

ROSKILDE SUMMER SCHOOL 2005

Cristina Stringher

MONTESSORI MATERIALS IN ADULT EDUCATION SETTINGS: A HYPOTHESIS OF USE IN ITALIAN CTPs¹.

"Ignorance is even more lethal for mankind than malnutrition and poverty."

Maria Montessori².

Introduction

Speaking about basic education for adult population in Italy is not irrelevant. Recent OECD-ALL³ data show how the majority of Italian citizens (53%) attain a level of education lower than high school. This, in comparative terms, represents by far the worst result among countries participating in the survey. Census Istat data in 2001 confirm such pessimistic situation (Tab. 1).

Tab. 1 – Educational attainment levels of the Italian population.

No title	Primary school	Lower secondary	High school	> High school
6.8%	26.4%	31.9%	28.5%	8.8%

Source: Istat 2001 Census, 2005.

In OECD-ALL, Italy is also the worst performing country in terms of literacy, numeracy and problem solving skills⁴.

How can this data foresee the knowledge society pictured in the Lisbon strategy for the European Union of the year 2010? What transformative forces need to be mobilized in order to produce change?

The objective of this article is twofold: to provide a descriptive overview of Italian adult skills profiles entailing educational needs, and to motivate the use of Montessori method and materials in adult education settings, namely in Italian CTPs. The link between these two parts is represented by my research experience in Campania Region, where adult education needs have been surveyed through the Predil Project⁵. My hypothesis is that in areas and population segments where the educational attainment level and the literacy level are very poor, functional alphabetization programs may benefit from guidelines contained in the Montessori method of education. I will corroborate my ideas in a practice-theory-practice cycle with the aid of desk research, data from the Predil Project, and the use of Maria Montessori's theoretical propositions on education. The third part of my essay will include preliminary thoughts for a potential research extension on field.

Lifelong learning and adult education in particular are indeed urgent measures to be fostered in highly complex societies: in approximately two decades the world shifted from analogical to digital information, from static to fluid society. This change, following the historical diffusion of mass schooling since the XIX century connected to mass industrialization, implies that illiteracy is no longer the priority in western educational systems. The Italian situation is somewhat

¹ CPT = Centri Territoriali Permanenti, have been introduced in Italy during scholastic year 1997-1998 and are based within schools offering courses to adults of three main typologies: "second chance school" (possibility to obtain a lower secondary or upper secondary school degree); courses of functional alphabetization; courses of Italian for foreigners aimed at social and linguistic integration of migrants. (Source: Ministry of Education, Quaderni 100/2003). The normative reference is *Ordinanza Ministeriale* no. 455/97.

² Montessori M., *Formazione dell'uomo*, Milano, Garzanti, 1949,1993, p. 109. The translation is mine.

³ OECD-ALL Italian data published on www.invalsi.it - Latest access: May 25th, 2005.

⁴ These are three major domains tested with the international OECD surveys. The following definitions are taken from OECD-ALL web site. *Prose literacy*: the knowledge and skills needed to understand and use information from texts such as editorials, news stories, poems, and fiction. *Document Literacy*: the knowledge and skills needed to locate and use information contained in various formats such as tables, forms, graphs, and diagrams. *Numeracy*: the knowledge and skills required to effectively manage the mathematical demands of diverse situations. *Problem Solving*: the ability to solve problems by clarifying the nature of the problem and developing and applying appropriate solution strategies.

⁵ This is the name of the project on adult education needs I have been engaged in. I will detail this research and its outcomes in Par. 2.

different: while at the beginning of the XX century in the European countries lower secondary schooling was spreading, in Italy idealism and fascism decided on the differentiation of educational paths in a selective function. As a consequence, large population strata were left illiterate and the diffusion of literacy may only be observed in the second part of the past century.

A persistent portion of illiteracy is thus a specific feature of the Italian system, where this phenomenon is now coupled with the unexpected deterioration of adult population literacy typical of all western countries, a trend which is being defined as functional illiteracy⁶.

From a sociological perspective, functional illiteracy may be encompassed within the wider phenomenon of social disadvantage.

Dal Lago and Molinari (2001) maintained what was already been established in Italy during the '90s, i.e. the concept of "disadvantage" cannot be considered in absolute terms, but should be rather seen in comparative terms: people may be disadvantaged in relation to their actual possibilities to access the educational system, or in relation to their possibility to find a job, or in relation to their geographical background and so on⁷. A broad definition of disadvantage indicates the impossibility or the limited possibility for individuals to access material and immaterial opportunities granted by citizenship rights. This is particularly true for the level of competency requested in modern societies: nowadays it is not sufficient to possess the "Three 'Rs", like in the recent past. The competent individual now needs to be proficient in the use of such competences to process information, to communicate, interact with others and the like.

Istat (Italian Institute of Statistics, 2003) in the category of "social disadvantage" uses indicators such as social inclusion/exclusion, access/not access to opportunities and services, and so on. Officially recognized areas of social inclusion/exclusion comprise such indicators as:

- absolute and relative poverty (people living in poor families);
- access or not access to emergency room in hospitals;
- individuals living in families which cannot afford to buy certain goods or services (such as food, electricity gas and water, medicare, transportation, apparel, home rents);
- occupational status (individuals living in families without a steady occupation).

Actually, social disadvantage may be synthesized by two main indicators:

- occupational status (unemployment);
- school attainment level.

In particular, the attainment level, and the level of literacy expected at a certain attainment level, enable individuals to benefit from civic, citizenship, social rights otherwise unenforceable.

Illiteracy is here referred to the absence of literacy, that is the competent use of written language. While in illiteracy the absence of instruction causes such a lack, functional illiteracy may be encountered in individuals who have spent years within the educational system and are technically able to recognize the symbolic use of letters but are not competent in the use of such symbolism to receive or to formulate messages⁸.

In the broad discourse on lifelong learning in Italy a special attention should be paid to this problem, which in my opinion hinders any program whatsoever aimed at the maintenance or improvement of life skills in the adult population. More specifically, adult education should address this issue as a preliminary "mastery learning" requirement.

