

**GENDER DIFFERENCES IN  
EDUCATIONAL OUTCOMES:  
A STUDY ON THE MEASURES  
TAKEN AND THE CURRENT  
SITUATION IN EUROPE**

**Italy**

# GENDER DIFFERENCES IN EDUCATIONAL OUTCOMES: A STUDY ON THE MEASURES TAKEN AND THE CURRENT SITUATION IN EUROPE

---

## Italy

### 1. General policy framework

In Italy gender inequality in education is not a question of concern. This doesn't mean that there is not a gender issue – as we'll see in the section 'Attainment' – but that gender is not perceived as a problem by national authorities and policy makers, at least in the educational sector. Policies to avoid gender discrimination and to promote equality of opportunities between males and females are put in place in the labour sector. In the government there is a Board for Equality of Opportunities (*Ministero delle Pari Opportunità*) but generally speaking it doesn't deal directly with education.

Gender equality is not explicitly expressed as a goal for the school system and it is not incorporated into legal documents and official regulations for education. The Italian Constitution states (art. 3) that 'all citizens are equal, without differences of sex, religion and social status'. This declaration is deemed sufficient to assure that there is no barrier to the entrance of women to instruction at any level of the education system and to various jobs and careers. In addition to constitutional principles, there are anti-discrimination laws and provisions to guarantee equal treatment and opportunities between men and women but they concern the labour market and don't precisely mention education.

At national level specific policies on gender in education are not in place and until now it has not been considered to introduce them. However at local level projects and initiatives on gender equality addressing schools and teachers are here and there realized by research organizations, associations, and regional, provincial or municipal authorities <sup>(1)</sup>.

### 2. Curriculum and guidance

Official national curricula for primary and secondary school don't take into account gender in defining subjects content neither suggest teaching approaches to make science and technology more 'girl-friendly' and languages or humanities more 'boy-friendly'.

Recently, the Minister for Equal Opportunities – whose Board has a general competence over all policies aiming to promote equality between men and women – published an announcement to fund projects (to be presented by individual schools at upper secondary level within May 15<sup>th</sup> 2008) directed to realize learning modules about gender differences.

The Female Historians Italian Association (*Società Italiana delle Storiche*) makes proposals about teaching history in a gender perspective (<http://www.societadellestoriche.it/main.php>).

---

<sup>(1)</sup> For example: a survey on gender differences has been carried out on 1 200 high school students in the province of Livorno in October 2008. Educational initiatives on gender differences are in place in Bologna schools. In the same city a study centre for the development of women-men equal opportunities (*Progetto Donna*) has been established since 1989.

The so-called DIVA project (Science in a different voice) aims to make teachers, high school students, politicians, university professors more aware of gender equality in science and from December 2005 onwards it involves schools in various parts of Italy (<http://www.irpps.cnr.it/diva/progetto.php>). There are also some books that suggest teaching strategies and materials to approach in the classroom gender issues <sup>(2)</sup>.

Nonetheless using all these resources is left mostly to individual teachers and schools decision.

### **Sex education and personal gender relations**

Brief and generic mentions of gender and sex education are contained in two documents attached as an annex to a legislative decree (D.L. 59/2004) enacted in 2004. The two documents are entitled 'National Guidelines for the development of individualized curricula in primary school' and 'National Guidelines for the development of individualized curricula in lower secondary school'.

A first mention of sex education appears in the introductory remarks of guidelines for lower secondary education describing the features of this school. In defining it as 'school aiming to the development of personal identity', the document says literally that parents have the main responsibility as to what concerns emotional and sexual education 'according to their human and spiritual values'. However in another section of the same text, entitled 'Emotional Education' (*Educazione all'Affettività*)<sup>(3)</sup>, you can read that 'pupils must be aware of how to establish relations with school-mates and adults of the opposite sex' and that they must 'recognize the relation between emotions, sexuality and ethics'. Unexpectedly, the guidelines for primary school are relatively more extensive; in a parallel section of this document referring always to 'Emotional Education', it is said that 'pupils must know: the main psychological, behavioural and roles differences between males and females; examples about the situation of the relationship between men and women over the history; the meaning of sex in relation to love, human reproduction and socialization; the main functions of genitals'. Moreover, pupils 'must establish positive relations with school-mates and adults, also taking their sex into account'.

The National Guidelines quoted above were approved in 2004 by the centre-right government as a temporary measure and new 'Guidelines for the curriculum' were introduced on a two years experimental basis in 2007 by the Education Minister of the new centre-left government <sup>(4)</sup>. In this new document some hints at personal gender relations are in the foreword, where a paragraph entitled 'For a new citizenship' declares that students personal identity must be enhanced 'without skipping religious beliefs, family roles and gender differences'. Another paragraph of the same document ('The meaning of experience') in the introductory remarks to first cycle education <sup>(5)</sup> affirms that 'schools must carefully follow various pupils conditions to favour the development and construction of gender identity'. Nevertheless, the parts of the previous guidelines referring to 'Learning to live together' and containing some mentions of sex education (as seen above) have been comprised in the subject-matters curricula. For instance, among the objectives of the science curriculum for primary school there is 'the knowledge of organisms functioning and the comparison of human beings, animals and plants reproduction'. In the case of lower secondary school, among the objectives of the science curriculum, there is only a hint at 'learning to live sexuality fairly'.

