IAL FVG

THE TRAINING OF TRAINERS IN THE FIELD OF LITERACY SKILLS IN ITALY

The school system and vocational training

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1. Education in Italy

The major developments in the school education system during the twentieth century have lead to profound changes in society in industrialized countries, by popularising an idea of progress and enabling large sectors of the population, previously lacking in formal education, to have a voice at last . Just when illiteracy seemed to have been totally eliminated however, came the first reports, in the second half of the 1980s, of adults who, despite having received an extended education during childhood and adolescence, had proven unable to understand or to conceive a written message. This sudden development was unforeseen, coming at a time when everyone thought literacy could be taken for granted.
It shocked some governments, such as the U.S.A. and Canada, into calling an inquiry. In 1992, The *Oecd-Ocde (Organisation for Economic Cooperation and Development)*, initiated an international research into adult literacy with people aged between 16-65, the *International Adult Literacy Survey (Ials)*, and this in turn lead to further analysis of the problems of adult literacy. Research aimed at maintaining economic development and social cohesion by setting up the appropriate initiatives, especially in those countries where low literacy rates seemed to put the people most at risk. The survey was aimed at an international perspective, providing a selective reading of educational needs.
The project actually started in 1994, with the collaboration of Intergovernmental committees, research institutes and governments. It involved 12 countries: Sweden, Germany, the Netherlands, Belgium (Flanders), Australia, United Kingdom, New Zealand, Canada, Switzerland, Ireland, the U.S.A. and Poland. Subsequently, in 1996, the Oecd-Ocde launched a second inquiry, *Second International Literacy Survey (Sials)*, in which the Italian government was also involved.
The Ials and Sials research programmes have provided a detailed study of literacy from several points of view, by trying to understand what influences the development of skills in the adult populations of different countries in various contexts like work, home, and social life.

Research into adult literacy in Italy

In 1997, the Ministry of Education gave the responsibility of researching into adult literacy and numeracy to Cede (The European Centre of Education) . The results were published in May 2000.
The methodology used – as defined by *Statistics Canada* – and in common with the research conducted by Ials and Sials, consists in analysing the factors that influence subjects' performance in literacy skills. The tests involved increasing levels of complexity; also of written communications, while socio-economic, cultural situations, working conditions and income were also taken into consideration. The approach used recalls the “practical intelligence” approach, involving the analysis of skills within working contexts, in daily life, and in situations where calculation and practical problem-solving are required. The variables of the framework taken into consideration may also be used to predict and identify the different levels of competence.

Three types of items were used in the research:

1 Newspaper articles or prose;
2 Schematic documents, such as graphs or tables;
3 Problems that required calculation and quantitative operations.

Relative complexity and contextual conditions were also defined.

A scale of measurement from 1 to 500 was also defined, and within this, 5 levels of competence were identified, ranging from 5, where the reader was able to understand and formulate a complex message, to 1, where the reader was unable to understand and formulate a message.
The following Table 1 illustrates the scales and levels by test type: “prose”, “graphics” and “calculus”.

Table 1 – Description of levels of the testing typology

LEVEL 1 (0-225 points)	
Prose	Look for and identify a piece of information identical (or in a parallel form) to the information requested. The distracters, if any, are to be found in a part of the text that is far from the information that must be identified by the test.
Graphics	Identify information through literal comparison. the distracters, where present, are far from the exact answer. In this case, the task requires the insertion of personal data in a form.
Calculus	Only one operation (addition) is required of the reader; its elements are already in the presentation of the item.
LEVEL 2 (226-275 points)	
Prose	Jdentify one or more pieces of information within the text; this may include many distracters, so that the reader is obliged to make simple deductions. At this level, the reader is asked to integrate two or more elements of information, by comparing or contrasting.
Graphics	The tasks are various, and they present different types of graphs and diagrams. In some cases, where the reader is asked to match two elements only, distracters may be present. The comparison or the matching may request some simple deduction. Therefore, the task requires the completion of a form, or a grouping activity, starting from the information contained in a graph or diagram.
Calculus	The carrying out of an arithmetical operation (addition or subtraction), by using numbers that are easily available in the text or document. (order forms, current account, etc.).
LEVEL 3 (276-325 points)	
Prose	Identify texts that correspond to the information requested by making simple deductions and by respecting precise conditions. The information is located in different paragraphs, and not in one sentence only. The reader may be asked to integrate, compare or contrast information found in different parts of the text.
Graphics	Different tasks: literal comparisons or synonymous comparisons; the reader has to take into account the multiple elements of information, or to notice some of the conditions. Therefore, the answer requires integrating pieces of information contained in one or more documents, which involves skimming the whole document in order to provide multiple answers.
Calculus	One ore more operations (e.g. division and multiplication). Often, two numbers are required, and they are hidden within a complex presentation. The expressions used are “how much”, “calculate the difference”, but some of the tasks require a deduction in order to identify the appropriate operation.

LEVEL 4 (326-375 points)	
Prose	Provide answers that request the gathering of several pieces of information, and for which it is necessary to produce deductions from within the text; the reader will have to integrate or to contrast quite lengthy pieces of information present within the text. The information requested is abstract; distracters are present.
Graphics	Compare and put together multiple pieces of information by reading the document and assessing appropriacy of the information. The reader often has to make complex deductions, and take into account various conditions.
Calculus	Carry out one operation only, in which the quantities are difficult to determine. The quantities cannot be found in the wording of the problem, but requires calculations of "how much", "find the difference", etc.
LEVEL 5 (376-500 points)	
Prose	Identify information in a complex text, containing plausible distracters. The reader has to make deductions and use specialised knowledge.
Graphics	Gather complex information and recognise a considerable number of distracters. The reader has to make difficult deductions and deal with pieces of information containing many conditions and references to specialized knowledge.
Calculus	The reader has to do a number of activities, finding out about the problem from various documents, based on previous knowledge, so as to determine how many steps and what has to be done.

A summary of the results of the Italian research into adult literacy and numeracy levels are as follows:

1 A considerable percentage of the population at a borderline level of literacy, unable to understand, use or produce pieces of information contained within written texts;
2 A lack of post-secondary level education. The percentage of the population that goes into further education to gain qualifications barely reaches 10%;
3 The scarcity of cultural and relational stimuli for large sectors of the population, especially in certain areas of the country.

The research also highlights the fact that the adults at level one, those who possess very modest skills, on the borders of illiteracy, represent about 1/3 of the population, while another third is at level 2.
In conclusion, we can say that about two thirds of the Italian population aged 16-65 may be considered barely literate.

Framework of demographic profiles and literacy levels in Italy

People taking part in the research were 49.6% men and 50.4% women, distributed within four residential areas: North-West (26.9%), North-East (18.5%), Center (19.2%), South and the Islands (35.4%). There were five age ranges: 16-25 years (20.1%), 26-35 years (23.1%), 36-45 years (20.8%), 46-55 years (20.8%), 56-65 years (17%).
The literacy of the sample is distributed in three groups with percentages of population varying from 30 to 37%. There is one first group at the first level, a second group at the second level, and a third group represents the population at the third and the fourth/fifth level (within this group, the share of

population situated at the 4/5 level represents about 23% for the “prose”, 19% for the “graphics” and 24% for the “calculus” sections).
The conditions involved, having a substantial link to literacy, are age, gender, geographical area and education. Here follow the main results of the analysis divided by individual variable per test type reported.

1.2. Literacy by age

The strict relationship between age and literacy level clearly emerges from the examination of the following tables.

Table 2 - Literacy by age – Prose (percentage values)

Age ranges	level 1	level 2	level 3	level 4/5
16-25	15,4	32,4	37,6	14,6
26-35	21,9	34,4	32,3	11,4
36-45	32,2	32,8	28,2	6,7
46-55	46,9	28,9	20,3	3,9
56-65	63,5	24,1	10,5	1,9

Table 3 - Literacy by age - Graphs and diagrams(percentage values)

Age ranges	level 1	level 2	level 3	level 4/5
16-25	18,2	35,5	36,8	9,6
26-35	27,2	32,8	31,6	8,4
36-45	35,2	33,9	24,8	6
46-55	46,5	30,5	19,7	3,3
56-65	61	27,2	10,3	1,5

Table 4 - Literacy by age - Calculus (percentage values)

Age ranges	level 1	level 2	level 3	level 4/5
16-25	19	34,1	35,4	11,4
26-35	23,5	30,2	35,4	10,9
36-45	30,5	31,3	27,7	10,6
46-55	39,4	32	22,5	6,2
56-65	52,3	29,5	13,4	4,8

The first significant evidence is the contrast between the two extremes, 16-25 and 56-65 years old. The age range 16-25 presents the best results in all the tests, by recording the highest percentages at the 4/5 level and the lowest at the level 1. On the contrary, at the age range 56-65, the percentages are very high for the level 1(63.5% at the "prose" examinations, 61% at the "graphics", and 52.3% at the "calculus"); at the level 3 they only reach 13.4%, while at the 4/5 level, the percentage is about 2.5%. While the imbalance between the two generations may seem obvious, this is not the case for the intermediate age ranges.
At the age range 26-35, the literacy borderline is 56.5% in the "prose" tests, 53.7% in "calculus" and at no less than 60% in "graphics". The statistics that emerge reflect a worrying lack of a sturdy educational background in this sector of the population, which should instead be providing a strong cultural and educational basis for getting into the labour market.
Finally, for the age ranges of 36-45 and 46-55, the percentage at level 2 is 65%, and 74% respectively, for the three test types. The emergency situation revealed for these two age ranges centres on three issues: the difficulty of getting back into this sector in case of redundancy, the low quality performance that can be expected from these people, and the limited socio-cultural level that they can be guaranteed.

1.3. Literacy and geographical area

The distribution of literacy levels in the four geographical areas of Italy chosen for the study, confirms that where the subjects live has some bearing on their eventual socio-cultural level.
The outline of risk enables a better understanding of the cultural gulf present within the country, between the North-West, the North-East, the Centre, the South and the Islands.

Table 5 – Literacy by geographical area – Prose (percentage values)

Geographical area	level 1	level 2	level 3	level 4/5
North-West	29	34,1	26,6	10,3
North-East	30,1	29,2	32,4	8,3
Centre	32,4	28,5	28,6	10,5
South-Islands	42,3	30,6	22,2	4,8

Table 6 - Literacy by geographical area - Graphics (percentage values)

Geographical area	level 1	level 2	level 3	level 4/5
North-West	30,2	33,3	28,8	7,7
North-East	30,6	30,8	31,5	7,1
Centre	35,1	29	29	7
South-Islands	45,1	33,8	17,5	3,7

Table 7 - Literacy by geographical area - Calculus (percentage values)

Geographical area	level 1	level 2	level 3	level 4/5
North-West	25,6	31,7	30,9	11,8
North-East	26,5	28,7	33,9	10,8
Centre	31,5	30	28,5	9,9
South-Islands	39,9	33,4	21,2	5,5

1.4. Literacy and educational level

The results show how educational levels appears to be one of the main causes of the low level of literacy. The distribution based on qualifications is reported in Table 8.

Table 8 – Distribution of qualifications in the sample interviewed

Qualification	Percentage
No education	0,2%
Incomplete Primary education	2,4%
Primary school leaving certificate	20,4%
Secondary/Middle school leaving certificate	33,7%
High school leaving diploma	35,1%
Post-diploma	0,9%
University degree	6,4%
Research doctorate	0,9%

Taking into consideration the distribution of qualifications by gender, the results of the sample questioned prove that in Italy, in spite of the equality reached by the educational process, there still remain obvious differences between the two genders. In fact, women are less qualified than men: 56.4% have a secondary or middle school leaving certificate at most, opposed to 51.7% of men, while 28.7% only have the elementary school leaving certificate, in opposition to a male percentage of

16.8%. Moreover, the highest qualification – the research doctorate – is reached mostly by men: 1.2%, as opposed to 0.6% of women.
The variable that seems to matter most, besides age and gender, in the distribution of qualifications, is where people live. By disaggregating the data for the different geographical areas, we can see that in the South and the Islands, more than 50% of the population over 36 have an incomplete elementary education, whilst in the 56-65 age group, as many as 75.3% have an incomplete elementary education. In the Centre and the North-East, only the 56-65 age group was found to have serious illiteracy problems. Finally, in the North-West, 35.2% of the population aged 36-45, 23.6% of the population aged 46-55, and lastly, 41.1% aged 56-65 are not in possession of a complete elementary education. Post school qualifications are distributed as follows: in the North-West, 9.6% have university degree or research doctorate, in the North-East – 9.2%, in the Centre – 7.4%, while in the South and the Islands – 6.6%.
By examining the correlation between literacy and qualification (Tables 9, 10 and 11), it is noteworthy that the population that lacks a qualification - that is the population which only possesses a primary school leaving certificate - is situated at skills level one in all of the three examination types, to a share of more than 90%.

Table 9 – Literacy levels for each qualification (percentage values)

Qualification	level 1	level 2	level 3	level 4/5
Non educated and incomplete primary education	93,8	4,5	1,7	
Primary school leaving certificate	76,8	19	4,1	0,1
Secondary/Middle school leaving certificate	36,1	39	21,7	3,3
High school leaving diploma	10,4	33,5	41,2	15
Post diploma	7,1	43,8	38,3	10,9
University degree and beyond	8,3	25,2	48,15	17,85

Table 10 - Literacy levels for each qualification - Graphics (percentage values)

Qualification	level 1	level 2	level 3	level 4/5
Non educated and incomplete Primary school	94,6	3,7	1,7	
Primary school leaving certificate	75,0	19,6	5,0	0,5
Secondary/Middle school leaving certificate	38,8	36,6	21,0	3,6
High school leaving diploma	14,1	37,3	39,1	9,5
Post diploma	5,6	33,4	47,3	13,6
University degree and beyond	9,5	37,8	38,1	14,1

Table 11 - Literacy levels for each qualification - Calculus (percentage values)

Qualification	level 1	level 2	level 3	level 4/5
Non educated and incomplete Primary education	90,6	7,7	1,7	
Primary school leaving certificate	69,4	20,7	8,4	1,5
Secondary/Middle school leaving certificate	33,3	38,6	23,8	4,3
High school leaving diploma	10,4	35,1	39,2	15,4
Post diploma	7,4	23,1	58,6	10,9
University degree and beyond	5,1	25,2	48,5	21,2

A really significant diminishing of the population at illiteracy hazard is noticeable only for the share of population in possess of a college diploma. The diploma owners who are situated at the 1st level of alphabetical competence are 10.4% for the "prose" examination and for the "calculus", and 14.1% for the "graphics". The possession of a college diploma represents therefore a reinforcement of the alphabetical competences for the adult life, configured as a contribution to the diminishing of the population's presence at the 1st level.
Then, by disaggregating the data according to the age range, the research points out the fact that for the youngest – 16-25 years old -, the diploma is a guarantee of superior competences than those of the university degree owners: 21% of the diploma-owners reach levels 4/5, in opposition to only 7% of the degree owners.
Furthermore, it is conspicuous that in equal conditions of qualification, there is a decrease of the competences correlated to the advance in age. The motivations are sought, in this case, within the action performed by other occurrences, such as for instance the working context.
There is also a final remark, originating from the disaggregating of data related to gender: women, in equal conditions of qualification, have proven to own more elevated competences for the "prose" examinations, provided they have a qualification superior to the elementary school leaving certificate, and less elevated for the "graphics" and "calculus" examinations (the indicator used, in this case too, is the consistence of presence at the 1st level).

1.5. Literacy by gender

The correlation between gender-alphabetical competence results as very articulated for the interlinking of other variables, such as age, area of residence and working condition. Generally, there arises a substantial equality of performances at the 3rd and 4/5th levels between women and men at the "prose" examinations, while there comes out a significant illiteracy hazard for women in the "graphics" and "calculus" tasks. Furthermore, the alphabetical competences result as more elevated for those who have frequented an instructional/formative activity.

The interlinking between the variables concerning age and geographical area of residence, a datum that points out the feminine illiteracy hazard consists in an absolute concentration of the lowest performances at three age ranges: 36-45, 45-55, 55-65, and in connection with the geographical areas. Not only the risk of illiteracy is crescent according to the age, for the women (it even reaches the highest peaks – also compared to men – with the elderly women), but it also presents a heavy emergency situation for the area including the South and the Islands.
For the age ranging between 16-25 and 26-35, for which the distribution of the alphabetical

competence levels is mostly turned away from the illiteracy hazard (prevalence of the 3rd and 4/5th levels for the age range of 16-25), a serious gap of the results is revealed according to the geographical areas. Added to this is the fact that the feminine presence at the 4/5 levels is always superior to the male, in all the areas of the country, except the South and the Islands.
Within the age range of 36-45, it is noticeable that at the "prose" examination – generally the most favourable to the feminine gender – 76.8% of the women of this share, resident in the South and the Islands, are situated at the 1st-2nd level (the percentage reaches 95.5% within the age range 56-65).
The opposite situation can be remarked in the North-West, where within the same age range, the highest percentage found at the 4/5th level is that of women (12.8%), which is superior even to the collocation of males in all four geographical areas taken into consideration.
The emergency situation pointed out for the Southern women is not only dependent upon the working difficulties typical to the area, but also upon the effects of the formative exclusion (school, specialized training, continuous training), in opposition to working and the exclusion from work (unemployment – concentrated to the South), which provoke a pauperization of the scarce alphabetical competences owned, due to the lack of usage and of the possible training and development of the competences even *on the job*.

1.6. Literacy: a family legacy

A final aspect of interest pointed out by the results of the research reach the possible conditioning of the alphabetical competence level due to the family background in which the individual has lived. In fact, the relationship between the qualification of the genitors and that of descendants, as well as the correlation between the educational level of genitors and the alphabetical competence of the descendants has been analysed.

One section of the questionnaire, used for the reconstruction of the socio-cultural background of the respondent, regards the genitors, and particularly the highest qualification that they have reached.
The qualification of the father is better remembered that that of the mother; only 1.9% does not know the qualification of the father, opposed to the 2.4% of those who do not know the qualification of the mother; the information gathered results insufficient for an extended investigation of the theme, result which derived also from other inquiries.
Tables 12 and 13 confront the qualification of the descendants to those owned by their genitors.

Table 12 – Qualification of the children/ father's education

	Qualification of the father					
	Incomplete elementary education	Elementary school leaving certificate	Middle school leaving certificate	Diploma	Post diploma	University degree/Research doctorate
Incomplete Primary education	6,7	1,3	0,2	0,5		
Primary school leaving certificate	50,6	18,2	4,8	3,3		2,8
Secondary/Middle school leaving certificate	11,7	41,8	35,2	26,1	16,4	4,7
High school leaving diploma		33,4	49,7	53,9	72	52

Post diploma		1	0,7	1,9	2,9	1,8
University degree/Research doctorate		4,3	9,4	13,3	8,7	38,7

Table 13 - Qualification of the children/ mother's education

	Qualification of the mother					
	Incomplete elementary education	Elementary school leaving certificate	Middle school leaving certificate	Diploma	Post diploma	University degree/Research doctorate
Incomplete elementary education	5,1	1,2				
Elementary school leaving certificate	45,3	14,8	2,1	0,8		
Middle school leaving certificate	33,3	39,6	35,8	19,2		15,2
Diploma	13,9	37	51,1	61	70,3	57,7
Post diploma	0,2	0,9	1,7	1,1	18,6	0,6
University degree/Research doctorate	1,9	6,5	9,4	17,9	11,1	26,5

A few considerations are proposed, starting with the extreme situations: the father without a qualification or with an elementary school leaving certificate, and the father that owns a university degree.
The descendants of fathers who have not completed the frequency of elementary school reach a diploma at a level of 11%; 30% obtain the middle school leaving certificate, 50% obtain the elementary school leaving certificate, while the rest do no complete the elementary education. The descendants of fathers who own only an elementary school leaving certificate obtain a university degree at a level of 4%; 40% of them has a diploma, and 30% an elementary school leaving certificate; in this case too, there is a share that does not complete the elementary education. 56% of the descendants of a father who owns a university degree have obtained a college degree, while 31% of them have obtained a university degree/doctorate; none of them has an incomplete frequency of the elementary education. Those whose mother has an incomplete frequency of the elementary education reach a university degree at a level of 1%; 13% have a diploma, 33% a middle school leaving certificate, and 45% an elementary school leaving certificate. Mothers who own an elementary school leaving certificate bring the 36% of descendants who have a diploma, and 6% of those who own a university degree. Mothers with a university degree ensure the diploma to 56% of their descendants, and the university degree or beyond to 26% of them. The most favourable situations are those registered for the “youngest” age ranges, for the descendants of young mothers. The disaggregated analysis of the genitors’ qualification, divided on age ranges of the descendants, points out the progressive strengthening in the education of the genitors, above all that of mothers.
In order to complete the framework, the information relative to the working conditions of the mothers has to be added. It is interesting to notice that 58.3% of the mothers work, or used to work, and they are the mothers of the youngest respondents; 60% of the total number of these mothers has a qualification, which is at least a complete middle school education. The working condition of mothers is mostly

present in the North and Central regions, and much more limited in the South.

After having defined above the family framework in which the alphabetical competence is developed, the research presents the distribution of levels reached by the population aged 16-65, according to the father's qualification. The situation is illustrated by the following Tables 14, 15 and 16.

