make the general public aware of these rights. It contributes to the social reintegration of children who have no material or moral support or who come from a disadvantaged background (orphans, abandoned children, children who have been mistreated ...). Therefore primarily they defend the interests of children and carry out work to support families and ensure children have a normal life and an education.

Generatie Tanara collaborates with local or foreign organisations which have the same objectives; it is involved in social groups and public institutions which operate in the same context.

With regard to the CLM, it had the task of participating in the collection of training needs of teachers, organising consultation and validation meetings to check the applicability of the Project in their educational context, it also was involved in circulating the results by organising a final seminar.

It also translated the *basic text* of the CLM into Romanian.

Within the establishment, amongst all those who have participated, the main representatives and coordinators of the activities were:

- Mariana Peterselm
- Alfonso Silvano Urbai.

### **Italy**

#### ***Università Cattolica del Sacro Cuore (sede di Piacenza)***



The Università Cattolica del Sacro Cuore was founded in 1921. It has 5 centres (Milan, Brescia, Piacenza-Cremona, Rome, Campobasso), 14 Faculties, 51 three year degree courses, 45 specialist degree courses, a four year degree course, about 90 masters, 53 specialised schools, 5 High Schools. The training provision is particularly geared

towards continuing education, thereby adding to approximately 42,000 students tens of thousands of people who use the extra curricular and post-graduate facilities.

There are over 1,400 permanent teachers, with more than 5,300 other staff - technicians, administrative staff and assistants. Research is carried out in 16 departments, 64 institutes and 93 research centres. There are various collaborative ventures with numerous foreign universities.

Within the Leonardo Project the University has collected information on the training needs of teachers, contributed to the setting up and evaluation of the CLM main project, been involved in the development and editing of the CLM and taken part in the circulation of the results by organising a national conference.

Within the establishment, amongst all those who have participated, the main representatives and coordinators of the activities were:

- Lucio Guasti
- Pierpaolo Triani
- Angelo Manfredini
- Silvia Libè
- Daniele Bruzzone
- Matteo Corradini
- Stefania Mazza
- Patrizia Guardincerri.

### ***Province of Reggio Emilia***

The Province di Reggio Emilia acts as an intermediary between the districts in the Province and the Region, takes on roles linked to taking care of any concerns and satisfying the needs of the provincial community of Reggio Emilia, trying to safeguard a balanced model of social, cultural, economic, territorial and environmental development.



Within the context of the training activities in the area, social services and work, the professional training service plans and coordinates all activities dealing with:

- Initial training for the unemployed and disadvantaged;
- new experimental activities linked to the requirements of the New Obligatory Schooling and Training;
- Higher education aimed at young people with diplomas or degrees;
- In-service training for employed persons.

The service also manages directly the funds assigned to the Region for the individual training of employees.

These specific tasks and the presence of the Office for Community Politics and International relationships, which follows projects financed by the European Union, make the Province a valuable partner for carrying out projects like the CLM.

Within the Leonardo Project the Province has in fact supplied consultancy and support services for the administrative management, collaborated in the management of transnational mobility and participated in the circulation of results, giving support to the setting up of the Round Table launch of the Project and organising a final national conference.

The representatives of the Office for Community Politics and International Relations for the CLM Project are:

- Dott.ssa Loriana Paterlini, Director
- Dott.ssa Chiara Manicardi, Responsible for Research and Development.

### ***Istituto Regionale di Ricerca Educativa Emilia Romagna (IRRE ER)***



The IRRE ER is an educational research institute which operates in Emilia Romagna, with a Head Office in Bologna. As a legal entity with administrative autonomy, it is a body which is responsible for the Administration of the Public Education. It gives support to the educational establishments in the region via the following activities:

- planning and implementing research, educational and experimental programmes;
- construction and implementation of training routes for teachers and managers;
- selection of particular training projects;
- collaboration in the processing of proposals for the innovation of teaching systems and discipline methods.

In the Leonardo Project the IRRE ER, already a member of the Cultural team, then operated also in other phases of the work. In particular: it participated in collecting information on the training needs of teachers, supplied specific administrative support and important

technical consultancy for carrying out consultation and validation meetings, it worked together with AIMC and CIDI to involve teachers in the validation, it worked out examples of didactic planning in accordance with the CLM method and contributed to the circulation of results via the publication of various articles in the Institute magazine and the setting up of a final seminar.

Within the establishment, amongst all those who have participated, the main representatives and coordinators of the activities were:

- Lucia Cucciarelli
- M. Cristina Gubellini
- Elisabetta Piva.

### ***Paoline Editoriale Libri***

The daughters of San Paul have a presence throughout the country with 55 points of sale (*Paoline* bookshops) for a personal service, for his/her human, cultural, spiritual, Christian development. They carry out editorial activities via:



- *Paoline* Editoriale Libri for the production of books (Milan and Rome);
- *Paoline* Editoriale Audiovisivi for the production of music (cd, cassette, music sheets) and videos (Rome);
- *Paoline* Minimedia for the production of images, tickets, posters, bookmarks (Rome);
- *Paoline* Magazine for the production of two titles: *Catechisti parrocchiali* and *Via Verità and Vita* (Rome);
- *Paoline* Internet site for a presence on the Internet which proves the global image of the publishing concern (Rome).

They carry out promotional/circulation activities and coordinate the *Paoline* bookshops via:

- *Paoline* DIFFUSIONE (Rome).

The *Paoline* publishing house took part in the Leonardo Project with the task of making people aware of CLM via meetings with teachers to check whether the products corresponded to their needs, it edited the *basic text* regarding the training methodology (in Italian and Spanish),

the *application text* for teachers (in Italian, Spanish and Romanian) supported by a cd-rom and took care of the setting up of a website and disseminated results from the CLM both *during the project* and at the end.

It also contributed to the circulation of results by organising some editorial presentations at its own retail outlets.

### ***Centro di Iniziativa Democratica degli Insegnanti (CIDI)***



An association of teachers of all types of school and all subjects, this Centre aims to promote establishing a teaching profession appropriate to the requirements of the school. To this end it promotes INSET initiatives, didactic research in every discipline; debates and arguments on different themes; various publications, both at regional and national level. The primary objective of the Association is to contribute to achieving a democratic school, which is more culturally equipped and closer to the interests of both girls and boys. The first CIDI was set up in Rome in 1972; after that other Centres sprang up in other towns, both large and small: today there are over 100, coordinated by the national CIDI.

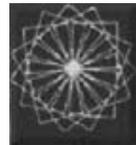
In the Leonardo Project the CIDI participated in the collection of information about the training needs of teachers, it contributed in a significant way to consultation and validation meetings for the CLM, identifying, together with AIMC and IRRE ER, those teachers who were involved in this activity. The CIDI also worked out examples of didactic planning according to the CLM method and collaborated in the circulation of results *during the course* of the project and at the end, also organising a final seminar.

Within the establishment, amongst all those who have participated, the main representatives and coordinators of the activities were:

- Isa Tolomelli
- Ivana Summa.

### ***Associazione Italiana Maestri Cattolici (AIMC)***

The AIMC [Association of Italian Catholic primary school teachers] is a free and democratic professional Association which brings together teachers, managers and school inspectors for the nursery and the first educational cycle. It operates with professional competence and with soli-



parity, in the School and in the country, bearing witness to evangelical values serving the individual. It works towards human, professional, social and religious training of school professionals, enabling professional experiences and exchanges, organizing meetings and work experience posts on educational questions and policy, taking an active part in the democratic management of the education system.

At a national level it has more than 15,000 members and has been operating since 1946 with 304 territorial areas in 95 provinces. It is recognised by the Ministry as an entity qualified to train school personnel, in accordance with the Ministerial Decree of 5 July 2005.

In Emilia Romagna the AIMC is present in 18 territories. It collaborates with the Regional Directorate General for Education in Emilia Romagna within the context of the regional system of In-Service training for school staff.

In the Leonardo Project the AIMC - Emilia Romagna participated in the collection of information relating to the training needs of teachers, contributed in a significant way to consultation and validation meetings for the CLM identifying, together with CIDI and IRRE ER teachers who were involved in such activity. The AIMC also collaborated in the circulation of results *during the course* of the project and at the end, also organising a final seminar.

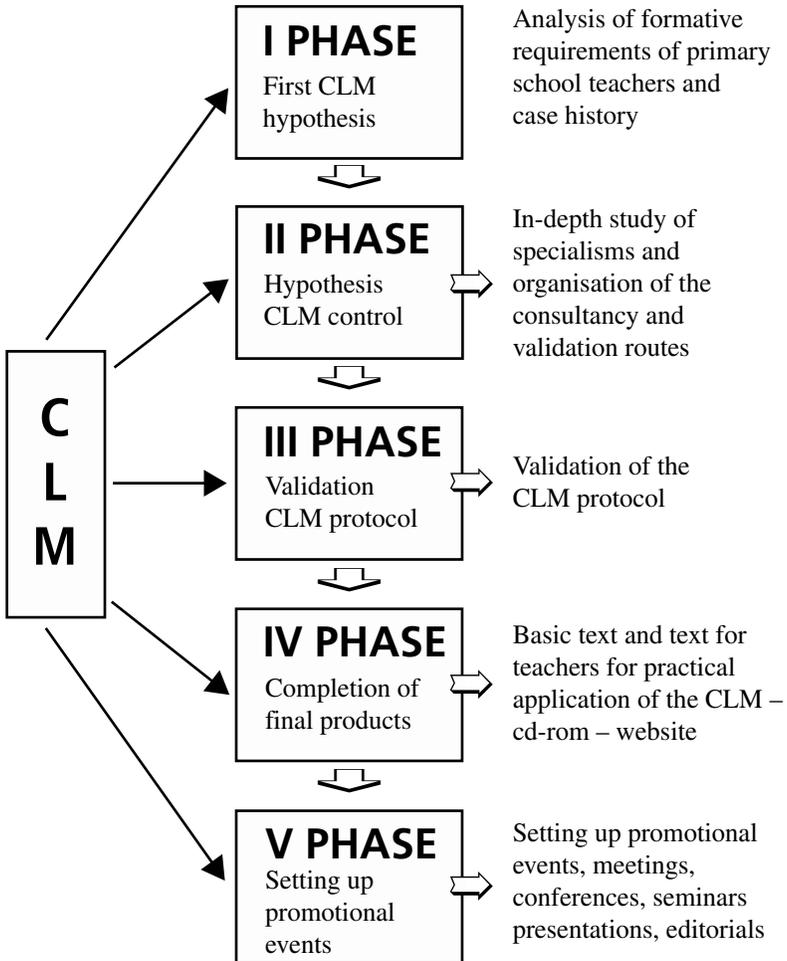
Within the establishment, amongst all those who have participated, the main representatives and coordinators of the activities were:

- Fiorella Magnani
- Antonella Cattani.

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## THE ROUTE OF THE PROJECT

### THE PROJECT PHASES





The project lasted 26 months, from October 2003 to November 2005, and it was split into 5 main phases.

During the *first phase* the Project Cultural Team (made up of representatives from the various partners) defined the first CLM hypothesis, by carrying out a lot of research on learning and teaching methods, and made an analysis of the training needs of primary school teachers which were emerging at a European level, comparing research and literature, interviews with representatives of the educational world of different countries and Ministerial educational programmes in France, England, Ireland, Italy, Romania, Germany and Spain.

During this phase there was also an interesting collection and analysis of cases relating to the creative teaching of mathematics and the rights of the child (the two topics chosen for validation of the CLM), involving numerous teachers from the different countries.

At the beginning of the Project a website was also set up, which has then accompanied the whole development of the project ([www.metodoclm.it](http://www.metodoclm.it)).

The *second phase* was characterised by the development and *editing* of the CLM protocol hypothesis which was to be validated.

The Cultural Team researchers therefore went into specialist areas of the method in more depth and at the same time organised consultation and validation routes with teacher volunteers from the sample groups in Germany, England, Italy, Spain and Romania.

There were then two consultation meetings with each of the sample groups to collect their opinions and tips about the method in order to be able to draft the final protocol hypothesis for the CLM application.

In the course of the *third phase* it was then possible to proceed to a validation of the CLM protocol, via a type of research which involved the teachers of the sample groups in numerous meetings for checking, partial application and further joint planning of the method.

The *fourth phase* was dedicated to the conception, setting up and putting into operation of the final products: a *basic text* on the CLM training methodology continuing the cultural basics of the method itself and the essential elements of creative learning (with translations in Italian, Spanish, Romanian, English and Portuguese) and a *text for teachers* for the practical application of the CLM (translations in Italian, Spanish and English) containing examples of numerous Learning Units.

Other CLM products planned in this phase were a cd-rom to support the text for application of the method, the report containing results of the exploratory research carried out with teachers throughout Europe and the official website of the CLM.

Finally the *fifth and last phase* saw all the partners in the Project working on the planning and implementation of promotional events, with the organisation of meetings, conferences, seminars and editorial presentations, to disseminate the final results of the Project. Just by way of example we can say that carrying out meetings and conferences was mainly entrusted to the Università Cattolica del Sacro Cuore (Italy), to the CES Don Bosco (Spain) to the Province of Reggio Emilia (Italy), to Enzkreis (Germany) and to Muintearas (Ireland).

There were also various editorial presentations by:

- Paoline Editoriale libri (Italy)
- Paulinas Editora (Portugal)
- Pauline Books & Media (England).