In accordance with Presidential Decree of 20 March 2009, the 'Guidelines for the Curriculum' have been extended, still on a temporary basis, for no longer than three school years starting from 2009-2010.

---

<sup>(2)</sup> For instance: MPI-Comitato Pari Opportunità (1997), 'Le pari opportunità nel sistema scolastico italiano. Proposte operative per una scuola che cambia' (*Equal Opportunities in Italian education system. Practical proposals for a changing school*), Roma. AA.VV. (1999), 'Per una didattica della differenza di genere' (*Teaching gender difference*), Pensa Multimedia, Lecce.

<sup>(3)</sup> This section is in a part of the document that deals with 'Learning to live together', jointly with citizenship education, road safety education, environmental education, health education and nutrition education.

<sup>(4)</sup> These new guidelines have been drawn up by a special commission and are being tried out in order to collect proposals for the final edition of the document, expected before the beginning of school year 2009-10 and which we are still waiting for.

<sup>(5)</sup> First cycle education in Italy comprises primary school (age 6-11) and lower secondary school (age 11-14).

This said, it is also necessary to underline that from year 2000 all Italian schools are autonomous in the building of their educational plans. On the basis of a decision of the School Council (*Consiglio d'Istituto*), that is composed by delegates of parents and teachers and, only at upper secondary level, of students, schools may realize – and many actually do – sex education programs. These programs are often proposed and carried out in agreement or partnership with local education authorities (regional or provincial) and especially local health units (ASLs). As an example, in the schools of the autonomous province of Trento (North-Italy) such programs are a steady project geared towards pupils of eight and tenth grade that envisages three or four two hours meetings in a school year in the presence of a psychologist and of a health worker<sup>(6)</sup>.

In upper secondary schools sex education programs are sometimes carried out, in a variety of forms, under the title of 'risk prevention', 'welfare education at school', etc<sup>(7)</sup>. Anyway, sex education programs properly said are not systematic neither compulsory in Italian schools and at the moment they are left to local decisions and projects.

### Guidance

In Italy guidance is provided for pupils who are completing lower secondary education (fourteen age) and for students in the last year of upper secondary education, but only preferences expressed by students themselves and their marks at school are taken into account. Guidance activities are organized by individual schools and generally speaking they are not gender sensitive. There is no official project of the Education Board (MIUR) to encourage young people in lower and upper secondary schools to choose educational fields that can prepare girls for traditionally male professions and boys for female professions<sup>8</sup>. Projects aiming to rise the number of girls choosing scientific and technical fields of study and to tackle women difficulties in the labour market, especially in traditionally male professions, exist in some tertiary level institutions, like the universities of Milan (*Progetto Universidonna*) and Turin (*Progetto Donna: professione ingegnere*)<sup>(9)</sup>.

### School books

There are not official guidelines or regulations on gender for authors of educational texts. School texts in Italy are not chosen or approved by the Minister of Education but teachers in every school are free to choose the texts they want. Some texts in social sciences deal with gender issues from a historical point of view but to treat the question is an initiative of individual authors and publishers. From 1998-99 to 2000-01 Italy took part in a European project (POLITE: Equal Opportunities in Text-books) aimed to lead publishers to the adoption of a self-regulation code. The Italian Publishers Association (AIE) agreed to the self-regulation code and to a complementary vade-mecum promoting the production of text-books that represent fairly women and men and help students to construct their identity.

## 3. Attainment

### International surveys

The gender gap in attainment is not, as already said in a previous section, an issue of concern in Italy but it exists as a matter of fact, as data from large scale international surveys demonstrate. Tables 1, 2 and 3 show Italy results for males and females in the last editions of PIRLS, TIMSS and PISA.

<sup>(6)</sup> Tamanini C. ed., 'Maschi e femmine a scuola: stili relazionali e di apprendimento' (*Males and females at school: relational and learning styles*), Provincia Autonoma di Trento – IPRASE del Trentino, 2007.

<sup>(7)</sup> Recently a program of this kind has been stopped in Milan because the lessons had been deemed 'too explicit'.

<sup>(8)</sup> A book that deals with this problem has been written by three Italian researchers: Mapelli B., Bozzi Tarizzo G. e De Marchi D. (2001), *Orientamento e identità di genere (Guidance and gender identity)*, La Nuova Italia, Firenze.

<sup>(9)</sup> The Polytechnic of this city has also published a Guide for students enrolling into university entitled '*Gender equality and sciences teaching: a call to discussion*'.

**Table 1: Gender differences in Italy in PIRLS 2006 (standard errors in brackets)**

WHOLE SCALE			LITERARY SCALE			INFORMATIONAL SCALE		
Males	Females	M – F	Males	Females	M – F	Males	Females	M – F
548 (3.3)	555 (3.3)	<b>- 7</b> (2.9)	548 (3.6)	556 (3.6)	<b>-8</b> (3.0)	547 (3.4)	551 (3.1)	-5 (2.9)

Note: Values in bold are statistically significant (p-value < 0.05).