Table 14 – Levels of alphabetical competence of the descendants/Qualification of the father – Prose examinations

Qualification	level 1	level 2	level 3	level 4/5
Up to the Primary school leaving certificate	57,7	25,7	14,1	2,4
Secondary/ Middle school leaving certificate	17,3	3,7	36,8	10,2
High school leaving diploma	13	31,1	39,9	16
Post diploma	28,9	56,6	9,3	5,2
University degree and beyond	7,8	18,6	53,7	19,9

Table 15 - Literacy levels of children /Qualification of the father - Graphics

Qualification	level 1	level 2	level 3	level 4/5
Up to the Primary school leaving certificate	53,8	24,5	16	2,6
Secondary/Middle school leaving certificate	17,6	36,7	38,8	6,9
High school leaving diploma	12,7	23,9	42,8	11,6
Post diploma	28,6	57,1	14,3	
University degree and beyond	13,3	31,8	40,5	14,4

Table 16 - Literary levels ofthe children /Qualification of the father - Calculus

Qualification	level 1	level 2	level 3	level 4/5
Up to the Primary school leaving certificate	48,5	28,4	18,4	4,8
Secondary/Middle school leaving certificate	15,4	31,7	40,5	12,5
High school leaving diploma	7,7	31,4	40,9	20
Post diploma	23,8	42,9	33,3	
University degree and beyond	14,3	22,4	44,8	18,5

THE SCHOOL SYSTEM

2. Teacher training

2.1. International framework for the initial training of teachers

Teacher training in Europe is a very complex subject, because it depends on the history, traditions, economy and politics of each individual country; from the way these factors have influenced the development of education and, not least, from the way it became to train teachers at the beginning of their career.
Generally, in countries where the system is reasonably developed, the initial training of teachers takes place in colleges specifically created for teacher training, as well as within the university system. In the past, teacher training was done more or less exclusively within the teacher training college system e.g. (the Anglo-Saxon *Teachers' Colleges*.)
Recently, the two systems have become increasingly interlinked, and even where the dual system still exists, studies have tended to move towards the university system.. This phenomenon has been defined as "*universitisation*" within the "*Green Book on the Training of Teachers in Europe*", produced by the TNTEE network of the European Commission, which presents a detailed analysis of the ongoing developments of the sectors in the European context. To avoid the course structures becoming too theoretical, rather than being integrated into a more practical syllabus, partnerships between the training institutions and the academic system have become the norm. This effective co-responsibility has increased in each of the reforms progressively adopted by each of the countries.
In all cases, the training path concludes with a "validating" title that qualifies professionally, and that represents, almost everywhere, a prerequisite for employment as a teacher. In some rare cases, e.g. France, the possession of such a qualification is enough to access the profession, thanks to a precise programming of the proportion of pupils to teachers, and it guarantees employment in a state school.
The training (with extremely rare exceptions) is comprised of the four or five years of high school education. There is a differentiated between primary and secondary teachers, four years for the former, and five for the latter.
The training pattern may be "*consecutive*" if the teacher training comes after the academic qualification, or it may be "*integrated*" if the training course is completely aimed at teacher training, and therefore it comprises both areas. In the case of consecutive training, a first level degree (*bachelors*), is followed by the professional training, while in the case of integrated training, a specific title is obtained, usually of a higher degree than the *bachelors*. In both cases, such a qualification often does not have the "academic" character of a 2nd degree title (the *masters*, corresponding to an Italian specialisation), but initiatives aimed at standardising qualifications are ongoing. Nevertheless a *masters degree* is not a compulsory requirement for being accepted on a post-graduate teacher-training course, nor are there situations in which a *masters* constitutes a qualification for the profession.
For primary school teachers – those who teach all or most of the subjects - the integrated model prevails; for high school teachers – who usually teach one subject, or maybe two – the consecutive model prevails. A different situation can be seen for the training of secondary school teachers (teachers of middle schools and lower secondary-high schools), where about half of the European countries have chosen the first model, while the other half has chosen the second.

Both types of course have the professional figure of the training teacher as their primary reference point. The choices relating to the arrangement of the curricula, the construction of the learning environment, the ways in which the training activities are performed, all focus on this aim.
It is significant that the individual skills required by different countries seem remarkably homogeneous (cf. following paragraph). This would have happened even in the absence of coordination. In political

circles, particularly within the Ministers' Council of the European Union, as well as in technical and scientific circles – particularly within the OCSE – a lot of emphasis has been put on the skills required by the *knowledge society*, on the changes that such things bring about in the nature of education systems, in changes relating to the role of the teacher, and in their training.
Such changes point to an increasing importance of different roles, not just as purveyor of information. Therefore, training puts less and less emphasis on the latter. All the international documents produced on this issue, in fact, point out that the "pertaining to content" component for the education of teachers-to-be is taking a less and less central position.

Teacher Skills in the European Union

The members of the ENTEP network (*European Network on Teacher Policies*), at their Conference held in Brussels on the 29th of September 2001, presented papers defining the skills that teachers should develop during their initial training. Besides the French community of Belgium, there were six other contributions from the representatives of Austria, Germany, the Flemish Community of Belgium, Italy, Portugal and the United Kingdom.
The reports do not all share the same standards, and they present rather diverse views. From the contributions received, there are three papers that represent official sets of rules:

- On the 16th of April 1996, the Flemish Government issued an ordinance relative to the training of teachers and to life long training. A modification issued on the 29th of September 1998 defines the teacher's role.
- Attachment "A" of the Italian Ministerial Decree of the 26th of May 1998, which lays down the rules and regulations for training courses that prepare teachers.
- The ordinance of December 12th, 2000 by the French Community of Belgium, which defines the initial training of schoolmasters and teachers.

There is a text that derives from a wide institutional consent, which is the common declaration of the Ministers of Culture's Conference President and the German schools' unions, held on the 5th of October 2000. The other texts represent relatively referential documents, and they apply to:

- The definition of the competency fields that interpose in the training curriculum of the teachers in Portugal. This country has recently produced, subsequent to the conference, a "professional profile of the teacher" destined to serve of guideline to the institutions in charge with of the training of teachers;
- The "Handbook accompanying the regulations of the qualified teacher's statute, and the requirements foreseen by the initial training of teachers", produced by the Training Agency for British teachers in July 2001;
- The contribution of Austrian universities to the definition of competences to be developed during the teachers' training.

All the documents introduce a list of competences that are occasionally assembled in categories. The degree of precision and detail of the renewed competences is variable.

The **Flemish Community of Belgium** defines ten types of skills for the teachers in pre-school, primary and secondary levels. The teacher is seen as:

- an moderator of the learning processes;
- an educator;
- an expert of contents;
- an organizer;
- a researcher and an innovator;
- a collaborator of the parents;
- a member of a scholastic group;
- a collaborator of the outside world;
- a member of a teaching community;
- a cultural actor

What is more, each of these categories is further sub-divided, into a certain number of sub-skills.

In the **United Kingdom**, the skills are divided into three large categories concerning:
- professional values and practice;
- knowledge and understanding;
- the teaching of four aspects: 1) planning, expectations and aims, 2) teaching strategies, 3) supervision and evaluation 4) class management.

In addition, a large number of skills and sub-skills are incorporated into each typology.

Austria organized the skills in the same way, in wide-ranging categories that are sub-divided into eight specific skills:
- the skills belonging to the subjects taught and their methodologies;
- personal and social skills;
- organizational and classroom management skills.

Germany offers statement of principles, covering the skills stated in the form of a reasoned argument. The following list of teachers' characteristics is submitted, related to their proficiency:
- teachers are specialists of the process of acquiring knowledge;
- they are aware of the fact that education influences the development and the personality of young people;
- they evaluate;
- they continuously develop their professional skills;
- they take part in the evolution of the school;
- they support internal and external assessment;
- they are expected to participate in the quality development of the education system and the school system.

Italy has defined a professional profile made up of twelve skills:
- to have appropriate knowledge;
- to monitor of students in their training;
- to collaborate with colleagues, parents, the authorities, institutions, the world of business and associated bodies;
- to integrate personal skills into different educational contexts;
- to ensure continuing professional development;
- to manage teaching methods according to clearly defined targets and methods;
- to encourage student participation according to their own abilities, by encouraging their interest in cross curricula activity;
- to organize time, space and methodology so as to favour the learning process;

- to encourage communication and collaboration among the students;
- to encourage innovation;
- to evaluate teaching and the overall school activity;
- to take on an appropriate social role.

Finally, **Portugal** offers a general definition of the professional profile, which involves three aspects. The training of teachers must enable them:
- to adopt an active and critical attitude towards social realities;
- to seek innovation and the application of new methodologies within the field of teaching;
- to develop the skills of self-assessment and self-criticism.

The similarities between the national definitions

Even if the norms and the ideas of the various documents differ, similarities can be found among them. First of all, the French Community of Belgium's categories of skills have been taken as the basic reference point, and then aspects not analysed by the French Community have been taken into consideration.
The six categories taken into consideration by the French Community are connected to the following aspects of the teaching profession:

1. The social dimension surrounding the socio-cultural knowledge;
2. The appropriateness of a scientific approach and the assumption of an inclination towards research;
3. The dimension regarding the subjects taught comprises the mastery of disciplinary and interdisciplinary knowledge;
4. The relational dimension integrates socio-affective knowledge;
5. The pedagogical dimension is about pedagogical knowledge;
6. The dimension of practical reflection is connected to professional skills.

By examining the documents produced by the various countries, a great similarity has been found among the seven countries (or communities) examined.
The results connected to the six dimensions are the following:

1. - The social dimension of the teaching profession

The social dimension in widely taken into consideration. In fact, the **Flemish Community of Belgium** dedicates three of the ten aspects of the teacher's professional profile to it. For the "teacher as a partner of the external world", the text recognises the necessity of strengthening contacts, of communicating and of cooperating with the world outside school. For the "teacher as a member of the community", the text stresses participation in social debate and specific training to prepare teachers to contribute towards school management, and to reflect on the social role of the teacher, and his/her position within society. The teacher is also a cultural "actor", as foreseen by a third aspect: he/she must be able to show a critical approach towards the fields of social, economical, cultural, scientific and artistic life.
In **Italy**, the social and cultural context of the school is important; and learning to educate a multiethnic population with all its associated problems. Another important aspect is the collaboration with actors groups, the world of production, local authorities and families.
Germany emphasizes the values of justice and equality in the classroom: these values are only worth

something if the teacher acts as the role model for their students. Collaboration with parents is important, as is collaboration with the world outside school
Portugal has also given priority to the social aspect of the teachers' professional profile. The teacher should adopt an active and critical attitude to the social reality. Therefore their training focuses on the cultural, social and ethical aspects of education.
The detailed reference document introduced by the **United Kingdom** covers the social aspect of the teachers' profile over several chapters. Above all, it insists on respect towards cultural, religious, or ethnic differences. Teachers are expected to both put into practice, and expect this from the pupils they teach. Moreover, they are involved in the management of their institute, and they know the legal context in which it is organized.
Finally, in **Austria**, the accent is put on social skills, by promoting the development of a sense of solidarity and equality, as well as that of a social and intercultural awareness. The will to accept worldwide citizenship, different values while still knowing how to display one's own – these issues are in the forefront.

2. – Research, linked to the scientific approach

This aspect is also present in the profiles studied. The **Flemish Community of Belgium** devote a specific section to the teacher as innovator and researcher. The teacher should be aware of on-going progress in research, and should use this knowledge to lead constructive criticism put into practice innovation.

Italy also approves innovation, in collaboration with other institutions, and with the business world.
As for **Germany**, the research aspect is mostly addressed to the continuous training that enables teachers to renew their knowledge, and to take into account the most recent developments and scientific discoveries.
In the reference document of the **United Kingdom** there is a section about the teachers' ability to improve, by assessing and by learning to start from other people's work, and by using research results.
Austria puts research in the chapter about subject and teaching skills: results of current scientific research should be integrated into individual and collective learning.

3. – Teacher skills regarding thubject taught

Comments to be found in almost all the documents. The various aspects are defined in different formulae:

- Teacher as expert in both subject content and teaching methodology. (Flemish Community of Belgium);
- Teacher having appropriate knowledge of both the subject and teaching methodology; and integrating the subject and his/her own skills. (Italy);
- Teacher as purveyor of new technological knowledge. (Germany);
- The importance of scientific training.
- Knowledge and comprehension of the subject matter essential (United Kingdom);
- Expert in own subject and the teaching skills relative to it (Austria);

The following elements seem to be common to the reports: the mastery of basic principles, the

integration of the subject within a global curriculum, historical aspects of the subject, linguistic, expression and communication skills, educational usage of data processing technologies and the media.

4. – Relational skills

Relational skills are broadly covered in the texts.
For the **Flemish Community of Belgium**:

As educator, teacher-student relationships are important; the creation of a favourable learning environment, atmosphere of equality, the space for character development and social integration. to The teacher should get to know their students' social and emotional difficulties, and encourage their physical well-being;

As parental support, dialogue and the collaboration with the families is vital;

As a member of a school team, participation is implicit, and the development of an atmosphere of constructive collaboration .

In Italy the recommendation is for teachers to have an awareness and understanding of their students, by taking into account their psycho-social needs. Personal identity, communication and mutual respect between teacher and students is to be encouraged, so as to create the best learning environment possible in the classroom.
Germany encourages teacher-parent collaboration. The same stands for the **United Kingdom**, which insists primarily on the need to communicate effectively with parents.
Austria develops this dimension substantially by encouraging appropriate student-work relations, the development of a sense of solidarity, social and intercultural sensitivity, tolerance and empathy towards the creation of a climate of mutual respect between students and teachers; it also deals with conflict management and encourages internal communication.

5. – The educational point of view

From the list of elements in the professional profile common to all the teachers of the **Flemish Community of Belgium**, the educational dimension refers to the importance of monitoring the learning process; this can be done via both methodology, and also through educational research. A suitable learning environment is also considered vital.
As for **Italy**, educational competence consists of building a rapport adapted to the rhythm of learning capacity of each individual group of students.
The **German** document pinpoints the importance of evaluation, which is seen as a basic element of communication between teachers and students, since evaluation evolves into advice, appropriate remedial action and subsequently progress.
The reference document of the **United Kingdom** refers to the teacher as a specialist able to offer advice, suggest appropriate learning strategies, and to build up suitable strategies for the students entrusted to her. The teacher should also understand that the learning process is conditioned by the physical, intellectual, social and emotional development of the child.
For **Portugal**, the development of educational competences is important mostly for the training of those teachers working with pre-school and primary level pupils.
Austria points out a planning competence, aimed at adapting teaching to the individual and to the social background of the students. The role of mediator is extremely difficult: stimulating and structuring communication in class and within the school community by presenting various

possibilities of dialogue and decision-making, is the target here.

6. – Reflection and self-assessment

A reflective or critical dimension should be integrated into the practice of teaching.
For the **Flemish Community of Belgium**, the competence connected to this field is that of the teacher as a companion of the learning process: defining and formulating targets, identifying a methodological approach, selecting the tools, finalising the appropriate teaching methods, choosing the evaluation system and carrying it out. This Community also makes reference to the "organizing teacher": the teacher should be able to create a working climate enabling a structured learning; the teacher should plan the activities and organize the steps to be followed.
The **Italian** text highlights the fact that the teacher should be able to adapt his teaching by continually self-assessing his performance and should also be able to communicate with the students and to collaborate with members of the educational team. It is also about the ability to adapt and to take part in discussion.

The main target of the teachers in **Germany** is that of planning, organizing and researching teaching and learning methods, as well as the evaluation of their activity.
The **United Kingdom** emphasizes all the skills related to the planning and the learning process, built on the identification of students' expectations, as well as on those of the school, institute and of society in general, and on the definition of the targets to achieve. The determining of learning strategies is a fundamental issue. Supervision and evaluation are critical. Class management is an important aspect to consider.
For Portugal, teaching skills involve the observation, the collaboration, the intervention, the analysis and the critical reflection of situations that have arisen.
Finally, in **Austria** it is taken into consideration the organization of learning, a skill which involves the teacher's comprehension of his own role within the school, the mastery of the methods and tools that lead to improvement. The teacher must be able to intervene efficiently and strategically; know how to control evaluation methodology, and to practice self-assessment, and thereby constantly improve their teaching.

In every case there are some differences among the skills identified by each country. This is principally due to legal differences from country to country. For instance, some texts insist on issues related to the safety of the students: the United Kingdom shows, in its learning strategies, the aim of creating a reassuring environment. The Flemish Community of Belgium, in the competence called "the teacher as organizer", describes the attitude of creating a stimulating and functional class climate, by taking into account the safety of the students.
These differences are however minor, for they relate mainly to the sub-skill.

Overall, it seems that the reference systems taken into account up to now by the European Union countries are generally common. It might be possible – in the medium or even in the short term – to define a competence profile for European teachers, and it will represent a guarantee of mobility for the teachers, as well as a guarantee of quality for education within the Union. This may be accomplished, provided that a general debate is set up on this issue, with the aim of producing a general consensus on the definition of skills, and cooperation to define common profiles.

2.2. The Italian system of teachers' initial training in secondary education

2.2.1. The reference institutional framework

Until 1998, in Italy the course preparation of the primary schoolteachers – on the hand –, and of the secondary education professors – on the other hand -, authorized a clear separation between their professions: the former came from a "masterly" instruction, focused of the psycho-pedagogical themes, while the latter came from a exclusively disciplinary "academic" instruction.
Starting from 1998, things have changed, carrying out the Law 341 of 19/11/1990, entitled "*Reform of the academic didactic regulations*". This law, as well as the relative decrees aimed at putting it into effect, although it disposes the various courses for the primary school (Graduation course in Primary Education Sciences, CLSFP), and for the secondary school (School of Specialization in Secondary Teaching, SSIS), authorize the *fundamentally unitary character of the training for the position of professor* within the whole educational system; such unity may be brought back by a multitude of elements, out of which three appear as decisive:

1. The structure that prepares the future professors is the university, i.e. the training institution in which teaching is inherently connected to research: therefore both for the CLSFP and the SSIS, the ability of the teacher training courses to promote professionalism, is to be interpreted not in a dismissive way – as a mere instruction -, but rather as a means of deepening knowledge within a solid cultural establishment, and an enhancement of applications.
2. The University does not operate alone, but it closely interacts with the educational system: the training is a central element of the educational process, and among the CLSFP and the SSIS teaching corps there are – in a position of "supervisors" – teachers that work for the educational levels for which the students are preparing to work. In the same period of 1998, in which the *General criteria* for didactic regulations have been defined, - and *ad hoc* law was brought out to enforce this.
3. The *General criteria* that universities are bound to respect in the establishment of their Ordinations (M.D. 26.5.1998), include a substantial ensemble of common indications for the CLSFP and the SSIS; additional rules are consequently introduced for each of the two courses; yet, such rules represent mainly specifications of such common indications. In this common part, the individualization – in 12 items – of the *formative target* for both didactic structures, which is the professional profile of the trainee teacher – proves to be fundamental. Then, since the didactic activities must be directly finalized with the reaching of this formative aim, the setting up of the curriculum proves to be homogeneous, articulated on four areas: *formation for the position of professor* (Education sciences and other transversal themes, area 1); *Disciplinary didactics* (area 2)*; laboratory* (area 3); *training* (area 4).

2.2.2. The initial training of the professors belonging to the secondary education: the Specialized Schools for Secondary Education

In the precedent paragraph, we have been referring to the unitary aspects regarding the academic system related to the training of teachers, be it articulated on diversely collocated didactic structures: in the Educational Sciences Faculties, the degree courses in Primary Formation Sciences (CLSFP) are the norm, while for the whole university – sometimes even in a inter-university formula – we can refer to the Schools Specialized in Secondary Education (SSIS).
At this point, attention should be particularly focused on the initial training system of the professors, in

the context of secondary education.
As foreseen, this type of instruction takes place within the Schools Specialized in Secondary Education, structures that are managed directly by the University. The SSIS have been created in the 1998/1999 academic year, and the first training courses for the secondary education teaching degree initiated diffusely in the 1999/2000 academic year.
These courses last for two academic years. The degrees that give access to one of the qualification classes foreseen by the school orientation represent an admission degree, relative to each of the fields in which the Specialized School is directed. According to the specific Minister's Decree, the acceptance to the School occurs by means of titles and exams. Besides the need of forming a classification, the entrance examination is also aimed at checking the candidates' possession of the minimum requirements related to the disciplinary knowledge. The number of the candidates to be admitted is determined on an annual basis. The entrance examinations, as well as the selection tests, are to be performed according to procedures determined by the Rector's decree.

As already outlined, the dispositions and principles to be respected by the Specialized Schools are established by the cited Minister's Decree of the 26th of May 1998 – "*General criteria of discipline for the university degree courses in primary formation sciences, and for the Schools specialized in secondary education*". The formative target of the schools is relevantly defined:

"***Formative target of the degree course and of the school course***"
(Annex A to the M.D. 26.5.1998)

The following ensemble of **aptitudes and competences that characterize the professional profile** of the teacher, and that can be integrated and specified within the didactic regulations, constitute a formative target of the degree course and of the school course:

1) to possess adequate knowledge of the interdisciplinary sectors of one's own competence, as well as those referring to historical and epistemological aspects;
2) to listen, remark, understand the students during the performance of training activities, and assuming knowingly and collegially their formative and psycho-social needs, with the aim of promoting the construction of a personal identity, feminine and masculine, together with one's self-orientation;
3) to exercise one's own functions in close collaboration with his/her colleagues, the families, the school authorities, the training agencies that perform and are represented within the territory;
4) to frame one's own disciplinary competences within the various educational contexts, by referring open-mindedly to the critics and the cultural interaction;
5) to continue to develop and deepen one's knowledge and professional competences, but continuing to pay attention to the new scientific acquirements;
6) to make one's didactic activities significant, systematic, complex and motivating, by means of a flexible curricular projection, which includes decisions regarding targets, knowledge areas, didactic methods;
7) to render the students participant to the field of knowledge and experience in which they operate, so as to follow their educational progress, the specificity of their contents, the interrelation contents-methods, as well as to the integration within other formative areas;
8) to organize the time, the space, the material – even the multimedia-, the didactic technologies, so as to make the school a learning environment addresses to everyone;
9) to manage the communication with the students and the integration amongst them as essential

instruments for the construction of attitudes, abilities, experiences, knowledge, as well as for the enhancement of their willingness to express themselves and to learn, and of their faith in the fact that they are able of acquiring new knowledge.

10) to promote innovation within the school, even if in collaboration with other schools or with the working environment;
11) to check and to assess, by means of docimological updated instruments, the teaching-learning activities, as well as the total school activity;
12) to assume one's own social role, in the context of the school's autonomy, with the awareness of the tasks and the rights of the teacher, and of the relative organizational problematic, by paying attention to the civil and cultural realities (Italian and European), in which the latter operates, as well as other necessary interethnic openness, and the specific issues of teaching to students belonging to non-Italian culture, language and nationality."

The Annex C of the Ministry's Decree of the 26th of May 1998, the "**Minimal qualifying contexts of the school**" are defined:

"The didactic regulations of each university individuates the minimum qualifying contents necessary to the achievement of the formative target related to the school, the didactic activities and the credits relative to the following areas, and to the scientific-disciplinary sectors:

Area 1: *training for the position of professor*. Includes didactic activities finalized with the acquisition of the necessary attitudes and competences mentioned in Annex A within the education sciences and other transversal aspects of the position.

Area 2: *formative contents of the directions.* It comprises didactic activities finalized with the acquisition of attitudes and competences - of which the Annex A, regarding the didactic methodologies of the correspondent disciplines, with specific attention to logic, genesis, the historical development, the epistemological implications, the practical meaning and the social function of each knowledge.

Area 3: *laboratory* (article 1, codicil 1, letter f) with specific reference to the formative contents of the directions.

Area 4: *training* (article 1, codicil 1, letter g)".

The didactic regulations of the SSIS are defined in compliance with the following criteria (art. 4 codicil 5):

a. at least 20% of the total credits are relative to didactic activities, of common norm to the various directions and offered proportionally to the number of students of area 1 (*formation for the teaching function*);
b. at least of 20% of the total credits are relative to didactic activities of area 2 (*formative contents of the directions*);
c. according to the instructions in a) and b), the offer of the university must be wider than the obligations foreseen for the student, which consents him to also benefit of some optional choices.
The didactic activities comprise the laboratory and the training. The *laboratory activities* are destined no less than 10% of the formative credits you related to the degree corse, and no less than 20% of the credits related to the school. The *training* activities, comprised the planning and verification phases,

are destined no less of 25% of the school credits.