Finally, the promoter CREATIV (Italy), CIDI, AIMC, IRRE ER (Italy) and GENERATIE TANARA (Romania) were entrusted with other dissemination meetings to publicize the main ideas of the CLM.

Across the 5 phases an *organisational superstructure* was defined with the role of making decisions and value judgements, control of the Project and management of the partnership, which was implemented via a body called the *Guiding Committee* and was made up of representatives of the different categories of partners and a President (Prof. Luigi Guerra).

Parallel to this the whole project had a *Communication Plan* with the aim of guaranteeing the Project's visibility and favouring the dissemination of information relating to the objectives and progress of the work both inside and outside the partnership.

Finally the whole project, its implementation and its products, was monitored and evaluated by an *External Evaluator* (Prof. Floriana Falcinelli), who guaranteed its methodological and scientific accuracy.

### ***Some of the main events***

Still alive in the memory of the whole working group at the start of this European adventure: the first meeting when the Project

was presented with a Round Table on creativity (*The new training frontiers in Italy and in Europe*) in **Reggio Emilia** in the month of December 2003, it was there that the Project officially started! the first meeting of the Project Cultural Team was held in **Piacenza**, at the end of the month of March 2004 at the Università Cattolica del Sacro Cuore.

In that period the so-called “pillars” of the CLM were presented and shared with the partners and mathematics and the rights of the child were chosen as topics and content for the CLM experiment.

It was from this meeting in Piacenza that the preparation phase began with meetings with the target groups of teachers in the different countries.

In **Madrid** in the month of October 2004 there was a second meeting of the Cultural Team to check the work carried out in previous months and the drafting of the first hypothesis of the method.

**London** was then the venue in October for the meeting of the Project Guiding Committee, the body set up to manage and implement the CLM together with Creativ.

In the meantime there were in various countries *consultation meetings* with groups of teachers to test the validity of the Project.

And now we come to more recent events: from the month of February, with the same groups, *validation meetings* were held in various countries to discuss the key elements of the methodology so as to be able to apply it in class with children. For this reason between March and May 2005, at the IRRE ER in **Bologna**, more than 20 teachers met on various occasions to discuss the feasibility of the Method and its concrete applications. Other appointments of the same sort were made with European teachers in **Madrid, London, Pforzheim, Timisoara, Lisbon and Milan** in order to continue the validation route with groups of primary school teachers.

An important event occurred from 7 to 9 February 2005 in **Dublin**, location for the 3<sup>rd</sup> meeting of the Cultural Team. At the core of the three days was a presentation of some Italian, Spanish, German models of teaching mathematics and a comparison with the pillars of the CLM, as well as an in-depth analysis of the second part of the Project: the rights of the child to live in an environment in a participatory manner.

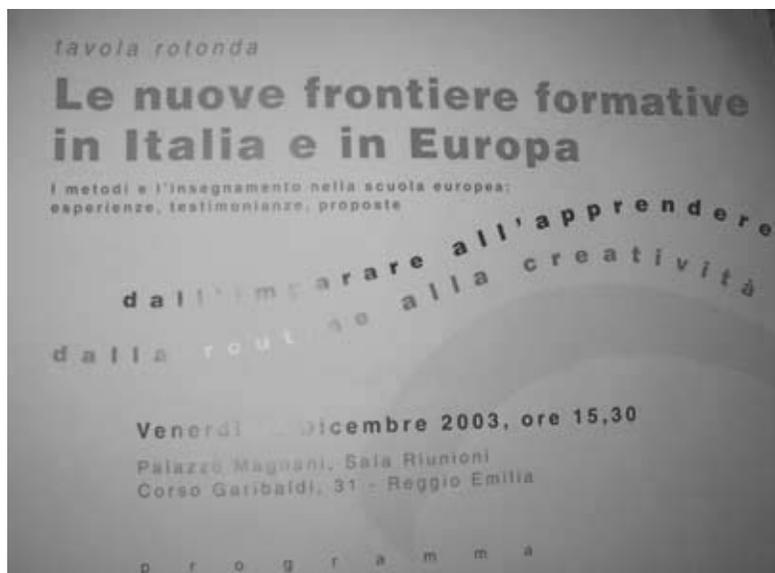
During the work the up-dated presentation of the CLM system and the participation, amongst others of:

- ❑ Prof. Lucio Guasti (Università Cattolica): *Relazione tra creatività e pluralità di modelli; [Relationship between creativity and plurality of models]*
- ❑ Prof. Pierpaolo Triani (Università Cattolica): *La promozione della partecipazione dell'infanzia: riflessioni sull'esperienza della Legge Italiana 285/97; [The promotion of the participation of the child, reflections on the experience of Italian Law 285/97]*
- ❑ Dott.ssa Lucia Cucciarelli (IRRE Emilia Romagna): *Competenze emotive e creative al servizio dell'insegnamento; [Emotive and creative competencies which can be used in teaching]*
- ❑ Dott.ssa Daniela Ruedenauer (Ispettrice, Enzkreis - Germany): *Nuove esperienze di insegnamento della matematica; [New experiences of teaching mathematics]*
- ❑ Dott. Andrea Farioli and dott. Alfredo Cenini: *Epistemologia e matematica; [Epistemology and mathematics]*
- ❑ Dott. Giulio Carpi and dott.ssa Lara Montanari: *La creatività e il metodo CLM. [Creativity and the CLM method]*

Another great cultural event was without doubt the *In-Service Training Seminar* at the Università Cattolica del Sacro Cuore di **Piacenza**, on 17 May, on the theme of *Didactics and creativity*. Of great importance here were the sessions by Prof. Michele De Beni, Prof. Luigi Pizzamiglio and Prof.ssa Alda Daparma.

In **Bologna** on 16-17-18 June last year, there was the last important meeting of the Cultural Team to illustrate deliberations on the method which had emerged from validations and which were useful for carrying out the two final tests. At this meeting Professor **Josè Antonio Fernandez Bravo** of the Centro de Ensenanza Superior in Madrid also took part and, during a public meeting, illustrated the criteria for a creative way of teaching mathematics.

In the following pages part of the research work carried out during the Project is presented, while for the didactic and operational aspects you need to refer to the *application text* related to the same Project.



Piacenza, 31 March 2004: 1st meeting of the Cultural team.



Madrid, October 2004: 2nd meeting of the Cultural team.



London, October 2004: meeting of the Guiding Committee



Dublin, March 2005: 3rd meeting of the Cultural team.



Bologna, June 2005: Prof. Bravo's speech.



Pforzheim (Germany): consultation meeting.



Lisbon (Portogallo): consultation meeting.



Newcastle (England): consultation meeting.



Madrid (Spain): validation meeting.



Timisoara (Romania): consultation meeting.



Speech by prof. Lucio Guasti in Madrid.



Bologna (Italy): some of the teachers who have taken part

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## ACKNOWLEDGEMENT OF THE TRAINING NEEDS OF PRIMARY SCHOOL TEACHERS IN A EUROPEAN CONTEXT

### PREAMBLE

In the launch phase of the CLM Project, it was considered opportune to set in motion a “first acknowledgement” of teachers’ training needs, via the collaboration of the different partners. It was not meant to be an all-encompassing survey and it certainly was not an exhaustive one. Instead it was thought better to carry out an initial investigation to find out from the legal documents and guidance programmes of the different nations involved in the Project, from the field of research, from cultural reflection, from the daily experience of teaching, what were the needs, particularly from a methodological point of view, which were considered particularly important in order to increase the quality of teaching. An investigation which did not result in a whole picture, but just some guidance as to where the work should be done.

This “acknowledgement of need” was carried out by investigating three sources with the aim of cross-matching information coming from different sources. *A first source* was made up of an analysis of the educational programmes of different European countries. An attempt was made to discover the profile of the teacher from these documents and consequently what might be the required and desired competencies, even implicitly, from the different national legislations.

*A second source* was made up of an examination of the results of some surveys carried out in the past few years and of some cultural analyses carried out by scholars and professionals in the field of education. The examination carried out was confined to surveys and cultural analyses in an Italian context; the elements which emerged, however, show a high degree of overlap with needs identified in the first source.

*A third source* was represented by the survey of some opinions coming from the educational world. By means of a questionnaire drawn up with 14 items, 10 closed questions, 4 open questions – defined in the development and administration phase as a “semi structured interview” – some teachers and managers, belonging to the edu-

cational spheres of the partners involved in the Project, were asked to express their position with regard to the current training requirements of teachers, content and teaching methods. In addition, given the specific object of this Project, it has been useful to set two questions regarding creativity in teaching and learning.

44 people replied to the questionnaire: 30 in Italian; 10 in Spanish; 4 in German. Therefore in this case too the prevalent source was Italian. Equally, the data which emerged enabled deliberations which could turn out to be useful in the development of guidance which can be shared in other contexts.

#### **LEGAL INFORMATION ABOUT THE EUROPEAN COUNTRIES INVOLVED IN THE PROJECT**

*Research into the Ministerial programmes in: France, England, Ireland, Italy, Romania, Germany, Spain*

(completed by A. Cenini)

The legislation which governs the educational establishments in the different countries involved in the current Project<sup>1</sup> is not involved directly and systematically with the training needs of the teachers. Such documentation, which mainly defines contents, objectives, aims and methodological guidance of the school and the single subjects being taught, is however an essential piece of comparison to decide on the professional profile which best suits educational training. It is therefore possible to proceed to deduce information from these documents, to define what are training needs for the teacher in a school nowadays.

Whilst confirming differences between the organisations of the different European countries our objective is to identify requirements and guidance, which, except for the national exceptions of the individual educational establishments<sup>2</sup>, can be recognised as common and capable of being shared. To avoid prolonging the discussion, we would like

<sup>1</sup> An indispensable reference regarding educational structure in all the European countries can be found at this site: [www.eurydice.org/Eurybase/frame-set\\_eurybase.html](http://www.eurydice.org/Eurybase/frame-set_eurybase.html).

<sup>2</sup> For a more in-depth study, please see: IMBERCIADORI F., ANDREINI G., ERMINI S., *Il curriculum di studio nelle scuole dell'Unione Europea*, De Agostini, Novara 2000.

to propose a series of points which can be defined as teachers' training needs in the light of legislation which governs educational establishments in the different countries involved in the research.

*Learning to reflect on your own actions in order to become completely responsible.* As a direct consequence of teacher autonomy they have to continually choose and help their pupils to choose.

*Learning to develop a methodological flexibility.* The freedom which a teacher enjoys never justifies a possible dearth of methodological resources but corresponds to a need to master a greater number of different methodologies, adapting them to the recipients and varying them on the basis of the changeable requirements of the class and the task.

*Specialising in the management of group dynamics within the class.* The reference to the importance of the group as a place of learning is constantly reaffirmed in documents we have examined. The teacher is required to know how to "read" the group, to form groups which are suitable and flexible, to use the internal dynamics of the group as a positive learning resource.

*Favouring the pupils' desire to be centre of attention.* Teachers are constantly asked to be able to develop the individual potential of their pupils, to be able to devise routes which are suitable for everyone and personalised, to alter and enrich their own strategies on the basis of requirements and diversity.

*Working in a team on the same project.* While confirming the freedom of teaching, there still exist many calls to multi-disciplinary if not pre-disciplinary activities. The collective nature of some teaching is required as well as the sharing of the same basic educational project.

*Developing your own pedagogical insight.* The constant calls relating to the importance of evaluation, the necessity to motivate your own actions, to create intrinsic motivation in pupils.

*Developing your own creativity.* The freedom of teaching demands constant training so as to facilitate the move from one bureaucratic-executive sphere to another which is more responsible and creative.



## SOME SURVEYS AND CULTURAL ANALYSES

(by P. Guardincerri)

As already stated in the *Preamble* to this short report, the analysis of some surveys and some cultural reflections have been confined to publications in an Italian context.

The first reference document is in the volume by A. Cavalli (by), *Gli insegnanti nella scuola che cambia. Seconda indagine IARD sulle condizioni di vita e di lavoro nella scuola italiana*, Il Mulino, Bologna 2000. [*Teachers in the school are changing, Second IARD survey on the conditions of life and work in an Italian school*].

As well as this text relating to a national research study, various documents have been discussed, identified by some of the Italian partners involved in the Project. The following have been examined in detail:

- Anòè R., *Scuola di base: dalle immagini alla realtà*, in *Le riforme*; [Basic schooling: from images to reality in *Le Riforme*]
- Brotto F. (a cura di), *Autovalutazione di istituto e leadership a più voci. Un confronto europeo*, International meeting papers, Milan, 20 November 2003; [Self evaluation of institute and leadership by a number of people – A European confrontation.]
- Calcerano L., *Le basi di un sistema di formazione per il personale della scuola*, Guidance magazine *Le rotte di Magellano*, 25 May 2003; [Bases of a training system for school employees]
- Catarsi E. (by), *Bisogni formativi dei docenti e scuola di base, Un'indagine nell'Empolesse Valdelsa*, Centro Studi "Bruno Ciari", Empoli 2003; [Training needs of teachers and basic schooling. A survey in Empolesse Valsesela.]
- Cerini G., *Chi insegnerà nella nuova scuola di base?*, in *La vita scolastica* 5/2000; [Who will teach in the new basic school?]
- Corradini L., Porcarelli A., Sacchi G., Sciolla M.T. (a cura di), *Quale formazione continua per i docenti?*, UCIIM contribution to the national Seminar MPI, Verona, 25-26-27 May 2000, *La scuola and l'uomo*, Giunti, Firenze 2000; [What sort of continuing education for teachers? ... The school and the man]]
- Giuntini C., *Dall'AIMC una volontà di risposta*, in national meeting AIMC *Valore aggiunto: percorsi personalizzanti*, Palermo, 8-9 November 2003. [A desire to respond from the AIMC, ... Value added, personalised routes]

The quick summary that we intend to make in this text with regard to teachers' training needs will follow on from the information shown in the IARD survey, because of the comprehensiveness displayed in that work, without however neglecting the other publications examined. All the interventions seem to converge towards a common idea - that of in-service training for teachers with a suggestion to look specifically at content, organisation and teaching methodology.

