

# Gender issues:

women's participation  
in education  
and work

The-OGS Project

"Overcoming Gender  
Stereotypes through Education"

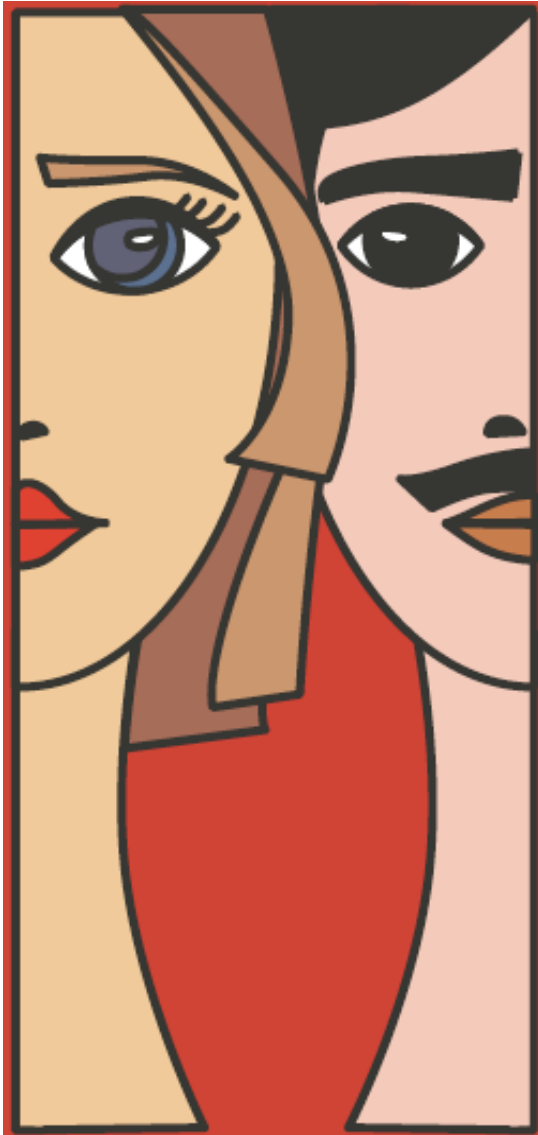
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# Gender issues: women's participation in education and work



## A. Female's and male's education

- A1 Educational levels for females and males
- A2 Women's studies:
  - secondary education
  - post secondary non tertiary education
  - tertiary education
- A3 Females succeed in studies more than males:
  - secondary education
  - tertiary education

## B. Females and males: labour force participation and educational attainment

- B1 Gender gap of the labour force participation:
  - secondary school graduates
  - university graduates
- B2 Comparison between countries
- B3 Circumstantial data on education and work:
  - secondary education and work
  - tertiary education and work

## C What about the future?

- C1 Expectations of 15-year-olds in the countries
- C2 Performances of 15-year-olds in the countries

# Population of 25 to 64 years old grouped by educational level and sex

(2001)

	Totale			M			F		
	basso	medio	alto	basso	medio	alto	basso	medio	alto
B	42,4	33,4	24,3	42,2	34,1	23,7	42,5	32,6	24,9
DK	27,4	50,2	22,4	26,3	53,3	20,4	28,5	47,1	24,5
D	24,6	55,5	20,0	21,0	54,8	24,1	28,2	56,1	15,7
EL	48,0	37,7	14,3	47,3	37,2	15,5	48,6	38,1	13,3
E	58,8	20,2	21,0	58,8	20,0	21,2	58,8	20,3	20,9
F	39,1	40,2	20,7	37,3	42,9	19,8	40,8	37,6	21,6
IRL	40,7	38,8	20,4	43,2	37,3	19,4	38,3	40,4	21,4
I	57,1	34,4	8,5	57,2	34,3	8,5	57,0	34,6	8,4
L	43,3	40,7	16,0	39,2	42,5	18,3	47,5	38,8	13,7
NL	36,6	42,7	20,7	34,2	43,2	22,6	39,0	42,2	18,8
A	27,3	60,2	12,5	22,3	63,1	14,7	32,3	57,4	10,4
P	78,5	13,8	7,7	80,5	13,3	6,2	76,6	14,4	9,0
FIN	31,0	41,8	27,1	33,1	42,9	24,0	29,0	40,8	30,2
S	26,3	46,8	26,8	28,0	47,5	24,5	24,6	46,2	29,2
UK	18,3	56,1	25,7	16,2	57,2	26,6	20,4	54,9	24,7
<b>Av. UE</b>	38,5	42,6	18,9	36,9	43,2	19,9	40,2	41,9	17,9

- the presence of both males and females in the italian educational system is still much lower than the mean of UE countries
- 57,1% of the population is yet endowed with, at the best, a secondary school grade, with respect to a UE mean of 38.5%
- the percentage of tertiary graduates is nearly 11 points less than UE mean, thus strengthening the negative image of the italian productive system.