The didactic activities foreseen for each semestre imply altogether between 250 and 300 hours.

The council of the school approves an individual study plan for each student. Such plan: a. *evaluates the formative path practiced at the university*, by recognizing credits corresponding to no more than two semesters; within the same total limit, eventual instruction experiences completed can be attributed a substitutive credit from the training obligation, which may represent no more than half of the obligations;
b. *defines the integrated curriculum*, eventually extended one or two semesters, for the student who means to achieve a multitude of qualifications at the same time;
c. *foresees, in addition to the school activities, an ulterior formation to be acquired in the competent faculties*, in which cases the previous curriculum turns out devoid in important disciplines for the qualification to be achieve and for the participation to the relating competitions;
d. *it disciplines the development of training* in various types of school institutions.

The frequency of the course is compulsory. At the end of each academic year, specializer must take a theorical-practical examination for the passage to the successive corse-year. After the theorical-practical examination of the last year, the study course is concluded with a final examination, which consists of a discussion over a written dissertation on one or more subjects of the course.
The final examination for the attainment of the specialization diploma is valued as a final examination, and qualifies to the teaching of classes corresponding to the disciplinary areas which the bachelor diplomas of which the specializers are refer to. The specialization diploma for the secondary instruction has a qualifying value and consents the admission to competitions for teaching positions related to the inferior and superior secondary education.

2.2.3. SSIS specialization and habilitation for teaching in a secondary school

As far as it concerns the specific of the **qualification for teaching**, those who achieve the specialization diploma released by the SSIS results as qualified for teaching and can become part, by introducing an appropriate application, of the permanent list of the competition classes of which he/she possesses the required qualification, in a province of his/her own choice, independently from where he/she has attended the SSIS. Art.1 codicil 6 of the Law n.306 of October the 27th 2000, establishes in fact that:
"The State examination, taken at the completino of the corse performed within the specialization schools , mentioned in article 4 of the law n.341 of November 19th 1990, and its subsequent modifications, values as an examination test to be inserted within the permanent lists foreseen by article 401 of the legislative decree n.297 of May the 16th, as replaced from article 1, codicil 6, of the law, n.124 of May the 3rd 1999. …".
The permanent classification lists supply 50% of the positions annually available for the position entrances - the other 50% come from the meritory lists of the ordinary competitions - and also serve to the attribution of annual temporary jobs; moreover, those who appear on it have a priority, compared to the aspirant substitute teachers who are not included, as far as it concerns the attribution of temporary teaching jobs conferred by the Principals.
The ensuing of the specialized qualification released by the SSIS guarantees an additional scoring, related to the qualifications obtained in a different manner, be it through the evaluation of the regular

contest's results, and be it the results of the permanent lists (art.3 of the inter-ministry decree no. 460/98). Such additional scores have been specified in art.8 of the inter-ministry decree no.268/2001:

"Art.8 Additional scoring

1. *With the aim of being inserted within the permanent lists foreseen by art.2 of the law no.124 of May the 3rd 1999, and by the Regulation adopted through a decree of the Public Instruction Minister no.123 of March the 27th 2000 (published in the Official Monitor – general series – no.114 of March the 17th 2000), the candidate qualified by the preceding layouts are attributed an additional scoring, compared to the one due for the ensued qualification, equal to thirty points.*
2. *According to the results obtained at the contests for teaching posts through titles and secondary school examinations, the eligible candidates on the meritorious list are attributed and additional score of three points for the qualification related to the disciplines included in the class of competitions, as well ass two points for the non-related qualification.*

It is pointed up that the additional thirty points for the permanent lists are attributed only to the qualifications obtained and certified by the SSIS, and they are not attributed in the class of competitions for which one is automatically found as qualified, as an effect of the regulations related to the correspondence of qualifications (see e.g. the Ministry circular no. 215 of September the 8th 1999, article 6). As an example, a person qualified by the SSIS for the 49/A class of competition – Mathematics and Physics results qualified as well for the class of competitions 47/A Mathematics, 38/A Physics, 48/A Applied Mathematics. Therefore, the person will be permitted to register for four different permanent lists, but the additional thirty points will be assigned only for the list on which he/she has obtained the SSIS qualification. This fact results explicitly from the Ministry Decree no.11 of February 12th 2002, which at the 2nd note of evaluation for the permanent list titles indicated that "*the additional scoring is assigned only for the qualification/s obtained and certified by the S.S.I.S., and not for the qualifications declared as correspondent, according to table A/2, annexed to the M.D. no. 39 of January 30th 1998*".

Due to the updating of the permanent lists ordered by the decree of February 2002, the additional scores described above have been attributed to those who have already been inscribed, or to those who had the right to be inscribed on the permanent lists, by being already qualified with other procedures than those of the SSIS. A possible ensuing of the specialization will therefore bring thirty additional points in the permanent lists of the class of competitions for which the SSIS specialization will be obtained, as well as a possible improvement of the qualification mark.

In order to accede at the regular contests announced after May the 1st 2002, the inter-ministry decree no.460/98 foresees the necessity of being already qualifies, particularly through a specialization diploma.

The following regular contests will provide the qualification only for those who, being devoid of it, will have the right to be admitted in role, according to the utile placement in the related meritorious list: in this case, the regular manner of obtaining the qualification will be the SSIS, because the fact of overcoming the contest examinations does not automatically offer the qualification, as happened until the announced contest of 1999. Yet, it is confirmed that the following may accede to the regular contests, according to the same decree, even if they lack the requisite of qualification:

a) the graduates from the academic years of 2001-2002, 2002-2003 and 2003-20004, if they have attended courses of respectively four, five and six years (art.2 of the I.D. no.460/98);
b) the non-qualified graduates, provided that the number of requests presented for a class of competition is less that the triple of the teacher post anticipated for the triennial validity of the contest's lists (art.4 of the I.D. no.460/98).

In the reference of **future prospects** for the teaching personnel recruiting system, the reform of the teaching personnel recruiting system finds a first significant passage in the text approved by the Law no.53 of March the 28th 2003. Some interesting aspects are gathered, related to the training of teachers, as seen in articles 5 and 7 of the above mentioned law:

a) it indicates the specialized university degree as an initial education for all the teachers, whether they teach the first study cycle (elementary school and first grade secondary school), or the second cycle (secondary school of second degree). Following decrees will fix the departments of the specialized university degrees corresponding to the school instruction.
b) The final examination for obtaining the specialized university degree will act as a qualification proof for one or more teachings individuated by a succeeding decree;
c) The access to the specialized university degree will be programmed according to the teaching positions effectively available at the educational institutions;
d) Those who have obtained the specialized university degree with the aim of acceding to the teaching positions of the educational institutions will perform, subject to the working formation contracts, specific training activities.

Up till now, the decrees aimed at putting the decisions into act have not been ensued; therefore there are multiple questions that follow the approbation of the new law. Some of the unsolved questions are:

1 The decree no.509 of 1999, put into effect starting from 2001, has transformed the entire organization of the universities through a two-level articulation: first level degree and specialized degree – which have substituted the precedent unique university degree. Still, this reformation has not been followed by the adaptation of the Minister's Decree that disciplines the access to various class of competitions (M.D. 39/1998).

Furthermore, the future access to a teaching position seems to become more and more problematic for the first level graduates.

2 Besides the decisions established by the reformation law, the actual status and the awaiting for the emission of actuation decrees allows the class of competitions of the secondary schools the possibility of obtaining qualifications by means of the SSIS. Furthermore, it is possible that qualifying courses be emitted for those who have accrued seniority within various orders and school degrees.
3 The recruiting forms foreseen by the school reform will bring to the following change in the regulations that discipline the present access to staff roles of the teaching personnel. The present recruiting system, put into effect by the law 124/99, as anticipated, foresees that the employment for 50% of the positions occur from the classification list of the regular contest including titles and examinations, while the rest of 50% occur from the permanent list. The integration within the new system and the one already existent will bring about the necessity of introducing a complex examination of the legislation.

2.2.4. The formation of secondary teaching in Friuli-Venezia Giulia

According to the initiative of the Universities of Trieste and Udine, in Friuli-Venezia Giulia has been established a "*Regional Inter-University School of Specialization for the Secondary Teaching*". Referring to this initiative, on 19.06.1998, the universities mentioned above have constituted a Consortium denominated "Inter-University Consortium for Teachers' Instruction" (CIFI), administered by a Didactic Management Committee. The Consortium has the task of coordinating the activities of the two Universities concerning the instruction of teachers.
The School's head offices are located at the Universities of Trieste and Udine, and the teaching

commitment of each of them is divided according to a unitary programming, which takes into account the didactic, financial and logistic resources of the head offices and of the formative request within the regional territory.
The Regulation of the Regional Inter-University School provides that each university institutes the head offices' Council of the School, and a Directing Committee for each direction activated in the location, according to the modalities foreseen by the Didactic Regulations.
The general targets of the School are articulated according to the following directions:

1 Acquisition of qualifying competences for the secondary teaching;
2 Acquisition if competences related to the education sciences and the educational interaction;
3 Acquisition of competences of historical and epistemological character within the teaching disciplines belonging to each of the qualifications achievable by the secondary schools;
4 Acquisition of competences related to the didactics of the disciplines characteristic to each qualification;
5 Acquisition of competences connected to the factual practice of teaching.

The School lasts for 2 academic years, for a total of 1000 class hours and 120 credits. The *admission* to the Schools is performed through a contest based on examinations and titles, at the conclusion of which a classification list is compiled according to the total scoring, expresses in hundredths (40 points are reserved to the first examination test, 30 points to the evaluation of the titles and 30 points to the second examination test).
The School is articulated in *directions*, corresponding to qualification groups for teaching in the secondary schools; these directions foresee study plans adequate to the professional formation corresponding to the class of competitions related to teaching in the secondary schools, according to the dispositions of the MURST Decree of 26.05.98, and its subsequent changes and additions.
The number of the positions offered for each direction is of 120. in any case, the School Council is reserved the possibility of non activating class of competitions, in case the anticipated number of inscriptions is not reached.

The directions activated by the **University of Udine** are:

1 Area of Natural Sciences;
2 Linguistic/Literary Area;
3 Area of Foreign Languages;
4 Area of Physics-Informatics-Mathematics.

At the University of Udine, the class of competitions activated within the above mentioned areas are:

	A059	Mathematical, Chemical, Physical and Natural Sciences for middle schools
	A060	Natural sciences, Chemistry, Geography and Microbiology
	A074	Animal breeding and animal production science
	A043	Italian, History and Civic Education, Geography for middle schools
	A050	Literary subjects for the secondary institutes of education

	A051	Literary subjects and Latin for high-schools and mastery institutes
	A052	Literary subjects, Latin and Greek for classical high-schools
	A045	Foreign language (English)
	A046	Foreign language and civilization (English)
	A045	Foreign language (German)
	A046	Foreign language and civilization (German)
	A038	Physics
	A042	Informatics
	A047	Mathematics
	A048	Applied Mathematics
	A049	Mathematics and Physics
	A059	Mathematical, Chemical, Physical and Natural Sciences for middle

The directions activated by the **University of Trieste** are:

5 Area of Natural Sciences;
6 Area of Physics-Informatics-Mathematics;
7 Linguistic/Literary Area;
8 Area of Foreign Languages;
9 Area of Human Sciences;
10 Area of Music and Entertainment.

At the University of Trieste, the activated class of competitions are:

	A059	Mathematical, Chemical, Physical and Natural Sciences for middle schools
	A060	Natural Sciences, Chemistry, Geography, Microbiology
	A038	Physics
	A047	Mathematics
	A048	Applied Mathematics
	A049	Mathematics and Physics
	A059	Mathematical, Chemical, Physical and Natural Sciences for middle schools
	A043	Italian, History and Civic Education, Geography for middle schools
	A050	Literary subjects for the second degree secondary education institutes

	A051	Literary subjects and Latin for high-schools and masterly institute
	A052	Literary subjects, Latin and Greek for classical high-schools
	A080	Italian for the Slovene teaching middle schools
	A081	Italian language and literature for the second degree secondary education institutes which teach in Slovene language
	A082	Literary subjects for the second degree education institutes (Slovene)
	A083	Literary subjects and Latin for high-schools and mastery institutes (Slovene)
	A045	Foreign language (English
	A046	Foreign language and civilization (English)
	A045	Foreign Language (German)
	A046	Foreign language and civilizations (German
	A045	Foreign language (French)
	A046	Foreign language and civilization (French)
	A036	Philosophy, Psychology and Education Sciences
	A037	Philosophy and History
	A031	Musical Education for the second degree institutions and schools of secondary education
	A032	Musical Education for middle schools

The maximum teaching schedule of the School foresees 4 phases, articulated in 500 annual hours, for a period of 2 course years:

A1: the *Formation for the position of professor*; equivalent to 200 hours and 24 credits (20% of the total amount of classes), it includes didactic activities finalized with the acquisition of the necessary aptitudes and competences for the education sector and other indirect aspects of the position;
A2: the *Formative contents of the directions*; equivalent to 200 hours and 24 credits (20% of the total amount of classes), it includes didactic activities finalized with the acquisition of the aptitudes and competences related to the didactic methodologies of the corresponding disciplines, with specific attention to the logic, the genesis, the historical development, the epistemological implications, the practical importance and the social function of each knowledge;
L: the *Laboratory of the discipline*; equivalent to 200 hours and 24 credits (20% of the total amount of classes); it includes the analysis, the projection and the simulation of didactic activities with the coordinated intervention of professors from the A1 and
A2 phases;
T: the *Training*; to 250 hours and 30 credits (25% of the total amount of classes); it represents practical experiences guided by Tutors, performed at school institutions with the aim at integrating the operational competences together with the theoretical ones.

The rest of 15% of the total amount of classes (18 credits) is dedicated to indirect activities.

The School Council approves an individualized teaching schedule for each student, by taking into account his/her former training path; in order to accomplish this it evaluates:

a) university courses concerning disciplinary didactics and methodologies;
b) epistemological, historical-critical and didactic university courses;
c) pedagogical, psychological, docimological university courses;
d) specialization and assimilating university courses, as long as they are relevant;
e) Specialization Schools, as long as they are relevant;
f) research Doctorates, as long as they are relevant.

Such activities may constitute didactic credits as long as they correspond to no more than an academic year (60 credits). Substitutive credits from the training activities can be attributed, as long as they do not overpass 125 hours, corresponding to 15 credits, in case the student possesses previous teaching experiences and formative experiences acquired in post-secondary structures.
The teaching schedules of the Specialization School are organized according to competence areas, which is according to the professional that are considered necessary to the teacher of the secondary school. At its turn, each area is predisposed within certain “modules”, each of them being assigned to the responsibility of a professor in charge to survey the development, and to coordinate the inter-disciplinary contributions. Each module foresees theoretical classes, laboratory activities and, finally, connexions to the training experiences. The integration of the various phases is carried out by the group of professors involved in the module, who will have to avail from the collaboration of specific personnel, according to the case.

2.2.4. The Training of teachers for the "basic skills": Mathematics, literary subjects, foreign language (English)

The term *"basic competences"* is related to the competences concerning the contents of literacy, defined at a European level by the terms *"literacy"*, *"numeracy"* and *"foreign languages"*. Within the Italian school system, such competences correspond to the teaching of Mathematics, the literary subjects – Italian, History, and Geography – and that of the foreign language (English most of all).

The following paragraphs present the formative offer presented by the Schools of Specialization, addressed to the future teachers for the secondary school, with reference to the above mentioned competences; furthermore, the competences the programs and the examination tests are delineated for the participation at public contests.

The SSIS training of the teachers' basic skills

The SSIS of the regions are usually articulated in *macro areas*, and subsequently in *directions* corresponding to groups of qualifications for teaching in secondary schools; as disposed by the M.D. of 26.05.98 and the subsequent changes and additions, such directions foresee teaching schedules adequate to the professional formation correspondent to the class of competitions related to the teaching in secondary schools.
Related to the teaching of basic competences for superiors schools, the "Physics-Informatics-Mathematics" direction includes teaching schedules for the class of competitions A047 "Mathematics", A048 "Applied Mathematics" and A049 "Mathematics and Physics"; the "Linguistic/Literary" direction includes the teaching schedule A050 "Literary subjects for the second degree institutes of secondary education"; finally, the "Foreign languages" direction includes the teaching schedule for the A046 class – "Foreign language and civilization (English)".

The following Table outlines the class of competitions of interest, as well as the corresponding teachings for the superior institutes of secondary education:

Code	Class of competition	School and direction	Subject
A047	**Mathematics**	High-school (2 years)	Mathematics
		Aeronautical technical institutes	Mathematics
		Technical institutes for quantity surveyors	Mathematics
		Industrial technical institutes for *the Informatics direction*	Mathematics; General, Applied Mathematics and Laboratory
		Nautical technical institutes	Mathematics
		Professional institutes *for the white art and the confectionery industry*	Mathematics; General Mathematics; Mathematics and Informatics Mathematics
A048	**Applied Mathematics**	Commercial technical institutes	

		for the following directions: administrative, foreign trade, commercial *for the direction: juridical, economic, corporate* *for the direction: expert accountant, business consultant and programmer*	Mathematics; Financial, Actuarial and Statistic Mathematics; Mathematics and laboratory Mathematics, Theory of probability and Statistics
		Technical institutions for corporate experts and foreign language correspondents	Mathematics, Applied Mathematics and Statistics
		Technical-industrial institutes *for the direction: Informatics*	Theory of probability, statistics, operative research and laboratory
		Professional institutes	Applied Mathematics; Applied Mathematics and Statistics
A049	**Mathematics and Physics**	High-schools	Mathematics and Physics
		Agrarian technical institutes	Mathematics and Physics
		Feminine technical institutes	Mathematics and Physics
		Tourist technical institutes	Mathematics and Physics
		Professional institutes	Mathematics and Physics
		Mastery institutes	Mathematics and Physics
		Art institutes	Mathematics and Physics; Mathematics, Physics and Accounting; Mathematics, Physics, Accounting and Sciences
50/A	**Literary subjects in the second degree institutes of secondary education**	Mastery institutes	Italian Literature, History and Civic Education
		Technical institutes	Italian Language and Literature; Italian Language; Italian Literature, History and Civic Education; Geography; Italian, History and Geography; Italian Language and Literature; History
		Professional institutes	Italian Language and Literature, History; All-round education and Civic Education, Literature and History of Entertainment; Foreign Literatures; Italian; History
		Art high-schools	Literature and History
		Art institutes	Italian Literature and History; Italian Language, History and Civic Education; Geography
		Mastery institutes	Italian Language and Literature, History, Civic Education and Geography
A046	**Foreign language and civilization (English)**	Second degree institutes of secondary education	Foreign Language and Literature
		Industrial technical institutes	Technical perfection of the foreign language
		Professional institutes	Foreign language; technical conversation in the foreign language

2.2.5. The syllabuses foreseen by the SSIS

Related to the above mentioned class disciplines, the *didactic programmes* foreseen by the Specialization Schools might present some slight differences of methodological formulation, related to e.g. the credits assigned for the various modules, the sequential logic of the didactic path's organization, the evaluation learning modalities, that the professors consider most appropriate and efficient in order to assess the apprehension related to the didactic module assigned.

As a following, we will consider the programs defined for the various class of competitions within the teaching schedule of the Specialization School for the Secondary Education, foreseen by the University of Udine.

A050 Literary subjects for the second degree institutes of secondary education

First year instruction

1	General Pedagogy	A1	3 cd
1	Sociology of Education	A1	3 cd
2	History of schools and educational institutions	A1	2 cd
2	Psychology of apprehension and memory	A1	2 cd
2	Psychology of the developing age	A1	2 cd
5	Institutions of public law and school legislation	TRS	2 cd
5	Autonomy of the school reformation process	TRS	1 cd
*	Teaching Informatics	TRS	2 cd
3	Introductions to the didactics of Italian Language and Literature	A2	3 cd
3	Introduction to History: concepts and methods	A2	3 cd
3	Introduction to Geography: concepts and methods	A2	2 cd
4	Analysis of the literary text I	A2	1 cd
4	Notions of Language and Language Science I	A2	1 cd
4	Didactics of Writing	A2	1 cd
4	Didactics of Comprehension and Oral Production I	A2	1 cd
*	Basis of Latin I Module (language)	A2	1 cd
3	Introductive laboratory of the Didactics of Italian Language and Literature	LAB	3 cd
3	Introductive laboratory of History: concepts and methods	LAB	3 cd
3	Introductive laboratory of Geography: concepts and methods	LAB	2 cd
4	Laboratory of Analysis of the literary text I	LAB	1 cd
4	Laboratory of Notions connected to Language and the Theory of Language I	LAB	1 cd
4	Laboratory of Writing Didactics	LAB	1 cd

4 Laboratory of Didactics of Comprehension and Oral Production I LAB 1 cd

Evaluation tests

1. Integrated examination of General Pedagogy and Sociology of Education
2. Integrated examination of General Psychology of the learning memory, Psychology of the developing age, History of the school and educational institutions
3. Integrate course of Introduction to the Didactics of Italian language and literature, Introduction to History: concepts and methods, and Introduction to Geography: concepts and methods (and laboratories)
4. Integrated course of Analysis of the literary text I, Didactics of comprehension and oral production I, notions of Language and Language Science I and Didactics of Writing (and laboratories)
5. Integrated examination of Institutions of Public Law and School Legislation

* for this course, only one examination is foreseen.