*With regard to the content* teacher training must be up to dated from a theoretical point of view: metacognitive reflection on individual and system learning, self-evaluation, constructivism, personal styles of learning, research and disciplinary experimentation, docimology, educational and relational problems, systems theory, and must without doubt respond to the needs of knowledge and an in-depth study of teaching methodology. The IARD research in fact affirms "the pre-occupation of teachers with lack of competence in the techniques of transferring knowledge (teaching abilities) and also a growing need for a general preparation on educational problems". The same importance is also in the Empolese Valdelsa survey, from which much data emerges "regarding the lack of teaching competence, which teachers are capable of resolving", as the author traces back the origin "serious under-valuation of the problems connected with teaching mediation". The publications examined supply precise directives: general and disciplinary teaching, new technologies and interactive and collaborative methodologies, research and methodological and didactic experimentation, research-action and reflective practicals, metacognitive approaches, *caring and sharing* and leadership roles.

*Methodological and educational renewal*, requested, directly and indirectly, by the same teachers, is generally agreed as being a priority in teacher training.

In fact the majority of secondary school teachers (in particular upper secondary) only use traditional lessons and therefore are always bound, more to a presentation of learning based on confrontation and argument, a presentation where you learn from the teacher and in which interactions between equals and knowledge which students have is considered marginal with regard to learning.

In this regard, Renato Anòè has stated that:

Bringing a child into the hall of an elementary school presents a notable variety of organisational models, but the persistence of the



front-on model is very common, played in the model lesson /repetition/testing, even if corrected by a number of educational expedients for the involvement of the pupils. The same thing could be true for the Middle School, for a persistence of centralisation of the content in comparison to didactic models.

Peer learning, which is so well used outside the classroom in a spontaneous manner, is underused in school; it can become for “basic schooling” a characteristic and unitary trait – a resource which is unexplored from the point of view of didactic possibilities, for the assumption of responsibility and participation of pupils when building their knowledge<sup>3</sup>.

The picture that emerges is therefore varied: on the one hand the environment, in its widest sense, and its protagonists, whose ethical and social merit is recalled by the Delors report and the Academic Board, and from this there is a “teaching/learning model which uses cooperation between pupils as a facilitating factor to achieve the objectives and a small group for researching, studying and testing”<sup>4</sup>; on the other hand the teacher, as a fount of knowledge, committed to a “frontal” style of teaching, supplied with various mainly written or verbal items to transfer the knowledge, which he/she adapts, if necessary, to use with various pupils. In the middle, all the possible positions without any continuity.

To sum up the contributions examined have clearly indicated the necessity to have good process of in-service teacher training, suggesting involving in the change either the level of the content or that of the organisation and methodology; it’s these which should favour experimentation in innovative teaching methods, so as to promote modernisation in the teaching-learning processes.

#### **SOME OPINIONS FROM TEACHERS AND MANAGERS**

*The results of the semi-structured interviews given to representatives of the educational world in Germany, Ireland, Italy, Poland, Czech Republic and Romania*

(by P. Triani, with the collaboration of  
A. Farioli, A. Colli, K. Giordani, C. Mistrorigo)

A *third source* of information was the administering of a short questionnaire to 45 teachers and school managers.

<sup>3</sup> R. ANOÈ, *Scuola di base*, p. 9.

<sup>4</sup> *Ibidem*, p. 9.

Some partners involved in the Project were asked to identify some people who might be available to administer a finalised questionnaire to collect opinions related to teaching and the training needs of teachers. There was no intention of getting a statistically valid group, but rather to collect further data to compare with the other sources which were being taken into consideration, to identify the most urgent areas for the work.

The items put to the interviewees were subdivided into 8 categories:

1. general character of the person interviewed;
2. the need to update;
3. opinions with reference to the items to be taught;
4. opinions with reference to the methods;
5. characteristics of an efficient teacher;
6. opinions about the creativity of the teacher;
7. opinions about the creativity of the students;
8. opinions about initial and continuous teacher training<sup>5</sup>.

To sum up briefly the findings we can certainly confirm that there seemed to be a clear prevalence of requests for more training in teaching methods and communicative and relational competence (*point 2*). With regard to content considered *important*, from among those currently present in the programmes, the major number of indicators (18) relate to an area which could be defined as *valuable-relational*. It was decided to put in this category all the indicators relating to the current importance of developing in the pupil the capacity to communicate, to live with others, to be able to have a dialogue, to respect the environment (*point 3*). With regard to methods practised (*point 4*) the questionnaires brought to light a teaching activity made up of two fundamental parts: *the lesson* (21 indicators) and *small group work* (19). The characteristics of the efficient teacher were mainly identified as his/her communicative capacity and ability to manage the group (*point 5*).

From the replies a methodological practice emerges whereby the lesson includes more participatory and collaborative methods. According to the majority of replies the creativity of the teacher (*point 6*) is present when the teaching method is characterised by a variation of communicative activities, equipment and materials, which encourage the active participation of the pupils.

<sup>5</sup> To get a complete view of the questions put to the teachers, mainly based on methodological themes and perception of creativity in teaching, please see the *Enclosure* at the end of the text.



However with regard to the creativity of the students (*point 7*), the open reply gave rise to a wide range of replies, but together it allowed the amplification of reflections which were sufficiently stated. The opinions which emerged had different points which overlapped which can be summed up under three basic factors:

- a) Personal initiative and contribution
- b) Originality/novelty of the result.
- c) The presence of some operations like the transferability of knowledge to other subjects and other contexts, the capacity to express a personal interpretation of reality. Creativity exists when the student “develops a personal interpretation of the knowledge acquired and reality”.

## OPEN CONCLUSIONS

The importance of this acknowledgement, as already underlined, does not allow for conclusions to be explained in detail, but rather to identify certain elements which ask to be interpreted as directions for work. i.e elements to be expanded upon and on which to build further research activities.

It is therefore not possible to affirm with certainty what are the needs of the primary school teachers. It's rather a case of putting in order some points, which, taken in their entirety, make up an image of the current sensitivity and culture with regard to the competence of the teacher.

What seems to lead the way is first of all the request for *more synergy* in the teaching activities among *content, methodological and relational competence*. More attention appears to be being placed on the capacity to communicate, to be with, to have a rapport with the children in an attempt to find a new balance between attention being given to the cultural content and attention being given to the individual and relational dimension. Also on the increase is the demand for knowledge and the ability to manage a class and activate a cooperative methodology. In a certain sense there seem to be traces of a culture which considers increasingly that teaching is also a *caring profession* and that investment is required for training in this area.

Another key point relates to the importance considering teaching in terms of *methodological pluralism*. In every source examined, in different ways, the necessity for the teacher to have a varied meth-

odological “bag” was stressed so that he/she could really be put at the centre of the pupil’s learning process. Here the request was placed to provide incentives principally for active, *cooperative and metacognitive* methodologies.

Another request to point out refers not only to the relationship with the pupils, but also the method of working with colleagues. The different sources agreed in attributing a *strategic role* to the ability to *plan* the teaching activity *as a team*.

Finally several times in the course of this acknowledgment there emerged a request for a good rethink of *teacher training*, particularly with regard to In-Service training. The acknowledgement also revealed the identification of three elements which should concur to improve quality:

- comparing and evaluating the experience;
- the deepening of the theoretical roots in strict contact with the experience;
- the possibility of trying what you are trying to learn.

*Experience, theory, trialling* represent therefore three key words when devising new training for teachers. The crucial point, however, remain the operational models through which this guidance is translated.



## THE PREREQUISITES OF THE PROJECT: METHOD AND CREATIVITY

### HOW CAN EVERYONE LEARN BETTER?

#### CREATIVITY AMONGST METHODS, LEARNING AND TEACHING

The topic is discussed in two contributions by Prof. Lucio Guasti, Lecturer in general didactics and coordinator of the Project's scientific research. The first has been taken from his book "*Apprendimento e insegnamento*" [*Learning and teaching*], Vita e Pensiero, Milan 2002; the second is taken from a speech delivered at the Università Cattolica di Piacenza during the 1<sup>st</sup> meeting of the Cultural Team (March 2004).

#### *Learning and method*

Whilst for traditional communication, for teaching, methodological intervention was relatively important – all you needed was the lesson – but for a teaching style based on learning this method is no longer sufficient, or rather is insufficient. Only in an updated format, which means methodologically modified, could it still have some value.

Learning is a *procedural form* of explaining content, therefore it follows implicit or explicit rules. It not only follows rules, but improves its rules, perfects and develops them.

Dynamism has a great facilitator: the method. Content is a *stimulator*, not a facilitator. The true mediator between the dynamics of learning and content is the method.

Teaching based on content proceeded in quite a linear way: the information contained therein was presented or explained in the best way and it was supposed that such a procedure brought with it the possibility that the mind took in what was presented to it, because that was almost self-evident. A clear proposal corresponded to a clear comprehension. With a lack of comprehension, the responsibility had necessarily to be attributed to the inadequacy of the mental potential of the subject, whose nature was weak with regard to the abstract quality of the content. Before nature even culture stopped. The only possibility of an appropriate reply could be still sought in the incentive of the

will, with the remote hope that this could compensate for the natural inadequacy of the intellect. Linked to the will was the exercise, as a last hope. Increasing the effort of the will corresponded to an increase in exercises. Once these tracks were exhausted there were no others left. *Ad impossibilia nemo tenetur.*

Learning does not believe in the theory of *insufficiency of nature*. Within the theory of learning there is a clear faith in the equal potential of nature. The confirmed insufficiency of men is due to insufficient or little respect of the equal potential of all men.

In every man there exist *fundamental vital energies* which can allow him to reach higher levels of comprehension ... even higher and higher levels. If this does not happen, the cause is sought in the environment and society which are not capable of adequately organising the conditions for learning to take place. Even today we see that in the most economically and socially advanced societies there is a development of education and learning which is higher than others; on the other hand, in societies or environments where there is poverty or social problems this does not happen or, at least, not in such an obvious way.

Next to these two poles, I believe that it is possible to advance a third theory regarding the *rapport* which you can establish between psychological dynamism (i.e. learning), social culture (i.e. content) and method (i.e. procedural form).

Society today has tried the hypothesis related to content and has found that it only partially responds to its own needs; it has started to hypothesise that escape from the old system can be found in the other sphere, that of learning, but it has not identified the methods to give operational consistency to the new guidance.

One could at this point advance the hypothesis that the method could represent the *interface* necessary between the dynamism of learning and the content of formal culture.

The more psychology enters into an awareness of the dynamism of the mind, the more it gives us diverse operative models. The hypothesis that psychology defines a model of mind activity and development that is unique and convincing for all appears more and more distant. In fact if some time ago experimental psychology thought it had found the philosopher's stone of the modus operandi of the mind, someone else rapidly managed to bring back a sense of reality and a measure which was less defined but more accessible - caution.

Despite this, it has to be admitted however that the various sources of investigation have proven that the mind has a formidable energetic potential with characteristics which are recognisable and describable.



Cultural research has not found itself in front of a mind with a *tabula rasa* or a “vague and indistinct potential”, but in the presence of developing dynamism with force that by “processing” it, it becomes structured and leads to development. However there exists a *base* on which you can really operate just as you can say that a dynamism exists which only waits to be stimulated to emerge in an adequate and complete form.

Content, in that it is essentially made up of concepts, does not appear to be the only appropriate element to put the dynamism of the mind into motion. Forms are needed which can have a dialogue with dynamism and can promote progressive organisation. The dynamic parts of the mind are offered a procedural assistance to penetrate inside formal conceptualisation. The meeting between dynamism and procedure can represent the first impact for the development of knowledge.

The concept of *process* becomes a central place in which dynamic methods and concepts meet. You can confirm that dynamism and methods interact in a formal way in the process to achieve understanding of reality or comprehension of the concept.

The relationship between dynamism and method generates movement for the running of the process. If in formal culture the method is generally considered a rational way to reach a goal, here it appears as the first logical interlocutor of dynamism. It is not necessary that the method is already given and completely formalised. Not all the scientists and philosophers agree with pure and structured acceptance of the method as a type of form a priori with regard to the content; however it is difficult to find anyone who claims that the necessary methodological forms do not exist to proceed in knowledge.

You can confirm that methodological forms exist which favour comprehension whether this be first or even at the same time, they favour the process of the creation of dynamism at the base of the knowledge processes. That same knowledge becomes, in this way, a *creation* process, not just data. Therefore you start to perceive knowledge as a “process of objectification”.

The *method* is not only a rational means to a goal or a route which builds its rules during its implementation. It is also, and above all, a form of culture, rather it could be considered as a *dynamic form* of creation of culture.