# Population grouped by sex, age and educational level

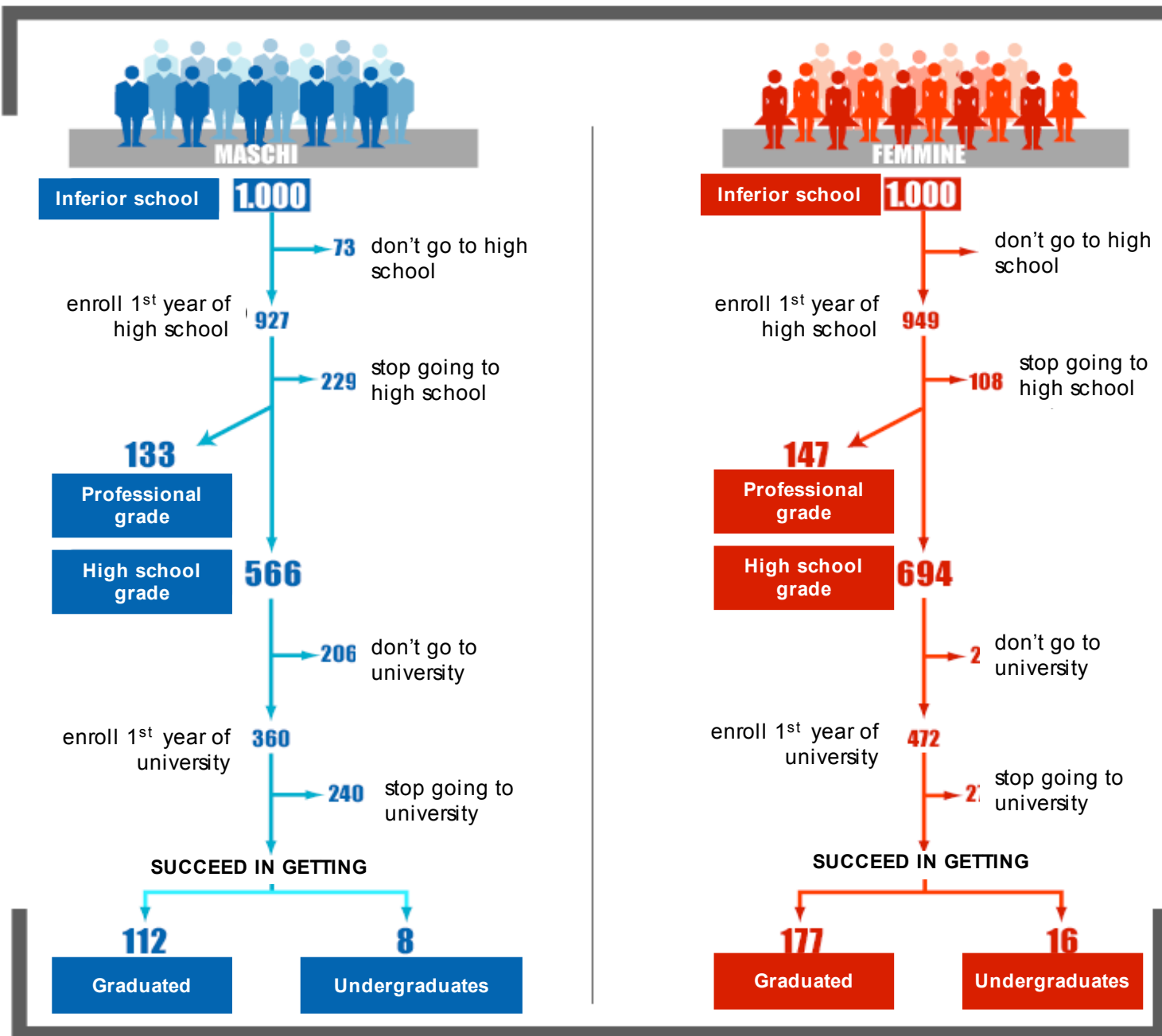
(1999)