⁶ According to the European Thesaurus of Education, the term "*analfabetismo*" in Italian translates the corresponding concept of "*illiteracy*" in English, which does not have a synonym like the French "*analphabétisme*". So, while in Latin languages it is possible to refer to "*analphabétisme fonctionnel*" (*analfabetismo funzionale* in Italian) and "*illettrisme*" ("*illetteratismo*") as synonyms, the same does not occur in English. OECD-ALL, for example, refers to "low-skills adults" to address people with literacy, numeracy and problem solving difficulties. Actually this seems to be more precise, since the wordings "literacy" or "illiteracy" only refer to one of the three domains tested in the survey. For the purpose of this essay, illiteracy will then translate the absence of school-based literacy, while the wording "resurgent illiteracy" or "functional illiteracy" will render the concept of "illettrisme" or "illetteratismo".

⁷ Dal Lago A., Molinari A. (eds), *Giovani senza tempo. Il mito della giovinezza nella società globale*, Verona, Ombre Corte, 2001.

⁸ Vertecchi B., *Letteratismo e democrazia*, in Gallina V. (ed), *La competenza alfabetica in Italia*, Milano, Franco Angeli, 2000.

1. Educational attainment, literacy and adult education overview in Italy

The historical perspective helps shed a light on the peculiarity of educational attainment in Italy.

Chart 1 – Geographical distribution of illiteracy in Italy in 1881.



Source: Ministry of Education statistics available at Istat, 1890.

In 1881, twenty years after the creation of the Nation and the subsequent introduction of mandatory primary education, illiteracy was a vast reality in most central and southern Italian regions, as shown in Chart 1. Darker areas illustrate its diffusion among the Italian population, mostly in southern regions, where 90% rates were found. In a backward society such the Italian, cultural factors contributed to the slow diffusion of mass schooling: especially in Southern rural areas, parents preferred to bring children in the fields with them, rather than encouraging them to study.

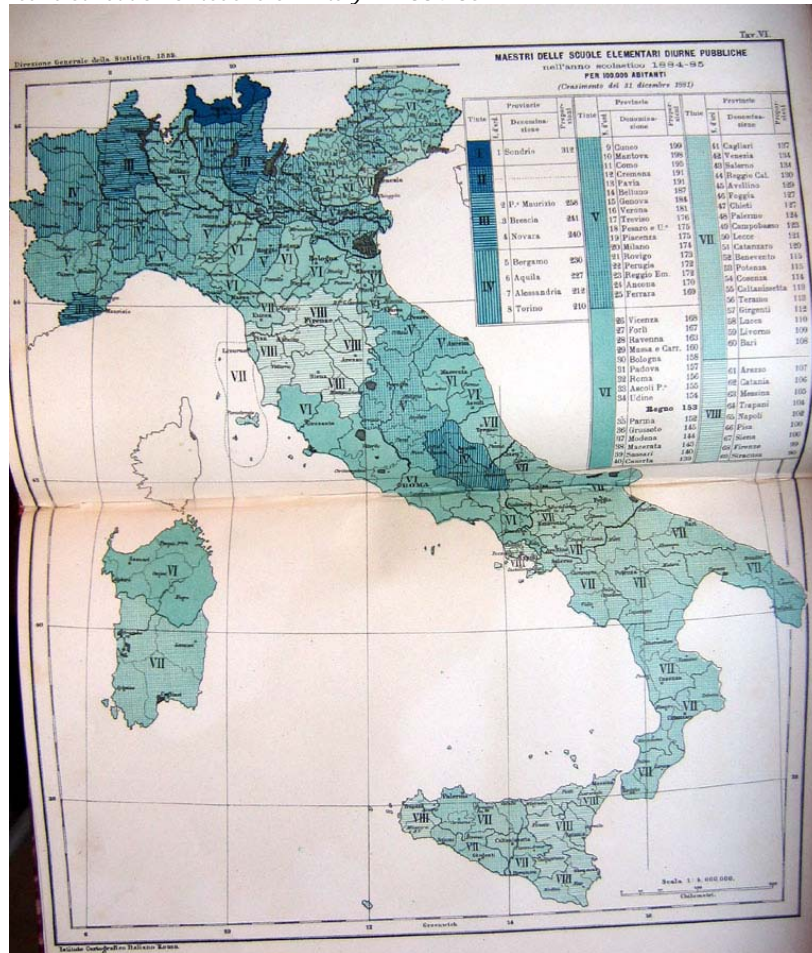
Only after the introduction in 1962 of the so called *Scuola Media Unica* (mandatory lower secondary school) the population's attainment level improved significantly and illiteracy could be drastically reduced. However, it should be considered that, with the increasing ageing of the population, there is now a substantial portion of Italians which have not attended such school, and this could partially explain the overall low education level in Italy, together with the persistent illiteracy rates (reaching around 8% in some areas of the country). The total number of illiterate Italian adults surpasses 2 millions in 1999.⁹

Among other structural Italian problems, another historical reason accounting for illiteracy may be traced in the diffusion of schools and teachers within the national territory at the end of the

⁹ B. Vertecchi, *Letteratismo e democrazia*, in Gallina V., *La competenza alfabetica in Italia*, op. cit.

XIX century. Chart 2 demonstrates that illiteracy is indirectly proportional to the diffusion of teachers: darker areas of the Northern regions have the higher number of primary teachers. Although there are few studies on this specific matter, the distribution of teachers grows slowly in the last part of the XIX century and in 1911 the Ministry of Education claims the teaching body is too small and of poor quality: in the following decade a massive introduction of new educators is witnessed until the establishment of the fascist regime.¹⁰

Chart 2 – Geographical distribution of teachers in Italy in 1884-85.



Source: Ministry of Education statistics available at Istat, 1890.

After more than a century, the geographical distribution of functional illiteracy on the territory may be portrayed by the map in Chart 3 showing a proxi indicator: the lack of possess of a lower secondary school degree in a portion of the adult population. In particular, the range of this population (15-52) enables to isolate the ageing effect.

¹⁰ Dei M., *Colletto bianco, grembiule nero*, Bologna, Il Mulino, 1994.

Chart 3 – Index of non possess of mandatory school (lower secondary) in Italy among 15-52 year-olds.



Source: Istat website: www.istat.it. Latest access: May 2005.

The historical comparison shows that in 2001 the areas of non possess of lower secondary degree are quite similar to those of the illiteracy shown in Chart 1 referring to 120 years earlier: although illiteracy has almost been eradicated, the cultural gap between northern and southern regions has not been filled in yet.

Referring to the present situation, low attainment levels are connected to low skills profiles. Both OECD IALS-SIALS and ALL surveys have raised the attention on this problem which in Italy assumes vast proportions. Although there is a complex relation between attainment level and functional illiteracy or literacy, Italy confirms an overall rather direct impact of school attendance on competency in life skills. The recently released OECD-ALL data have been gathered in the following countries: Bermuda, Canada, Italy, New Leon Mexico, Norway, United

States¹¹. Tables 3 and 4 respectively show the results in life skills competencies and the educational attainment level of the Italian population.