A050 Literary subjects within the second degree institutes of secondary education

Second year instruction

1	Experimental Pedagogy and Docimology	A1	2 cd
1	Social Psychology	A1	2 cd
1	Special Pedagogy	A1	2 cd
2	General Didactics	A1	2 cd
2	Laboratory of General Didactics	A1	1 cd
2	Psychology of Education	A1	2 cd
2	Laboratory of Psychology of Education	A1	1 cd
*	Direction	TRS	2 cd
*	Laboratory of Didactic Methodologies	TRS	3 cd
4	Didactics of Comprehension and Oral Production II	TRS	2 cd
3	Didactics of the 20thc Literature	A2	2 cd
3	History and Historiography of the 20thc	A2	2 cd
4	Notions of Language and Language Science II	A2	1 cd
4	Didactics of Italian Language and Literature II	A2	2 cd
4	Italian for foreigners	A2	1 cd
5	Didactics of History	A2	2 cd
5	Didactics of Geography	A2	1 cd
3	Laboratory of Didactics of the 20thc Literature	LAB	2 cd
3	Laboratory of History and Historiography of the 20thc	LAB	2 cd
4	Laboratory of Didactics of the Italian Language and Literature	LAB	2 cd
4	Laboratory of Italian for foreigners	LAB	1 cd
5	Laboratory of Didactics of History	LAB	2 cd
4	Laboratory of Didactics of Comprehension and Oral Production II	LAB	2 cd
5	Laboratory of Didactics of Geography II	LAB	1 cd

Evaluation tests

1. Integrated examination of Experimental Pedagogy and Docimology, Special Pedagogy and Social Psychology
2. Integrated examination of General Didactics, Psychology of Education and Laboratories
3. Integrated course of Didactics of the 20thc Literature, and 20thc History and Historiography (and laboratories)
4. Integrated course of Didactics of Comprehension and Oral Production II; Notions of Language and Language Science II; Didactics of Italian Language and Literature for foreigners (and laboratories)
5. Integrated course of Didactics of History and Didactics of Geography II (and laboratories)

* for this course, only one examination is foreseen

A047 Mathematics

First year instructions

1	General Pedagogy	A1	3 cd
1	Sociology of Education	A1	3 cd
2	History of the schools and educational institutes	A1	2 cd
2	Psychology of learning and memory	A1	2 cd
2	Psychology of the developing age	A1	2 cd
6	Institutions of public law and school legislation	TRS	2 cd
6	Autonomy of the school reformation process	TRS	1 cd
*	Teaching informatics	TRS	2 cd
4	Didactics of Mathematics: Algebra	A2	1 cd
3	Didactics of Mathematics: Analysis	A2	1 cd
3	Complementary Mathematics: Geometry	A2	4 cd
4	Complementary Mathematics: Arithmetic	A2	2 cd
5	Bases of Informatics 1	A2	2 cd
5	Bases of Informatics 2	A2	2 cd
3	Bases of Mathematics (it may be attended the first or the second year)	A2	4 cd
3	Laboratory – Didactics of Mathematics: Analysis	LAB	2 cd
4	Laboratory – Didactics of Mathematics: Algebra	LAB	1 cd
3	Laboratory - Calculus 1	LAB	1 cd
3	Laboratory - Calculus 2	LAB	1 cd
4	Laboratory – Symbolic Calculus	LAB	3 cd
5	Laboratory - Statistics	LAB	2 cd
5	Laboratory – Moderate Mathematics	LAB	2 cd

Evaluation tests

1. Integrated examination of General Pedagogy and Sociology of Education
2. Integrated examination of General Psychology of the learning memory, Psychology of the developing age, History of the school and educational institutions
3. Didactics of Mathematics I
4. Didactics of Mathematics II
5. Integrated examination - Moderate Mathematics, Informatics and Statistics
6. Integrated examination - Institutions of Public Law and School Legislation

* for this course, only one examination is foreseen.

A047 Mathematics

Second year instruction

1	Experimental Pedagogy and Docimology	A1	2 cd
1	Social Psychology	A1	2 cd
1	Special Pedagogy	A1	2 cd
2	General Didactics	A1	2 cd
2	Laboratory of General Didactics	A1	1 cd
2	Psychology of Education	A1	2 cd
2	Laboratory of Psychology of Education	A1	1 cd
*	Direction	TRS	2 cd
*	Laboratory of didactic methodologies	TRS	3 cd
	The student will choose 2 of the courses activated within this Direction		
3	Didactics of Mathematics: Geometry	A2	1 cd
3	Didactics of Mathematics: Probabilities	A2	2 cd
4	Didactics of Mathematics: Logic	A2	1 cd
4	History and Epistemology of Mathematics	A2	2 cd
5	Complementary Mathematics: differential calculus	A2	2 cd
3	Laboratory – Didactics of Mathematics: Geometry	LAB	2 cd
3	Laboratory – Didactics of Mathematics: Probabilities	LAB	1 cd
3	Software laboratory – Didactics of Mathematics	LAB	3 cd
4	Laboratory – Didactics of Mathematics: Logic	LAB	2 cd
5	Laboratory – Didactics of Programming	LAB	2 cd
5	Laboratory – Multimedia & informatics tools	LAB	2 cd

Evaluation tests

1. Integrated examination - Experimental Pedagogy and Docimology, Special Pedagogy and Social Psychology
2. Integrated examination - General Didactics, Psychology of Education and Laboratories
3. Integrated examination – Geometry, Probabilities and software for the didactics of Mathematics
4. Integrated examination – Logic and History
5. Integrated examination of differential calculus, Programming and Laboratory of informatics and multimedia tools

Assessment test – foreign language

* for this course, only one examination is foreseen

A048 Applied Mathematics

First year instruction

1	General Pedagogy	A1	3 cd
1	Sociology of Education	A1	3 cd
2	History of the schools and educational institutes	A1	2 cd
2	Psychology of learning and memory	A1	2 cd
2	Psychology of the developing age	A1	2 cd
6	Institutions of public law and school legislation	TRS	2 cd
6	Autonomy of the school reformation process	TRS	1 cd
*	Teaching informatics	TRS	2 cd
4	Didactics of Mathematics: Algebra	A2	1 cd
3	Didactics of Mathematics: Analisys	A2	1 cd
3	Complementary Mathematics: Geometry	A2	4 cd
4	Compelentary Mathematics: Aritmetics	A2	2 cd
5	Bases of Informatics 1	A2	2 cd
5	Bases of Informatics 2	A2	2 cd
3	Bases of Mathematics (it may be attended the first of the second year)	A2	4 cd
3	Laboratory – Didactics of Mathematics: Analisys	LAB	2 cd
4	Laboratory – Didactics of Mathematics: Algebra	LAB	1 cd
3	Laboratory – Numeric Calculus 1	LAB	1 cd
3	Laboratory – Numeric Calculus 2	LAB	1 cd
4	Laboratory – Symbolic Calculus	LAB	3 cd
5	Laboratory - Statistics	LAB	2 cd
5	Laboratory – Moderate Mathematics	LAB	2 cd

Evaluation tests

1. Integrated examination of General Pedagogy and Sociology of Education
2. Integrated examination of General Psychology of the learning memory, Psychology of the developing age, History of the school and educational institutions
3. Didactics of Mathematics I
4. Didactics of Mathematics II
5. Integrated examination - Moderate Mathematics, Informatics and Statistics
6. Integrated examination - Institutions of Public Law and School Legislation

* for this course, only one examination is foreseen.

A048 Applied Mathematics

Second year instruction

1	Experimental Pedagogy and Docimology	A1	2 cd
1	Social Psychology	A1	2 cd
1	Special Pedagogy	A1	2 cd
2	General Didactics	A1	2 cd
2	Laboratory of General Didactics	A1	1 cd
2	Psychology of Education	A1	2 cd
2	Laboratory of Psychology of Education	A1	1 cd
*	Direction	TRS	2 cd
*	Laboratory of didactic methodologies	TRS	3 cd
	The student will choose 2 of the courses activated within this Direction		
3	Didactics of Mathematics: Geometry	A2	1 cd
3	Didactics of Mathematics: Probabilities	A2	2 cd
4	Didactics of Mathematics: Logic	A2	1 cd
4	History and Epistemology of Mathematics	A2	2 cd
5	Mathematics: Finances I	A2	1cd
5	Mathematics: Finances 2	A2	1cd
3	Laboratory – Didactics of Mathematics: Geometry	LAB	2 cd
3	Laboratory – Didactics of Mathematics: Probabilities	LAB	1 cd
3	Software laboratory – Didactics of Mathematics	LAB	3 cd
4	Laboratory – Didactics of Mathematics: Logic	LAB	2 cd
5	Laboratory – Didactics of Programming	LAB	2 cd
5	Laboratory – Multimedia & informatics tools	LAB	2 cd

Training

Evaluation tests

1. Integrated examination - Experimental Pedagogy and Docimology, Special Pedagogy and Social Psychology
2. Integrated examination - General Didactics, Psychology of Education and Laboratories
3. Integrated examination – Geometry, Probabilities and software for the didactics of Mathematics
4. Integrated examination – Logic and History
5. Integrated examination of Programming, financial Mathematics and multimedia tools

Assessment test – foreign language

* for this course, only one examination is foreseen

A049 Mathematics and Physics

First year instruction

1	General Pedagogy	A1	3 cd
1	Sociology of Education	A1	3 cd
2	History of the schools and educational institutes	A1	2 cd
2	Psychology of learning and memory	A1	2 cd
2	Psychology of the developing age	A1	2 cd
6	Institutions of public law and school legislation	TRS	2 cd
6	Autonomy of the school reformation process	TRS	1 cd
*	Teaching informatics	TRS	2 cd
3	Didactics of Mathematics: Analysis	A2	1 cd
3	Didactics of Mathematics: Algebra	A2	1 cd
3	Complementary Mathematics: Geometry	A2	4 cd
3	Complementary Mathematics: Arithmetic	A2	2 cd
5	Didactics of Physics A	A2	2 cd
4	Preparation of didactic experiments A	A2	2 cd
4	Elaboration of the scientific didactics	A2	2 cd
3	Laboratory – Didactics of Mathematics: Analysis	LAB	2 cd
3	Laboratory – Didactics of Mathematics: Algebra	LAB	1 cd
4	Laboratory - Mechanics 1	LAB	1 cd
5	Laboratory - Thermodynamics	LAB	2 cd
@	Laboratory - Electromagnetism 1	LAB	1 cd
5	Laboratory - Optics 1	LAB	1 cd
5	Laboratory – Quantum Physics 1	LAB	1 cd
4	Didactic paths in Physics 1	LAB	1 cd

Evaluation tests

1. Integrated examination of General Pedagogy and Sociology of Education
2. Integrated examination of General Psychology of the learning memory, Psychology of the developing age, History of the school and educational institutions
3. Integrated examination - Didactics of Mathematics (and laboratories)
4. Integrated examination - Didactics preparations
5. Integrated examination – Didactics of Physics
6. Integrated examination - Institutions of Public Law and School Legislation

@ this course will be part of the integrated tests of the second year
* for this course, only one examination is foreseen.

A049 Mathematics and Physics

Second year instruction

1	Experimental Pedagogy and Docimology	A1	2 cd
1	Social Psychology	A1	2 cd
1	Special Pedagogy	A1	2 cd
2	General Didactics	A1	2 cd
2	Laboratory of General Didactics	A1	1 cd
2	Psychology of Education	A1	2 cd
2	Laboratory of Psychology of Education	A1	1 cd
*	Direction	TRS	2 cd
*	Laboratory – Didactic methodologies	TRS	3 cd
*	Multimedia didactic instruments	TRS	2 cd
3	Didactics of Mathematics: Geometry	A2	1 cd
3	Didactics of Mathematics: Probabilities	A2	2 cd
4	Didactics of Mathematics: Logic	A2	1 cd
5	Didactics of Physics B	A2	2 cd
5	Preparation of didactic experiences B	A2	2 cd
6	Complementary Physics 2: Quantum Physics, Atomic and Nuclear Physics	A2	2 cd
3	Laboratory – Didactics of Mathematics: Geometry	LAB	2 cd
3	Laboratory – Didactics of Mathematics: Probabilities	LAB	1 cd
3	Software laboratory for the didactics of Mathematics	LAB	3 cd
4	Laboratory – Didactics of Mathematics: Logic	LAB	1 cd
4	Laboratory – Didactics of Programming	LAB	2 cd
5	Laboratory - Mechanics 2	LAB	1 cd
6	Laboratory - Electromagnetism 2	LAB	1 cd
6	Laboratory - Optics 2	LAB	1 cd
6	Laboratory – Quantum Physics 2	LAB	1 cd
5	Exercises and problems of Physics 3	LAB	1 cd

Training

Evaluation tests

1. Integrated examination - Experimental Pedagogy and Docimology, Special Pedagogy and Social Psychology
2. Integrated examination - General Didactics, Psychology of Education and Laboratories
3. Integrated examination – Geometry, Probabilities and software for the didactics of Mathematics
4. Integrated examination – Didactics of Mathematics II (and laboratories)
5. Integrated examination – Advanced Didactics
6. Integrated examination – Modern Physics (for the evaluation test, the Electromagnetism Laboratory 1, activated in the first year, is also taken into consideration)

Assessment test – foreign language

* for this course, only one examination is foreseen

A045 English - A046 English

First year instruction

1	General Pedagogy	A1	3 cd
1	Sociology of Education	A1	3 cd
2	History of the schools and educational institutes	A1	2 cd
2	Psychology of learning and memory	A1	2 cd
2	Psychology of the developing age	A1	2 cd
6	Institutions of public law and school legislation	TRS	2 cd
6	Autonomy of the school reformation process	TRS	1 cd
*	Teaching informatics	TRS	2 cd
3	Course of English - level C2 Proficiency English	A2 + LAB	3 cd
4	Didactics of English: programming	A2 + LAB	4 cd
4	Communicative activity of oral interaction	A2 + LAB	2 cd
4	Methods of linguistic evaluation	A2 + LAB	2 cd
3	Didactics of the pronunciation and listening of English	A2 + LAB	3 cd
3	Didactics of reading and writing	A2 + LAB	3 cd
@	Didactics of the culture and civilization of Anglo-Saxon countries 1	A2 + LAB	3 cd
5	Multilingual education	A2 + LAB	3 cd
@	Didactics of multimedia 1	A2 + LAB	2 cd
5	Learning strategies	A2 + LAB	3 cd

Evaluation tests

1. Integrated examination of General Pedagogy and Sociology of Education
2. Integrated examination of General Psychology of the learning memory, Psychology of the developing age, History of the school and educational institutions
3. Didactics examination – Integrated abilities of English I
4. Didactics examination – English language I
5. Didactics examination – Communication and learning
6. Integrated examination - Institutions of Public Law and School Legislation

@ this course will be part of the integrated tests of the second year
* for this course, only one examination is foreseen.

A045 English - A046 English

Second year instruction

1	Experimental Pedagogy and Docimology	A1	2 cd
1	Social Psychology	A1	2 cd
1	Special Pedagogy	A1	2 cd
2	General Didactics	A1	2 cd
2	Laboratory of General Didactics	A1	1 cd
2	Psychology of Education	A1	2 cd
2	Laboratory of Psychology of Education	A1	1 cd
*	Direction	TRS	2 cd
*	Laboratory – Didactic Methodologies	TRS	3 cd
*	Programming and projection of a teaching path	TRS	2 cd
3	Didactics of multimedia 2	A2 + LAB	2 cd
4	Methods and approaches for the teaching of the English language	A2 + LAB	3 cd
3	Didactics: use of the sectional and scientific language	A2 + LAB	3 cd
5	Didactics: literature and civilization of the Anglo-Saxon countries 2	A2 + LAB	3 cd
5	Oral and written culture of the English-speaking countries	A2 + LAB	2 cd
4	Language awareness	A2 + LAB	3 cd
4	Module programming	A2 + LAB	3 cd
*	Lend course – 4 meetings	A2 + LAB	1 cd

Evaluation tests

1. Integrated examination - Experimental Pedagogy and Docimology, Special Pedagogy and Social Psychology
2. Integrated examination - General Didactics, Psychology of Education and Laboratories
3. Integrated examination – Didactics of English with social aims (the teaching of Multimedia Didactics I + the Laboratory activated in the first course year are also taken into consideration)
4. Integrated examination – Didactics of Integrated Abilities in English II
5. Integrated examination – Didactics of the Anglo-Saxon Literatures and Cultures (for the evaluation test, the teaching of Didactics of the Anglo-Saxon Literatures and Civilizations 1 + the Laboratory activated in the first course year are also taken into consideration)

* for this course, only one examination is foreseen

2.3. The process of accreditation and selection of the teachers

2.3.1. Competences, programs and examinations foreseen within the public contests

It is foreseen for the candidates to the qualification contests and examinations for teaching positions in secondary education institutes to possess the following ***cultural and professional requirements***, regarding the discipline sector or sectors foreseen by each of the class of competitions:

4 Absolute mastery of the disciplines' contents.
5 Preparation on the epistemological bases and a critical knowledge of the disciplines.
6 Mastery of the programs related to the teachings foreseen, as well as the knowledge of the general outlines of the whole curriculum.
7 Knowledge of the formative role assigned to the single instructions, related to the formative finalities pursued by the curriculums, also in sight of the elaboration of experimental improving propositions.
8 The capacity of orientation in the pedagogical-didactic field of research, as well as that of educational sciences; the ability of selecting the most appropriate and coherent methodological formulations of the disciplines, besides the learning potential relative to the age level of the students.
9 Disciplinary preparation and pedagogical-didactic competence, which guarantee the possession of attitudes destined to collocate the arguments in correct and motivated hypotheses following the learning process, within the programming activities of the class Council.
10 Knowledge of the bases of psychology related to the developing, cognitive age.
11 Knowledge of the docimological themes, finalized with the individualization of the didactic evaluative paths that are motivating and beneficial, and of the issues concerning the initial, formative and total evaluation. The paths chosen must be held out to the instauration of an objective and transparent assessment, probably anchored to evaluation parameters that are cut out on the structure of the individual disciplines.
12 Knowledge of the methods and instruments suitable for the initiation of an integrated and differentiated didactics, coherent to the formative needs of each student, particularly to that of the physically disabled.
13 The preparation on diagnosis methods and instruments for the learning levels of the students, finalized with the relevance of their training in the initial phase, as well as with the registration of the successive rhythms of apprehension. For this aim, the candidates must know the teaching programs of the precedent cycle of instruction, as well as that of the cycle they are in, together with their own disciplines.
14 Knowledge of the modern issues of permanent education, of the orientation and the individualization of the possible forms of acquisition of useful data for the perception of the attitudes and the tendencies of the students.
15 Possession of the methodology of research in the finding and the usage of the sources, as well as that of the bibliographical instruments and of the most recent manuals used in the schools. The practice of didactic handouts - included the multimedia, to be used for one's own cultural and professional updating.
16 Knowledge of the competences related to the collegial organs and the capacity of efficiently interacting with the latter.
17 The capacity of group-working for the elaboration and the development of an articulated

didactic-educative programming, in the framework of the institute project.
18 Knowledge of the School's Service Chart.
19 Knowledge of the European dimension of the teaching programs.
20 Mastery of social competences, related to the organization of learning and to the management of the groups, as well as relational competences, in order to be able to conduce relations with different social subjects.
21 Candidates who participate to the class of competitions with a teaching language different from Italian are also asked to know the laws and the other special dispositions related to the local school regulations.

The duration of the written, graphic, written-graphic and written-practical tests, when not explicitly established in the program related to the class of competition, is fixed by the Minister of Public Instruction, according to the theme of the examination assigned.
The duration of practical examinations, when not explicitly indicated within the examination's program, is fixed by the examining committee.

The oral examination and the eventual practical tests will take place in the order established by the examining committee.

As for the new disciplinary ranges, constituted according to the financial law exclusively for examination and mobility purposes, according to the Ministry's Decree no.354of August 10th 1998, they refer to the specific programs and examinations foreseen by the above mentioned measure.

MATHEMATICS examinations and program for the class of competitions 47/A Mathematics and 49/A Mathematics and Physics

Examination

The examination includes a written and an oral examination.
The Mathematics examinations, written and oral, regard the arguments comprised in the program, as well as the methodological and didactic issues related to Mathematics.
Written examination
The written examination, common and compulsory for the class of competitions 47/A and 49/A, consists of solving the Mathematic problems propounded, by referring to the contents foreseen in the Annex A.
It is allowed only the use of a pocket numeric non-programmable calculator.
Duration of the test: 8 hours.
N.B: The positive result of the test represents a condition of admittance to the following examinations (M.D. no.354 of August 10th 1998, art.4, codicil 2).
Oral examination
The oral examination involves the contents foreseen by Annex A and the methodological-didactic aspects of Mathematics.

Program

Elements of mathematical logic: the propositional calculus; rules of inference and derivations in the calculus of predicates.
The hypothetical-deductive method: primitive concepts, axioms, definitions, theorems. Coherence, independence and completeness of a axioms' system. Formal systems and models.

Algorithms and their properties. Construction of algorithms and their translation in a programming language.
Ensembles of data and their marked structures.
Implementation of direct and iterative algorithms. Control of the precision. Recursive algorithms. Computational complexity.
Formalization of the concept of algorithm. Thesis of Church. Incalculable functions. Non decidable Problems.

Notions of the theory of ensembles: operations on the ensembles, Cartesian product, relations. Order structures.

The numerical ensembles: N, Z, Q, R, C. Algebraic numbers and important numbers. Principle of induction.
Cardinality of an ensemble. Infinite ensembles and comparison between them.
Algebra structures: group, ring, body. Vectorial spaces. Bases, linear transformations. Matrices, determinants, resolution of linear systems. Algebra structure of the ensemble of the matrices.

The Euclidian geometry and its axioms. Affine and projective geometry. Non-Euclidian geometries. Topological spaces.
The analytical method in geometry: curves and algebraic areas.
Geometric transformations: isometrics, similes, affinities, projective.
Topological transformations: the geometries according to the Klein programme.

Numeric successions. Functions.
Limits, continuity. Differential calculus for functions of one or more real variables. The problem of measure, integral calculus for functions of a real variable.
Numeric series. Development of a function in a real variable: series of forces, series of Fourier.
Ordinary differential equations.

Numeric calculus: errors and their propagation, interpolation. Approximate resolution of the equations. Numeric integration.

Occasional events: definitions, evaluations and properties.
Conditioned probability, stochastic independence. Theorem of Bayes.
Occasional variables. Distributions of probability: binomial, geometrical, of Poisson, rectangular or uniform over an interval, exponential, normal.
Convergences: law of the large numbers and central theorem of the limit.
Fundamental relations among the different distributions.

Statistic research: phases of the research, revelation of the data, codification and archiving. Uni-varied statistic analysis: statistic distributions and graphic representations. Statistic indices for quantitative variables and properties. Bi-varied statistic analysis: bi-varied statistic distributions (double-entry tables); conjunct, conditioned, marginal distributions; independence and connection. Regression. Adequacy of the model. Appropriateness of the adaptation. Multiple linear regression. Statistic inference: sampling schemes; problems and methods of parametric estimation.

Instruments and informatics programs for the mathematic-numeric calculus and for the graphic.

The most important moments in the history of Mathematics.

Examinations and program of MATHEMATICS for the class of competition 48/A Applied Mathematics

Examination

The examination includes a written and an oral examination.
Written examination
The written examination consists of the development of a theme chosen by the candidate amongst the three proposed, related to the: arguments of the oral examinations, registered in the annexed program;
or the critical comment on arguments with an applicative character;
or a theme including both the above mentioned characteristics.
Duration of the examination: 6 hours.
Oral examination
The oral examination involves the subjects of the contest, particularly referring to the arguments included in the annexed program.

Program

Elements of the theory of ensembles.

Elements of mathematical logic.

Bases of classical algebra.

Elements of abstract algebra.

Bases of infinitesimal analysis (functions, limits, derivates, maximums and minimums, infinitesimals and infinites, series, integrals, lengths of a curve, differential equations, series of Fourier, outlines of functional analysis).