TITOLO DI STUDIO	F		M		MF	
	25 - 34	55 - 64	25 - 34	55 - 64	25 - 34	55 - 64
<b>TOTALE UNIVERSITÀ</b>	10,8	3,8	9,1	6,9	10,0	5,3
laurea/dottorato di ricerca	9,2	3,4	8,2	6,6	8,7	4,9
diploma universitario	1,6	0,4	0,9	0,4	1,2	0,4
<b>TOTALE SCUOLE SUPERIORI</b>	45,9	12,3	43,0	16,8	44,5	14,5
diploma di maturità	37,2	9,6	35,7	13,8	36,4	11,7
qualifica professionale	8,8	2,7	7,4	3,0	8,1	2,8
<b>LICENZA MEDIA</b>	37,3	19,0	42,5	24,7	39,9	21,8
<b>LIC. ELEMENTARE, NESSUN TITOLO</b>	6,0	64,9	5,4	51,5	5,7	58,5
<b>TOTALE</b>	100,0	100,0	100,0	100,0	100,0	100,0

**in the younger generations the situation is not much better but the level of females' instruction outclasses males' both in secondary and tertiary grades**

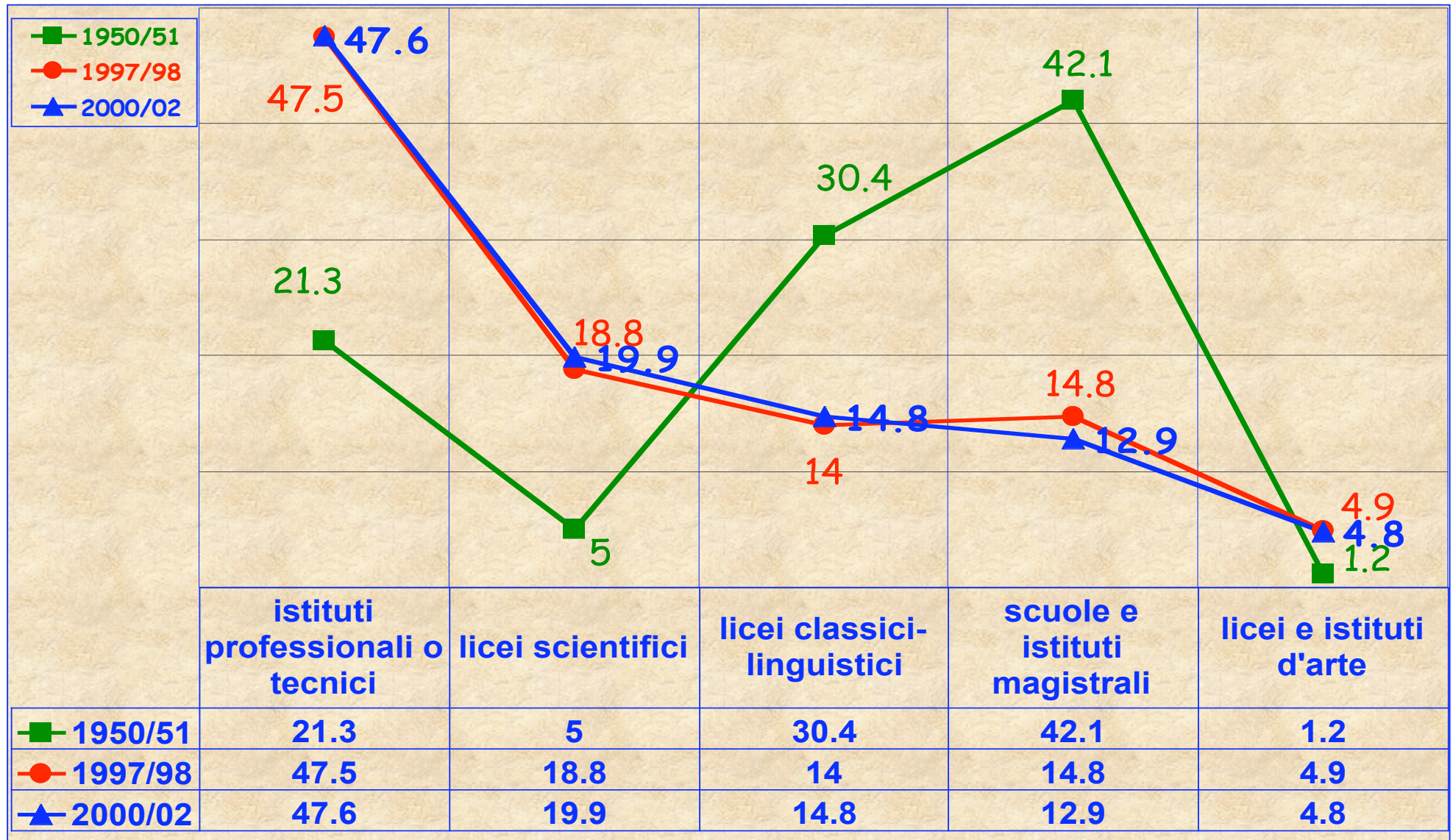
# Educational iter for females and males