Source: IEA 2007, PIRLS 2006 International Report.

**Table 2: Gender differences in Italy in TIMSS 2007(standard errors in brackets)**

FORTH GRADE						EIGHTH GRADE					
Mathematics			Science			Mathematics			Science		
Males	Fem.	M – F	Males	Fem.	M – F	Males	Fem.	M – F	Males	Fem.	M – F
514 (3.6)	499 (3.2)	<b>15</b> (2.5)	541 (3.7)	529 (3.2)	<b>13</b> (2.6)	483 (3.5)	477 (3.3)	6 (3.2)	499 (3.1)	491 (3.3)	<b>8</b> (3.1)

Note: Values in bold are statistically significant (p-value < 0.05).

Source: IEA 2008, TIMSS 2007 International Mathematics Report and TIMSS 2007 International Science Report.

**Table 3: Gender differences in Italy in PISA 2006(standard errors in brackets)**

READING			MATHEMATICS			SCIENCE		
Males	Females	M – F	Males	Females	M – F	Males	Females	M – F
448 (3.4)	489 (2.8)	<b>-41</b> (4.0)	470 (2.9)	453 (2.7)	<b>17</b> (3.4)	477 (2.8)	474 (2.5)	3 (3.5)

Note: Values in bold are statistically significant (p-value < 0.05).

Source: OECD 2007, PISA 2006 International Report.

International surveys results show that in Italy, like in many other countries, girls outperform boys in language tests and boys outperform girls in mathematics and, sometimes, in science tests.

Moreover, in the region of Veneto (North of Italy), which took part in 2003 and 2006 PISA surveys not only as a component of the Italian national sample but also individually with an own sample of schools and pupils, a multilevel regression analysis was carried out on the 2006 science data. The analysis has revealed that, if we control for reading competency (below level 3 or at level 3 and above), or for the synthetic mark on a four levels scale <sup>(10)</sup> got by the sampled students two years before in the leaving examination of lower secondary education, the males advantage in science PISA test becomes statistically significant <sup>(11)</sup>. Another analysis carried out on the PISA 2003 results in Veneto <sup>(12)</sup> has ascertained that the gender gap size changes when students data are disaggregated for the three tracks (academic, technical and vocational) into which Italian education system is organized at upper secondary level (where the large majority of fifteen years students is), as showed in Table 4.

<sup>(10)</sup> Excellent, Very good, Good, Pass.

<sup>(11)</sup> See: Martini A, Zaccarin S., 'Analisi multilivello dell'influenza delle caratteristiche individuali e di scuola sulle prestazioni in scienze', in: USR per il Veneto, *Le competenze degli studenti quindicenni nel Veneto. Rapporto Regionale OCSE-PISA 2006*, Cap. 9, CLEUP, Padova, 2008.

<sup>(12)</sup> See: Martini A. 'Differenze di genere e organizzazione della scuola secondaria', in: C. Marangon e M.T. Siniscalco (a cura di), *Gli studenti quindicenni nel Veneto: quali competenze?*, Cap. 11, USR per il Veneto, 2005

**Table 4: Gender differences in Veneto by type of school track. PISA 2003. (s.e. in brackets)**

TRACK	READING			MATHEMATICS			SCIENCE			PROBLEM-SOLVING		
	M	F	M – F	M	F	M – F	M	F	M – F	M	F	M – F
Academic	567 (7.9)	563 (9.8)	4 (10.0)	584 (7.7)	529 (9.7)	<b>55</b> (10.7)	597 (9.3)	570 (10.2)	<b>27</b> (13.1)	570 (8.3)	541 (9.4)	<b>29</b> (9.5)
Technical	512 (10.7)	525 (6.8)	-13 (10.0)	539 (10.1)	507 (6.9)	<b>32</b> (10.4)	550 (10.4)	533 (7.1)	17 (10.1)	529 (9.1)	516 (6.7)	13 (8.0)
Vocational	435 (14.7)	492 (19.1)	<b>-57</b> (25.0)	452 (12.9)	458 (16.5)	-7 (21.2)	460 (13.2)	496 (20.1)	-36 (22.4)	445 (13.3)	475 (14.9)	-31 (19.7)
All tracks	494 (9.9)	535 (6.8)	<b>-42</b> (12.5)	515 (9.6)	507 (6.6)	8 (12.4)	525 (9.8)	542 (7.0)	-17 (12.3)	506 (9.6)	519 (6.3)	-13 (11.7)

Note: Values in bold are statistically significant (p-value < 0.05).

Source:USR per il Veneto 2005, Rapporto Regionale PISA 2003.