In conclusion, it is the process which guarantees the unity of the learning made up of dynamism, methods and concepts. It is the place in which the rapport between the potential of the mind, the procedural forms and the consolidated concept of culture develops better.

## ***Learning and teaching***

With regard to the relationship between learning and teaching, there exist nowadays two elements to compose: one is the natural aspect of learning and the nature of man, the other is the constructive nature of culture.

Often cultural tradition comes to blows with human nature: the conflicts have been very bad, both from a pedagogical and a political aspect.

The attempt now is to see if it is possible to find, within the training processes, a common point of convergence, a synthesis between the two aspects.

At the beginning the emphasis was on content and the content was the subjects being studied; after this attention moved onto learning and today in fact methodologies refer to learning.

The crucial question is how to make culture and learning converge in a process which is unifying and which is sufficiently appropriate for everyone. The challenge is therefore significant because it touches on points which have to deal with all people independent of their culture.

The question today is *how* all men can learn: not how the Italians learn or how the Spanish learn or how the English learn. Learning has a natural rule which is sufficiently equal for everyone.

Consolidated culture tends to divide, learning tends to unify. Therefore the attempt to move onto learning is also an attempt to search for unification processes for human development which are called educational processes.

It is necessary to see if it is possible, on the basis of these two elements, to find a reduction in the *quantitative weight* of knowledge, i.e. from the quantity of the content, and an increase in the *qualitative weight* of the mind's dynamism or the dynamism of awareness of human nature.

In this ambitious and difficult design many people have asked themselves the question: is there one *single learning method*? A method which is *sufficiently shared*?

There are without doubt some points in common between the different cultures:

- \* All cultures learn by experience;
- \* All cultures want to know things;
- \* All cultures are able to evaluate, judge things.



During the twentieth century there were attempts made to find common names for things *general method, common method or shared method*.

A particularly significant author in this respect is **Alexander Coirè**, Russian researcher who studied in Germany with Husserl, in Paris with Bergson, in the USA, and has produced very interesting pieces on Cartesio, considered to be an important observer of this method in Europe.

Coirè made two main observations:

- If it's the mind that counts and not the objects, it's ridiculous to classify and divide science according to its objects.
- The signs of science are to be found in man, i.e. the primary origin of all sciences is in the human mind. This means that reason is not empty, it is not a *tabula rasa* which has to receive everything from outside, on the contrary it possesses what is needed to create science.

These statements indicate that a new thought has started which places the genesis of science predominantly inside rather than outside the man.

The *generative* capacity of science therefore currently seems to be very concentrated on the capacity of the mind to deal with objects.

Then this switch of attention also produces some questions with regard to the method: should one speak of a single method or of more methods? Is it possible to save specific methods even in the presence of a single method? and further still: what is the importance of the content and the meaning?

A crucial point to be dealt with is therefore that of understanding if the aim of teaching today is to open the minds of the subjects to learning or is it rather that of increasing the quantity of information, content and knowledge.

A possible route is one which crosses the following elements:

1. experience,
2. comprehension,
3. capacity to evaluate and judge the object.

Then there is the relationship between experience and comprehension, between comprehension and judgement, between experience and judgement. These could therefore be three general indicators of a method, at the base of mathematics, science, language.

Experience and comprehension then need a *comparison*, which poses the following questions: do you have to think about the problem of increasing the comparison? Does comparison increase the level of knowledge? Does it increase the capacity of judgement? Does it enable an increase in the level of comprehension?

This is an interesting argument, from the moment that it tells us that a *single experience* is not sufficient to understand; it is always necessary to compare one's own knowledge and experience with different situations that can allow you to gather additional elements or quality elements of the object under consideration.

One further aspect to consider which one reaches at this point is decision. Today theory about man's education insists a lot on his capacity not only of judgement but also *decision*; it is necessary to learn to judge, but judgement implies a choice and choice implies a decision. One has to add to the decision action and behaviour which are two elements characteristic of every type of experience. There is no experience without behaviour, there is no experience without action.

In this position it is no longer sufficient to have a *good knowledge* to be able to know things, you also have to have a *good action* to be able to know, and therefore to have the capacity of judgement and behaviour.

However experience should bring with it comprehension, and comprehension, through comparison, should produce a new level of comprehension which allows a more appropriate judgement, judgement can provoke decision and decision behaviour.

Can the route identified up to now, experience, comprehension, comparison, judgement, be defined as a learning process?

A process without method is *pure form*; therefore if there is not a method the process represents a progression of a strictly formal nature, and identifying a process without the identification of a method seems more of a rationalist than an existential exercise.

The mind opens on the basis of a process, which is made up objectively of a series of phases and one can suppose this to be a possible general method. The phases are those of experience, comprehension, comparison, judgement, which anticipate methodological specialisations or specific special methods. Within a general method then it is possible to identify *specific methods* and therefore to consider the process not as a method but as a *methodological structure* inside which you can insert specific and particular methods.



Therefore one arrives at the theme of *possible plurality* of methods:

- the method inside the methodological areas;
- the scientific method;
- the naturalistic method which could substitute the scientific method;
- the hermeneutic method;
- the dialectic method;
- the phenomenological method.

Can one claim that these methods should be taken on as a single base? Should school, educational training be solely based on scientific method? Should educational training today be based solely on a terminological method? Or should training be based on a plurality of choices, which depend on the context, the situation and the objectives which enable this choice to function?

To the basic scheme, experience, comprehension, judgement, are therefore added some methodological elements which are the fruit of contemporary culture, i.e. comparison, decision making methodologies, behaviour. Therefore to respect the dynamics of learning, it is necessary to add the *general aspects* of the method with *particular* character aspects.

However one point which unites general and particular and is to be found in all the research is the formulation of the *hypotheses* at the moment in which they are known or operate.

And here we could also ask a question about whether creativity is a form of hypothesis inside cultural processes, if you have to place it at the beginning of a cultural process or only at the end.

It remains certain however that for every type of reflection one needs to formulate hypotheses and therefore, to return to the initial phases of the learning process:

- it's true that it's an experience,
- it's true that the experience produces awareness,
- it's true that then you have to get to the solution of a problem,
- therefore to an evaluation,
- to a judgement,
- to a decision,

but it appears that hidden away within this process, there is formed in the human mind a capacity which is sometimes not aware of the solution to a problem which passes through the initial formulation of a hypothesis, which could be a question, a guided question, an attempt-

ed solution, an attempt to delay the data. The hypothesis is neither strictly linked to natural sciences, nor strictly linked to hermeneutical sciences, it is part of a *component* which deals with the ways in which the subjects relate to daily life but also scientific life.

**EMOTION AND CREATIVITY IN THE PROCESS  
OF TEACHING - LEARNING**

*The contribution is by Prof. ssa Cucciarelli and Prof. ssa Gubellini and was presented by Prof.ssa Cucciarelli at the meeting held in Dublin the 3rd meeting of the Cultural Team (February 2005).*

Let us reflect on what are the qualities of a creative trainer in connection with

- social inclusion
- a more efficient cooperation in transnational workgroups
- a greater efficiency in communication
- avoiding inter-cultural conflicts
- building a behaviour of active citizenship.

Can one talk of emotional competence...? or creative intelligence? with aim of:

- motivating
- improving
- including
- anticipating
- individualising
- identifying
- managing.

Emotive intelligence

<i>is</i>	<i>anticipates</i>	<i>produces</i>
expressive emotional/ moving perceptive instinctive absorbing	awareness and self respect awareness and respect of others readiness to dismantle and reassemble continually	attention meeting comparison joy

Taking inspiration therefore also from the philosophy of Carl Rogers and his pre-suppositions of active listening, person centred learning, tolerance, we can arrive at a definition of the hypothesis of a *creative trainer*, as someone who is capable of:

- improving or creating efficient communicative exchanges;
- developing satisfying inter and intrapersonal relationships;
- managing problematical group situations;
- overcoming personal weaknesses, showing social and creative competency in cognitive-intellectual, moral-ethical, relational, managerial, emotive, motivational dimensions.

Within these reflections we can therefore insert the CLM that, with its make-up and its strategies contributes without a doubt to creating in places of learning a climate imbued with realism, acceptance, empathy, play, increase in value, building a climate which is favourable to creativity, enabling creative training and the development of all the abilities of the individual.

## CREATIVITY AND SURROUNDINGS

Creativity is considered to be a natural gift which, however, in different ways belongs to each individual and whose qualities can always be exercised and developed. We can say that there is also a rather generalised agreement on its importance in today's society. There are many meetings, symposia, publications which recognise its validity and back its development. We are right in the middle of changes which are happening in society, teaching and human relationships where the major risk is represented by the conservation of ideas, concepts and organisational methods and traditional learning. The expectation of innovation is consequently quite a bit higher today than in the past; this accentuates the necessity to expand system creativity, both for the individual and the group.

With regard to the purely didactic aspect we have to say that in a static civilisation it was enough to have acquired, it did not matter how, the knowledge and expertise that would last for a lifetime, but in a civilisation in rapid transformation acquired knowledge and expertise no longer have such importance as the accrual of the capacity to learn and above all the desire to continue to learn. This is why stimulating creativity both of the teacher and of the student becomes *all one* and is part of that virtuous circle that feeds motivation for lifelong training as a style of life.

### ***Main theories and models relating to creativity***

Before this rather homogeneous picture and the general recognition of creativity there are many different interpretations and prospects which keep the field of research clearly open and challenging. When you get past the declarations of a general nature on the value of creativity and you try to probe meanings and origins you always find new questions, unexplored territory and meanings in development.

For this reason too we feel it is useful to propose a digression on creativity which might help at least to see the complexity of the problem. To do this first of all we would like to bear in mind two considerations.

The study of creativity and the interest in it are, however, *rather recent* and like every path to knowledge which deals with deep and complex aspects of human personality (intelligence, free will, liberty etc.) they can take many guises. Creativity therefore looks like a many-sided inexhaustible reality and is always open to new acquisitions coming from different approaches and disciplines.

The study of creativity is not overlooked, but rather becomes a privileged place of *hermeneutic work* where interpretations about its origin and its deep meaning intertwine, diversify and grow consistently.

In this section we have chosen to consider creativity by using a *historical-analytical* perspective which tries to identify theories and ways of thinking, nuclei of meaning and, finally, to propose some of the main *processes* connected with the development of creativity. We do not pretend that such a panorama will be exhaustive but that it might offer a stimulating picture for reflection and a point of reference for those who at a later stage we will try to define as “models”.

#### *The psychoanalytical perspective and legacy*

A hundred years have passed since Freud started his psychoanalytical reading of the psychic processes, and since then it has not been possible to count psychoanalytical schools which have sprung up from splits, separations, heresies, expulsions. Despite such a complex scenario it is at least possible to say that some of the characteristics of that perspective are correct.

The psychoanalytical approach considers the creative capacity as an *unconscious function*, and therefore related to our latent energies, our feelings and affections:

- first experiences of the individual;
- unsatisfied desires;
- strict correlation between genius and creativity, between exceptional experience and the creative moment.

At the centre of the Freudian theory on creativity is the concept of *sublimation*.

The Freudian approach was the first to try a psychological explanation of the roots of creativity, which are considered as an attempt to resolve a conflict generated by instinctive biological urges which have not been released.

Creativity consists of a deviation which is subject to the energies of the libido compared with the original aim. The driving energy coming from the deepest dimensions of the mind is the “secret” of the creative people compared to those who are more on the defensive and closed when confronted with their own unconscious mind. In this sense it would be possible to also read a large part of the existing artistic production as a meeting place between the unconscious of the *creator* who speaks and the unconscious of the *user* who reads, listens or looks at the work.

**Otto Rank** (1884-1939) claims that, unlike the so-called normal individual who tells his unconscious to be quiet, the creative person tries to “make a virtue” of the necessity for individualisation which consists in generating their own world in an autonomous way subjecting the outer world to the inner one.

**Melanie Klein** (1882-1960) reads in the creative process an attempt to repair and reconstruct what has been internally destroyed and attacked. Creativity seems to emerge as a vital impulse to recreate what has been destroyed. In it are identified destructive and regenerative forces, states of anxiety and guilt, together with tendencies to recreate and repair.

**Donald W. Winnicott** (1896-1971) identifies creativity as the process par excellence capable of alleviating the sense of guilt deriving from the separating the creator from the fusion.

**Milton H. Erickson** (1901-1980) claims that the “creative I” is the vital element for questioning and explaining internal conflicts and difficulties, capable of transforming difficulties from restrictions into opportunities for personal growth.

### *Humanist psychology*

This is a movement which has tried to remove the creative dimension from association with suffering and pathology while reviving the origin of creative force in the primary processes.

Creativity is the manifestation of man's liberty, bent on affirming his own individuality even against social and cultural conditioning which surrounds him, freeing the creative potential buried under laws and psychological defences. Of particular importance is growth inside an environment which is psychologically healthy (freedom to think, to try, to make mistakes, to take risks).

Creativity goes hand in hand with autonomy and shows the freedom of man therefore it is important for his *self-realisation*. It is not primarily about art but living your life in a human way.

**Carl Rogers** (1902-1987), probably the major exponent of humanistic psychology (together with A. Maslow, R. May, G. Allport, F. Pearls, G. Kelly), maintains that the main spring of creativity is the inherent tendency in man to find self-fulfilment, to achieve his own potential, a tendency found in all organic and human life: the "imperious need to expand, extend oneself, to develop and mature (...), to express and activate all the power of the organism, until this activation grows and enhances the organism or the "self". The creative act is defined as "natural behaviour of an organism".