(1999)



a higher percentage of women carries on studying and succeeds in getting the relative grade

# Girls entering to secondary education



# Index of feminization by kind of school

(1950/51 - 2001/02)

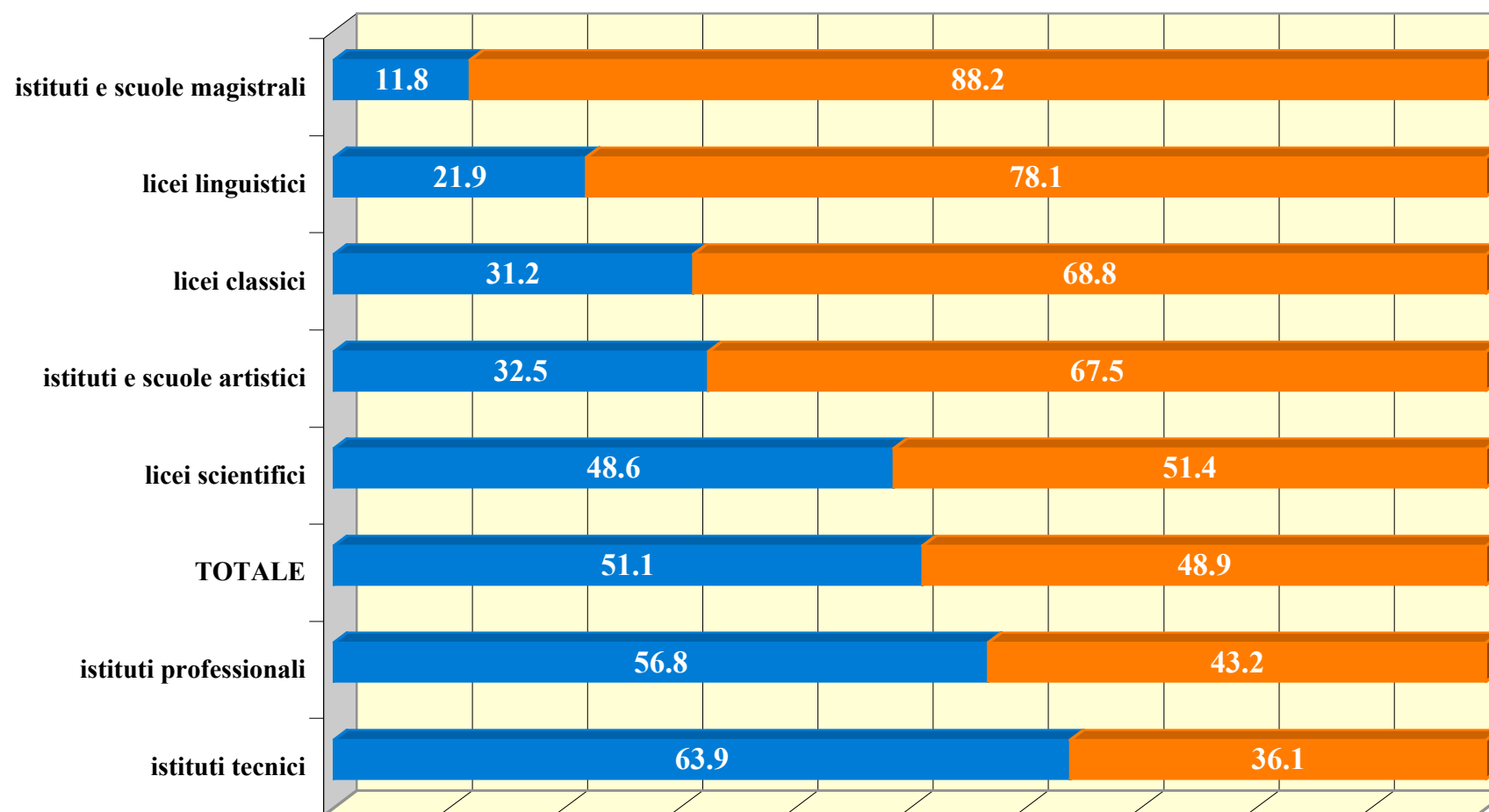
TIPO DI SCUOLA	Femmine su 100 iscritti							Variazione %
	1950/51	1960/61	1970/71	1980/81	1990/91	2000/01	2001/02	
Ist. professionali	24,7	33,1	41,4	46,2	47,4	43,9	43,2	74,8
Ist. tecnici	19,4	23,6	23,9	37,2	40,4	37,0	36,1	85,6
Licei scientifici	18,3	18,6	36,6	43,0	46,5	51,0	51,4	180,8
Licei classici	37,0	39,3	51,4	57,2	66,6	68,6	68,8	85,8
Licei linguistici	-	-	-	88,0	86,7	78,6	78,1	-11,3
Scuole magistrali	100,0	100,0	100,0	100,0	97,3	83,3	84,7	-15,3
Istituti magistrali	84,6	87,4	87,8	93,1	92,5	89,0	88,3	4,5
Istituti d'arte	14,7	32,1	56,0	63,8	68,3	65,6	66,7	353,4
Licei artistici	51,1	59,2	64,7	66,2	72,5	69,8	68,8	34,6