Tab. 3 – Synthesis of OECD-ALL results in competencies and skills for life, 2005. Average scores of Italian geographical areas compared to best-performing countries.

Area/State	Literacy		Numeracy	Problem solving
	Prose	Document		
North-west Italy	235	234	240	230
North-east Italy	234	230	239	229
Center Italy	235	231	239	231
Southern Italy	218	213	218	214
Italy Isles	226	223	230	218
Italy Total	229	225	233	224
Norway	290	295		284
Switzerland			289	

The Italian performances measured through these competency testing tools is indeed very poor (Tab. 3): Italy shows very low scores in all domains compared with the best performing countries (Norway for Literacy and problem solving, Switzerland for numeracy). Moreover, the Italian results reveal the inequality in geographical distribution, Southern regions being the worst performing.

The attainment level seems to have a positive relation with adults' performances in life skills and it is represented in Tab. 4 again through the index of non possess of mandatory school: in Northern and Central regions, a low index of **non** possess of mandatory school seems to be connected with higher scores in all four types of life skills (reported in Tab. 3).

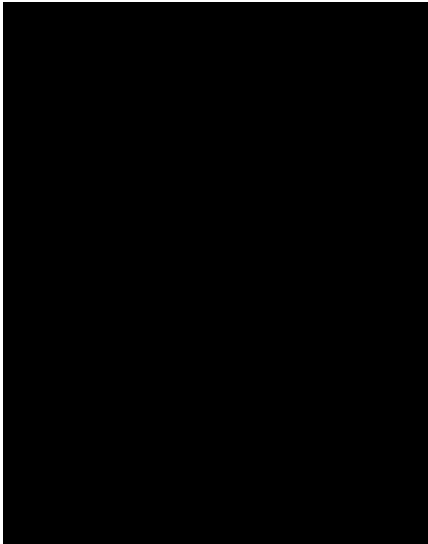
Tab. 4 - Index of non possess of mandatory school (lower secondary) among 15-52 year olds by gender and geographical areas.



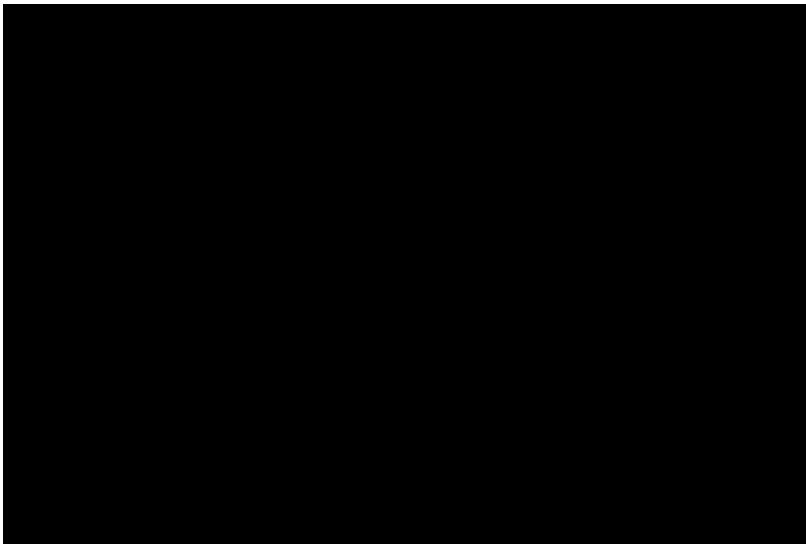
GEOGRAPHICAL AREAS

GENDER

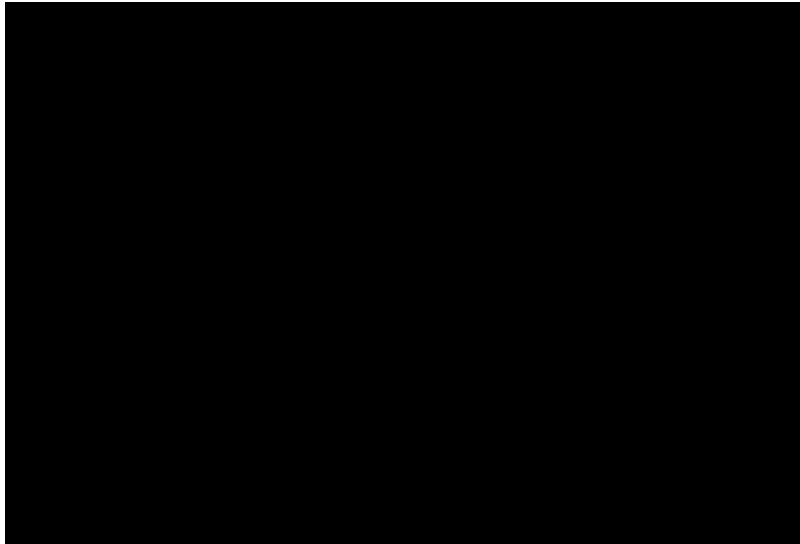
¹¹ OECD-ALL data and initial results commented are taken from Gallina V., *Prima sintesi dei risultati*, www.invalsi.it, May 2005. Population age range: 16-65.



Males Females Total



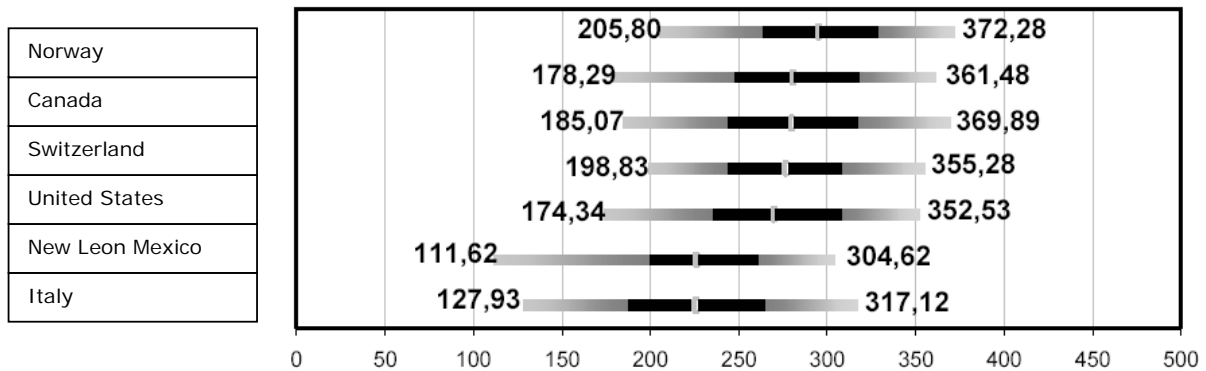
North West	7,91	9,03	8,46
North East	7,19	8,67	7,92
Center	6,89	9,00	7,95
South	11,68	16,87	14,29
Islands	13,35	15,46	14,42
Italy Total	9,16	11,72	10,44



Source: Istat Census 2001, data available in 2005 – www.istat.it. Latest access: June 2005.