An environment which is psychologically healthy and stimulating (safety, possibility of experimenting, independence, breadth of experience...) frees the innate creative potential.

For **Abraham Maslow** (1908-1970) creativity is in fact linked to authorisation of the human being, obtainable only with the satisfaction of fundamental needs. In this concept creativity is a potential which needs to be freed to be a better person.

According to **Erich Fromm** (1900-1980) the creative viewpoint is to see the other person, the world, in its real dimension, in its uniqueness, without distortion and to respond to it with our own integrity. With regard to this perspective the stance of **M. Mencarelli** is more than ever current - he claims that creativity is a way of being, of living, of confronting reality, the truest and most authentic way of becoming a person in his/her own uniqueness and originality. It protects man's authenticity, which is dignity, originality, potential. This is possible via three great educational processes: functional autonomy, critical awareness, responsible freedom (cf. Mencarelli M., *Creatività and*



*valori educativi. Saggio di teleologia pedagogica, [Creativity and educational values, Essay on pedagogical teleology] La Scuola, Brescia 1977, pp. 62-88).*

For **D. Goleman** creativity can show itself at any age, but it plants its roots in infancy. For babies life itself is a creative adventure.

At the base of creativity there is a state of discovery, wonder and stupor before the unknown and the capacity to see what is known with new eyes.

But training and acquisition of precise techniques is also needed. Creative people combine discipline with capacity to gamble and throw themselves forward, people who are dynamic and alive, “eternal debutants”.

### *Behaviourism*

Behaviourist psychology explains the psychological processes as a group of associations of stimuli and responses with the support of reinforcements starting with the assumption that human action is governed essentially by external phenomena.

For this reason a close correlation is of course established between instrumental conditioning (massive use of reinforcement) and divergent thought. Creativity will manifest itself in a limited manner in sectors in which behaviours are reinforced.

Determinant factors in creativity are therefore either a person’s past history, as a form of reinforcement, or possible genetic predispositions.

*Associationist Theories.* Associationist psychologists can be identified in that their method places the accent on the most simple and controllable psychic phenomena, from which the most complex are derived by combination and by association.

The creativity theory of **S.A. Mednick**, gives an explanation in terms of particular *associations between stimuli and responses*, characterised by the fact that the elements are correlated in an unusual way.

For Mednick, it’s in the associative capacity of the ideas that the characteristic of creative thought resides. In fact he defines it thus: “the most important task in the creative process is to put together, in a useful way, ideas which are usually a long way from one another”.

According to this view there are three situations which favour the insurgence of creative thought:

- *Serendipity*: is a model in which combinations happen by chance, and the casual presence in an environment of appropriate stimuli to evoke new associations: “so two ideas that do not have links can be put together because the objects which evoke these ideas can by chance find themselves within that environment”
- *Similarity*: is when two elements evoke similarities in their properties and in the stimuli they generate.
- *Mediation*: distant elements are brought closer by one or more intermediate elements: for example you can put together the ideas X and Z, which usually would have nothing in common, via the idea that Y is linked to each of the other two.

*Neo-Associationist Theories.* A recent form of *Associationism* is “*Neo-Associationism*” which considers essential factors of thought, habit, past experience and repetition.

**R.W.Weisberg** claims that it is necessary to think of the creative subject as an individual who, faced with a problem with which he is dealing, tries to retrieve information from his own memory and to imagine possible solutions in the light of some defined criteria that he (or the context in which he is operating) has given himself. In this way the subject is not exposed to the associations but searches actively for them drawing on his own experience.

This is a cognitive perspective according to which creativity therefore is not really different to daily thought, given that it is based on continuity with the past.

One “continuist” interpretation of intellectual creativity is also advanced by **H.E. Gruber**. According to his vision there are no sudden lights but *insights* have their own recognisable microgenesis ascribable to sub-destinations, false departures and returns. Therefore no radical rifts are to be found but amplification of little differences (continuist in this sense).

*Bisociation and integrative thought.* Amongst researchers who have described the phenomenon of creative association one remembers Arthur Koestler (1905-1983). He defined “bisociation” as the operation which reunites two frames of reference, associated contexts or reasoning elements which would normally be considered incompatible; the creative individual therefore is the one who manages to operate contemporarily on the cognitive level and to put such plans into contact between themselves.



### *The Gestalt approach*

For Gestalt psychologists productive thought is characterised by the instantaneousness of the appropriate response called *insight*, intuition. It is distinguishable from reproductive thought which is limited to proceeding by attempts and errors, to the superficial registration of the events which characterise a situation and to a minimum comprehension of the structure of the latter.

The attention paid to *structures* is that which allows productive thought to operate a restructuring or to collect new properties of the elements of the problem which are thought of in this manner and used in new roles or in different perspectives; it therefore implies the recognition of the problematical elements via a deeper penetration of the problem, through the discovery of a general principle which brings to the foreground the essential aspects which were first in the background and eliminates or brings to a second level those on the borders.

For **Max Wertheimer** (1880-1943), for example, thinking consists in collecting the emerging form; the one in a musical score “it’s the melody above the single notes: the perception of form precedes and gives importance to the single beats. When changing key the melody remains”.

Innovative solutions are therefore conceived precisely from the problems identified: “from the problem there emerge vectors which, starting from the area of disturbance, try to change the imbalances which are present. These vectors point the way to proceed to deal with the problem, to plug the gap which has opened and eliminate the tensions found”.

### *Cognitive psychology*

It’s well-known that the behaviourist theories put themselves in contrast to the *cognitive* theories.

According to the latter, the individual ceases to be considered a passive element whose behaviour is moulded by the environment which surrounds it, and becomes an active presence. External events no longer act on him, but it is their perception which constitutes the main source of influence on behaviour.

Creativity is no longer a different system of associated links (according to **Mednick’s** theory, 1962), but a new method of receiving, manipulating the associations and combining the data to research efficient solutions.

The cognitive strand considers creativity as a *function of the self*, as the whole of the operative abilities of man.

This research strand has led to the identification of creativity with the *solution to the problems*, on which base we find the observation that if creativity coincides with determined ability, with ordinary cognitive processes, its expression par excellence would be found in the capacity to resolve problems and, in the final analysis, would coincide with it.

At the basis of the creative activity there would therefore be present some mental capacities, such as fluidity, flexibility, the capacity of synthesis and analysis, depending on the nature of the mental senses (for example from the breadth of the categories, which will be even broader when they include objects which are very different).

The cognitive scholars produced a large number of maps indicating the cognitive abilities and the senses which support the creative activity (*Guilford*, 1950; *D'Alessio and Manetti*, 1976; *Pagnin and Vergine*, 1974, 1977; *Rubini*, 1980).

According to *J. Bruner* creativity is the work of re-ordering and transformation of the obvious facts which enable us to proceed further than these towards a new intuition. Creative action has a *productive surprise* that can have different content according to the activities in which the man finds himself involved.

An important role is played by *metacognition*: the act of reflection and recognition of your own cognitive processes.

Creativity develops and grows through different observant and self-observant moments. Such moments can be sought in a purposeful and aware manner, but it is possible that they can also occur through reflection and a more superficial and casual self observation. Events which determine, at least with regard to learning about creative processes, the conditions to suppose the possible existence of different levels of metacognition.

### *Constructivism*

The individuals are active participants in the *creation* of their own knowledge. Knowledge is assimilated through assimilation of information in diagrams. In constructivism learning is achieved via exploration, experience and manipulation of objects and materials. This theory puts together the development of creative thought with the necessity for an active participation in the process itself.



**Jean Piaget** (1896-1980) (*theory of the stages of development of the thought functions*) established a direct link between development of creative thought and active learning (where attention is given to the interests, inclinations and characteristics of the child).

According to **Semyonovich Vygotsky** (1896-1934) (*social constructivism*) an appropriate interaction between the child and the group of adults and/or equals favours, enriches and expands creative possibilities. The creative process would develop in several phases: receipt of information, transformation, fragmentation or dissociation, re-amplification and, finally, via an associative phase. The information, thus worked, is linked to “other psychic elements present in the mind of the individual” and “the result of the amplifications and associations carried out by the subject is translated into products which are feasible or communicable to other people”.

In this *circular* process the need to adapt the environment is decisive. In fact imagination derives from this, and imagination is more articulate when individuals are in more complex environments and rich in stimuli; this does not necessitate contrasts between imagination and reality because “the fantasy of the subject draws heavily on elements gathered from the concrete world. The richer the experience of the subject, the more material he can mentally process and the greater the probability that this processing may lead to innovative products”.

#### *Factorial models (cognitive guidance)*

There are methodologies used to investigate creativity in which thought is considered as an articulated unit, modular and divisible into parts called factors and therefore distinct cognitive abilities which are identifiable via the appropriate surveys and statistical analyses.

**J.P. Guilford** (1897-1988) manages to identify a certain number of traits characterising the more creative individuals and divides them into traits associated with the *intellect* and traits associated with *personality*.

Among the intellectual traits Guilford thought that those identifying creative people could be:

- a) the fluidity of ideas;
- b) the flexibility of thought;
- c) the complexity of the conceptual structure;
- d) the capacity to be able to move away from the obvious and the ordinary by refusing traditional interpretations.

With regard to personality Guilford believed for example that the capacity to adapt oneself to different environmental conditions could facilitate creativity.

For Guilford creativity leads to the characteristic of divergent thought or that type of thought in which there is noticeable research and which is disposed to accept a quantity of replies or a mind capable of asking questions.

**E. Paul Torrance** (1916-2003) wrote a series of principles to carry out training in creativity to:

- appreciate the pupils' new proposals, encourage those who formulate them, teaching them to experiment with every idea to check its efficaciousness;
- make subjects aware of the stimuli;
- get used to tolerance of new ideas;
- make sure the subject values their own creative thought;
- encourage and appreciate autonomous learning;
- stimulate the need to think creatively;
- train educators who are filled with a creative spirit.

To these principles must be added the 4 components necessary to the creative process:

- originality                    (*uniqueness*)
- fluidity                      (*quantity*)
- flexibility                  (*change direction*)
- processing                  (*select and process*).

In direct contrast with the idea of creativity as a generalised trait to measure using particular psychometric tests (different from intelligence tests) is **H. Gardner's** idea. According to the well-known author of *Teoria delle intelligenze multiple [Theory of multiple intelligence]*, creativity is more the fruit of the environment than hereditary.

The author identifies a series of specific intellectual abilities for different fields and make creativity depend on the meeting between a prevalent type of individual intelligence and the cultural and social conditions which allow it to manifest itself.

His theory revolves around fundamental organisational themes: the relationships between childhood and adulthood in the creative personality; the relationship between the creative individual and the others; the relationship between creative individuals in a given field.

He confirms that “the creative individual is a person who mainly resolves problems in a single field of activity, devises products or questions in a way which initially is considered original but ends up being accepted in a particular cultural environment”. Therefore a social and cultural recognition is required so that one can talk of creativity achieved. Creativity is expressed in a discipline, in a sector in relation to the dominance of one or more intelligences. Therefore those who are creative have reached a high grade of competency in one sector and are able to devise new solutions.

**T. Amabile** hypothesises that some personality traits can be characteristic of especially creative subjects, in particular we would highlight:

- independent judgement
- self confidence
- attraction to complexity
- aesthetic guidance
- capacity to take risks.

According to current studies by **R.J. Sternberg and T.I. Lubart** creativity consists fundamentally in the “capacity to produce something new (original, unexpected) and appropriate (useful, adaptable to the previously fixed task)”.

Creativity requires the convergence of six distinct but interrelated resources, i.e.:

1. intellectual capacity
2. knowledge
3. style of thought
4. personality
5. motivation
6. environment.

In particular, *intellectual capacity* is made up of three main characteristics: *capacity of synthesis*; *analytical capacity*; *practical-contextual capacity*.

If used separately, these three factors do not produce a creative process, but lead to different results; the *capacity of synthesis*, alone, produces new ideas which are not subjected to any control, whether with regard to their validity, or their application; the *analytical capacity* only produces critical and not creative thought; finally, the *practical-contextual capacity* can be like a simple transmission of ideas which do not however have any innovative characteristic or applicative quality.

### *Models of expanding the creative process*

Some scholars of creativity have tried to understand the creative process by breaking it up into distinct phases or in some way reconstructing it by its most decisive moments.

Hereinafter some of the most well-known summaries.

**Graham Wallas** (1858-1932) outlines a theory of phases which is then taken up by many others with few changes; he believed that the creative process can be divided into four stages: preparation, incubation, illumination and verification.

The *preparation* phase is like an initial moment, during which the individual collects data, thinks in a free manner, searches for and listens to suggestions, allows the mind to wander. The second phase, the *incubation* stage is deducible by the fact that between the preparation stage and the illumination stage a certain period of time elapses, that can be a few minutes or months or years. Therefore after preparation the material collected is not simply introjected, but proceeds into a processing stage, of whose methods the creative person has no or hardly any awareness: the inventor incubates his ideas in seeds like the hen incubates her eggs or like the organism incubates its microbes before a fever develops.