Elements of geometry (algebraic curves and algebraic areas of the regular projective space; elements of differential geometry of the curves and of the areas of the regular Euclidian space). Notions on the logical bases of mathematics, as well as on other particularly interesting arguments, and the elementary

mathematics (Euclidian geometry, non-Euclidian geometry, the elementary transformations and their groups).

Applying to the discontinue functions: equations of the finite differences, moderation method, general mathematic models.

Elements of methodological statistics.

Elements of calculus of the probabilities (irregular events and numbers; probability and distribution of the probabilities; subordinate probabilities, independence and correlation; rule of the large numbers; tendency to a normal distribution; induction; notions on irregular processes – simpler types -; application to the theory of the decisions in conditions of incertitude – examples on operative researches; value of an information – and to problems of introduction to statistics – test, sequential or non-sequential; quality control. Notions of game theory, as in card games – Poissonnian case in the theory of codes, etc.).

Mathematical applications in economy. Preference, utility; problems concerning the Paretian maximum and optimum.

Notions on some theory, model or procedure (general equilibrium, development models, linear programming, etc.).

Financial mathematics and connected problems (rules concerning capitalization, discount, equivalent taxes; certain income; general amortization, amortization of loans, particularly involving bonds).

Insurance applications - in the field of life insurance and general insurances; clear awards and loadings, mathematic reserves, risk, reinsurance; notions of insurance technique.

Functioning methods and application of electronic calculators ed data elaborators (both for the perfection of calculus and for the administrative, organizational, technical-scientific works); logic of Boole, principles of programming, iteration methods, simulation.

The main figures emerging from the history of applied mathematics, seen within the framework of civility and of the society they have lived in.

Examinations and demonstration of knowledge from the candidate for the disciplines 46/A Foreign language and civilization (English) and 45/A Foreign language (English)

Examination

The examination includes a written and an oral test.
All the tests, in all their articulations, must be performed in the foreign language.
Written examination
The written examination consists of articulate answers to questions, and in argumentations on a literary

text: content aspects, central argument, informative nucleus, structure and linguistic & stylistic mechanisms, connections with the themes regarding the civilization of the foreign country.
Solely the use of non-encyclopaedic monolingual dictionaries is permitted.
Duration of the examination: 8 hours.
Oral examination

Knowledge

The candidate will have to prove his/her knowledge of:

1 the civilizations of the foreign countries in which the language examined is spoken, from a literary, artistic, historical and economic point of view, from its origins, until the present day;
2 the ethnic and linguistic asset of the above mentioned countries; at least three literary works of ten significant authors belonging to different periods and representative for the various literary genres;
3 the general issues related to the didactics of the foreign language in the first and second degree secondary school, the means of verification and evaluation, the didactic subsidies and the usage of the new information technologies;
4 the teaching programs in their various degrees and the study directions, as well as some widely used manuals;
5 the evolution of the linguistic theories, particularly those from the period of the 1940s till the present day;
6 the direct knowledge of the essential Italian and foreign bibliography related to the articles of the examination program;
7 At least 15 days before the date of convocation for the oral examination, the candidate will send to the Committee his/her program, including a list of the works that he/she intends to present.

The Commission will prepare an equal number of excerpts, gathered from authentic texts and from manuals, with the indication of the degree, and probably of the study direction for which they might be used.

Before the interview, the candidate will extract randomly one of the above mentioned excerpts and in the same aula where the Committee ill stand, he/she will reflect on the didactic usage of the chosen material.

The candidate will then illustrate to the Committee the specific aims that he/she would try to reach, the presentation techniques, the typology of the didactic activity and the exercises, the usage of handouts, the verification modalities and the evaluation criteria, the durations necessary for the different phases, the introduction in the curriculum and the possible inter-disciplinary junctions. According to the context, he/she will prove the knowledge of teaching programs, of the main linguistic-didactic themes and their junctions with the linguistic theories.

Starting from one or more works chosen by the Committee from the ones presented, the candidate will frame them in the production of the author, an more generally, in the historic-literary period, by referring to other works and authors.

Finally, the candidate will discuss on arguments relative to the civilization of the countries in which the examined language is spoken.

Examinations and programs of ITALIAN, HISTORY, CIVIC EDUCATION, and GEOGRAPHY for the class of competition 50/A. Literary subjects in the second degree secondary education institutions

Examination

The examination includes a written and an oral test.
Written test
The written test of Italian, common for all the class of competitions included in the Discipline Area, consists of the analysis of a literary text, chosen between two proposed, to be developed related to the contents aspects, to the literary genre, the informative nuclei, to the structure and linguistic, stylistic and , if needed, metric mechanisms.
An ensemble interpretation of the text will follow, added to a personal comment. The didactic usage of the text proposed in a middle-school or a second degree secondary school will be requested, at the candidate's own choice.
During the development of the examination, the candidate will have to prove a presentation capacity in an adequate linguistic form, a capacity of critical elaboration of the arguments, awareness regarding the educational finalities to which the possession of such knowledge may be reported, knowledge of the adequate methodologies by which he/she must confront such arguments in class.
The usage of the Italian language's vocabulary is allowed.]
Duration of the test: 8 hours.

N.B.: The positive result of the written test is an admission requirement for the following tests (M.D. no.354 of August 10th 1998, art.4 codicil 2).

Oral examination
The oral examination, common for all the class of competitions included in the Discipline Area, involves the programs of the basic subjects common to all the class of competitions of the literary subjects that appear in Annex A. the commission will have to ascertain the candidate's capacity of operating the appropriate connections among objectives, methodologies and contents of the various subjects, in the context of the general principles on which the didactic programming is based.

Referring to the individual subject of the class of competitions, the candidate must prove his/her knowledge of the essential bibliography, specially regarding the main reference works, and must also be able to analyze and evaluate some manuals of his/her own choice, regarding the subjects involved.

Program of Italian

a) Finalities, methodologies and techniques of the didactics' of Italian in the multidisciplinary context of linguistic education, seen as a gradual development process of the communication, expression, cognitive and social interaction capacities of the individual. A clear knowledge of the methodologies and techniques for the development of the oral and written linguistic abilities is requested, together with an adequate consideration of the reports among spoken language and non-spoken languages; also, the variety of functions, usages and forms of the spoken language, of the conditions imposed by the Italian linguistic environment (due to the strong presence of dialects and other local idioms), as well as the issues regarding the connection with the teaching of foreign languages, and generally with other discipline areas.

b) Analysis of the Italian language's structures, according to the theoretical updated orientations. Outlines of semantic and lexicology; description of the morphological and syntactic structures; principles of phonology. Purpose of the language's reflection in the framework of linguistic education.

c) Essential knowledge of the Latin language, of the changes of spoken Latin in the neo-Latin languages, and of the elements that are sufficient in order to institute confrontations with the Italian language.

d) History of the Italian language and the present linguistic context of the Italian society; variety of the regional linguistic traditions, and the assertion of the Italian language, its course from the medieval times till today, with reference to the issues regarding the connections among language, dialects and languages of the ethnic minorities.

e) The literary tradition and other aspects of the Italian culture. The candidate is asked to know and to be able to comment adequately, within the framework of a general historic profile, significant texts belonging to various epochs, referring to different literary genres.

f) Evolution of the Italian literary history in its organic development, by means of the direct reading, the widest possible, of the text which constitute the most significant testimonies.

The candidate will have to prepare a personal choice of at least ten themes related to the main literary currents from the origins till the present day, by taking into consideration – through direct reading – the most representative authors of each current, and by allowing more space to the literature of the19th and 20th centuries. The following authors must be considered a compulsory study object: Dante, Petrarca, Boccaccio, Ariosto, Machiavelli, Guicciardini, Tasso, Galilei, Goldoni, Parini, Alfieri, Foscolo, Leopardi, Manzoni, Verga, Carducci, Pascoli, D'Annunzio, Pirandello, Svevo, Ungaretti, Montale, Saba, Quasimodo, Pavese, Vittorini. Particularly, the candidate will have to present an organic and significant choice from the work of Dante which, related to the Divine Comedy, will have to include the lecture of ten chants for each Canticle. As for the text analysis, the candidate will have to prove able to critically interpret the texts, and to evidence the characteristics of structure and language, by also proving first-rate knowledge of rhetoric and metric.
The candidate must possess an adequate knowledge of the report between Italian literature and the literatures of the most important European and extra European countries, regarding the most representative literary movements and the most relevant authors. Therefore is requested the reading, in Italian, of a literary work (narrative, theatrical, poetry) of at least three foreign authors, of the candidate's own choice, and their framing within the cultural tradition of the relative country.
The candidate must prove his/her possession of the research methodology in the retrieval and usage of the sources, as well as that of the most important critics regarding the chosen texts.
Moreover, the candidate is asked to be able to orientate him/herself in the field of the popular culture's traditions, and that of the modern communication methods.
The list of the chosen authors and works will be sent by the candidate to the Commission at least fifteen days before the date appointed for the colloquium.

Program of History and Civic Education

a) Updated notions of history (also by means of opportune bibliographic references), as a reconstructive and interpretative inquiry accomplished according to scientifically bases rules and procedures, and able to connect various types of events and testimonies (economic, social, technological, political, military, cultural, linguistic, ethic, religious, artistic, etc.).

b) Effective knowledge of the great historic themes that emerge from the human civilizations' panorama, from prehistory till the present day, according to the following reference scheme:

1 The ancient civilization of the Mediterranean and their relations and integrations;
2 The Greek civilization and its prevalently cultural legacy;
3 The Roman civilization and the process of Romanization of the Occident and of the Mediterranean area;
4 Christianity and its affirmation in Ancient and Medieval period; its progressive diffusion;
5 The great migrations of peoples (Germanics, Slavic, Arabs, etc.) from the end of Antiquity, and the ethno-linguistic composition of Europe and of the Mediterranean context;
6 Papacy and Empire in the Middle Ages; economic, social and political life in the feudal system and in the commons; the mercantile bourgeoisie; the civilization of Renaissance; travels, discoveries, inventions and their consequences; the Reformation and the Counter-Reformation;
7 The birth of the modern European state; the origins of the British parliamentary regime;
8 The colonial expansion of Europe; the encounter with the main extra European civilizations;
9 The Industrial Revolution and the development of Capitalism; the American Revolution; the French Revolution;
10 The Napoleonic period;
11 Europe in the 19th century; political events and social, economic, scientific, technologic, cultural developments; the modern Constitutions and the rise of the national consciences; birth and development of the unions' movement; birth and affirmation of the American States; Risorgimento and Italian political unification; subsequent processes of social, economic and cultural unification of Italy, until the present day;
12 The great world conflicts and the new order of Europe; Fascism and Nazism; the Resistance in Europe and in Italy; birth of the Italian Republic and its Constitution;
13 Issues of international cooperation and particularly those of the European integration; the decolonization and the Third World.

c) A clear knowledge of the educational aims of the study of history in the different degrees of education, according to the relative teaching schedules.

d) Possession of methodologies and didactic techniques suitable for the promotion within the student of the participation to studying history as a research work and reconstruction by means of data gathering (even starting from the surrounding world, with its monuments and products of the local culture), the formulation of hypotheses to be checked, critics of the sources, connections between various facts, by using different subsidies.

e) As for the Civic Education, the candidate will have to prove a clear knowledge of the aims of this teaching, which - in a close connection to history and geography – is essential for the formation of the social and civil conscience of the citizen.

Therefore, the candidate will have to prove knowledge of the Italian Constitution and to be able to

illustrate its articles in relation to the historic events that have made it possible, and of the juridical and social concepts that have inspired it.
The candidate must prove his/her knowledge of the methodological criteria of the historic research, including those related to the use of the historic sources and documents; to be able to critically evaluate the most important contemporary historic reference.
Furthermore, the candidate must be able to individualize the most appropriate paths for an efficient didactic mediation of the discipline, to formulate and to follow a correct didactic programming, to adopt adequate instruments of verification and evaluation for the students.

Geography Program

a) Aims, methodologies and techniques related to the didactics of Geography as a study of the complex reports between the human being and the environment, according to the methods of scientific observation and critical interpretation, in a perspective that lightens mostly the anthropologic aspects of the discipline. Within the area of the most scientific-naturalistic themes, the candidate will have to prove the essential knowledge that allows him/her to establish didactic connections and forms of collaborations with all the other disciplines of the scientific-experimental and naturalistic area.

b) The candidate will have to prove the possession of clear and comprehensive knowledge regarding the physical and anthropologic aspects, particularly those regarding Italy and Europe, and a more general knowledge regarding the extra European countries.

Within this competence framework, he/she must be able to notice clearly, in the handling of the two disciplines, the interdependence of the geographical data and the historical events, their mutual influence and effects.

More specifically, the program includes:
Elements of general and astronomic geography:

1 The human and natural factors that interact in the formation of the anthropologic-physical systems, and in the transformation of the geographic environment; the complex issue regarding the human being-the environment: flora, fauna and climatic conditions; natural resources and sources of energy; their usage (agricultural, industrial, artisan, commercial activities); means of communication; human settlements and migratory movements; demographic situation and the quality of life; variety of cultures and forms of social organization; travels and explorations;

Regional geography of Italy:

2 Physical outlines of the territory and geographic bases of the Italian State;
3 The Italian regions within the environmental and economic characteristics and within the political-administrative organization of the State;
4 Examination of the demographic issues regarding the human settlement and the geo-economics problems of the various branches of activity; issues regarding the communication networks and particularly those concerning circulation and traffic;
5 Geographic issues of the depression areas and physical, anthropological and economic solutions; geographic frame of the issues regarding the Italian South;
6 Italy in the Mediterranean basin, in Europe and in the context of the great European and worldwide organizations.

Regional geography of the world

1 The territories of the continents and of the major countries and states of the world in their fundamental aspects: physical-political and socio-economical;
2 The oceans and their basic characteristics;
3 Geographic issues regarding alimentation in the world;
4 Study of the “distances” by using charts, atlases, planispheres, etc., accompanied by the projections of videos and slides in order to explain the important phenomena related to the vision of the countries and environments filmed;
5 Physical and ecological outlines of the polar regions and their rising explorative, scientific and economic importance;
6 Examination of the main international collaboration organisms for the development and the evolution of the peoples, and their important contributions the to resolution of the major problems of humanity.

2.3.2. The training within the SSIS

The training proposed by the SSIS consists of "technical-operative integration" - activities that are activities that are to be organically integrated with other didactic activities, and no constitute a separate action.

The integration in the laboratory and training activities must occur jointly to a *phase of projection and theoretical reflection,* to which the contributions of the education sciences and the discipline didactics concur, and an *operative phase*, addressed to the formation of professional competences.

Therefore, the training has been "built" by orienting it towards the professionalization of the new teachers in the organic framework of the educational project of the SSIS. The structure of the SSIS originates from the research lead in the context of the teachers' formation, by confronting different models, and clearing their valences and extents:

7 The meta-cultural model, which refers to the critic discussion of an innovative proposition capable of offering the useful elements to an individualized projection for the class intervention; the discussion of cultural definitions; the re-elaboration of didactic proposals;
8 The experiential model, in which the teacher is offered some detailed didactic proposals that are already predisposed for the work with the students, and which have to represent the object of the formation. Therefore, the teachers live a cognitive experience that may be proposed to their students (the model has been adopted in order to spread some experimental projects in the U.S.A.);
9 The located model, which refers to the learning within practical professional communities: the individual proposals are followed; different activities that are compatible with the dynamics started in the context of the individual classes are analysed. The model requests a methodological, pedagogical-didactic, organizational-administrative reflection.

The structure of the SSIS recalls an integrated formative model, that is a model which "integrates" the three modalities exposed by the diverse phases and activities, in order to provide the training teachers a critical reflection over the cultural elements that are the object of the formation; the experience of the specific activities which must be performed in class, and the materials which are to be used; the experience concerning the accomplishment of specific segments within the school.

The training foreseen for the SSIS aims at promoting the acquisition of professional competences connected with the effective exercitation of teaching, and of the school practice, as well as the need that the latter initiates relation of tight collaboration between the School and the SSIS.

The main target of the training is represented by the formation of a teacher who has a critical reflection upon his/her own professional practice. Such a reflection involves, besides the trainee, the sustaining professors, the supervisors and the professors of the SSIS, so as to create a real process of formative growth and of factual collaboration between the main cultural and educational agencies involved in these activities. By reducing the aims of the training to the most basic form, we may distinguish:

The **aims** for the **trainees**:
- to build a know-how;
- to use the training as a place of observation, reflection, experimentation, confrontation and re-

elaboration;
- to put into a context the cognitive and relational elements;
- to explore the direct activity for the situational formation;
- to favour the insertion within the future working position.

The **aims** for the **SSIS**:

10 to form a teacher who reflects critically over his/her own professional practice;
11 to create a real process of formative growth for all the subject involved in the training;
12 to create a teacher who is aware of the didactic-pedagogical choices put into act during the teaching-learning processes.

The **figures involved** in the training are:

13 within the University: the university professors;
14 within the University and the School: the trainees and the supervisors-coordinators of the training;
15 within the school: the school director, the training referee, the titular professors, the students, the parents, the non-teaching personnel.

By analysing the tasks and the functions of the main figures involved, we may distinguish:

Functions of the supervisors-coordinators of the training, related to the trainees:

1 to individualize the training modules for the professional formation of the trainees, outlined in the formative project of the SSIS;
2 to define the biannual project to be presented to the schools;
3 to propose the training modules; to determine the modalities in which the trainee might be inserted in the school;
4 to discuss and control the work that the trainee will perform in the school and in the specific classes;
5 to provide the school and the trainee with the instruments necessary for the supervision of the training work; to analyze, together with the trainee, the work performed, and to ask for a critical reflection on the didactic, relational and contents aspects;
6 to evaluate the trainee's presentation and the materials produced; to discuss the work of the trainee with the titular professor;
7 to evaluate the efficacy of the trainee's work, by using the means of supervision offered, and if necessary, to intervene by producing the necessary changes.

Functions of the trainees, related to the supervisors:

1 to collaborate in order to define the training plan;
2 to refer to the supervisor for explanations regarding the accomplishment of the modules within the school;
3 to address the supervisor concerning the difficulties encountered during the training; to consign to the supervisor the material produced at the end of every module, as well as the training reports;
4 to discuss the elaborated materials with the supervisors;
5 to integrate the work according to the reflections made together with the supervisor and the titular teacher.

Functions of the trainee within the school:

1 to plan, together with the titular teacher, the temporal division of the working schedule,

accorded with the supervisor, and defined within the schools;
2 to accomplish the training by using the instruments provided;
3 to collaborate with the titular professor in the ways and manners foreseen by the modules and by the agreements made with the supervisor;
4 to elaborate the materials requested by each module;
5 to submit the work performed to the titular professor, both in the production phase, and in the phase of accomplishment.

Organizational and methodological choices for the training project at the SSIS of Friuli-Venezia Giulia

From the point of view of the *organizational choices*, the inter-university Manifesto of the SSIS of Friuli-Venezia Giulia foresees 250 hours of individual training, divided in two years, to be performed at different types of Schools, according to the availability and to the projects of the individual Institutes. Therefore, the trainees can perform training various training modules in various schools, by following a curriculum coherent to the project of the SSIS. The tendency, accordantly to the organizational aspects, is that of making the trainees work in small homogeneous groups, according to the disciplines, with the aim of being able to mutually confront.

Within the University, the supervisors will project the training modules to be submitted to the Training Committee (for the disciplinary modules, they submit to the reference professors the modules to be adopted); they define the specific projects for each institute; propose the modules to the trainees and follow them in the accomplishment of their training. The Training Committee of the SSIS individuates the training modules for the professional formation of the trainees, outlined in the project of the SSIS, and proposed by the group of supervisors; they also define a project to be presented to each single school.
Within the "host" schools, the supervisors have the task of presenting the project of the SSIS, and to analyze the training propositions offered by the schools. The integrated project school-SSIS specific for each Institute is obtained from the integration of the selected modules for the biannual project of the SSIS, and from the project proposed by the school. The modules proposed by the SSIS may be integrated or substituted by corresponding materials produced by the schools (with the acceptance of supervisors, titular professors, trainees). The development of each module, although it may foresee some flexible elements, must be in any case coherent to the formative project of the SSIS.

Based on the projects defined this way, the trainees may initiate their training path.

By taking into consideration the *methodological choices* related to the training project of the SSIS operating in Friuli-Venezia Giulia, the individualization of a series of *qualifying areas* of the training is revealed, identified according to the professional competences that the trainee must acquire during his/her own formative path. Within each area, different *training modules* are foreseen:

	Preparation for the training
	Welcoming
	Collegial Organs

	Direction
	Projects and/or activities offered by the school and/or by the SSIS
	Examinations for the Middle School certificate
	Examinations of professional qualification
	State examinations
	Disciplinary projection
	Disciplinary didactics
	Direction
	Projects and/or activities offered by the school and/or by the SSIS
	Projection and revision meetings with the SVT
	Preparation for the SSIS State examination

The didactic areas foresee a major or a minor duration, according to the incidence of the different thematic on the professional formation. Therefore, the disciplinary didactics foresees the greatest number of hourly units ed of credits: in this area, in fact, all the activities related to the *disciplinary training* are foreseen in the class of competitions that offer a continuity of the didactic laboratory's activities, and for those performed within a school, together with the titular teacher.
For the *attribution of the credits* in the various areas, a band of oscillation is foreseen between a minimum and a maximum, in order to allow the trainee to program with his/her own reference supervisor a personalized formative path, which takes into account the competences acquired at the SSIS, of his/her working experiences and eventual searching activities in the disciplines foreseen in his/her own class of competition. The trainees who hold an instruction experience can, for instance, limit the training in some cross-sectional areas, and to widen it in others. In any case, taking into account the number of the total credits, some common parameters are defined, that is the minimal number of credits in each area, in order to guarantee the validity and the acceptability of the training itself.
Each area foresees some relative arguments and thematics, as well as *fundamental learnings*, from which the training cannot prescind. Moreover, the various areas have their own *temporal positioning* within the two years of course: the cross-sectional training is preferably situated in the first two semesters, that is to the beginning of the formative path of the trainee, while the disciplinary areas should be situated in the third and the fourth semester, that is in the second half of the course (second annuity). Particular cases of trainees can be introduced: those who teach during the first year of course, or who have in their curriculum significant previous experience in the competition classes for which they demand the qualification - in this case it is possible to anticipate activities that regard the areas of Planning and disciplinary Didactics.
In the fourth semester, moreover, *activities of preparation for the final examination of the SSIS biennium* are foreseen, in which the supervisors organize, discuss and correct the material chosen by the trainees for the final presentation, and ratify the hourly units concerning the encounters held with the trainees.
The *evaluation* of the training activities - presentation of the trainee on the individual modules, material produced by the trainee, instruments compiled within the course of the modules - it is carried out by the supervisors, by taking into account the opinion of the
titular teacher.