**the amount of females choosing kinds of schools of typical masculine tradition is rising**

**BUT .....**

## Presence in the high school by kind of school and sex

(2001/02)



	istituti tecnici	istituti professionali	TOTALE	licei scientifici	istituti e scuole artistici	licei classici	licei linguistici	istituti e scuole magistrali
■ F	36.1	43.2	48.9	51.4	67.5	68.8	78.1	88.2
■ M	63.9	56.8	51.1	48.6	32.5	31.2	21.9	11.8

**the feminization index of enrolled students is still unfavourable in technical and professional schools**



## Class of 1998 graduates who enrolled in a post-secondary school grouped by kind of course, kind of school and sex

TIPI DI SCUOLA E SESSO	corsi di F.P.	corsi post-diploma	corsi privati a pagamento
<b>TOTALE</b>	<b>62,3</b>	<b>10,1</b>	<b>35,2</b>
<b>TIPI DI SCUOLA</b>			
istituti professionali	63,5	12,0	33,1
istituti tecnici	62,0	10,8	35,0
licei	58,7	5,7	40,0
istituti magistrali	62,5	10,6	34,5
altri tipi di scuole	68,3	4,5	35,3
<b>SESSO</b>			
<b>Maschi</b>	<b>58,1</b>	<b>12,0</b>	<b>39,0</b>
<b>Femmine</b>	<b>65,4</b>	<b>8,7</b>	<b>32,3</b>

- 20% of secondary graduates joins other educational programmes which last less than university
- a large amount of these professional specializing programmes are organized by Regions, while around 10% is funded by central government
- more than one student out of three resorts to private organizations on payment, especially for information technology courses
- women are more concerned with regional courses than men (65,4% vs 58,1%) while men mainly resort to private courses

# Index of feminization in university

(1950/51 - 2001/02)

GRUPPI DI CORSI DI LAUREA	F su 100 iscritti							variazione %
	50/51	60/61	70/71	80/81	90/91	00/01	01/02	
scientifico	46,6	36,9	35,6	54,1	50,5	55,5	53,8	15,4
medico	8,2	11,0	17,8	34,6	45,0	55,7	59,0	621,3
ingegneria	2,1	3,7	5,0	14,2	22,1	26,4	25,7	1145,1
agrario	-	1,7	4,5	21,3	32,4	45,6	45,0	2550,4
economico	4,4	9,6	21,8	30,4	41,8	46,8	46,9	955,6
politico-sociale	-	-	-	38,6	48,6	57,8	59,7	54,7
giuridico	11,0	15,8	20,3	41,0	52,8	58,9	58,5	431,4
letterario	60,7	73,4	74,6	75,6	79,8	79,9	79,5	31,0
diplomi	-	42,8	44,4	54,4	51,7	50,4	52,1	21,7