The fever's lightning strike is the third phase, that of *illumination*. Where confusion and obscurity reigned just before, now solutions and ideas appear and flow forth with clarity: it can be a sudden intuition, or a clear vision, or a sensation, something between an impression and a solution, at other times however it's the result of a prolonged effort. *Verification* closes this sequence; it is necessary so that the solution can overcome the critical evaluation of the innovator, or even of the public. It would be interesting to understand better what characterises these phases, but unfortunately the available texts all reveal a certain superficiality in describing such a process.

Other authors who have divided the creative process in more stages are, for example, **Joseph Rossman** who examines the creative process of 710 inventors by means of a questionnaire. He increased Wallas' four stages to seven steps:

1. Observation of a need or difficulty
2. Analysis of the need
3. Survey of all available information
4. Formulation of all objective solutions



5. Critical analysis of these solutions for their advantages and disadvantages
6. Birth of the new idea - the invention
7. Experimentation to test the most promising solution; the selection and perfection of the final embodiment by some or all of the previous steps

**Alex Osborn** (1888-1997) like J. Rossman, divided the creative process into seven stages, but used a different terminology:

1. Guidance: Pointing at the problem.
2. Preparation: Gathering pertinent data.
3. Analysis: Breaking down the relevant material.
4. Hypothesis: Piling up alternatives by way of ideas.
5. Incubation: “resting”, to invite illumination.
6. Synthesis: Putting the pieces together.
7. Verification: Judging the resultant ideas.

More recent authors extend Wallas’ four stages, or go into more depth and subdivide them into autonomous moments. In this number is **Hubert Jaoui**, for whom creation is like a process in four stages:

1. *The birth of an intention.* It can be focalised, until it becomes a precise or vague indeterminate project, like an itch, a need without specific aims.

2. *The preparation.* This occurs in two ways. In an active way: like researching documents, consultation of tests, compilation of forms, preparation of sketches and drafts; in a passive way: the creator cleared his filters and allows data of all sorts to enter until he feels the impregnation is complete, that he cannot absorb anything else.

3. *The incubation.* In this stage the inventor incubates and processes his ideas; the duration of this stage is variable, often long. Here the aspect of processing the unconscious is very interesting, where the assembly mechanisms operate unbeknown to the inventor.

4. *The illumination.* “It’s the most moving”, it’s the passage from obscurity to the sudden apparition of the solution “with an impressive clarity that can blind him”. Jaoui distinguishes an endogenous type of illumination from one which is provoked by an external event “like Newton’s apple or Denis Papin’s pressure cooker. In any case illumination is favoured by prepared minds”.

**E. De Bono** suggests we reflect on “thinking” but even more on “how to think” i.e. how to address thought.

In general, when we are faced with a problem, we always keep the same pessimistic emotional, detached attitude.

When we put on a hat we change our attitude. You put on a hat to go out or to carry out a job (policeman).

Wearing a hat when you go to a meeting or face a problem means assuming a certain attitude, which changes according to the hat one wears.

The method *Six thinking hats* is used in business during meetings and is of great use, because the method is easy to learn and apply, as well as being efficient by being much more constructive; this thanks to the participation of all members in the argument, to a substitution of the dialectical method with a mapping method and, in addition, enabling the adoption of more ways of thinking.

Using one thought at a time, more attention can be placed on reasoning on things, reflecting, thinking, evaluating the pros and cons before deciding, so as to arrive at a mature choice.

The aim of the thinking hat is intentional thought, allowing the thinker to choose and direct his own thought, separating emotions from logic, creativity from information etc. therefore wearing one of the 6 hats, he defines a certain type of thought.

Each hat is characterised by a colour and specific characteristics belong to the colour - attitudes necessary for wearing one hat as opposed to another. By choosing a hat you are asked to play a part.

The hats are:

WHITE HAT: neutral and objective. It is concerned with objective facts and data.

RED HAT : emotional. It is concerned with emotions.

BLACK HAT: gloomy, negative. Why it's not possible to do a particular thing.

YELLOW HAT: positive, optimistic, full of hope. It is concerned with positive thinking.

GREEN HAT: creative. It indicates new ideas.

BLUE HAT: organisational. Controls and organises the thinking process and the use of the other hats.

With the six hat method, we can speak clearly without offending anyone; in fact it is essential that a request (for example to put on a different hat), does not constitute a threat to the self or the personality of another person.

**Mauro Scardovelli** (Association Aleph, Neuro Linguistic Humanistic Programming).

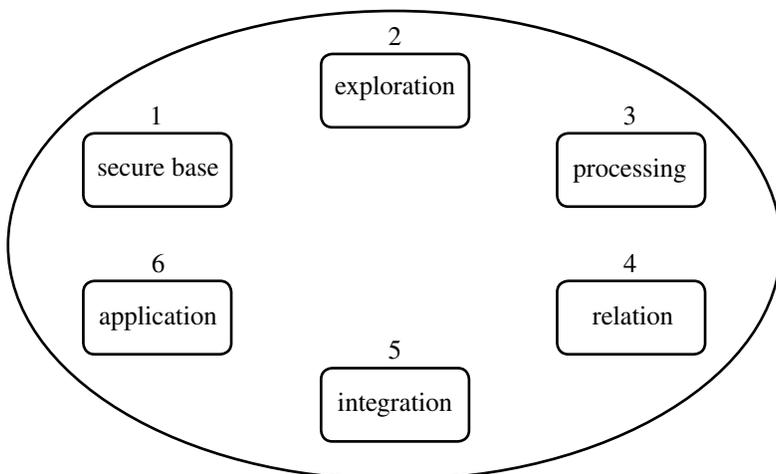
BEERIA: a NLP [Neuro linguistic programming] humanistic model for the development of creativity.

Creativity is not considered as something special, a privilege of the particularly gifted, or something which happens rarely, in lucky moments. Creativity is the very essence of the process of life. You do not realise yourself if this process gets blocked, gets interrupted, gets weaker and if the journey towards self-realisation gets interrupted, at that moment the doors are opened to the destructive forces.

BEERIA can be considered as the generative nucleus of all humanist NLP. It sprang from the fertile inter-breeding of different discoveries, experiences, analyses and comparisons with other models. Among these models followers of Jung's theories have had a decisive weight, in the updated American version (**Kroeger, Thuensen**, 1988), and those working in Psychosynthesis (**Assagioli**, 1991), both of which can be translated in terms of NLP, i.e. in terms of meta-programmes and systems of beliefs and values (**James, Woodsmall**, 1988).

BEERIA applies in every field of human activity, because it is vital and creative, and is particularly to be found in the fields of learning, teaching, training and research, as well as the field of therapy, personal development or self growth.

BEERIA is an analytical diagram of the human creative process in six phases:



1. *Secure Base*. The relationship between the secure base (security), exploration and learning does not just relate to the behaviour of children, but is a constant which can be found also in adult behaviour (cf. Attachment Theory, **Bowlby**, 1979).

2. *Exploration*. Exploration means active research, therefore production of new experience capable of arousing curiosity and interest: exploration to trigger the creative process and vital energy.

3. *Processing*. Processing as assimilation and active research of links and construction or discovery of a new Gestalt.

4. *Relation*. By “relation” is meant a widening of the frame: the object of awareness, once defined and elaborated as Gestalt, is compared, for similarities and differences, with previous knowledge and Gestalt belonging to contexts which are also very different.

5. *Integration*. The formation of a higher order of Gestalt corresponds to the fifth phase of BEERIA: integration or *insight*. It is the expression of the uniting function, therefore of love. In this case, love for knowledge.

(In every type of problem, every time in which the *processing* phase is no longer able to produce useful results, the *relation* and *insight* phases become essential to produce the necessary enrichment of the map of the world).

6. *Application*. It means a return to the practical level of the *insight* achieved.

### ***Hypothesis for the construction of a reading model of creativity***

The hypothesis identifies a sort *compass*, a *pair of glasses* which can help to construct other models of creativity, analysing the theoretical positions and the definitions expressed by different authors and movements.

We have therefore classified the authors and theories analysed on the basis of the primary and fundamental criteria which stipulates how much creativity is *established* with respect to the vision of learning and knowledge, and of its theory in general.

In addition the following elements were taken into consideration by the subsequent definition of models:



- The importance which is attributed to *critical thinking* and *creative thinking* and to their possible synergy or lack of connection;
- the definition of creativity as a characteristic potentially present in a few individuals, in many or not all;
- the possibility of developing creativity;
- the presence of creativity as an innate determinate element mainly from the environment;
- the influence of environmental factors for the development of creativity;
- the role of creativity as a determining element for the self-realisation of the person;
- the vision of creativity as a product or a process.

### *Reading models of creativity*

#### Hyperrationalist and devaluing model

Metaphor: *Creativity is like a sort of illness. Sooner or later it's possible to get better.*

#### Main characteristics of the model:

- Creativity is essentially considered disorder.
- It tends to be associated with a lack of discipline and little productivity.
- Partial value is accepted if surrounded by particular environments and actions.
- It's mainly seen as an element that can put the order created into crisis.
- Creativity is essentially present in the artistic sphere (painting, poetry etc.).
- A good part is considered as an expression of neurotic aspects of the personality.
- It's mainly generated by the meeting and clash of contradictory thrusts and impulses.
- Creativity is mainly understood as an element which detracts from a valid analysis route and rational solution of the problems.

#### *Reference authors:*

- Freud
- Erickson
- Winnicot.

### Reductionist and minimalist model

Metaphor: *Creativity is like a **mother-in-law**. Her presence is advised in small doses. If well-managed she does not do a lot of damage, she can actually be useful*

#### Main characteristic of the model:

- Creativity loses the connotation “dangerousness” if it is introduced in well defined spaces and is contained in sectors where behaviours are reinforced.
- The solution to problems happens mostly via indiscriminate and unusual procedures and the combinations found are quite accidental.
- The instinctive aspect is the prevalent characteristic of this vision of creativity.
- Creativity is reduced to an immediate expression, reactive in character, whether the reaction takes place in relation to a biological and historical legacy or whether it is aimed at the social system.
- Creativity is a simple association of stimuli and responses (with a reinforcing role).
- It is therefore principally conditioned by outside elements.
- The variety of some associated mechanisms can facilitate the resolution of problematical situations.
- Creativity is a simple amplification of processes and behaviours that are usually present.

#### Reference authors:

- Mednik
- Weisberg
- Gruberg.

### Functional and solutionist model

Metaphor: *Creativity is like a **light switch**.*

*When required it is activated to switch on the lamps in order to have light. But if there is good visibility in the room or possibly if we leave the house, the switch is switched off and not used.*

#### Main characteristic of the model:

- Creativity is accepted and recognised in a sufficiently constituent manner.
- It assumes greater weight with respect to previous models.



- It is substantially contained in the functions of the right hemisphere.
- It relates to the existence of distinct and marked confines between rational and creative thinking.
- It resorts to creative thinking when it is necessary to find innovative solutions that rational thought does not produce.
- Creativity is essentially brought back to *problem solving*, therefore to producing new solutions to old problems.
- Creativity is principally identified with divergent thinking, the ability to find more than one solution to the same problem, by imagining, discovering, inventing. It is the opposite to convergent thought which consists in giving only one answer.
- Creativity is understood as the ability to generate new ideas to express something new and personal with regard to the usual schemes of reference.
- The development of individual creativity remains mainly considered as more productive than collective.

*Reference authors:*

- De Bono
- Guilford.

Advanced and multiphase model

Metaphor: *Creativity is like planning, living and remembering a holiday.*

*The time spent doing this is considerable and is over and above the length of the holiday itself. It therefore becomes quite a long experience, however appreciated, beautiful, pleasant, looked forward to for months and months, thought about and planned for a long time and then enjoyed right till the end.*

*But sooner or later you have to come back from holiday, you have to return to your normal life ... even if we would like to stay their all our lives.*

Main characteristics of the model:

- Creativity is seen as a constituent element, of great use, on which to base a good part of learning and knowledge, even if not for all. There still remain some levels or activities for which a right of belonging is not fully recognised.
- Creativity is recognised as of value but still in terms of a product.

- A greater *problem solving* illustration is developed by identifying different phases: *problem finding*, *problem setting*, *problem analysis*, *problem making* and *problem taking*.
- The first advantages of alternating the rational phase with the divergent phase are recognised.
- Creativity is understood as the ability to generate new ideas, concepts, and innovative products.
- Attention is concentrated on processes which lead to creativity.
- Originality is viewed very positively, almost as an absolute value.
- Creativity is not an exceptional ability reserved to the gifted but a normal process to express the self.

*Reference authors:*

- Osborne
- Jaoui
- Wallas
- Torrance
- Sternberg.

Integral Synergy Model

Metaphor: *Creativity is like the **human body**.*

*It is unique even if made up of different parts; each part is important to be able to move, to display knowledge, to relate to the person, to be in harmony with the self, each one relatively self-sufficient.*

Main characteristics of the model:

- Creativity pervades or can pervade every field of human activity.
- Creativity is seen not only in terms of a product but also as a process.
- It refers to a brain activity which is integrated between the functions of the left and right hemisphere. The emotions and the instincts are no longer set against rationality and cognitive ability.
- Creativity therefore resides in the concerted and global use of the two hemispheres. The divergence-convergence rapport is emphasised.
- Creativity is also seen from the axiological side (area of the values).
- Creativity is considered a condition in order to be able to live one's life fully and completely, to be able to achieve self-realisation.