Italians score at the lowest levels of proficiency in three ALL scales (document literacy, numeracy, problem solving), while they are the second worst performers before New Leon Mexico in Prose Literacy. As an example, here below is a graphic representation of scores from the 5th to 95th percentile in Document Literacy (Tab. 5).

Tab. 5 - Document Literacy scores from 5th to 95th percentile.

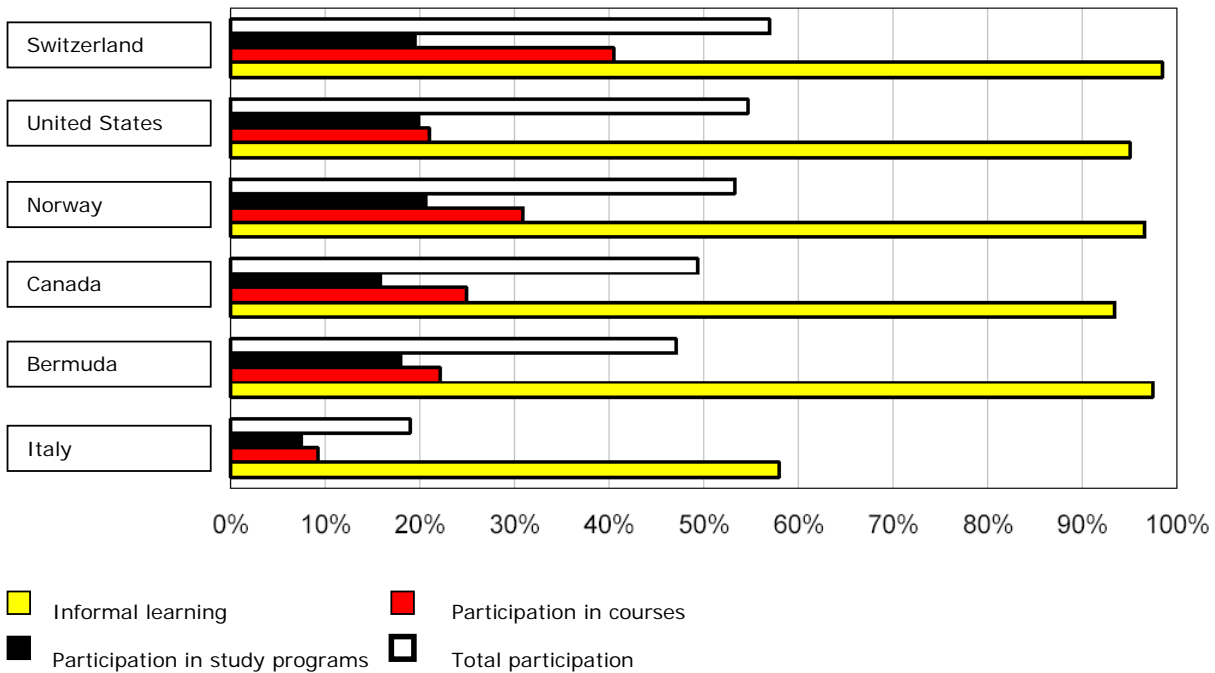


43% of Italians reach level one in the ALL literacy scale, level 1 being the poorest and 5 the highest. Experts consider level 3 of the scale as being predictive of a good working, social and civic performance of adults in everyday life, but only 20% of Italians achieve this level or higher.

Such poor results may be deriving from a number of reasons, some historical – as already pointed out -, some socio-economic. Among these, the low qualification of jobs offered to Italians from Italian companies is one of the most pernicious, since it triggers a vicious cycle: low-culture firms producing low added-value goods request low qualified personnel. This way, the demand for education, in-service training and adult education in Italy remains low and the overall culture of the population suffers in the long-medium term, with direct negative impact on the competitive edge of the nation as a whole.

OECD-ALL data support this hypothesis. Chart 4 shows population learning patterns among ALL participating countries, where Italy is again and by far the worst performer.

Chart 4 – Learning patterns in ALL participating countries.



Italians (and the Italian workforce in particular) not only score poorly in life skills, but do not feel the need to continue learning and do not participate in learning initiatives as much as other nationalities do. The lowest performers feel less the need of further knowledge. In

particular, only 1 person out of 10 at score level 1 attends courses or studies, while 5 out of 10 do so at level 4/5.

The Italian work force is generally less skilled than its competitive counterparts, in all occupational sectors and for all professional categories: 20-25% reach level 3 and 4,5 of the ALL scale, compared to 40 to 70% of the Norwegians. There is a marked difference between the competencies requested for the new or the old economy, and Italy seems to be able to offer mainly old economy jobs resulting in lower demand for qualified personnel. This is particularly true in Southern regions, with high agricultural vocation.

The most recent Italian legislation regarding measures for unemployment, job flexibility and on the educational reform are indeed scarcely incisive in promoting employability, lifelong learning and participation, three key terms of the European policy against social disadvantage: for instance, a lexicometric analysis I carried out on the key legislative texts reveals that the term "lifelong learning" is found only once throughout law 53/2003 of Italian educational reform. However, individual life-long learning actions are carried out through law 53/2000 and law 236/93. Law 53/2000 defines individual lifelong learning as a subjective right.

2. The Predil Project¹²

What kind of learning needs may be observed within the poorest performing population ranges?

The research project I have been engaged in is called PREDIL (Prevention and Diagnosis of Functional Illiteracy) and it has been carried out on the population of the Campania Region in 2004-05 on the basis of the expertise gained during the OECD-ALL and IALS-SIALS surveys. Campania may well represent other European areas of cultural deprivation, where the need of lifelong learning and training hides a deeper need of basic instruction for the adult population participating in a democratic society. The project allows to zoom into this culturally deprived area which may be considered paradigmatic of other similar situations to be found elsewhere in Europe: this is Italy's second most populated region, with a young population. In addition, Campania occupies Italy's third place for business density (with a high number of small businesses), it has high unemployment rates and income at national lowest levels.