From the point of view of the ***competences***, speaking about the teaching “profession" means that the teacher must possess knowledge, as well as comunicative and relational qualities, particularly important in the scholastic interactions (teacher-institution, teacher-teacher, teacher-students, teacher-families) and methodological and technical instrumentations for the exercise of the profession. The ensemble of the competences that, for all the qualification classes, constitute the objective of the SSIS training, can be outlined as follows.

In the *area of the planning*, competences relative to the:

1 Construction of a coherent curriculum with the departure levels of the class;
2 Scansion of the same in "modules" and/or didactic units;
3 Diachronic and sinchronic structuring of the "reticular conceptual maps" of the discipline;
4 Construction of a research project with pluri/inter/metadisciplinary implications;
5 Conduction of moments of analyses and independent research by the students (proposed by themselves or activated by the teacher);
6 Acquisition by of the students of a method of individualized study, finalized with a methodical, organic, reflexive,and personally re-elaborated learning.

In the *area of the programming*:

1 Mastery of the structure of one programming;
2 Mastery of the basic key-concepts: formation objects, didactic objects, cognitive objects, cross-sectional objects, relational objects, acquaintance, capacity, ability, competences, inductive method, hypothetical-deductive method, conduction of the didactic activity and working modalities (frontal lesson, group work, individualized work of reinforcement and support, activity of animation and para-scholastic), appraisal and relating criteria and instruments.

In the area of the *disciplinary competences*:

1 Knowledge of the epistemological bases and the structure of one’s own discipline, of its it nodal points and of the temporal scansion;
2 Ability to identify the needs of the students;
3 Ability to define the formative valences of one’s own discipline and its didactic objectives;
4 Ability to stress the objectives in one coherent temporal sequence;
5 Ability to construct the coherent verification tests with prefixed targets;
6 Ability to measure and to estimate according to explicit criteria;
7 Ability to use methodologies, techniques, various instruments (also new technologies);
8 Ability to plan and to realize one or more lessons.

In the *area of the relational competences*:

1 To manage the class and its dynamics;
2 To motivate the students in order to study;
3 To send differentiated and individualized stimuli;
4 To listen to the persons involved in the educational process;
5 To manage group works and researches.

In the *area of the professional formation*:

1 To reflect the activated procedures;
2 To use instruments of auto-assessment;
3 To activate procedures of research and action;
4 To collaborate with the colleagues.

Passing to consider the ***working procedures*** for the training, the trainee is engaged to enter in the titular school and to report to the persons with which he/she will enter in contact, in the respect to the scholastic context and the professionality of the persons who work within it. The training is based on the collaboration, the flexibility, the acceptance of the innovations, and the mutual personal improvement. Moreover, these elements encourage the trainee to critically reflect, in a constructive way, by taking him/serself into consideration. Furthermore, the collaboration work not only regards the relationship with the supervisor and the titular teacher, but also the one with the trainee fellows.
The above cited "training modules" are thought as paths that the trainee and the titular teacher can follow together within the scholastic context, by agreeing through the University supervisor of training. The modules intend to be flexible paths that can be adapted to the requirements of the persons who take part in them, and to the context in which they work. The structure of the modules can be outlined as follows:

Title	The theme of the module is indicated.
Synthesis	The module is described synthetically.
Purpose	The elements which concur for the acquisition of professional competences are emphasized.
Objectives	The objectives targeted at the end of the module are defined.
Work phases	The work is articulated in specific phases; for each of them are indicated the objectives, the timing, the actors, the activities and the instruments provided by the SSIS, and the materials that the trainees are supposed to use.
Evaluation	The actors, the materials and the aims are indicated.
Monitoring	Indications are provided concerning the supervision of the modules.

Every trainee has a booklet to compile with companies and dates in order to document his/her presence in the schools; moreover, he/she possesses a " *training notebook*", in which all the material elaborated during the training is collected, in particular: personal training diary, instruments and materials of the modules, copy of the presentation of every module, and other given informative material from the receiving schools.
The training is an integrated part of the specialization course; consequently this activity, as all the others, is subject to ***verification***. In particular, to each module of the training corresponds an appropriate verification that implies for the trainee activities to perform during the development of the module, and works to be introduced to the supervisor at the end of the activity. Generally, they the supervisor is presented the printouts of materials and elaborations related to annexes compiled during the various phases of the module, the eventual additional annexes compiled together with the titular teacher, and the presentation of the module based on a given trace and on the working diary of the trainee. The total evaluation of the training activity, moreover, is also added the comment of the titular

teacher on the work performed by the trainee in the school. The possibility of encounter between the supervisor and the teacher is also previewed, in order to discuss about the work performed by the trainee.
The training supervisor collects the documentation that attests the Formative path of the trainee during the training: the annexes enclosed and delivered at the end of every module, the presentation of the module, the comment of the ttular teacher on the work performed, the monitoring card of the module, and all other additional material.

2.3.3. The evaluation system for the competences of the SSIS

The evaluation is realize in the two complementary moments of the *auto-assessment* (of the individual, the group, the School), and of the *hetero-assessment*, i.e. the evaluation performed by others. The first form, the *auto-assessment*, is based on the autobiographic reconstruction of the experiences developed within the modules and the training. The *hetero-assessment*, in the other hand, is performed at the end of each module, in the laboratory and research activities, in the final colloquiums of the first and the second year, and in the State examination for obtaining the qualification. The evaluation activities foreseen follow different aims: to indicate in the various phases the formative offer of the school, and the training experience, in order to correct the possible mistakes, to control the reaching of the aims foreseen and to induce a culture of evaluation in the trainees, as well as in all the other collaborators of the School.

The competences

At the centre of the professional competence of the teacher, there are *three interacting dimensions*:

a) the *knowledge*, seen as an ensemble of awareness and cognitive competences related to the total and problematic configuration of the disciplines in which one takes part: evolution of the total theoretical framework, conflicting theories, crisis points, hypotheses and implicit metaphors, relevance and epistemological-didactic translation, etc.);
b) the *know-how*, conceived as an ensemble of educational and didactic competences which express themselves within the observation of the class and of the individual students, in the projection (individual or in collaboration) of formative paths, in the organization and the leading of the class and the groups, in the active collaboration for research projects;

c) the *knowledge of being*, which requires a posture of openness towards the rising issues , of critical and constructive change of mind concerning one's own actions and role.

In this perspective, the methodological aspect appears as central in a double dimension: *disciplinary*, with attention paid mainly to the epistemological implications, to the practical significance and to the social function of each knowledge; and *reticular*, therefore related to the connections between the different areas of knowledge and to the cross-knowledge. At the same time, as long as "to know" does not mean "know how to teach", and "know how to teach" in sot enough to "teach how to learn", the most indispensable general methodological competences, applied to the disciplinary area, will have to be assisted by psycho-pedagogical masteries.

The theoretical capacity and the efficacy of the learnt competences should manifest at the *applicative moment*. Nevertheless, a homogeneous environment is in many cases protected, as for instance a course, a laboratory or a seminary held within the Specialization School is different from the real working context, face to face with the students, the teachers, the parents and the principal. The development, the full awareness and the verification of the capacities and aptitudes of the individual trainee happen most of all in the context of the training, in two basic types of activities, which are defined as "*class activities*" and "*system activities*".

a. The *class activities*

The interaction between teaching-learning in direct contact with the students is surely the hottest, most focal, most significant moment of the didactic training project. For this aim it will be necessary to find equilibrium between the two equally important, but antithetic instances: on the one hand the full right of the tutor to fully re-explain the liberty and the teaching style that are his own, and on the other hand, the need off the Specialization School to fix and orientation, some steady points, a common route, whose lack would make the experience confrontation and a homogeneous evaluation of the trainees become arduous, if not impracticable. Although there are different timings and different modalities, by taking into consideration the entire training experience, i.e. the implication of more than one tutor for each trainee, one should manage to deploy the whole complexity of the teaching function in the class activity. The following might be considered as a first provisory list of situations:

Different modalities of teaching a lesson:

16 frontal lesson;
17 work groups (casual, cooperative, leveling, tutoring);
18 laboratories.

Different formative offer:

19 the standard;
20 the recovering;
21 the interaction with the supporting teacher;
22 the improved offer: optional or not compulsory courses.

Methodologies:

23 meta-cognitive competence;
24 aware usage of specific strategies for the resolution of problems;
25 programming and managing learning environments;
26 organization and usage of technologies and didactic instruments.

Disciplinary contents:

27 choice criteria for the contents, referring to the curricula, the epistemological structuring and the disciplinary nuclei (directly correlated to the courses and laboratories of the SSIS).

Within the training activities, the auto-assessing moment follows mainly the different actuation phases of the didactic project: fixing a target and priority scale, managing the class by contemporarily performing a systematic observation, facing the emerging issues and the deviations from the pre-fixed path, checking the learning. In any case, the confrontation between the evaluation of the tutor/titular

professor and the trainee becomes more aware and articulate at the end of the class, or at the end of a lesson-cycle. The so-called “observation notes” constitute the tangible mark of this path; they are an integrating part of the didactic project (compiled by the tutor and/or by the trainee), as well as the “journal” or “training diary” written by the trainee, in which is registered everything significant or problematic during the experience.

b. The *system activities*

A decisive component of the teacher’s professionalism consists of knowing how to situate him/herself within a system that presents new regulations (institutional level), new roles, functions-aims defined at an organizational level, in which the institutes operate more and more in an autonomy regime. There are multiple aspects that the future teacher must consider:

Organizational aspects of the institute:

28 articulation of the curricular and optional moments (therefore located within a compulsory timing section);
29 facultative teachings;
30 modular organization of the teachings;
31 learning environments and new technologies of communication;
32 differentiation of the formative offer: level groups, formative obligations and recoveries, diversified formative credits;
33 integration: insertion of the immigrants, support, learning disturbances;
34 home works and interaction with the families;
35 external collaborations: school networks, ASL, local institutions and external agencies, professional updating and qualifications.

Within this organizational articulation, moreover, the fundaments will acquire new basic meanings.

Relational aspects:

36 reports with the students (as a group and as individuals);
37 reports with the parents (individual meetings, parents’ assembly, council of the institute, class council with the representatives);
38 reports with the colleagues and the principal (informal meetings, collegial organs, work committees).

2.3.4. The ascertaining of the competences within the SSIS

Checking modality for the evaluation of the individual modules (first and second year)

It concerns the evaluation initiated by each teacher within his/her teaching module.
Usually, the means of verification and the evaluation criteria are presented at the beginning of the classes, and afterwards they will be part of the document (*didactic project*) presented by each teacher to the trainees, during the first encounters. The didactic project contains briefly the formative proposal that the professor is sharing with other trainees, therefore favouring the assumption of mutual responsibility regarding the path to be followed. Furthermore, this procedure, as all the others initiated by professors, allows to the trainees to notice and experiment on themselves the modalities of didactic

interaction that are suitable for a future usage .
The didactic project includes, also in a synthetic form, the following aspects:

39 the targets of the formative path, concerning the competences and the knowledge to be acquired;
40 the contents that the professor intends to affront;
41 the working conditions (lesson, exercises, etc.);
42 the assessment modalities (when, with which instruments) and evaluation modalities (criteria).

The verification typologies may vary, and they are chosen by the professor according to the formative path proposed: multiple choice questions, brief test, didactic project, interviews, etc., and they may originate evaluations integrated by more modules.
Generally, a module is considered to be a formative path of about 40 hours. When a module is articulated in more sub-modules (of 8, 12 hours, etc.), the Coordinator of the direction usually individualizes a referent professor for the module (assumable the one who has more teaching lessons), who has the task of agreeing with the teachers of the sub-modules concerning the verification instruments, and the evaluation criteria.
The aim is that of favoring the integration among the sub-modules, by avoiding, as much as possible, to juxtapose verifications for too brief paths, and to find solutions that arise an internal coherence of the didactic path proposed by the module, as well as the coherence of the verification instruments and the formation methodology.

Testing modalities for the final evaluation of the first academic year

At the end of the first year, the trainees will have to present two works:
43 a cognitive autobiography;
44 a training journal/training diary.
Both the autobiography and the training diary will be the object of the end of the year interview that the trainee sustains after having finished all the examinations, in front of a committee composed of a President, a professor of the specific disciplines, of a cross-disciplinary professor and of the supervisor.

Modalities of testing for the final evaluation of the second academic year

For the second specialization year, contrarily to the first year, it is proposed the presentation of an elaborate training journal/training diary that gathers the experiences lives by the trainee both during the training and the SSIS classes. The test begins with the training experience re-read and interpreted according to the theoretical learning acquired.
As for the first year, the final evaluation of the second year foresees an interview that involves the text produces and the experiences lived during the two years of specialization.

State examination (to be performed after the interview of the second year)

Art.2, codicil 7 of the M.D. of 26.05.1998 foresees a test of language, which consists of the verification of the capacities regarding the reading, comprehension and translation in Italian of texts written in English related to the disciplinary and professional fields of the direction. The texts involved in the

examinations are indicated at the beginning of the two years of specialization. The test must be performed at least three months before the final examination of the second year.
The final evaluation of the specialization biannual (curriculum) takes into account the evaluations obtained during the two years, by calculating the pondered media between:

45 the media of the two grades obtained for the evaluations of the first year;
46 the grade obtained at the final interview of the first year;
47 the media of the grades obtained for the evaluation of the modules of the second year;
48 the grade obtained for the evaluation of the final interview of the second year.

The result obtained concurs for the evaluation of the State examination (Art.5 of the I.D. no. 11303/M.D. of 04.06.2001).

Presentation for the State examination

Art.3 of the I.D. no.11303/M.D. 04.06.2001 establishes that the interview for the state examination will begin with *"the presentation and the discussion over a presentation in which the candidate critically re-examines the training activities and the activities related to the didactic laboratory, performed in the biannual of formation"*.
Therefore, the trainee produces a *presentation* which consists of a *critical reflection on the biannual formative path* on the whole. This presentation, starting with the training journal discussed critically for the final evaluation of the second year, is integrated by a premise that points out the learning acquires, the theoretical re-elaborations, the laboratory activities and the training activities of the entire formative path of the SSIS biannual.

THE SYSTEM OF PROFESSIONAL FORMATION

3. The formation of trainers

3.1. The professional qualification of trainers

In this chapter we intend to refer some elements of reflection stimulated by a recent ISFOL analysis of the "formative standards", aimed at finding possible solutions for the professional qualification of trainers.
Actually, the possibility of defining a national reference framework for the standardization and the acceptance of professional profiles and/or of competences of trainers appears rather challenging.
The research has helped to point out the issue, and its possible solutions, in a EU context. The analysis of the international comparisons, the synthesis of the results of the on-the-spot researches, and of the confrontation between the experts interviewed have indeed outlined a manifold scenery of the professional areas of trainers, rich of practical proposals, but as well open to the most diverse politics of intervention.
We intend here to focus only on the following aspects:

- an evaluation of the professional situation of the trainers in Italy,
- the characteristics of the professional standard model for the regional PF systems,
- the guidelines for a possible accreditation path and/or qualification of trainers, aimed at facilitating the connections between the initial formation of the trainers and their professional development/maintenance.

3.1.1. The professions of formation in Italy. Regulation perspectives

The research on the field carried out by ISFOL has confirmed that in Italy:
1. there is no common professional area for "trainers", nor is there a recognized professional identity (in terms of an acknowledged "professional community");
2. there is a growing presence of occasional trainers, who perform their formative functions only temporarily or occasionally;
3. there is a development of the processes of segmentation or fragmentation of the cycle of distribution of the formative services, linked to a growth of the *outsourcing*;
4. new competences and/or professional roles are emerging, which cannot always be assimilated to traditional formation roles (mainly personal and employment services).

Notwithstanding these fragmentation tendencies, however, the trainers' issue is obtaining more and more attention. That is:

- the business system asks for a *quality formation*, capable of responding to the new needs of the labour market as well as to the technological, organizational and social changes;
- people in charge of the public formative policies together with the social parties are proposing programs of formation and qualification of the operators of the field.

The Working Agreement of September 1996 provides that *"the formation of educators, according to the plans of intervention agreed upon, is considered to be the essential instrument for facilitating the progressive integration of the systems, the qualitative improvement of the formative offer, and the recovery in disadvantaged situations"*.

The new law 196/97 (known as the "Treu package") invokes *"the adoption of proper measures, aimed at favouring, according to intervention plans foreseen by the agreement with the regions, the formation and the internal or external mobility in the sectors of those employed for the professional formation"* (art.17 codicil f), to be financed within the framework established by the law 236/93.

In the Document of the Regions having as subject the reformation of the PF system (May 1997), the question is considered from many points of view:
- to foresee, at national-level, "teaching qualification, the juridical status, the retribution criteria, advancement of the teachers" (rearrangement of the functions, point 3.1);
- to arrange, still at a national level, "the formation and upgrading plans for the personnel, in tune with the Regions", and "the directional funds for the management of the training qualification system (study titles, teaching qualification)" (financing modality, 3.2);
- to create "one or more national supporting structure … for the so-called "technical system", included in the personnel formation; such a structure must be connected to a network of regional structures provided with technologies and experts, adequate to the tasks that are to be performed" (organization, point 3.3);
- to define the quality requisites of the formation agencies, among which the "qualification of the operators, both teachers and non-teachers" (accreditation system, point 4.6).

Though enough to provide a general perspective, these references appear somewhat partial from an operative point of view. This is valid at a national level, as well as at a regional level.
At a national level, if one focuses on the institutional aspects and dynamics, the result is that without qualified human resources, and an adequate strategy, a transformation or reform of the formative system is unthinkable.
With regard to the regional systems of professional formations, our present need is to act on the basis of *intervention plans*, in order to face better two basic aspects:

- the formation and development of new personnel;
- the internal or external mobility connected to the renovation of the formation institutes and the transformation of the centres in formative agencies.

Within these plans the management of the human resources and the organizational management are interwoven though a national frame of reference has to be taken into account to give assurances to the operators and guarantees to the users. Hence the need for an agreement between national and regional governments.
This agreement, however, collides with a reduction of direct investments in the PF, distributed by the regional Administrations, and with a consequent and continuous rise in the dependence on communitarian funds. The predominance of selection and entrusting devices based on projects, rather than on distributional organisations, further involves the risk of a disarticulation of the system, which may emphasize the "dissolution" of the professional educators, in favour of occasional educators.
The idea of an institutional acknowledgement of the profiles and of the qualifications of trainers originates on this concern, but it faces – as happened before for other functions related to the services for the persons – with a series of methodological and organizational problems:

a) in the procedures and typologies of professional accreditation (qualification, accreditation, certification etc.) one may notice a plurality of models, the extreme being:
- a *direct qualification of individual operators*, which mainly aims at the study degree, at some qualifications obtained from a public institution (as school or university teachers), and/or connected to a professional bulletin board. Such a model appears more appropriate to the traditional formative paths of the operators, as well as to the definition of a juridical status, with well-defined framing and career

criteria;
- an *indirect accreditation, originated from the organizations for the distribution of services*, whose operators may contribute with their function (as employees or collaborators). This model appears to be more inspired to a culture of quality, and less oriented to the protection of the individual operators, in favour of a logic of flexibility and answer to the users' needs.

b) In the personnel policies, followed by institutions and organizations providing formative services.
In the case of *private or social private organisms*, it may be noticed on the one hand a strong impulse towards the protection and/or the introduction of common professional profiles (generally at a national level), related to forms of framing and contractual guardianship; moreover, this direction tends mostly to record and consolidate the changes that have already occurred within the organizational and professional structure, rather than anticipating them. One has to take into consideration the possibilities of connecting the starting situation with the continuous evolution of the professions, related to the social demand and the contexts of social division. Actually, this evolution risks to transform the recognition procedures (mostly if they are translated in contractual terms) into rigidity factors. Hence the need to search for more dynamic models, capable of overcoming such obstacles, and/or defining new rules for the personnel, as understood from the recent legislations regarding the organisms "without lucrative aims" (ONLUS), very common among the formation agencies.
On the other hand, a most authentic legitimacy of the "professionals of formation" tends to be found within the capacity of auto-regulation, in the game of demand-offer of services; hence the idea of formal qualifications and accreditations as useless, an idea that originates from the "proof of the market".
This does not mean, however, that every hypothesis of legislative or contractual regulation is not valid, as confirmed by the recent controversy on the juridical status, and the protection of "para-subordinate" workers (common figures in the Italian world of formation).

c) In the regional politics referred to the PF personnel.

It may be noticed several management approaches to the "training" of human resources:
- the "publicistic", considering the PF personnel mostly as a fixed cost, in charge of the public Institution, and requiring guarantee conditions (to be granted to the distributing institutions, even private or officially recognized); in this case, the PF is seen as a para-public compartment, where the reinforcement of old rules prevail on the need of innovation.
- the "privatistic", which denies the need of a public administrative presence in the PF, and which sees the issue of the personnel (included that of mobility) as the exclusive competence of the single formation organisms. In this case, any regulating intervention of the Region is discarded, as long as it does not regard the financing fluxes by which the quality of the offered services may be authorized;
- the "strategic", which points at influencing the re-qualification politics and/or the development of the personnel (in spite of its public or private status), as fundamentals of a repositioning action of the PF systems, in an optic of pluralist and consensual management.
If in the first case, the possibility of qualification for educators can be guaranteed through a simple regional bulletin board – and in the second case it appears as almost superfluous – in the third case, instead, it is fundamental to endow oneself with key-qualifications, on which to base the re-qualification processes of the system as well as the innovation of services.
Almost all the Italian regional PF systems today are in a situation of surplus and/or mobility of the personnel.
On the one hand, the traditional educators appear as redundant (mostly in the first level area of

formation), while on the other a strong increase in the number of functions and formative figures is estimated, particularly those concerning the alternative paths, the apprenticeship and the employment services. Therefore, it is not difficult to imagine a scenery characterized by a series of professional transitions towards and from these services, with a rising acceleration linked to the impact of the legislative and institutional reforms in act.

It is exactly such transitions of the professional paths that reinforce *the exigency of new professional paradigms, and of access and development device* of trainers, in order to simplify and orient the present transformation towards:

- a system of identification of the profiles and competences of trainers;
- an accreditation path at a national level.

The definition of professional standards represents then a possible element of connection between the needs of an initial and continuous formation, and those related to the qualification/accreditation.

3.1.2. TOWARDS A STANDARD COMPETENCE MODEL OF TRAINERS

The research has systematically used *the approach of the competences*; this has revealed as a useful instrument for:

- the on-the-field analysis of the functions and practices of educators;
- the dynamic interpretation of the professional transition of educators;
- the definition of a "referential" for the initial and continuative transition of educators.