In Academic Schools (*Licei*), males get higher results than females in all subjects and the differences are significant except for reading, while in Vocational Schools (*Istituti Professionali*) the opposite happens but score differences are not significant except for reading. In Technical Schools (*Istituti Tecnici*) boys outperform girls in three of four subjects but the score difference is significant only in mathematics. Furthermore, we can observe that the biggest gender gap in mathematics is between males and females enrolled in the academic track (55 points), while in reading the largest gap is found in vocational track (57 points). If we consider that pupils recruited by the three types of schools differ with regard to average level of general ability and family status, we can suppose that there is an interaction of gender with student ability level and social class.

Although a gender problem exists in Italian education at primary and secondary level – as we see from data above – no specific policy or strategy is put in place to tackle it at governmental level.

### National examinations

Starting from year 2008, two standardized tests in Italian (with two sections: reading comprehension and grammar knowledge) and Mathematics have been introduced among the proofs of the national examination at the end of lower secondary education (until this date committed only to school teachers). Table 4 reports the results of these two tests for a representative sample of Italy as a whole and of the three main geographic areas (North, Centre and South) in the country.

**Table 5: Standardized tests results of 2008 examination at the end of lower secondary education**

	READING COMPREHENSION Average percentage of correct answers		ITALIAN GRAMMAR Average percentage of correct answers		MATHEMATICS Average percentage of correct answers	
	Males	Females	Males	Females	Males	Females
North-Italy	69.4	73.5	57.5	63.0	55.7	53.1
Centre-Italy	70.5	74.8	58.1	63.2	57.8	54.7
South-Italy	69.8	72.9	65.9	70.0	57.0	57.9
Italy	69.8	73.5	61.0	65.9	56.6	55.4

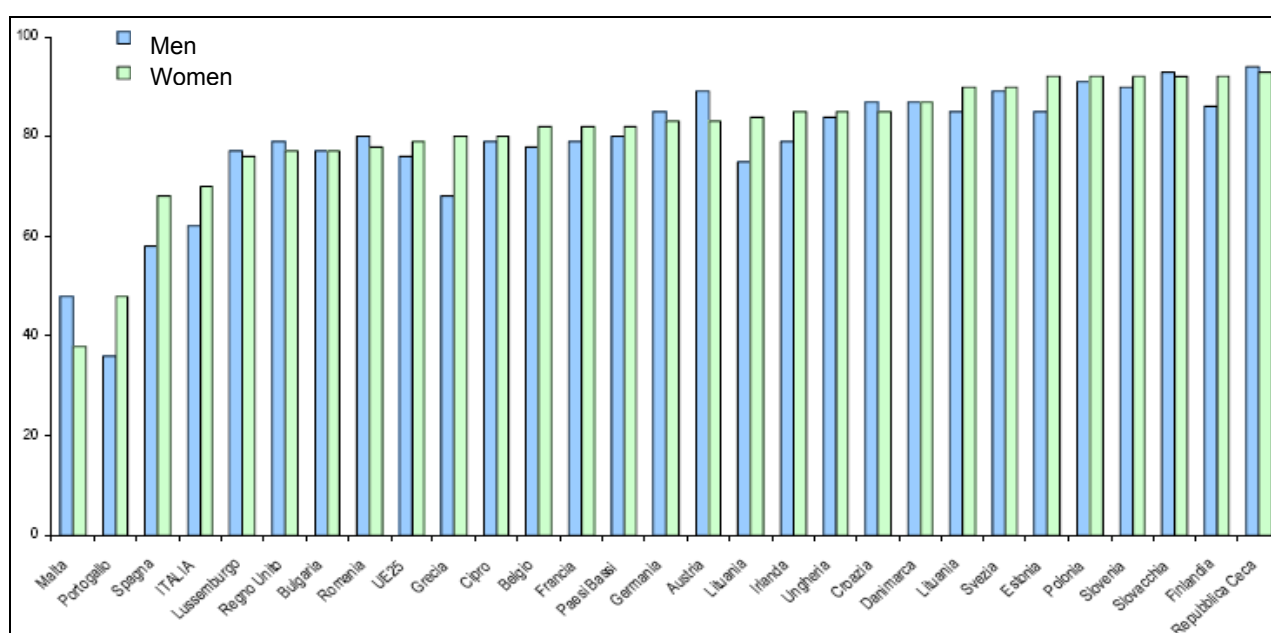
Source: INVALSI.

Differences between males and females are in the expected direction but only those in reading comprehension and grammar knowledge for Italy and the Northern area are significant at a confidence interval of 95% (INVALSI 2008, Report on the results of national tests, p. 22).

### Data from international and national statistics

Apart from the results of international and national tests we saw above, there are many other data demonstrating that boys and girls educational outcomes are different at every level. For example, in 2005 in age group 24-35 the proportion of women with at least a secondary school diploma (ISCED 3-6) was in Italy higher than the proportion of men (see Graph I).

**Graph I: 25-34 years old people with at least a secondary school degree (ISCED 3-6) by gender in UE countries. Reference Year: 2005 (percentage values)**



Source: EUROSTAT, LFS (in: ISTAT, Gender Statistical Data 2007).

The latest ISTAT (Italian Statistics Institute) data referring to upper secondary school graduates (ISCED 3) in the population of nineteen years old people draw the following picture (see Table 6).