The research methodology blended quantitative techniques (questionnaire with cognitive tests plus questionnaire on socio-economic background of respondents) and qualitative insights (in-depth interviews and focus group). Two main objectives have been set: a) the identification of cultural profiles together with learning needs of "at risk" adults; b) the description of local networks for adult education.

The target population (aged 16-65) included three specific segments: individuals occupied in industry; families of individuals occupied in industry; residents in rural areas.

The quantitative sample, composed of 1500 cases, was stratified per quota representing rural and urban/industrialized areas in the region, with a numeric consistency of 700 and 800 cases respectively.

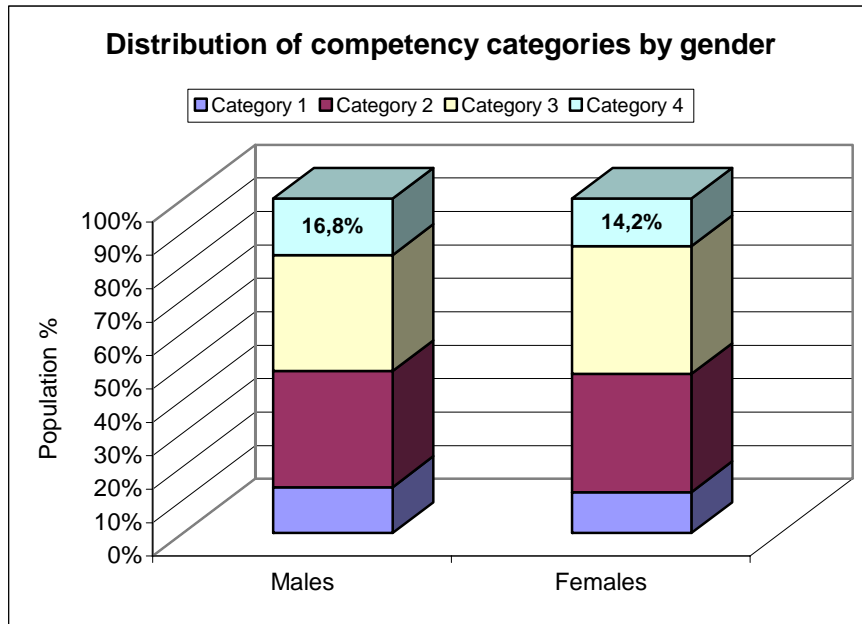
A specific feature of this project is to develop tools for the study of lower-level competencies in the traditional OECD-ALL domains of literacy, numeracy and problem solving: the lower half of OECD-ALL levels (2.5, 2, 1) have been disaggregated into 4 categories (1-4) in order to further discriminate between the different achievement levels. The research tool developed by the project team may thus be used for diagnostic purposes whenever adult literacy, numeracy and problem solving skills need to be assessed. This is particularly true in orientation and at the beginning of an adult education course.

Initial results confirm the poor performance in the competences analysed (Chart 5): less than 17% of males and approximately 14% of females reach category 4, which does not even compare with the third level of OECD-ALL: this means that the entire population surveyed is below the minimum threshold of literacy and numeracy requested to perform daily tasks of a modern society. Although this is not surprising, considering that the survey sample is skewed

¹² Project Team includes: Alessia Mattei, Antonella Mastrogiovanni, Saida Volpe under the coordination of Vittoria Gallina.

towards “at risk” populations, it still represents the magnitude of the functional illiteracy problem in the region. Interesting comparisons against the overall regional cultural profile will be possible in the Fall of 2005, when regional data from the new OECD-ALL wave become available.

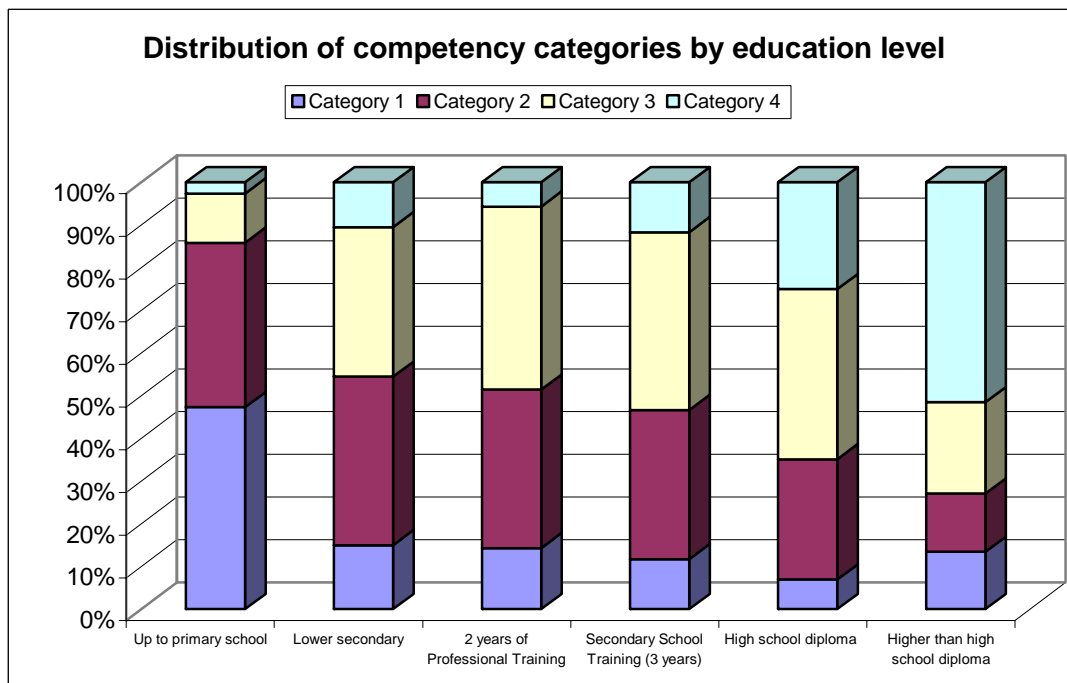
Chart 5 – Distribution of the Predil population in competency categories (literacy and numeracy) by gender.



Source: Predil research group.

Consistently with OCSE-ALL results, competencies measured with the Predil Project increase with the educational attainment level.