During the latest years, in Italy the literature of the competences has flourished, with the consequences of producing the inevitable polysemy that influences the present usage of the term.
All in all, speaking of competences, instead of professional profiles, is a way of facing the insufficiency of the traditional *job analysis*, and the crisis of the organizations based on the functional specialization on the one hand, and on the other the new demands for a *contextualization* of knowledges and performances.
Actually, if the organizational aspects today are focussed on the processes and on inter-functionality, the organizational structures are no longer describable as assignment and requirements system. In fact, competence is not a characteristic incorporated in the individual job, nor is it reducible to know-how, but it concerns the skill of the subject itself which, when confronted to a professional task, knows how to act by using the repertory of personal and organizational resources (attitudes, knowledge, skills, behaviours, etc.) at his/her disposal.
This primacy of the subject, the necessity of referring to specific contexts, also explains the emphasis given today to the "key-" or "cross-" competences, i.e. those competences characterized by the maximum potential of the transferability of the actions from an organizational context to another.
In Italy, the works of ISFOL better emphasized this perspective, also related to the search for "professional areas", activity areas (ADA) and "capitalizing formative units".

The following competence typology has been proposed:

PROFESSIONAL AREA: PROFESSIONAL FORMATION	
COMPETENCE TYPOLOGY	DESCRIPTION
Basic competences	Competences which tend to become favourable or compelling conditions: • access to formation • employment • professional development (Examples: languages, computer science, corporate organization, elements of economy, law, etc.)
Technical-specialist competences	Knowledge and techniques specific to the profile and to the professional area (sectors or processes), that in turn can be distinguished in: • common and basic competences (characterizing the professional area, condition of flexibility for the specific profiles); they are also preliminary to: • specialized competences, which are part of the common competences, and which define the individual professional profiles (they derive from the analysis of the sector/compartment and of the functions/processes)

Cross-competences	Competences considered to be influential on the application of the various technical-professional knowledge. They refer to behaviours of diagnosis, relation, coaptation (Example: communication, decision making, problem solving, etc.) They derive from the analysis of behaviour of the subject in a working context.

In the other European countries we assist to an equivalent debate that has slowly substituted the traditional approaches; for instance:

- in Belgium, the key-competences have been interpreted as *skill* typologies, connected to the person, to the functioning of the enterprise, to the organization, to the individual working position;
- in Germany, they regard the personality, rather than the performance, in terms of decision-making, communication, organization of one's work, auto-learning capacities;
- in France, the competences are seen, within the ROME system elaborated by ANPE, as elements of description of the professional qualifications, in terms of knowledge and know-how, or in terms of personal skills;
- in the united Kingdom, they are classified in *basic skills* (prerequisites for the assumption of various roles), *core skills* (seen as personal and cognitive competences), *occupational specific skills* (referring to specific professional figures), *personal effectiveness* (personal or vocational characteristics).

As for the specific frame of trainers, however, so far the applications have been much less numerous; in the European area actually only in France (with the ROME repertory) and in the U.K. (within national occupational standards NVQ), there are consolidated models on this regard, though part of a general repertory.

From a methodological point of view, the model proposed by the research follows some basic steps, already proposed by ISFOL:

a) refer not to a profile, but to a professional area of educators, though today such a "professional family" is framed within heterogeneous, and/or coming across a strong transition phase, organizational systems;
b) identify the reference process and the "basic activities" of "educators";
c) elaborate a repertory of technical-professional competences, to be used for the qualification/accreditation operations.

The operative proposal has been inspired both to the French model of ROME (and to the conceptualization of the *référentiels de compétence et de formation*), and to the English model of NVQ. Despite the inevitable risks of discretion, the model proposes a specific configuration for the Italian case, compatible with the ISFOL approach. On the other hand, such effort seems to be proper, also to avoid to increase a tendency towards a *bricolage*, typical of much institutional engineering of our country.

The essential points of the model may be specified as follows:

1) it is assumed that the professionality of the *educators* may be referred to at least *three professional*

area, recognized as peculiar or intersecting the area of one's professional formation:
- learning/teaching (LEARNING);
- organizational development and management of the human resources (DEVELOPMENT);
- demand/offer convergence for the labour market and the local development (PLACEMENT).
This tripartition first takes note of the increasing interaction between formative environment and entrepreneurial world, connected to the spread of the alternation processes, of the permanent education and to the new politics of the human resources. Second, it adds a third area (that of labour market),both because some of the present regional PF personnel will opt for this area, and because more and more formative projects and services will have to integrate in a context of territorial politics. Though not covered by the present on-the-field research, it may be assumed that the area we synthesized in the world "*placement"* is destined to become more and more important in the next future for many operators coming from the world of formation.
While the "heart of the profession" is still in the first area, professional development routes can be foreseen, towards and from the other areas, that can to fill most profiles and/or rising competences. This does not mean that the deep divergences among the institutional formation of public interest, the enterprise formation and the employment services shall be denied.

2) Sideways to the three areas, it is possible to identify a standard cycle of the supply of formative services (in a wide sense), that can be represented in functional terms (as a process similar on the *functional breakdown* of the English NVQ).

3) This standard cycle is at the base of the creation of a matrix of the competence areas (related to the functions of the operators), starting from which it may be possible to specify the individual competence units (as happens with the *units* of the NVQ model and/or with the ADA of the ISFOL model for the capitalizing units). The competence units represents the closest reference for the planning of the initial (and/or the subsequent) formative paths of the operators.
Though avoiding any form of prescription, the whole of such competences should represent the basis to define the professional standards of the educators.

4) Starting from the matrix, a cartography of the typical professional profiles can be also obtained, as a result of an aggregation of the competence areas according to professionality levels and/or to the most important organizational roles for the operators (similar to the model of the English NVQ, though to complete with a more classical re-elaboration, similar to that proposed by the French ROME repertory). For each profile entrance requirements may be also specified, containing an operative description, similar to that suggested by the ROME model.

Such cartography becomes necessary mainly for the formative policies (public or non-public) concerning the formation of the educators; in fact, it should include the definition:

7 of the present profile of the educators, also according to the professionality levels used by the European Union;
8 of the medium-term evolution of the profile (where possible).

Landmark professional areas

It is agreed that the professional area of formation includes the activities directly connected to the pedagogic functions of instruction/formation/animation, though it extends to include the accompanying

functions, *tutorship, counselling,* human resources' management and development (activated within the private and public organizations of the formative services). Furthermore, it tends to intersect both with some of the functions of the employment services (particularly, those regarding the orientation and the accompaniment of the auto-entrepreneurial projects), and with those of some services for the persons (particularly, socio-educational services).

Professional functions and competences
The macro-functions identified are 7:

a) analysis of the needs and of the demand;
b) projection and planning of actions or instruments;
c) supply of the intervention/service;
d) evaluation and supervision of the results;
e) promotion of the action/service and relation with the context;
f) quality and/or research and development;
g) coordination and/or direction of the action/service.

To these functions correspond a series of standard activities, which in turn can be expressed in terms of competences (i.e. of knowledge and skills).
Consequently a few lists of competences, strictly connected to one another, have been roughly defined:

a) competences regarding the formation/learning

The list intends to cover both the present formation modalities, and those emerging from the auto-training and distance-training – both the traditional formation and the new modalities of animation and accompaniment.

b) competences regarding the organizational development

It is a list that intends to cover the specific activities of the management of the human resources, in an organizational area which formative component.

c) **competences regarding the convergence of demand/offer on the labour market**

It is a temporary list to be validated in succeeding targeted researches, also given the low level of consolidation of these services on the institutional level.

Profiles and levels of competence

Starting from the above mentioned matrix, aggregations of functions/competences identifying standard professional profiles of the operators are possible. Such profiles may cover activities existing even in more professional areas, and be further specified as follows:

a) segmenting them according to the levels of professionality

Formation operators have been classified, according to the English NVQ and to the European classifications, in the following levels:

1 *Intermediate level professionality* (3), equivalent to a middle range competence, able to operate in different working activities, in various contexts, also complex and non-routinary. It implies a high degree of responsibility and autonomy, sometimes also with control and management functions;
2 *Medium-high level professionality* (4), equivalent to a complex level competence, able to operate in specific professional or technical activities, in a wide variety of contexts, and with a

high degree of autonomy and responsibility. The responsibility to coordinate the work of others, and to allocate the resources, is often required;

3 *Managerial professionality* (5), equivalent to a competence that involves a significant capacity of intervention, in a wide range of complex technical fields, also in unknown contexts. A strong personal autonomy is required, as well as a significant responsibility for the work of others, and for the allocation of resources, in an executive position, with high integrated skills of diagnosis, planning, implementation and evaluation.

The various profiles came up from the research (as well as others described in the literature), have been placed in a special matrix, which identifies on the one hand the professional areas of prevalent reference, and on the other hand, the function of prevalent connection of the profile.

b) by attributing to each single competence a degree of command standard for that profile

This is possible for the single areas of competence, using the matrix of the activity/competence areas; as an example, we enclose the representations (*radar chart*) of the standard profiles of the formation operators reported by the Italian research (*teaching trainer*, *tutor trainer*, *projector trainer*, *orientation trainer*).

This arrangement also enables:

4 *to compare the various profiles* of the area, with regard to the basic reference competences and to the respective “areas of command”;

5 to represent the importance degree of the *cross-competences*, with regard to the other competences.

c) by projecting the professional evolution of each profile

Actually, two temporal perspectives could be developed:

6 one related to the present situation;

7 one in the medium run.

This representation helps to point out the routes of professional development in a vertical direction (i.e. with respect to different levels of *seniority* or administration of the careers), but also in a horizontal direction (with regard to possible professional changeovers).
This may prove very useful, mainly in case of a “polytechnic” device of initial formation for the educators, inter-disciplinary and modular (which may be organized in capitalizing units).

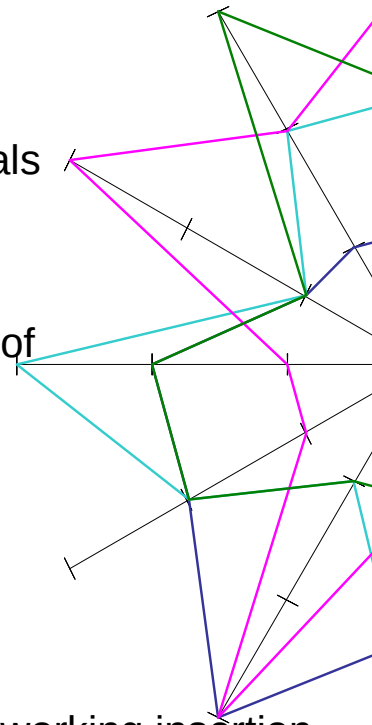
AREA OF FUNDAMENTAL CO

AL1 – diagnosis of the
requ

DL4 – evaluation and supervision of the service's requisites towards clients/users

DL3 – evaluation of the people's potentials

DL2 – evaluation of the learning results and/or of the competences



DL1 – evaluation and supervision of the actions

CL3 – counseling and/or tutoring of the working insertion
l

CL2 – animation and facilitation

group learning

3.2. The educator's competence profile

As pointed out in the previous chapter, at the moment in Italy there are no precise competence standards for the educators, who operate in the field of professional formation. Therefore, this part of the research intends to examine some elaborations relative to the main competence areas of educators in the field of the basic skills. To this purpose, the specific contents of teaching will be left aside, since they are more or less the same as those examined for the teachers of the school system. Instead, we will concentrate upon a series of cross-competences, which at the moment the scientific literature and the operative practice are considering as central for the formation of the educators.

3 Formative planning area
4 Teaching programming area
5 Teaching methodologies area
6 Evaluation of the formative processes area.

3.2.1. Area of the formative planning

The formative planning is an intentional and planned action aimed at outlining the transformation path of a *given* situation (personal, inter-personal, social) into a *wished* one, in agreement with the subjects involved, by acting upon the existing leverages (culture, conveniences, opportunities), and using the resources (knowledge, competences, spaces, times, methodologies and techniques…), delineating a path marked by a series of stages (more or less sequential, more or less logic), so as to represent a useful and significant guide for trainers and the other actors.
The subsequent project should enable to control the formative action both during the different stages of the path, and at its completion. This control in turn offers the possibility to revisions-adjustments to the project *in itinere*.

The elaboration of the project must take into account six elements characterizing it:

- aims
- intervention area
- resources and constraints
- processes
- control of the actions
- evaluation of the results.

The aims

The *strategic aim* corresponds to the space the project has to cover with regard to the other actors (institutional, economic, social, cultural, etc.) in the reference context, and therefore relevant for its achieving.
Hence the importance to categorize the project with regard to the *problem* it is going to solve, in an equivalent, or even better way, than already done elsewhere.

The *specific aims* represent the *performances* that are going to be performed. The latter should be defined possibly in an operative way, distinguishing them in capacities/competences, products/services, economic return, organization, social impact, visibility, improvement capacity.
Yet, the aims should not be defined starting from what the actors "want to be", but essentially from what they "can be": it is better to improve the degree of efficacy and efficiency of the aims along the way, rather than reconsidering them because of difficulties not fully taken into consideration at the planning stage.

The intervention field

The clear demarcation of the boundaries and of the conditions of the reference field favours the rationality of the project, that is its capacity to positively face unforeseen and unexpected situations that, as known, represent an important aspect of the projects within particularly complex contexts.
Therefore, it is necessary to specify the *field* of the project, its segmentation, its *target* (potential customers), if there is any direct or indirect *competition*, which are the cultural and communication characters the project must take into consideration, etc.).

To demarcate the intervention field is therefore a decisive factor for the success of the process.

Resources and constraints

In the intervention field, the available resources are to be defined as precise as possible, with regard to the constraints bordering the project.
The necessary resources for the accomplishment of a project are grouped in the following classes:

12 human;
13 technological;
14 financial;
15 organizational and logistic;
16 knowledge and information.

The constraints usually refer to:

17 legislation;
18 market;
19 culture.

It is therefore necessary to have a clear vision of the constraints/resources map available to the manager and decision-maker, in order to define then the peculiar aspects of the project.

The processes

It is now possible "to build the operative process", that is to concretely define the way in which the available resources are to be used, in order to guarantee the completion of the project's stages, and to operatively pursue the objectives defined.
The operative processes, both aimed at the manufacturing of goods or the supply of services, are usually identified as follows:

20 the *work practice*, i.e. the specification of the competences necessary for the execution of the project, with regard to the human resources, the technologies and the organizational plan;
21 the *programs*, i.e. the organization of the actions, both in general terms and in terms of intervention units, defined as modular sequences arranged in a logic and chronological order;
22 The communication, integration and coordination *procedures* between the parties, i.e. the instruments that allow to "hold together" an extremely differentiated system, being able to guarantee a proper integration and a constant reference to the project's aims, avoiding wastes.

The control of the actions

The control of the project is performed through a series of more and more sophisticated factors, following the development of the *Project Management* science, and more precisely:

23 organizational models (functional hierarchic, professional bureaucratic, divisional, planning, and matrix);
24 direction styles (bossy, technical, charismatic, sympathetic);
25 climate (formal, informal, target-oriented, fulfilment-oriented, etc.);
26 technology (intensity, ergonomy, concentration/decentralization, etc.);
27 personnel management system (recruiting, socialization, rewarding system).

The evaluation of the results

The operative project must be submitted to a scrupulous evaluation. To evaluate means being able to observe the correspondence of what has been defined in the project design with what has been practically accomplished.
In order to do this it is necessary to refer to the project's aims, which indicate – as said before – the *performances* that are to be accomplished, in operational terms, i.e. verifiable.
The evaluation process contemplates the following stages:

- identification of the *quality criteria* established by the decision-maker and by the other relevant actors;
- individuation of the *indicators*, of the *standard and threshold values*;
- *procedures* of measuring and evaluation.

With regard to the timings, we need to point out that:

- the feasibility study represents in a way the *ex ante* evaluation;
- the *in itinere* evaluation may be defined as monitoring (i.e. the verification all the way of the correspondence of the actions and the stages with the criteria specified in the program, which enables to make adjustments in the course of the project ;
- the *ex post* evaluation refers to the final results and to their impact on the external and internal environment.

3.2.2. Area of the teaching programming

The teaching programming represents the stage subsequent to the formative planning. It enables *to practically determine the targets, the contents, the experiences, the means and the verifications with regard to the learning process, with the aim of making the trainer's activity more efficient and rational.* We introduce here three different models that can be adopted in the planning and management of the formative actions:

3 traditional teaching model
4 formative technology model
5 relational and experiential approach.

a. **TRADITIONAL TEACHING MODEL**

This model centers around the following rule: "Teaching and evaluate the progresses". This means distribute in time the contents to be learned, to create a temporal sequence based upon relatively short teaching segments, according to the logic of the content index.

The classical teaching methodology is carried out as follows:

6 EXPLANATION
7 EXEMPLIFICATION
8 EXERCISES
9 CORRECTION

The verification takes place during the process, through exercises and self-assessment, enhancement of the explanation, and furthermore, during the summative phase, through a formal approach, i.e. by means of objective "tests". Such a model allows only one type of correction, that is speed up or slow down the length of the modules (except for recuperation of lessons lost).

It is therefore a teaching model thought for a motivated and selected population. It does not take on oneself the success conditions and strategies, fitter to the heterogeneity of the new school population. Reintroducing it in an apprenticeship context arouses problems of motivation/resistance and depersonalization. Hence, inefficacy.
Although this model has shown a certain adaptative capacity, turning into an "equalitarian teaching model", this has brought about two negative results:

- leveling of the results;
- trivialization of the contents and of the formative experiences.

b. MODEL OF FORMATIVE TECHNOLOGY

It is an alternative to the traditional model, based upon a transformation of the teaching action into sequences/processes made up of 5 typical steps, with a continuous interaction:
1. FORMATIVE TARGETS – determination of the operative results, in terms of contents and skills, intended to be achieved;
2. PRELIMINARY SITUATION OF THE STUDENT – verification of the prerequisites; should they not be present, activities to overcome the gap between present knowledge and required knowledge will be performed;

3. TEACHING PROCEDURES – definition of the learning itineraries and their distribution over time (timing);
4. EVALUATION OF THE RESULTS ACHIEVED – preparation of the verification procedures and instruments, both of formative and summative type;
5. FEED-BACK – constant interaction among the different stages, and not a mere distribution over time of the learning contents.
Within this model, the teaching becomes "learning process", in a technological sense:

- to be represented in formal terms (planning)
- to be applied as a control/correction (implementation).

Hence, there is a high "rationalization" of the learning process. The model of the formative technology proceeds as if the individual might be made functional to the projector's design, i.e. through hetero-directed cognitive and operative processes.
Therefore it is a vapid approach, i.e. it cannot give motivation, but can only support it when it is already there. This model has the following advantages:

- to avoid the "fatalist" logic of the teaching-learning;
- to improve the productivity of the school;
- to make a better use of the time;
- to extend the possibilities of the teacher.

The disadvantages:

- it has become ideological: a passe-partout good for any problem;
- it assumes the embracing of a model, it poses problems of rigidity and of enclosure within a rigid technological scheme;
- the socio-affective aspects are absent, so they must be "compensated";
- the planning is the imposition of a model, rather than the creation of a practice or experience, i.e. a synthesis between behaviour and ideas;
- the scheme targets-results is abstract: it is not connected to a concrete action path, aimed at solving the problems given in a satisfactory manner for the actors.

c. RELATIONAL AND EXPERIENTIAL APPROACH

Talking about "approach" we intend a frame of reference ("map"), and an equipment of instruments helping the actor to orientate, in order to be able to solve all the problems met in the formative action.
The learning process:

- is part of the person's own world;
- contributes to the progress of the person's maturation process;
- cannot be limited to a functional aspect.

This approach does not presuppose the learning process, rather the inclination of the individual or of the group to the formative experience.

Which implies two consequences:

- A sense of action: it is not pre-determinable, but it is given by the kind of involvement among the actors of the formative experience.
- Techniques to be adopted: the pluralist principle or adequacy principle is valid here: a better correspondence to the problem and the context (also involving the enterprise and its culture), in which the formative action takes place, taking into account the "critical"

relationship between aims and resources available.
In other words, the characters of the training person do not derive from abstract theoretical frames, but can be discerned in the relationship. The formative action cannot be assimilated in analogical terms to the productive process, but rather to the vital process of the farmer, growing, favouring the potential of each individual.
According to what has been said, the following aspects of the formative intervention may be outlined:

1) The distinction between two "formative projects": the initial formal one, and the real one, depending on what really happens during the formative action;
2) The preliminary phase: not only "entrance", but beginning of the formative experience. It leads to the "educational contract", mutual among the players;
3) It is necessary to refer to the "subjective cycle" of the formative experience, linked to the path of contents and competences.
4) The importance of the choice of the formative experiences, which may define a significant and productive path of the person involved;
5) A friendly and mimetic evaluation: through experiences, avoiding the formal assessment, and enhancing the self-assessment, relying on the communicative and informative value of the subsequent path, using an instrument of evaluative documentation (dossier or portfolio).
6) Trainer's aids: planning/accompanying instruments to support a significant style (group-community), confrontation and supervision.

The path of the formative action may be represented as follows, from the point of view of the trainer-tutor:

- FORMATIVE-FORMAL PROJECT
- ACTIVATION PHASE
- EDUCATIONAL CONTRACT
- CHOICE OF THE FORMATIVE EXPERIENCES
- REAL FORMATIVE PROJECT
- FORMATIVE REPRESENTATION
- DOSSIER OR PORTFOLIO
- FRIENDLY AND MIMETIC EVALUATION
- TRAINERS' AIDS

in the teaching/learning process The following elements are of utmost importance:
- aesthetic formation, beyond the theory-practice alternative, and the vulgar scientism;
- dramatization processes;
- biographic fundaments;
- realistic formative experiences ("real task").

This approach excludes "cold", distant, with no involvements ways of learning.
Instead, it provides for the interest for people, the creation of situations that stimulate the human disposition.
It privileges the valorisation of personal resources or "pedagogy of success" and of excellence (the best a person or a group are capable of offering).

3.2.3. Area of the didactic methodologies

3.2.3.1. The changing role of the trainer

The teacher as facilitator of the learning process

The trainer's role depends on the functions s/he has to carry out in the teaching process. The traditional view of these functions does not correspond to the new situation, where the learner is an active partner and takes on the responsibility for his/her own learning.
In order to create the conditions that provide the student with opportunities that will enable him/her to become an efficient and successful person and professional, now and in the future, it is necessary to change the whole process of teaching/learning, the classroom practice as such. This will involve changes in the trainer's functions, which, in turn, will require the trainer to learn skills and competences based on personal characteristics that are different from those trainers were hitherto required to have. The trainer acquires a new meaning of facilitator and consultant.
Changes in the role and function of the trainer also involve changes in values, beliefs, attitudes and the teaching culture. In fact, it is the change from individualism to development-oriented collaboration. This is collaboration between trainers and students in a teaching/learning process, based on mutual respect, shared goals, support and a shared school culture.
Trainers have to move from trainer-centred and subject-centred teaching to a learner-centred teaching/learning process where the learner is an active partner.
The teaching/learning process, in which the trainer is a facilitator, is subject to more unpredictability and spontaneity. It demands from the trainer greater concentration, intensity of thinking, attention and creativity.