- Creativity is a way of being, of living, of confronting reality, the true and authentic way of realising the person's potential in his/her uniqueness and originality.
- Creative activity is the full ability of thinking, receiving and combining previous experiences in a new way to give original and personal meaning to the current ones.
- Many occasions for creative expression can be identified: to achieve useful ideas or products, to resolve problems or process action plans but also with a recreational aim for oneself or to make a substantial change to the system (for this it's not possible to trim down to *problem solving*. The notion of creativity has an intrinsic transversal value; it has to do with transformative, innovative and associative actions).
- Individual creativity alternates with collective creativity.

*Reference authors:*

- Mencarelli
- Maslow
- Creativ.

*Common elements found in the various models*

- Learning actively, in a heuristic way.
- Creativity is an ability that anyone can encourage with an appropriate exercise.
- There is not a single type of creativity.
- An attitude of amazement, perplexity and wonder like that of a child who is about to be born.
- Every individual can be creative in one field and not in another.
- Creativity exists in as a judgement of social and cultural nature which defines it as such.
- A substantial freedom of expression.
- A substantial practical efficiency is identified when using the various phases.
  1. *Preparation*: the phase in which the problem is delved into by researching all the useful information.
  2. *Frustration*: when you work towards a solution to the problem and you don't find it.
  3. *Incubation*: is a more passive phase, in which the information sought is assimilated; it happens outside our knowledge awareness, in the unconscious mind. Often the unconscious

mind communicates with us via *intuition*, drawing on a vast stock of which we are not even aware.

4. *Illumination*: when we don't think about anything in particular, we are more open to intuition. We allow our mind free reign to fantasise. Suddenly the solution emerges as if from nowhere.
5. *Action*: illumination turns into realty, action.



## THE CREATIVE LEARNING METHOD

### PRINCIPLES OF THE THEORY OF CLM TRAINING

Training tends to supply information while it should prepare active life (to respond to more authentic needs).

By training we mean actions which favour:

1. a positive and true rapport with life;
2. the explosion of cognitive, relational, practical potential ... of people;
3. the production of significant changes in people's attitudes;
4. the production of substantial changes on a cognitive level (best organisation of knowledge);
5. individual growth and maturation of the subject;
6. learning how to learn better;
7. the development of the person as self appropriation;
8. the development of social attitudes;
9. the increase of the significance of meanings, starting point for training, and the request for conscious dynamism.

### *Training axioms*

1. You can teach theory in practice.
2. We learn better when we think it's significant and important.
3. The peaks of learning and entertainment cannot but coincide.
4. Only if training "talks" to everyone will it be heard.
5. It's theory which has to be adapted to practice (starting with people).
6. No content and discipline as they are boring ... it's only the concrete composition of the learning experience that can make them like this.

### *Methodological guidance*

Strategies should be put in place which:

1. are active, absorbing, experiential;
2. favour intentional learning;

3. structure in a most effective way theoretical and practical moments;
4. use all the energy of the whole group for individual learning;
5. value people's assumption of responsibility and protagonism;
6. which enable relations and dynamic interpersonal meanings and dialogues;
7. which reactivate latent energies and different intelligence;
8. which systemize in practice interdisciplinary knowledge pedagogical, psychological, didactic;
9. which tend to not divide intellectual and emotive culture.

To conclude and sum up therefore:

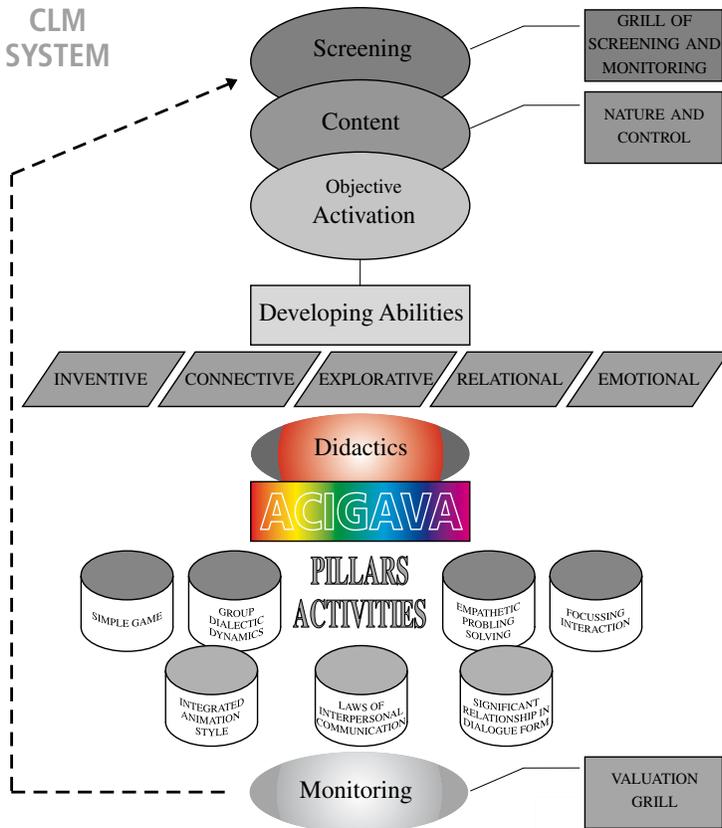
- CLM is a *systemic* approach, in which all elements depend on each other, there is a constant exchange between the parties, reticular systems, weaving.
- CLM refers to the *plurality of the mind* nowadays a paradigm of our culture, which includes:
  - psychological theories are based on the idea of plurality (Maslow, Guilford, Sternberg, Fodor, Lipman, Gardner).
  - Consider that the theory of "Multiple intelligence" of Howard Gardner appears to have the most followers with current teaching.
  - Implementing a didactic plurality which takes account of various sorts of communicative and personal cognitive styles of learning and teaching.

## THE CLM SYSTEM

As can be seen from the diagram on the next page, CLM presupposes that each trainer, to prepare and manage a training session, starts from an initial *screening* to evaluate the situation at the start and has an in-depth knowledge of the *contents to teach with*, then to propose as an *aim* that of the *activation* of the learner.

This objective is accessible via the ACIGAVA procedure, the specific teaching route, inside of which are 4 *pillars* relating to the learning experience and 3 *pillars* relating to the trainer.

Finally it concludes with a *monitoring* which enables the checking of the work of the trainer and the *activation* of the learners and returning, in a circular route, to the beginning of the route to be able to readapt the educational actions.



Hereinafter we show in a synthetic manner these single and important phases:

### *Screening*

The trainer assesses the initial situation of the learners to then allow himself to plan the concrete activities, analysing the level of activation of each individual learner and of the group; the survey of the individual and group abilities used until that moment; the communicative and relational attitudes of the teacher; the second level variables (space, furnishings, material, time, age, number, as well as the psychological variables which condition learning).

### ***Mastery of content and knowledge of their nature***

The trainer primarily reflects on the epistemology of the subject and on the possible didactic effect of its specific structure and examines closely characteristics, origin, development and specific problems. The teaching guidance therefore remains influenced by possible epistemological differences traceable after having analysed the nature of the matter.

#### ***Objective - Activation***

*Activation* is the learning-teaching model developing the abilities of each person and of creative thought; on the basis of initial evaluation of the level of activation of the group and the subject, the teacher defines the objectives to be achieved and the route to take.

The activation route, which crosses 5 progressive phases, is characterised by the *implementation and explosion* of fluid thought, availability for change, mental flexibility, elaborative thought, empathy, imagination and reactivity to the stimuli.

And from the parallel *extinction* of stereotypical thought, steadiness and resistance, fear of failure, prejudices and impediments.

Therefore activation is achieved via the full development of specific abilities of creativity, classified by us as inventive, connective, explorative, emotional and relational.

#### ***Didactics***

This is the specific phase of teaching the content, which is carried out via the implementation of ACIGAVA by means of the application of the 7 *pillars* of the CLM (see the following pages). The passages which characterise it illustrate the different moments which must be prepared and managed by the trainer and therefore experienced directly by the learner.

#### ***Monitoring***

This is the checking of the state of individual and group activation, of individual and group abilities used, of communicative and relational attitudes of the trainer and of second level variables, returning then to the beginning of the route, evaluating how to proceed in the training action and returning to plan new activities.



From the whole system we will now describe in a more detailed manner the aspects relating to ACIGAVA and the 7 *pillars* through which it is implemented.

## ACIGAVA

**L**

### LAUNCH

An initial important meeting is carried out with content which is new or only partially known  
*(which could be considered of little importance by the learner)*

### RED

**At the beginning of the course emotions and attitudes of curiosity, amazement and pleasure are developed**

### YELLOW

**An experience is identified which starts to stimulate an appropriate sense of adventure and which creates surprise and positive expectations**

### ORANGE

**One approaches the content without particular ties, and without allowing oneself to be conditioned by possible fixed opinions and prejudices**

### WHITE

**One makes a first comparison with personal experience**

**U**

**UNDERSTANDING**  
*intuitively*

One makes an initial comprehension of the content, which links to the learner's experience at the start of the learning process  
*(Gradually comprehensions become more and more refined and of a higher level)*

**RED**

The knowledge which one has assimilated into one's own cultural code is added to the current mental map

**YELLOW**

One starts to grasp the value and sense of what one is learning

**ORANGE**

On the path of discovery one starts now to also accumulate data and information via comparisons with dissonant elements

**WHITE**

Questions start to be formulated or to spring up in a specific way and doubts and perplexities are expressed

**BLUE**

The importance of the group becomes clear and explicit for the experience of individual learning (group as a resource)

**VIOLET**

The objectives of the learning route are shared  
The criteria of evaluation, which will be used at the end of the course, are introduced



**H**

***HYPOTHESISING/CREATING IDEAS***

hypotheses are formulated to proceed on the learning route and/or solutions are found to contingent problems  
Strategies of lateral thought are used which favour  
The breaking of fixed beliefs, prejudices and routine thinking

**RED**

hypotheses are formulated to devise procedures/routes of learning/activity to structure and link the information collected, interpret it, and continue on the learning route

**YELLOW**

Hypotheses are formulated to resolve contingent problems

**J**

***JUDGING/DECIDING***

The hypotheses formulated in the previous phase are analysed and judged, deciding then which to take on board in the implementation phase

**RED**

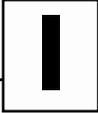
One analyses ideas from the previous phase

**YELLOW**

One judges the ideas and the proposals which have been made

**ORANGE**

One selects the ideas/solutions considered most efficient, defining with clarity the characteristics of the tasks and actually redefining the objectives previously identified



## ***IMPLEMENTATION***

**The procedures/activities/solutions chosen as “coherent” experiences in the first 3 phases are implemented individually and as a group**

### **RED**

**Procedures/activities/solutions chosen are implemented continuing to develop:**

- Amazement, curiosity, pleasure, surprise
- Sense of adventure
- Continue comparisons
- Discovery, value and sense of experience
- Comprehension

**WITH THE AIM THAT THE LEARNER ACQUIRES MORE AND MORE of the content and the abilities**



**E**

*EVALUATING*

The learning route is evaluated comparing outcome with objectives and taking into consideration whether it is opportune to return to one of the previous phases

**RED**

**The effect of what has been implemented in the teaching sphere is evaluated**

**YELLOW**

**The effect of what has been implemented in the social and relational sphere is evaluated**

**ORANGE**

**An evaluation is made as to whether the content has been assimilated**

**WHITE**

**A check is made to see whether the content can be transferred to other sphere/disciplines**

**BLUE**

**An evaluation is made as to at what point ACIGAVA may possibly return**

**A**

*APPROPRIATION*

Having arrived at full comprehension of the content, which is developed in an active manner by the learner and extended to other spheres and situations; one can implement abilities which are also transferred to other contexts and disciplines. Appropriation is to be considered both for specific and privileged content/concepts and for others of larger dimension and quality and has its own gradual and partial progression

**RED**

**The appropriation of contents and competences are reinforced**

**YELLOW**

**A final feedback is collected and the process concluded**

### *The 4 CLM pillars relating to the learner*

The CLM then envisages that the learning experiences proposed in the various ACIGAVA phases are structured via the selection and implementation of 4 *pillars* (activities of various types) relating to the learner and with continual implementation on the part of the trainer of behaviours and attitudes envisaged by the 3 *pillars* and related to these.

Hereinafter we are therefore going to summarise the main characteristics of the 7 CLM *pillars*.

#### *1. Group dialectic dynamics*

The dialectical dynamics of the group enable the developing and experiencing of learning experiences centred on a revision and selective implementation of *Learning Together*, (one of the main trends of cooperative learning) and on the focused use of techniques of dialectic and creative group dynamics.

We really believe that it is necessary to get over the “foolishness” that makes us sit for years in groups on school benches, for catechism and other teaching activities, without this community experience really being exploited for better efficiency in respect of individual learning. Often the group experience is just “put up with” or considered incidental; sometimes just putting people together in a room is considered a group experience.

*The revision and selective implementation of Learning Together* – on the basis of some of our specific reflections, indications and additions with regard to *Learning Together*, which we read again in the light of creativity and for a greater creative and flexible use of the group dynamics, it would be necessary:

- a) to place more attention and care on recreational dynamics developing originality, variety, efficiency and “involvement”;
- b) to introduce specific techniques and dynamics for the development of group creativity;
- c) to increase the flexibility of some sequences in order to avoid an excessively “mechanical” application of the approach.