Chart 6 – Distribution of the Predil population in competency categories (literacy and numeracy) by educational level.



Source: Predil research group.

An even worse situation is encountered in the problem solving competency, where the research team had even to create the "Zero category", meaning no possess of this competency at all. 33% of the Predil population fits in this group. It is important to underline that at category 3, compensative actions on competency lacks are still possible, while at lower categories it is necessary to reconstruct or even to build new competences ex novo.

In spite of this, a negligible percentage of the sample declares to attend courses of any kind.

63 in-depth interviews have been carried out to enrich the cultural profiles with information on life history, initial school experience, learning needs and motivations, incentives and obstacles to learning needs, types of course offered and desired.

To the purpose of this argument, primary qualitative research output are population learning needs, with relevant underlying motivations. Learning needs of interviewees are essentially triggered by a) a general need for personal improvement, pleasure for learning and self-fulfillment; b) a specific need linked to work improvement; c) socialization needs to fill in lonely moments. It is worth mentioning that these motivations match those in Houle's typology of adult learners¹³. Especially older individuals seem to pursue learning activities for their own sake and self-expression. Obstacles to learning are generally referable to lack of time or economic reasons. The main difficulties connected to learning are due to insecurity and shyness, and often referred to language comprehension. This latter is perhaps the most relevant qualitative finding connected to actual measurement of poor literacy skills. Although many interviewees are not even aware of their learning difficulties, several are conscious of their limits and in some cases they expressed them in touching instances:

I think things but I have troubles explaining them, I feel that something goes that way, but I have difficulties in writing ... this is why I want to learn to read and write good. Sometimes I feel my brain has seized up. Woman, 34 years old with elementary degree.

Learning needs may be divided into two main types: professional training and second chance schooling. Both are addressed into CTPs, whose course offer seems to effectively intercept population learning needs at this level.

3. Montessori method in adult education setting

Adult education cannot address the learning needs of different individuals in the same way: a manager requiring additional management skills cannot be taught the same way as an illiterate with expression problems. At the same time, low-attaining and low-performing individuals cannot be thought to just need professional training, or be treated like grown-up children. On the contrary, they do express a strong need for broad cultural improvement which entails education and instruction, rather than training, and they need to be recognized as adult learners with "special needs". Such needs also emerged from an interviewee during the Predil Project, a male aged 63, who said that he wants professors to "*understand him and to explain more than once*".

Key findings from the Predil profiles may be employed at this stage for the purpose of my argumentation. In Campania region, but also elsewhere in deprived areas, I believe individuals with the following characteristics could benefit from additional education and instruction in a Montessori environment:

- very low scholastic attainment level;
- individuals in need to improve and often to build new literacy, numeracy and problem solving skills;

¹³ Houle's typology may be synthesized as follows:

students oriented to the objective: they decide to learn on the basis of a specific learning objective; when this is achieved, the learning process stops.

Students oriented to the activity: the learning activity, more than its contents, is the primary focus of these learners who, through the activity, wish to establish new social interactions.

Students oriented to learning: they seek knowledge for itself and tend towards levels of increasingly higher personal growth and self-realization.

Houle C.O., *The literature of adult education*, San Francisco, Jossey-Bass, 1992. Fedeli D., *Formazione degli allievi adulti e distance education*, Psicologia e Scuola, n° 106, Oct-Nov. 2001.

- motivated persons to continue learning for self-realization and or for socialization;
- persons wanting to achieve higher educational degrees (lower and upper secondary school), but poorly performing according to the Predil Project (categories 0,1,2).

Persons requiring and motivated by professional training courses in my opinion do not fit in this frame, since they are more interested in the acquisition of specific skills to be immediately used for working purposes, rather than in improving their overall cultural profile.

My hypothesis is that CTPs students¹⁴ could benefit from the use of Montessori materials, in particular for basic skills acquisition such as grammar, syntax and basic mathematic competency. This is corroborated by the essential characteristics of the Montessori Method, functional to the acquisition and consolidation of the concept of lifelong learning.

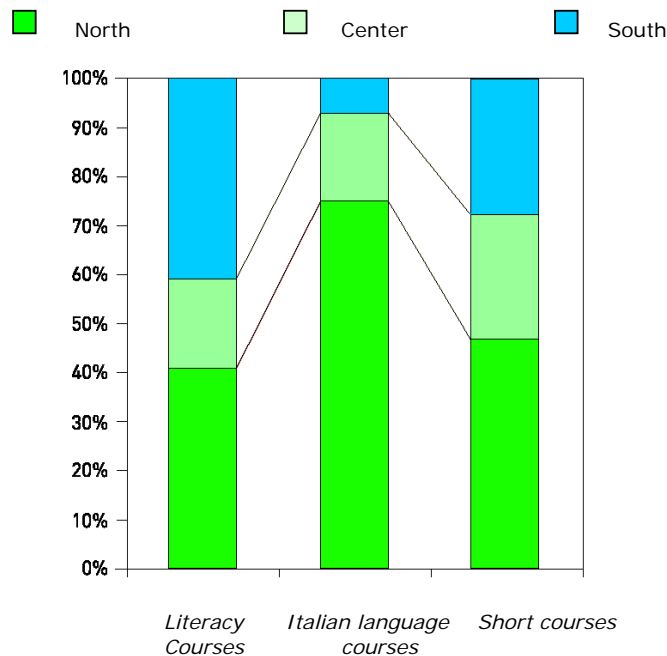
Here I will give an overview of statistics on CTPs to substantiate my discourse. I will then briefly recall the principles of the Montessori method in the light of nowadays andragogy theories and draw my conclusions from there.

3a) Italian CTPs

Introduced in scholastic year 1997-98, in 2001-02 CTPs are 546, hosting a total of 387,007 adult students. 73.6% of them attend functional alphabetization courses, 15.3% pursue a secondary school degree (lower or upper secondary), the remainder 11.1% are foreigners following Italian language courses.

The geographical distribution of course offer in CTPs is summarized by Chart 7: in the Southern regions CTPs organize courses mainly for functional literacy and for the acquisition of degrees (of lower or upper secondary level). The location of CTPs inside lower or upper secondary schools marks another important feature of this institution: adults feel that school is what they need and what they seek. In addition, teachers employed in CTPs are professors in lower or upper secondary schools. There is an immediate link between the school environment, the course offer and needs expressed by the target audience.

Chart 7 – Distribution of Italian CTPs course offer by geographical region¹⁵.