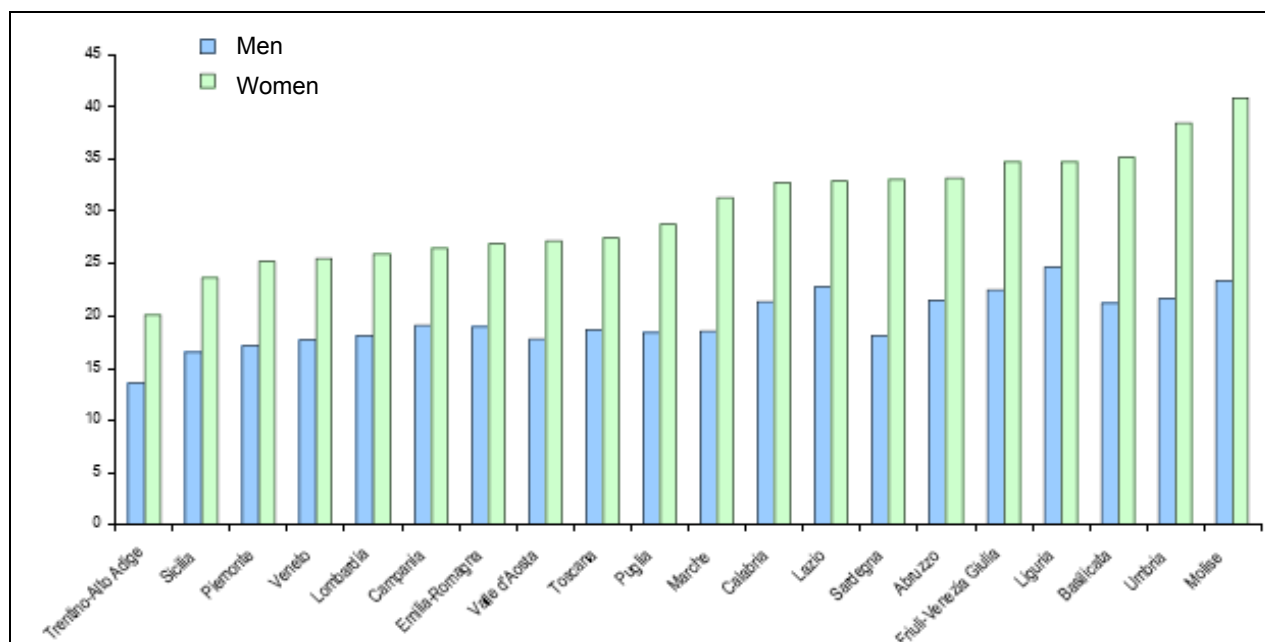
**Table 6: Nineteen years old people with a secondary degree as a percentage of same age total population by gender and geographic area. Reference Year: 2006/07**

	MALES	FEMALES	ALL
North-Italy	61.7	76.6	68.8
Centre-Italy	72.9	83.8	78.2
South-Italy	74.1	81.1	77.5
Italy	69.0	79.9	74.3

Source: ISTAT (The Education System: Tables).

Moreover, in each of the twenty Italian regions, the percentage of 25 years old women with a university degree (ISCED 5) in 2004-5 was greater than the percentage of men in the same age group (see Graph II).

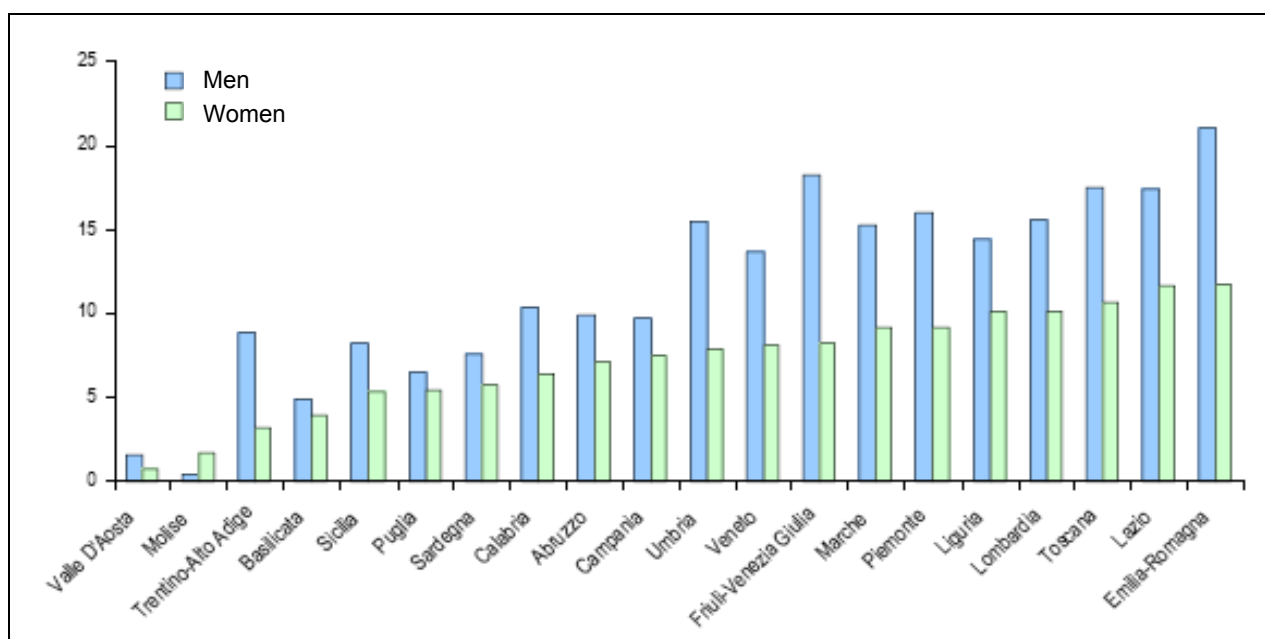
**Graph II: University graduates by gender and region in Italy. Reference Year: 2004/05 (values per one hundred 25 years old persons)**