Using the *group dynamics* enables first of all the development of a sense of belonging, accelerating the processes of socialisation and reciprocal knowledge, creating shared rules, routing individuals’ ener-



gies towards common objectives; this condition makes communication within the group itself more fluid and clear, it reduces embarrassment and vindications, enables individuals to use more resources in learning (being less worried about the management of interpersonal relationships) and therefore impacts indirectly on the level of learning.

Of course all of this presupposes on the part of the trainer a good knowledge of the theory relating to group dynamics and an efficient management of the same, skilfully reading the roles and the functions that are established.

Then let us talk of the *dialectical* group dynamics, in as far as it is necessary to direct the group appealing to two completely different dimensions:

- *cooperative dynamics*, which are incentives for collaboration, cohesion and sharing objectives;
- *competitive dynamics*, which promote antagonism, defiance, the desire to confirm one's own abilities.

This is because from each of them you can get justifications which push towards *activation* and which, in each case, favour a more complete explosion of all an individual's competences and resources.

A calibrated interaction of these dynamics exalts the creative potential of the individual and the group involved in the dialectic game between "external pressure" and "internal interdependence".

The *nature* of the dialectic dynamics of a group enables the trainer to:

- create an excellent condition for the cognitive and emotional constitution and growth of the group;
- intervene in the efficient reading and modifying of the communicative network, roles and functions;
- specifically favour the learning/acquisition of knowledge and content;
- use structured and formal activities, which enable individual and organised group work routes;
- provide for and measure cognitive and emotional involvement;
- have recourse to the use of specific material.

With regard to *creativity*, the experience of learning, experienced via dialectic group dynamics, aims to implement in individuals the following experiences:

- to experience *problem solving* in a group;
- to receive experience via the technique of development of group creativity;
- to know how to restructure one's own thinking in view of the perspectives presented by the other members of the group;
- to develop the capacity of imagining oneself and immersing oneself in contexts and situations which are different from the current ones.

## 2. Simple game

The *simple game* enables the structuring and bringing into existence of learning experiences which are centred on a *recreational activity* which promotes a favourable context for creativity in that the presence and use of materials and structure of the games enables the development of curiosity, amazement, sense of adventure, imagination.

The simple game therefore offers a game which is *uncomplicated*, unpretentious, essential, based above all on people and dynamics that can be put in motion, without requiring particular instruments, objects, spaces or material to apply them.

To be implemented it requires only an appeal to oneself and the others achieving in this way the criteria of *maximum exploitation* of the resources available in the situation and the *research into simple solutions* to complexity.

The simple game also exploits informal moments both of individuals at play or small groups, and didactic/educational completion does not preclude (rather it requires) that non-structured approach essential to the development of creativity.

The *nature* of the simple game therefore envisages:

- involving particularly emotional elements of the people;
- favouring the use and development of all the senses;
- freeing from the necessity for specific and sophisticated materials;
- creating non-structured situations;
- facilitating the exploration of situations.

Within the sphere of *creative learning* the preprepared *simplicity* wants to support in people the need to relate to and "use" others to develop integrally one's own creative potential. Via this experience of learning the individual is not bound to the functional steadiness of pre-



established material, which can mainly harden thought and courses of action with respect to the ties placed by interpersonal relationships.

Simplicity favours in an extremely significant way the process of imagination and the development of fantasy.

Plato said that “necessity is the mother of invention”.

Leonardo da Vinci maintained that “necessity is the greatest inventor of all”.

In addition creative people love *to play* because often the game favours the following opportunities:

- creating opportunities to act spontaneously and inventively;
- testing oneself, running risks, learning strategies to deal with lack of success;
- bonding with the world;
- increasing physical, intellectual and moral development;
- developing all perceptive ways;
- transferring temporarily into a fantasy world;
- seeing the reality of new points of view;
- producing new ideas;
- being protagonists of the experience being lived.

### 3. *Empathetic problem solving*

This allows the structuring and experiencing of learning centred on activities for the acquisition of competences related to *problem solving* and *empathy*, with the aim of emphasising the expression of different intelligences and abilities via the development of adequate individual strategies of *problem setting* and *problem solving* enriched by the *empathetic approach*, which favour mental flexibility and improve perception, the experience of reality and the capacity to restructure.

*Problem solving* essentially defines an experience which favours the capacity, which every individual should develop in learning, of finding, as we have described above, more efficient solutions and strategies for everyday problems, of exploiting personal resources to be able to confront and resolve them, and of developing attitudes to flexibility and the capacity to adapt to the most desperate situations.

The learner should take the opportunity to make perceptions of himself, the others and the world more flexible and to react via functional behaviour and attitudes, so as to find new and efficient solutions for new problems.

The relevance then of *empathy* underlines the necessity of a complex and complete approach to reality and to people who surround the learner.

To do this, it is necessary that the learner himself is able to and knows how to empathise, in accordance with the definition that we gave of it previously, with the people and the reality which surrounds him.

The combination of empathy with creativity and *problem solving* is based, on the one hand, on the presupposition that learning experiences, experienced mainly as a group and centred on *problem solving*, increase in the individual the empathetic capacity to decentralise, to collect other people's points of view and to empathise with their positions and emotions; on the other hand, the development of empathetic capacity increases in the individual the capacity to face up to difficulties and problems in a more creative and efficient way.

The learning experiences relating to the current pillar on the one hand therefore are facilitated by empathy, on the other they facilitate empathy itself.

This particular experience of learning aims to guide the learners into assuming that *problem solving*, as we have described it prior to this, as a normal strategy capable of knowledge and learning, fed and made more efficient by the continuous effort of putting oneself in another's shoes, of respecting the originality and the Cultural code, of always seeing situations from new and original points of view, of knowing how to adapt situations.

A constant concern for and tendency to adopt an empathetic attitude increases the probability that an individual might achieve successful *problem solving* processes, implementers of second grade changes, in as far as he increases his ability to know how to see situations from numerous different points of view, by collecting other people's perspectives, by imagining future scenarios, as well as by setting problems and then finding unexpected and unforeseen solutions.

Empathetic *problem solving* is therefore closely linked with creativity in that it:

- favours the original expression of the learner's characteristics;
- favours the assumption of new roles which are different from their own;
- agrees to see reality from more points of view;



- develops a flexible attitude with regard to the resolution of problems;
- agrees to avoid or anticipate its own resistance and that of the others;
- facilitates the acceptance of the language of others;
- develops active listening;
- supports a flexible and interdisciplinary use of one's own intelligence;
- integrates strategies of convergent and divergent thought.

#### 4. *Focussing interaction*

*Focussing interaction* enables structuring and making experiences of learning centred on activities which create a strong link between contents, disciplines and reality and the learner's experience of learning, favouring therefore the development of one's own creativity.

Interaction refers to the process by which the learner interacts with reality and effectively learns something new, when this is equated to something well-known, i.e. with the cognitive schemes, structures and categories of the learner; everything which is dissonant with regard to this provokes in fact immediate resistance to the change which impedes learning and which must therefore be predicted and by-passed.

As Guasti also points out, the significance of a content is given by the rapport it establishes with the experiential world of the person involved. The content acquires significance if it makes sense to the learner, i.e. if it enters into his conscience as a vital element, otherwise it remains a factor outside life.

It's the normal way in which each of us learn.

It is therefore necessary to distinguish the efficient immediate exemplification of the contents and/or discipline by an action which emphasises the immediate and future needs of the learner, to make them appreciate immediately the value of the contents themselves.

In this sense the interaction process can also not be an everyday occurrence. This "comparison", this "bridge" with "reality" can be set back, even if sooner or later it has to be crossed... a person can for example also listen to very abstract concepts expressed perhaps with a very pregnant language, which is immediately barely referable to his own experience.

But if he understands consciously that all this "has something to do" with his own life, he will be more motivated to learn even more.

The focussing interaction is not limited to this operation (linking new contents to learn with experience, the cultural code and the experience of the person) but it completes the action, exemplifying continuously in current and immediate everyday reality the *use* that it can have, for that determined person, the learning of the content for which he is applying himself; *the urgency* which that “thing” represents for him or her; the *centrality* with regard to his life.

From this point of view the learning experience proposed must start with the learners and return there.

You can understand better then the suggestion of proposing activities with *experiential* cut, not just in the sense that the learners make “things” (are active and not so much “passive” listeners), but above all in the sense that the actions proposed speak, communicate with their experience (i.e. are significant for their cultural code).

An experience of learning experienced via focussing integration then favours directly *the development* of creativity, since it stimulates the learner to:

- extend the vision of his own existence, and link his life with new facts and people;
- increase the possibility of intervention;
- collect new concepts;
- increase the planning capacity of the person and the spectrum of his own ability;
- take out of the hall the competences developed there;
- draw in a significant way on the knowledge and competence emerging from real life to use them in other contexts.

### ***The 3 CLM pillars referring to the trainer***

#### ***1. The integrated animation style***

Characterised by a style of teaching which enlivens the group learning experience, the first *pillar* links the potential of animation with the educational-relational-didactic requirements of the learners.

This is an integrated approach with regard to the requirements of individuals (and the group) in learning and to the educational / didactic aims to be reached.



By *style of animation* is meant the capacity to know how to involve the participants effectively in the training in an interactive and “nice” way. To sum up:

- the style of the animation manages to render special actions apparently insignificant or repetitive.
- The style of the animation emphasises the protagonism of the group participants who therefore feel actively involved in the process.
- The style of the animation is based above all on “how” the experiences are proposed and looks after all the details and situations so that these take place in a manner which is particularly fascinating, emotional, all-involving, “active” in the widest sense of the word.
- The *integrated* style of animation is not limited to the efficiency of the methods used or the skill of the trainer in knowing how to involve people (e.g. animator of a tourist village) but it takes great care that the action proposed (with respect to the style cited prior to this) be *integrated* by a strong didactic and educational consideration (also have a significant value in the learning and the personal growth).

## 2. *Respect and efficient management of the laws of interpersonal communication*

The second *pillar* is characterised by the attention to the sphere of human ethology and behavioural science with particular reference to:

- pragmatics of human communication;
- body language;
- the language of change (persuasive communication, encouragement, self effectiveness);
- the recognition of errors, distortions and communicative paradoxes;
- in depth study of personality theories.

The environment should be characterised by the presence of a *positive social climate*. It is the relational climate which creates in the child a feeling of security to face up to reality in personal and critical terms. Rogers emphasised how important it was to have original and participatory learning from the child, to achieve conditions (suspension of judgement, attitude of congruence and empathy on the part

of the teacher) to construct that climate of psychological liberty and security that allows the child to express himself and achieve his own idea of bringing things up to date, his own creativity.

A positive perception by the pupil is important for Rogers and to have positive expectations of him and leave space for his initiative and his capacity for self-learning, looking perhaps beyond the immediate results and using mistakes not as a negative element to be condemned but as a useful element to have information on how much has been poorly or wrongly understood.

The teacher should therefore establish a real communicative rapport with the pupil based on dialogue and reciprocal respect and listen to him verbally and non verbally.

The care of informal and unstructured moments will ensure an opportunity for teacher-pupil communication during the learning process.

### *3. The facilitation of significant relationships in dialogue form*

This third *pillar* is implemented via a specific attention to the *pedagogy of interpersonal relationships* and with a particular reference to:

- empathy
- communicative circularity
- management of feedback
- symmetry and complementarity
- participation and distancing
- active listening
- unconditional acceptance.

The trainer (teacher, catechist, educator...) must know how to use and carry out in an appropriate manner *the rules of interpersonal communication*, playing with the people involved and respecting his own role of “route tracer”, like a film director of training, i.e. above all someone who prepares, organises, stimulates and verifies the action.

Saying a *film director* does not however confirm his detachment from the action itself in as far as his personality and his actions determine in every case the climate of the group and the learning motivation.

In addition, as well as the *dialogue element* linked mainly to the management of the relationship, there is also the aspect of the *significance* of the trainer, who has to acquire credit and value with the



learners, so that the indications and messages sent by him acquire important significance for those who listen to them and act accordingly.

Therefore with the aim of acquiring significance and credibility the trainer should dedicate time and attention to *caring for* the interpersonal relationship with all participants, the *sharing* of different elements of the training course (expectations, doubts, contents, socialisation, conclusions, conflicts etc.) and the *exploitation* of the experience itself via his own actions.

The *importance* of the trainer and the training course then directly increases the motivation of the learner, an indispensable element, as Mencarelli confirms, for any discussion about educability which “lacks foundations if it does not place its roots in human motivation, or in everything which guides and pressurises man in his decisions, his initiatives, or the following of his more or less immediate aims, or the very definition of the ideals of life because this means understanding him better and therefore educating him more efficiently”.

*Enclosure*

SEMI-STRUCTURED INTERVIEW GRID

1. Age  
Indicate year of birth
2. Sex
  - a. Male
  - b. Female
3. Qualifications
  - c. High School Diploma
  - d. University or post secondary school diploma
  - e. Degree
4. Profession  
.....
5. Body, institute or service  
.....
6. Nation in which you exercise the profession  
.....
7. Main tasks carried out in school (list)  
.....
8. Based on your experience, relating to primary school teachers' training needs, do you think that teachers need to have up-to-date training in:
  - a. methodologies
  - b. content
  - c. other (please specify)
9. With regard to the current content of the educational programmes in your country:
  - Which do you think are particularly important today?  
.....



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