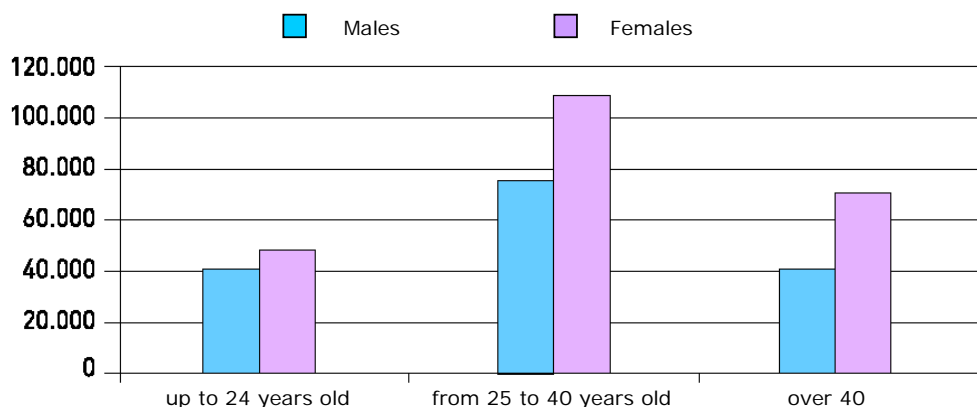
Source: Italian Ministry of Education, *Quaderni degli Annali dell'Istruzione*, 100/2003.

¹⁴ I refer here in particular to second chance schools, yielding to the acquisition of a lower secondary degree. CTPs also offer courses of functional alphabetization which could be run with the aid of Montessori materials and methodologies.

¹⁵ The table translates the Ministry's wording, although there might be an error in the specification of the histograms: the first one should probably read "courses for the acquisition of a degree".

The students' profile of functional literacy courses is mainly composed by women, their modal age is 25-40 (Chart 8), one half are unoccupied.

Chart 8 – Distribution of Italian CTPs students by age and gender.



Source: Italian Ministry of Education, *Quaderni degli Annali dell'Istruzione*, 100/2003.

The educational attainment of functional literacy students is somehow counter-intuitive, given that almost 60% hold a diploma degree or higher and approximately 40% reach the lower secondary level or lesser.

In spite of their recent introduction and relatively low number, CTPs have several features which could make them the ideal place for the provision of adult education courses: location, existing learning facilities, potential networking with other institutions, teaching staff to name but a few. Notwithstanding these positive features, the situation of CTPs analyzed through the Predil Project is more complex: in particular, there persists a lack of coordination among institutions variably involved with unemployed, immigrants, youth and other disadvantaged categories. In particular, networking with other institutions still constitutes more of an objective rather than a consolidated reality of schools and CTPs. A great deal of organization still needs to be planned for the adult education network to function as a system of services for end-users.

Nevertheless, the potential of CTPs is still to be tapped: considering that lower and higher secondary schools in Italy account for a total of 14,503 institutions¹⁶, if each could host a CTP, the adult education services could be a wide-spread and deeply-rooted reality.

3b) Montessori principles and andragogy today

Malcolm Knowles, in his *The adult learner. A neglected species* (It. transl. 1996)¹⁷, claims andragogy is a more appropriate theory addressing adult learning than pedagogy. He maintains this is due to two main features of pedagogy: a) *the need to know*, which for children mainly rests on what the teacher wants them to learn in order to pass exams; b) *the concept of one's self*, which in children mirrors what the teacher thinks of them, that is a dependant personality. Other misconceptions of traditional pedagogy reported by Knowles include *children's orientation to learn by subject*, rather than by experience (since the learning material is organized for them in this way) and *their external motivation to learning*, deriving from the use of grades, evaluation practices, approval or disapproval by teachers and parents. Perhaps Knowles did not consider Maria Montessori in his bibliography!

The Italian doctor not only criticized precisely the same features of traditional pedagogy which Knowles rejects, but also founded a "new pedagogy" based on the need to free children from adult prejudices, such as their dependant attitudes.

Furthermore, Knowles illustrates the relationship between teaching models in simple/complex learning tasks and the level of individual learning ability (low/high). If the task is simple and

¹⁶ Precisely, 7,890 lower secondary and 6,613 upper secondary schools exist in Italy in scholastic year 2002-03. Source: Ministry of Education, *Quaderni degli Annali dell'Istruzione*, 100/2003.

¹⁷ Knowles M. *Quando l'adulto impara*, Milano, Franco Angeli, 1996.

the level of individual learning ability is low, behaviorist training is sufficient; with the increase in task complexity and individual learning abilities, cognitive approaches and humanistic psychology should be the preferred strategies, although he claims autonomy should be gradually pursued at all individual levels¹⁸.

In my opinion, the critique to the andragogy model lies in the fact that adult learners' educational tasks need to be based upon autonomy and self-motivation regardless of their complexity, the opposite risking to treat adults like grown-up children.

In spite of this, there are strong similarities in the andragogic model compared to Maria Montessori's thought. Both place emphasis on the need to:

- free the learner from a static, top-down teaching approach;
- allow self-expression, autonomy;
- avoid too strict subject learning;
- consider the teacher a facilitator rather than an authority;
- allow experiential, research-based learning.

Although it is not possible to condense one's thought in just a few paragraphs, here I will briefly describe Montessori method and materials and I will highlight those features which in my opinion are of higher importance for my proposal¹⁹.

In Montessori's words, education is the active aid to normal expansion of life, which needs only to be waited for: no needs to draw out nor to repress anything.²⁰ The origins of development are inside the learning individual and, while the surrounding environment may modify, aid or destroy the learning impulse, it never creates, any new acquisition being the result of the individual's inner motivations. Therefore, three sets of variables define Montessori educational theory:

- variables pertaining to the learning subject;
- variables pertaining to the teaching subject;
- variables of the environment where the teaching-learning process takes place.

Maria Montessori is probably the first pedagogist to stress the importance of observation of learner's characteristics in order to free his/her learning needs. Once the needs are explicit, the teacher may attempt to respond with the appropriate offer of materials and aids fulfilling those specific needs.

Regarding the teacher, Montessori declares the teacher is the *trait d'union*, the link between the child and the educational environment prepared for his/her activity. Teacher's task include a precise observation of the learner, which is the basis for the teaching process. Away from the traditional lesson, the Montessori teacher is more a tutor facilitating and clarifying to the child the various activities, that is to help him choose from the available materials (means for development), and let him exercise with them for the time he needs.