Source: ISTAT (Gender Statistical Data 2007).

Women enrol into university in a greater number than men and they accomplish their university studies more frequently than their opposite sex mates in every part of Italy, especially in Centre and South regions. However if we consider the kind of university degree, we can see that the number of men with a scientific or technical degree per one hundred inhabitants in age group 20-29 exceeds everywhere the number of women (see Graph III).

**Graph III: University graduates in scientific and technical subjects by gender and region in Italy. Reference Year: 2005 (values per one hundred inhabitants in age group 20-29)**



Source: ISTAT (Gender Statistical Data 2007).



Women enrolling into university prefer, generally speaking, studies in humanistic and social fields to studies in scientific and technical fields, but in some related science sectors like Chemistry, Pharmacology, Biology, or in some professional courses like Medicine, the number of women is now higher than the number of men. The lowest percentage of girls with regard to all students enrolled is found in Engineering and in Science (Mathematics and Physics). For details see Table 7 below.

**Table 7: Students enrolling into university by gender and course subject.  
Reference Year: 2005/06**

COURSE SUBJECT	MEN	WOMEN
Science	75.4 %	24.6 %
Chemistry and pharmacology	37.8 %	62.2 %
Earth and Life sciences	38.7 %	61.3 %
Medicine	36.3 %	63.7 %
Engineering	81.6 %	18.4 %
Architecture	51.7 %	48.3 %
Agriculture	56.9 %	43.1 %
Economy and Statistics	51.7 %	48.3 %
Political and Social Sciences	38.7 %	61.3 %
Law	41.3 %	58.7 %
Humanities	34.1 %	65.9 %
Foreign Languages	18.2 %	81.8 %
Education	10.3 %	89.7 %
Psychology	21.1 %	78.9 %
Physical Education	68.7 %	31.3 %
Defence and Security	83.5 %	16.5 %
Total	44.2 %	55.8 %

Source: MUR (in: ISTAT, Gender Statistical Data 2007).

Women course choices at university reflect choices at upper secondary school, as Table 8 shows.

**Table 8: Females rate per total number of students enrolled into upper secondary education by type of school and geographic area. Reference Year: 2006/07**

	ACADEMIC SCHOOLS (classical, scientific, languages courses)	ACADEMIC SCHOOLS (pedagogic and social sciences courses)	TECHNICAL SCHOOLS	VOCATIONAL SCHOOLS	ART SCHOOLS	ALL SCHOOLS
North-Italy	57.0	83.4	36.1	46.3	68.9	49.6
Centre-Italy	56.5	84.0	33.5	44.0	67.1	48.9
South-Italy	57.4	85.4	32.7	40.0	63.9	48.4
Italy	57.1	84.5	34.2	43.4	66.6	48.9

Source: ISTAT (The Education System: Tables).

In this table Academic Schools are divided into two groups depending on the type of course curriculum. It's necessary to underline that the difference between curricula of various courses in the same category is not relevant, except for the number of weekly lessons of some subjects and for the presence of particular subjects. For instance, in academic scientific courses (*Liceo scientifico*) there are in a week more mathematics lessons than in classical courses (*Liceo classico*) and only one ancient language, Latin, is compulsory for all students (while in classical courses two ancient languages, Latin and Greek, are studied). Generally speaking, girls outnumber boys in Academic Schools, especially in classical, pedagogic and social sciences courses, and the same happens in Art Schools, where they are in large majority. It may be important to note that Academic Schools curricula in Italy have a humanistic orientation (the so-called 'Scientific Liceo' is not an exception) and that objectively favours females, who are more motivated towards this study field and get better results in literary subjects.

### Grade repetition

In all school levels, males repeat grades more frequently than females, as we can see from Table 9, that reports data for lower and upper secondary school pupils (in primary school grade repetition is rare).