This is required in a situation when the learner becomes a partner and is given a chance:

- to take an active part in planning and organising his/her learning;
- to decide and take responsibility for the results of his/her learning;
- to have his/her opinions listened to;
- to show his/her initiative and creativity; and
- to develop his/her self-confidence and self-reliance.

Traditional teacher	Teacher/facilitator
1. Teaches, gives information, explains	1. Facilitates students' learning
2. Teaches formally	2. Teaches informally
3. Does everything for the students	3. Creates situations for students' experiences
4. Decides everything	4. Involves students in decision making
5. Is creative about how to teach	5. Is creative in finding and offering situations for the development of students' creativity
6. Dominates the classroom	6. Builds relations on mutual respect and trust and encourages student participation
7. Focuses on students' errors	7. Focuses on students' progress
8. Is active, creative, and innovative him/herself	8. Delegates the right to be active, creative, innovative to students

The trainer needs certain skills and competences to organise a learner-centred teaching/learning process.
These are:

- the skills of democratic classroom management;
- the skills to facilitate the development of interpersonal relations on trainer-student and student-student levels;
- the skills to clarify and identify student needs and abilities; and
- the competence to create a relevant balance between theory and practice, teaching and learning<and trainers' and students' responsibilities and activities.

The trainer, as facilitator of the growth of the student's whole personality, must, first of all, have the qualities s/he is assisting and encouraging the learner to develop. In addition, s/he has to know how to encourage, promote and support the student's personal and professional development. This means that trainers have to have certain new qualities. The skills of student-centred teaching cannot be learnt and used efficiently if the trainer does not have certain personal characteristics such as:

- tactfulness;
- the ability to communicate;
- the ability to share without being imposing;
- resourcefulness.

Another basic skill of the trainer/facilitator is the ability to create an environment which encourages learning. A learning environment has several aspects:

- *the physical environment:* the equipment and the way it is organised in the classroom, e.g. how students are seated, the trainer's place, arrangement of furniture etc.
- *intellectual climate:* attitudes and relationships, the atmosphere in the classroom, the trainer's
- attitude to students progress, e.g. interest and support, the trainer's enthusiasm about his/her
- own work, student's cognitive interests and their attitude to their own learning goals, generally
- accepted values, beliefs and the broad interests of trainers and students.

The students role in the teaching/learning process depends greatly on trainer-student relations, i.e. on the trainer's role and his/her attitude towards the students.
The trainer is the organiser of the teaching/learning process and determines the style of communication

used with and among the students. The way the trainer carries out his/her role and the attitudes s/he has are part of the so-called hidden curriculum and influence the students' development e.g. an authoritarian trainer and a democratic trainer will have different influences on their students.

3.2.3.2. The teaching techniques

Following are the set of the most used teaching technologies in the Italian professional training system, plus two recently introduced methods.

A) Widespread technologies

1) Lesson
- Introductory approach
- Deductive approach
- Per issues

2) Exercises
- sciolistic
- training
- problem solving

3) Case Study

4) Incident

5) Auto-case

6) Simulations
- training
- structured (Role-Play)
- analogical
- self-centred

B) Recent methodologies

1) Cooperative Learning

2) Problem-Based Learning

A) WIDESPREAD TECHNIQUES

1. LESSON

It does not belong to the category of the active methods.
The achievable teaching goal consists in the communication of knowledge in a form already structured, filtered by the personality and the knowledge of the teacher. It creates a communication process, it does not stimulate the acquisition of knowledge: only the emission of information is certain, but not the real process of learning from the students.

To attain the aim of an efficient acquisition of the notions communicated, it is necessary that the lesson is followed by an exercise, be it individual or in small groups.

a) Deductive path

Stages:

- **Introduction**: it concerns the general goals of the lesson, with a special emphasis on significant theoretical and methodological aspects.
- **Presentation of general principles**: the theoretical reference and the assumptions of the argumentation are reviewed.
- **Development of the arguments**: passing from logically superior aspects to logically inferior aspects, in a cascade sequence.
- **Conclusions**: practical consequences and possible examples.

b) Inductive path

Stages:

- **Presentation of a particular case**/ specific situation at the beginning of the problem/question.
- **Considerations:** on the cases, on the possible explanations and consequences.
- **Concepts:** formalization of theoretical concepts, based on the results of the precedent stages, by means of a generalization process.
- **Definition of the applicative consequences**.

c) "Per issue" stage

Stages:

- **Asking meaningful questions**.
- **Explanation of the goal** of the speech on the theoretical or of the practical consequences plane (why it is important to speak about them).
- **Solutions and concepts:** handling of the questions developing concepts aimed at the research of solutions.
- **Conclusions and consequences:** reformulation of the key-points on the base of the solutions found, and definition of their practical implications.

2. EXERCISES

a) Notional exercises

Goal: to steady the learning and fill possible gaps in the knowledge of notions.

Instruments: questionnaires and fact-finding tests including questions on the teaching subjects (open and closed questions, alternative or multiple choice questions).

Means of execution:

- The questionnaire is filled by the whole class, individually;
- the questionnaire is not collected by the teacher, who comments in class the solutions of the individual questions, involving the audience in the examination of the right or wrong

alternatives.

b) Training exercises

Goal: to transmit capacities about the operative execution of a certain manual of intellectual activity. It is a teaching instrument that favours the learning processes of closed and set behaviours.

Examples: the use of a software to carry out a given procedure (editing and printing a letter, creating an archive, make calculations with an electronic sheet, etc.).

Aspects to be taken into consideration:

- the gradation of the difficulty levels;
- one may choose an individual or a subgroup performance (no more than 3 persons);
- it has a didactic succession relation to the lesson.

c) Problem solving

Description: it consists in giving a problem whose resolvability depends on the correct use of already-possessed notions, or other notions, that will be delved in class, or discussed in previous lessons.

Time: higher than in operative practices, in order to allow the participants to reflect upon the various ways to tackle and solve the problem.

Stages:

- Presentation of the general situation to the group;
- Subdivision in subgroups (no more than 5 persons), in order to allow everyone to express their opinions;
- Subgroup work;
- Final discussion involving the whole class; different from the training exercises, it becomes an occasion to learn, stimulated by the discussion and by the confrontation between subgroups.

3. CASE STUDIES

Goal: development of the analyzing capacity, to affront rationally (limited rationality) and solve complex and articulated situations, of the same sort and complexity of those the participants have to confront with in their working life. Compared to the *problem-solving* the problem has no predictable solution. The correct solution does not exist and cannot be predicted *a priori.* What matters is the internal consistency of the logic process through which the participants reach the solution, and the presuppositions to complete the data.

Stages:

- Presentation of the general situation to the group, through a written description of a problematic situation.
- Subdivision in subgroups;

- Work in subgroups;
- Examination of the work of the subgroups by the whole class.

During the plenary session, the professor does not underline the right and wrong aspects of the various solutions (as in the *problem-solving* sessions), but s/he favours the exchange of views, and highlights the different logics adopted.
The choice of the context may concern the same organization in which they operate, as well as different situations (this implies to later shift what has been learned to one's context). However, it is sufficient that the case is plausible.

Time: half class-day.

Teaching: centred on the process and neutral on the contents (non executive).

4. MULTIPLE STAGE CASE OR INCIDENT

It is divided in two moments. First, the participants have to tell what information they need and why (stage centred on the capacity of *problem setting*). Then, the solution to the problem is searched (stage centred on the capacity of *problem solving*).

Advantages: it allows
- To develop one's attention on the gathering of information;
- To optimizing the request for information;
- To break the heaviness of some cases.

Stages:
- introduction of the general situation to the group;
- subdivision in subgroups and first question (what information you need and why);
- subgroup work;
- first plenary session, with examination of the subgroup works;
- delivery of the second part of the case, containing all information;
- subgroup work;
- conclusive plenary session.

5. AUTOCASE

It is a case not prepared by the teacher, but presented by the participants themselves, taken from the working reality. The presentation is made verbally and not in a written form.

Stages:
- choice of the case to be discussed (in plenary session or in subgroups);
- examination of the problem posed by the participant/narrator (listening to the case and

formulation of questions);
- elaboration of solutions or hypothesis (in plenary session or subgroup).

Time: 2 to 6 hours.

Teaching goals: it favours
- the capacity of diagnosis (*problem setting*), the gathering of information, find different reading perspectives;
- the transfer of learning;
- participation and involvement.

6. SIMULATIONS

They define a series of techniques, though indicated with the same term, having as a result a lexical ambiguity.
We are speaking of:
- behavioural simulations;
- simulations at a relational level;
- simulations at a decisional level (in this case they are called management games or business games), variant of the cases.

They have in common the fact that they all belong to the group of the so-called experience techniques, centred on the relational level, in which learning takes after the verification of the validity of behavioural choices, done in a protected situation.

a) Training simulations

The recreation of interpersonal behaviours limited to circumscribed situations. To be noted its similarity with the training exercise (the use of a standard procedure); nevertheless, the simulation has a high emotional value, caused by the emotional exhibition required from each participant.

Examples: making a phone call to fix an appointment, answers to the most frequent objections in this context, etc.

Didactic goal:
Improving the possibility to use a specific behavioural procedure.

Notice:
- the roles to be played must be clearly written and easy to identify, giving enough contextual data;
- the observers are to be given an observation grid, on which they should write down elements that will become subject of discussion during the plenary session;
- the situation represented must be identical to that in which the participants will operate in real life;

– it is desirable that the participants volunteer.

b) Close context role playing

It is the most widespread form of role-play. It consists in the examination (made by small subgroups), of the situation described in a written case, and in the subsequent enactment of the social relations made necessary by the same case.
The contextual data, even this case, are well-known. However, the behaviour is not reproduced, but chosen.

Example: meeting between principal and collaborator required by a situation; selling meeting for a specific product for a specific customer, etc.

Goals:

- to develop the logical and rational ability to analyze complex situations, to evaluate alternative solutions, and come to an unhurried decision (tactical component);
- development of abilities concerning interpersonal behaviours, the control of emotions, the understanding of the fee-backs, through the representation of the social relationship required by the decisions taken (relational components).

Advantages:

- makes aware of the importance of one's own relational style, of the respect for other people's feelings, and of the reading of the feed-backs generated within the communicative situation.

Stages:

- the case reproduces a two-person problematic situation (principal-collaborator; customer-seller, etc.)
- one participant has the role of counterpart, and prepares separately with the teacher;
- the other participants, divided in subgroups, examine the case;
- one member of each subgroup plays the role-play with the counterpart;
- the simulations may be videotaped;
- finally, the plenary discussion can begin, to analyze what had happened and draw conclusions, generalizing some principles which may be applied to the real world.

c) Analogical exercises

Goal: to improve the abilities to understand the effects of some categories of behaviours through the examination of appropriate external stimulations (artificial situations).

Examples: prisoner's dilemma, adventure in the desert, NASA, etc.

The content of the game does not belong to the working activity of the participants, but the process is analogue to the interpersonal and social dynamics of the working activity (cooperation, leadership, power, role, listening, trust, conflict, etc.).

They are used to introduce specific subjects, to give start to a process of experiential learning in which other teaching techniques will be used (lessons, cases, structured role-plays).

d) Analysis exercise, here and now, or self-centred

Goal: to improve the ability to understand the effects of some categories of behaviours through the exam of the present situation of the formation group.

Examples: Johari windows, sociogram, personal ambitions, etc.

The task to assign depends on the phenomena to examine, with subsequent collective examination of what has been done, of the individual and collective emotional repercussions, of the predicable developments and of the analogy to the normal social life.
It is a form of analysis of - intervention on the phase that the group is going through in its life cycle. It has to be used within an open psychological contract with the class.

B) RECENTLY INTRODUCED METHODOLOGIES

1. COOPERATIVE LEARNING

The *cooperative learning* is a teaching/learning method that uses particular techniques of cooperation within the class, oriented to small groups of students. For the importance it gives to the interpersonal relationship in the learning, it is defined as a "social mediation technique". In this context, the teacher is the organizer, the mediator and the facilitator of the learning experiences; the students are addressees of the teaching action as well as main characters of the learning and a real resource.
The characteristic element of the *cooperative learning* is the "*working in groups*" of students (but also of teachers). The success of working in groups always depends on a series of competences and behaviours that make up the constitutive and fundamental aspects of the "*teacher's profession*" (team teaching); actually, in the group working, each teacher may just act his/her role as well as show his/her consensus with the aim of the group.
The level and the quality of the functions a school group are measured according to a specific variable: the ability to become a "working group".
The tasks of the teacher (and of the team) are mainly:

- Make the project and the operative path transparent to the individuals and the group, both at the beginning than in the course of the work;
- Give the support to the work of the individuals as well as to the work and the balance of the group.

Important variables for group working are: the products, the processes, the feed-back and the actions of the individuals and of the group.
Following are the main elements of the methodology of cooperative learning, through a comparison with a traditional approach.

DISTRIBUTED LEADERSHIP	
COOPERATIVE GROUPS	TRADITIONAL GROUPS
Belief: Each member of the group is able to understand, to learn, and to fulfil the task, if s/he would be asked to fulfil it. A sense of reciprocal sympathy has been noticed when the task is fulfilled. *Behaviour*: No leader is chosen or assigned. All members of the group act as leaders when necessary and proper.	*Belief:* A member of the group is chosen by the teacher or by the group as a leader. S/he is responsible of the fulfilment of the task. Everyone feels sympathetic towards the others when the task is fulfilled. *Behaviour:* A leader is assigned or chosen. S/he acts as a leader, assigning his/her competences to the members of the group.

HETEROGENEOUS GROUP	
COOPERATIVE GROUPS	TRADITIONAL GROUPS
Belief: The most efficient are heterogeneous groups in terms of social origin, level of competence, physical attributes and gender.	*Belief:* The most efficient are the homogeneous groups, in terms of social origin, level of competence, physical attributes and gender.

Behaviour: The selection of the groups is random, or done by the teachers to guarantee the heterogeneity.	*Behaviour:* The teacher selects the groups according to the characteristics of the group-members.

POSITIVE INTERDEPENDENCE	
COOPERATIVE GROUPS	TRADITIONAL GROUPS
Belief: Not all students want to work in groups, unless there is a reason to do so.	*Belief:* The students work together only when the teacher tells them to do so.
Behaviour: There is a result produced by the group, a group or individual responsibility, shared materials and/or a particular group award.	*Behaviour:* The members of the group create one or more group products; sometimes they share the materials, feel responsible only for their own achievements and receive individual awards.

ACQUISITION OF SOCIAL COMPETENCES	
COOPERATIVE GROUPS	TRADITIONAL GROUPS
Belief: The ability of working efficiently in groups derives from competences that may be taught and learnt.	*Belief:* The students begin the formation with the premise that they already know how to get along and how to work in groups.
Behaviour: The social abilities are specified, put into practice, respected and controlled.	*Behaviour:* The teacher tells the group to cooperate.

AUTONOMY OF THE GROUP	
COOPERATIVE GROUPS	TRADITIONAL GROUPS
Belief: The students learn how to solve the problems they encounter by themselves, **rather than** asking for the teacher's help.	*Belief:* The members of the group need constantly the help of a teacher to solve their problems.
Behaviour: In the **problematic** issues, the teacher gives suggestions and **advises** the entire group.	*Behaviour:* The teacher leads and arranges the groups, to solve the problems according to his/her observations.

8. PROBLEM BASED LEARNING (PBL)

The problem-based learning (PBL) represents one of the most widespread formative methodologies used in the Anglo-Saxon countries. It allows to operate simultaneously in different fields: in the development of problem-solving strategies, of disciplinary-content knowledge, of practice-operative abilities. In fact, the students are given from the very beginning the role of problem-solvers, and they are confronted with non-routine, low structured issues, reflecting the problems of the real world. Such problems do not have a pre-determined solution, which can be procedurized *a priori*, therefore they require an activity of investigation, of information-gathering, and of reflection, as well as an approach using problem-solving techniques and a method of attempts and errors.
The PBL consists of two complementary and inter-related processes.

Definition of the curriculum	**Cognitive coaching**
The teacher • describes a low structured issue, based on the desired learning goals, on the characteristics of the students, simulating problematic situations typical of the real world. • creates a first outline of learning and teaching events based on the formative needs of the students. • analyzes the resource field necessary to the problem, and works in order to make them available	• The students actively define the problem and some of its potential solutions • The teachers and the trainers support the students, making the learning processes explicit and aware.

The PBL begins with the introduction of a problem which is not well structured yet, on which everybody's efforts are concentrated, in order to define, elaborate and solve it. The teachers take on the role of coach (cognitive and meta-cognitive), rather than that of knowledge-dispensers; the students, on their side, take on the role of active problem-solvers, of decision-makers, rather than that of passive listeners.
The usage of the PBL methodology determines a postponement of the traditional roles in the learning process:

Teacher	**Students**	**Problem**
Teacher in the role of coach: • asks questions on how to define and tackle the problems • surveys the learning • tests and challenges the students • involves the students into the process • surveys and adjust the change levels • manages the group dynamics • begins the process	The student as active problem-solver : • active participant • involved and engaged • builder of meanings	The problem as initial challenge and generator of motivation: • weakly structured • appeals to the human desire of reaching a solution/stasis/harmony • structures the needs and the subsequent learning context.

Among the advantages offered by the Problem-Based Learning method there are:

Construction of the motivation
Involves the students more deeply in the formation, since they have to reduce the initial discrepancy between the competences possessed and those required for the solution of the problem (cognitive dissonance). Secondly, the effort derives from the perception of playing a decisive role in the result of process of research for a solution.

Importance of the learning and reference to common sense

- it answers better than other approaches to the natural question asked by the students about the need to study and about the connection between what is discussed in class, and its utility in the real world.

Key-competences: development of a critical and creative thought

- the scenery characterized by non-routine problems stimulates the critical and creative thought, unlike formative models in which for each question asked by the teacher, there is only one exact answer derivable from the contents previously discussed.

Key-competences: learning to learn

- it promotes meta-cognition and auto-regulated learning, asking the students to generate strategies in order to define the problems, gather the necessary information, analyze the data gathered, build and test solution hypothesis, compare the strategies adopted with those of other students.

Learning as understanding

- it asks the students to learn in ways similar to those that everyone will use in the future, and in similar circumstances; it tests the learning, to demonstrate that it is an understanding experience, and not one of mere acquisition of notions.

Finally, the experiential model of the Problem-Based Learning can be compared to a traditional prescriptive model, to point out some traits of particular interest:

Prescriptive model	Experiential model
• Adopts the perspective of the teacher, of the expert • Has a linear development • Teacher –one who transmits the formation • Student –one who receives the formation • Structured environment	• Adopts the perspective of the student, of the one who learns • Has a hyper-textual and network development • Teacher – seen as a facilitator • Student – seen as a builder (of meanings, knowledge and abilities) • Flexible environment.

3.2.4. Area of the evaluation of the formative processes

The general architecture of the evaluation process may be divided in the following stages:

- definition of an object of analysis;
- explanation of an optic, of a "lens", through which investigating it (the reference frames, expressed in evaluation criteria and indicators);
- the "data gathering", through instruments coherent with the reference frames;
- the "expression of an evaluative judgement" (confrontations between defined standards and achieved results).

Before entering into the merits of the various evaluation typologies, it is advisable to refer the scale of the evaluative action.

The goals

Considering the formative intervention as an activity characterized by the fact of being built around a system of goals, the evaluation is a criterion to judge their achievement, i.e. the efficacy of the formative action. From this point of view, the evaluative action becomes a process parallel to the formation, an instrument to intervene on the formative course of action, pointing out its strengths and weaknesses, and therefore allowing for an improvement of the process of pursuit of the goals.

Hence, the evaluation represents the "testing" of the entire process of planning and accomplishment of the formative actions. The operations characterizing it aim at catching all the elements which enable to:

- verify that the results achieved may be considered satisfactory, with regard to the expectations;
- reconsider the entire process analytically, in order to redefine the weak elements;
- the object and the analysis unit.

The evaluation becomes a system to control, by confronting the results obtained with the goals, the different stages of the formative process.

From a systemic point of view, the evaluation proceeds parallel to the formative intervention, giving way to a process of feedback, based on the mechanism formative action/evaluative feed-back/decision/formative action. Therefore, a process is outlined, through the construction of continuative control systems: evaluation of the organizational context, evaluation of the inputs (methods, resources, didactics, etc.), evaluation of the execution (surveillance), evaluation of the results (learning, behaviour, performances).

The space-time dimensions of the formative intervention – its articulation in stages, the possible existence of different "places" where the learning process articulates, as well as the various phases of the process – force us to determine the portion of space and time to be submitted to an analysis. Such a portion will be represented by the *analysis unit* (the individual stage or the entire formative path, for example).

The logic-chronological dimension

Establishing “how much to evaluate” means to meditate on the ways in which the evaluative activity intervenes, and in which form, in the formative activity seen as a complex decisional process. In this sense, the evaluation becomes the essential premise in each decisional phase of the formative path, on a didactic, and organizational-managerial plan, as well as on that related to the results of the intervention achieved.

As far as the logic-chronological dimension, we describe here the classic subdivision among in ex ante evaluation, in itinere evaluation and ex post evaluation.

The *ex ante evaluation* may contribute to the definition of the goals of the formative path, to their organization in systems of goals and to the checking of the existence of the initial prerequisites; the *in itinere evaluation*, oriented towards the control and the monitoring, takes on the function of feed-back for the ongoing formative path; the *ex post evaluation* is oriented towards the checking of the results of the formative intervention achieved: in order to verify the achievement of the formative goals, it may take on the form of delayed or impact evaluation.

The subjects

Within the life cycle of a formation project, with regard to the position occupied by the subjects with regard to the path, and to the object, two main types of evaluations may be distinguished:

- an *internal* evaluation;
- an *external* evaluation.

The ***internal evaluation*** refers both to the achievement of the learning goals by the individual subjects of the formation, and to the general evaluation of the project.

The first, didactic, testifies the possession of cognitive and professional requisites, necessary to enter a certain working position/role; the second accompanies the development of the project from the record of the formative needs to the verification of the results.

The methods used may be quantitative (test, structured examinations, questionnaires) or qualitative (semi-structured examinations, interviews and meetings); the subjects of the evaluation are inside the analysis unit.

The ***external evaluation*** refers to the congruity aspects of the individual stages, with regard to the whole formative path, and of the path itself, with the general project apparatus.

Therefore, the analysis unit will coincide with the different segments, or with the entire path, in case the congruity analysis has as a parameter the general architecture of the project; the methods used vary according to the phases in which the evaluative process is articulated; the responsibility of the evaluation belongs generally to a subject outside the formative path.

The organic character of the evaluative process is also to point out, so much as it deals with the subjects, the instruments, the goals which come into play in the various phases of the formative path. Such organicity has to form the logic of the executive planning of the formative activities.