The Montessori material follows the child according to the four "development plans": from birth to 6 years of age, from 6 to 12, from 12 to 18, from 18 to 24 and adulthood. Materials are meant for direct use of children and not as didactic tools aiding the teacher's explanation of a lesson. There are in fact no "traditional" lessons in Montessori classrooms.

However, from Casa dei Bambini onward all activities contain elements of great aid in lifelong learning, such as the ability to work in groups, and the concepts of self-regulation, responsibility.

My intuition is that Montessori materials and methodologies could be tested also for use in adult settings like CTPs: the target group of such action could be low performing adults in the

¹⁸ Although Knowles' theories have also been applied in Third World countries, he seems to have worked primarily with managers and multinational companies, and less with low-competent individuals.

¹⁹ I feel a recap of her principles is useful, since I've noticed there is considerable distortion of Montessori's thought.

²⁰ Montessori M., *La scoperta del bambino*, Milano, Garzanti, 1999, p.67.

OECD-ALL or Predil scales, needing to achieve a lower or upper secondary school degree. A second group could be adults who want to attend short courses of functional literacy.

The basis of this transposition could be Montessori's general educational principles, the high school setting and Montessori materials also developed for the earlier plans: although Montessori has been actively involved with UNLA²¹ in the fight against illiteracy, she died in 1952 without completing her project to develop materials for adult learners. Furthermore, she primarily focused her attention on illiterates rather than today's functional illiterates²². Unfortunately no-one of her students nor collaborators brought about her studies to a vast diffusion in the field of adult education²³. In addition, the only Montessori materials developed for adults are those for illiterate needing to learn to write and read, whereas nowadays we are faced with the challenge to build further knowledge not from scratch, but working with low-skilled adults. This means we cannot start from the alphabet, like Montessori had to do, but we should be able to assess adults' needs in basic education and move from there onward.

To this end, I would start with a recognition of pedagogical models and teaching styles presently applied in CTPs to identify potential areas of improvement. My impression, from talks with CTPs teachers during the Predil Project, is that – dealing with low-skilled adults - professors tend to have little expectations on the quality of their students' learning potential, and for this reason they tend to decrease the quality of their intervention rather than finding appropriate, tailor-made solutions to this population needs. My point is precisely to avoid this downside by researching an effective teaching method to increase not only the quality of socialization, but also of the learning outcomes of low-skilled adults. This would mean to bring all students to meet the requirements for passing lower or upper secondary school exams.

A preliminary hypothesis of use of Montessori material concerns the fields of grammar/syntax and geometry. The idea is to identify a set of already available Montessori materials taken from different levels of the Montessori plans of development, to identify other up-dated materials which could be of interest (such as computers with internet connection) and from there to start building an "adult Montessori environment" opening new paths to adult expression and learning. Whenever a learning need collides with the lack of pre-requisites in basic education, Montessori materials may be autonomously used by the adult to easily arrive at a secure level of proficiency.

This methodology could present the following benefits to these adult learners:

- to allow the learner to autonomously go back to basics without feeling guilty;
- to avoid correction from an external agent (Montessori materials are self-correcting);
- to encourage independence;
- to promote self-fulfillment and a sense of mastery autonomously achieved, resulting in higher self-directed motivation.

Up to now I have not been able to work out a complete research methodology. However, in order to prepare a field tryout of the idea, I would consider:

- the entry level of each participant, using Predil cognitive tests as a basic evaluation tool together with the socio-economic background questionnaire;
- the type of tasks and knowledge domains which could benefit from Montessori materials;
- the role of the facilitator/tutor in presenting and discussing the use of the materials;

²¹ Unione Nazionale per la Lotta contro l'Analfabetismo, National agency for the fight against illiteracy, is an organization operating since 1947. It promotes lifelong learning, the development of the human person and his/her active participation in social life.

²² Already in 1948, at the time of her book *La scoperta del bambino*, Maria Montessori reports that her method for teaching children to write was applied in the USA to reduce illiteracy among army soldiers.

²³ Professor Luigi Tarsitano, now vice president of UNLA, seems to have worked directly with Maria Montessori to an adult education project which she elaborated in 1950-51. Unfortunately, it has not been possible to interview him nor the President, Prof. Avveduto, due to the fact that the association is presently relocating to other buildings. Source: http://www.paternostro.org/~luigi/pdf/vita_magistrale.pdf

- a self-evaluation method to establish the level of competence in each task performed by each participant. In this context Predil scales or similar scales could be employed to assess both the entry and the exit levels of participants.

The envisioned issues include the following key sets of variables of the Montessori method:

- the provision of a Montessori "adult" environment which needs to be imagined and organized according to learners' needs: materials perhaps require "adultization";
- the learners, according to Predil findings, would like to retrieve the same image and atmosphere of school they left when they were children: this means they feel in need of a "guide" and perhaps even an authority to tell them what to do and when, to explain concepts and to control the learning process. This is not exactly what Montessori learning is about: autonomy is indeed the opposite. This is a crucial point which could be addressed from the very beginning of the learner-teacher relationship;
- the need for teachers to gradually change their role and attitude (from authorities to facilitators and tutors);
- the definition of a precise observation procedure of adults in the Montessori setting to feed data into the model.

A key issue of this proposal is teacher's training: all teachers taking part in the experiment should agree to follow Montessori guidelines for presenting the activities. While this could in principle represent an obstacle, a few teachers involved in the Predil Project declared they too found difficulties in changing from traditional school to teaching adults. For this reason I believe they could benefit from specific adult Montessori training.

4. Conclusions

Poor performances in life skills is a very serious indicator of potential future problems for the Italian population: if the tendency to keep the overall culture of the nation below fast developing countries is to continue, the social consequences of phenomena such as globalization, de-localization of enterprises and immigration of higher-skilled individuals from Eastern Europe will be severe.

Although my idea is still very much in embryo at this stage, a totally new population segment could be addressed through this proposal: low cultural profiles cannot be just left to the "television pedagogy" of soap operas, reality shows and commercials.

It's a matter of civicness to request and to offer. Since, as Maria Montessori used to say,

«There's only one problem, and that is human development in its entirety; when this is achieved in whatever unit – be it a child or a nation – everything will follow, spontaneously and in harmony. »

Maria Montessori²⁴

Date: May 25th, 2005

Updated: June 6th, 2005

²⁴ Montessori M., *To educate the human potential*, It. transl., *Come educare il potenziale umano*, Milano, Garzanti, 1992, p. 27 . The translation is mine.