**Table 9: Percentages of students repeating a grade by gender and level of secondary education. Reference Year: 2006/07**

	LOWER SECONDARY SCHOOLS				UPPER SECONDARY SCHOOLS			
	Students total number	Percentage of students repeating a grade	Males (% on all repeating students)	Females (% on all repeating students)	Students total number	Percentage of students repeating a grade	Males (% on all repeating students)	Females (% on all repeating students)
North-Italy	699 935	2.4	71.2	28.8	2 459	6.1	65.2	34.8
Centre-Italy	311 192	2.4	70.5	29.5	1 263	5.9	65.6	34.4
South-Italy	718 904	3.0	67.6	32.4	2 852	6.7	65.6	34.4
Italy	1 730 031	2.7	69.3	30.7	6 664	6.3	65.4	34.6

Source: ISTAT (The Education System: Tables)

And the same picture is represented by data in Table 10, which reports females rate of at grade students in upper secondary schools.

**Table 10: Females rate per total number of at grade students in upper secondary schools by type of school and geographic area. Reference Year: 2006/07**

	ACADEMIC SCHOOLS (classical, scientific, linguistic courses)		ACADEMIC SCHOOLS (pedagogic and social sciences courses)		TECHNICAL SCHOOLS		VOCATIONAL SCHOOLS		ART SCHOOLS		ALL SCHOOLS	
	All	Fem.	All	Fem.	All	Fem.	All	Fem.	All	Fem.	All	Fem.
North-Italy	90.8	92.4	80.4	82.6	70.7	75.8	51.5	56.3	69.5	73.4	73.6	78.6
Centre-Italy	90.3	91.8	80.1	81.8	68.6	71.8	51.7	56.5	64.2	68.5	74.1	78.8
South-Italy	92.4	93.5	82.5	83.4	67.5	70.5	58.6	64.0	66.2	70.4	75.3	80.6
Italy	91.4	92.7	81.4	82.9	69.0	72.9	54.6	59.5	67.1	71.2	74.5	79.5

Source: ISTAT (The Education System: Tables).

To sum up, all sources of evidence tend to confirm that in Italy a gender issue in education exists, but this is not recognized as a question of concern by official education authorities (particularly when the problem regards males). As we said, there are not policies to tackle the underachievement of boys or to make mathematics and science more 'girl-friendly'. The functioning of the education system from a gender perspective is ambiguous: on the one hand, it favours girls, that, as we saw above, are better than males at school and enter academic secondary schools and universities in a greater number than boys. But, on the other end, females' choices of study fields, at upper secondary and tertiary level, follow often traditional stereotypes about male and female jobs and cut off girls from some more promising or innovative professions in scientific and technical sectors.

#### **4. School climate and environment**

In Italy there are measures and policies against bullying in general, but not specifically against bullying towards girls, or against verbal abuse or sexual harassment.

No measure is in place to make parents more aware of the gender issues affecting their children.

#### **5. Teachers**

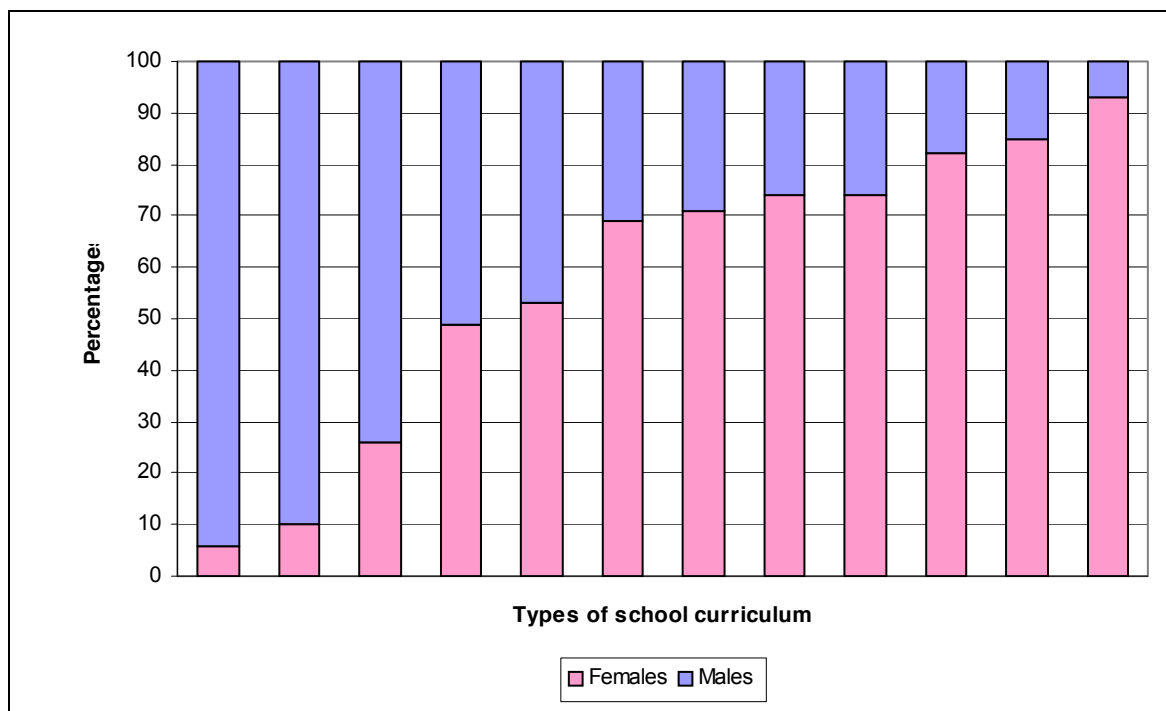
Teachers in Italy are in large majority women in all levels of education, but especially at pre-primary, primary and lower secondary level, where they nearly constitute the whole body of teachers. In spite of this situation, no policy is in place to encourage men to take up the teacher profession.

Gender is not included as a topic in guidelines or curricula for teacher initial education and there are not specific gender guidelines relating to teachers' day-to-day practice in schools. However, as we saw in section 2, some texts which make proposals for teaching in a gender sensitive perspective are provided by the book industry (see note n. 2). Gender is available as a topic in continuing professional development activities organized on the basis of local initiatives but not by central education authorities. These don't have any strategy to inform teachers and other education staff of international agreements and guidelines on equality between women and men in the educational field.

#### **6. Single sex education**

Co-education of boys and girls is a principle of classes organization in Italian public schools. So public single-sex education is not available in Italy.

This said, it is noteworthy that co-education is a norm and also a matter of fact in pre-primary, primary and lower secondary education, where the same curriculum is provided to all children. But in upper secondary education where, as we saw above, there are three school tracks and within each of them a variety of courses is offered things change. Gender is a determinant of student choices and as a consequence some upper secondary schools or courses within schools become in fact single-sex: for example, the industrial courses in Technical and Vocational Schools, or the pedagogic courses in Academic Schools (*ex Istituti Magistrali*). The Graph below, taken from PISA 2003 Regional Report of Veneto (see note n. 12), shows the distribution in upper secondary school courses of boys and girls sampled in the region.

**Graph IV: Distribution of upper secondary education students by gender and type of school curriculum in Veneto. PISA 2003**

Source: USR per il Veneto 2005, Rapporto Regionale PISA 2003.

## 7. Higher education

We saw above that boys and girls make different choices when enrol into university. The differences between males and females yet relate to study field but not to level, at least as to BA and MA courses. In other words there is horizontal but not vertical segregation. However when we consider doctorate courses (ISCED 6) things change a little. Table 11 below shows the percentages of males and females who were admitted to doctorate courses at University 'La Sapienza' of Rome (the greatest University in Italy) with regard to years 2003/04, 2004/05, 2005/06.

**Table 11: Students admitted to doctorate courses by gender and type of course subject at the University 'La Sapienza' of Rome**

Subject	Year 2003-04			Year 2004-05			Year 2005-06		
	Students number	% Males	% Females	Students number	% Males	% Females	Students number	% Males	% Females
Mathematics and Computer science	28	39.3	60.7	27	81.5	18.5	28	82.1	17.9
Physics	29	51.7	48.3	34	58.8	41.2	35	71.4	28.6
Chemistry	26	38.5	61.5	28	39.3	60.7	24	37.5	62.5
Earth Sciences	8	62.5	37.5	9	77.8	22.2	11	45.5	54.5
Life Science	67	29.9	70.1	75	50.7	49.3	80	35.0	65.0
Medicine	143	34.3	65.7	128	37.5	62.5	145	44.1	55.9
Civil Engineering and Architecture	78	51.3	48.7	94	50.0	50.0	110	57.3	42.7

Industrial and Computer Engineering	76	71.1	28.9	97	67.0	33.0	95	78.9	21.1
Humanities	88	26.1	73.9	101	38.6	61.4	106	30.2	69.8
History, Philosophy, Education, Psychology	74	39.2	60.8	76	44.7	55.3	94	38.3	61.7
Law	61	57.4	42.6	57	63.2	36.8	66	51.5	48.5
Economics and Statistics	49	69.4	30.6	55	47.3	52.7	50	56.0	44.0
Political and Social Sciences	46	45.7	54.3	45	60.0	40.0	59	35.6	64.4
Others	21	57.1	42.9	13	53.8	46.2	15	40.0	60.0
Total	794	45.1	54.9	839	50.9	49.1	918	48.9	51.1

Source: University La Sapienza – Rome.

Considering the last year data (2005-06), we find the smallest percentages of females in 'Mathematics and Computer Science', 'Physics' and 'Industrial and Computer Engineering' courses, while the smallest percentages of males are in 'Life Science' and 'Humanities' courses. Generally, and especially if we compare these data to those in Table 7 (which are at a national scale), we can see that the total percentage of girls in doctorate courses tends slightly to decline. This is confirmed by the lesser frequency of women among the researchers and moreover among the university associate teachers and professors, where men outnumber women.

Although there are not central government strategies or policies to face the issue of stereotyped choices of courses made by males and females, single university institutions, as we saw in paragraph 2.3, have projects to encourage girls to choose scientific and technical careers. On the contrary no policy either at a central or at a local level is put in place to improve gender balance in professions – like teaching – where females are in large majority.

Unrevised English

The content is under the responsibility of the author.

Author: Angela Martini (Researcher at the National Institute for the Evaluation of the Education System – INVALSI).

Situation in December 2009.