**the feminization index enhances in the faculties of masculine tradition**

# Students enrolled in university grouped by faculty and by sex

(2002/03)

GRUPPI	totale	composizione %		variazione % su a.a. 2001/02		
		M	F	M	F	Totale
scientifico	12.415	77,1	22,9	1,3	-10,0	-1,6
chimico-farmaceutico	11.350	37,7	62,3	16,6	15,4	15,9
geo-biologico	17.914	39,9	60,1	9,2	12,7	11,3
medico	24.494	34,2	65,8	17,3	10,9	13,0
ingegneria	37.193	83,3	16,7	-0,4	2,5	0,0
architettura	15.924	52,3	47,7	21,6	24,0	22,7
agrario	7.901	61,0	39,0	11,2	14,1	12,3
economico-statistico	45.886	53,6	46,4	-0,2	1,3	0,5
politico-sociale	47.245	39,7	60,3	3,9	-0,7	1,1
giuridico	39.649	43,1	56,9	-0,8	7,9	4,0
letterario	32.232	34,7	65,3	11,6	10,3	10,7
linguistico	20.572	19,2	80,8	15,7	7,5	9,0
insegnamento	17.763	12,1	87,9	17,4	10,4	11,2
psicologico	11.218	22,6	77,4	-17,1	-24,4	-22,9
educazione fisica	5.071	64,5	35,5	14,7	8,4	12,4
difesa e sicurezza	333	85,6	14,4	-12,8	-14,3	-13,1
<b>TOTALE</b>	<b>347.160</b>	<b>45,3</b>	<b>54,7</b>	<b>4,5</b>	<b>5,0</b>	<b>4,8</b>

## Students enrolled in university grouped by faculty and sex

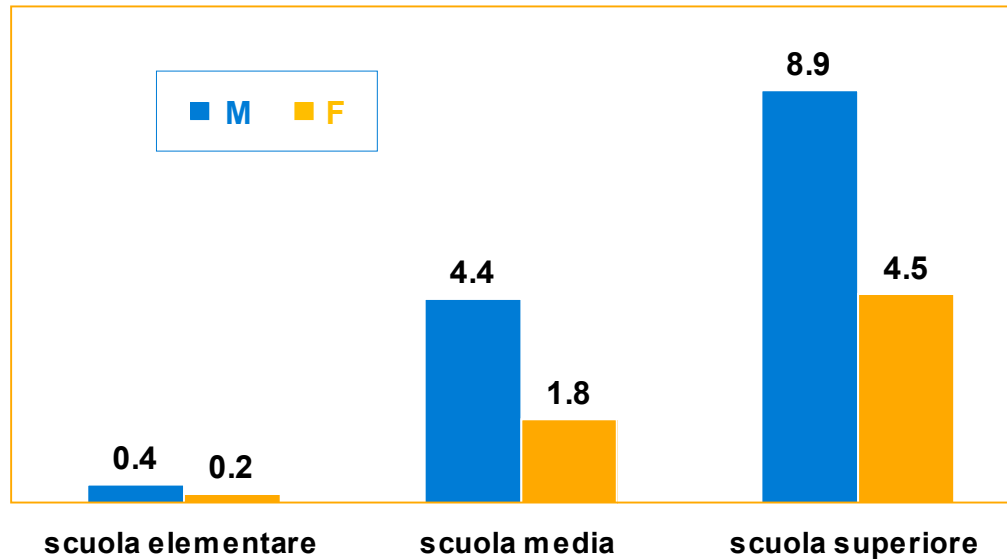
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(Academic Year 2002/03)

- in 2002/03, females' enrolling enhances more than males': 5,0% vs 4,5%
- the feminization index enhances in the faculties of masculine tradition (but not in scientific courses)
- the amount of enrolled females is higher than males: 54,7% vs 45,3%
- the presence of females is still particularly strong in language and psychology-related faculties: 8 females out of 10 enrolled, while it's yet very poor in engineering and scientific groups

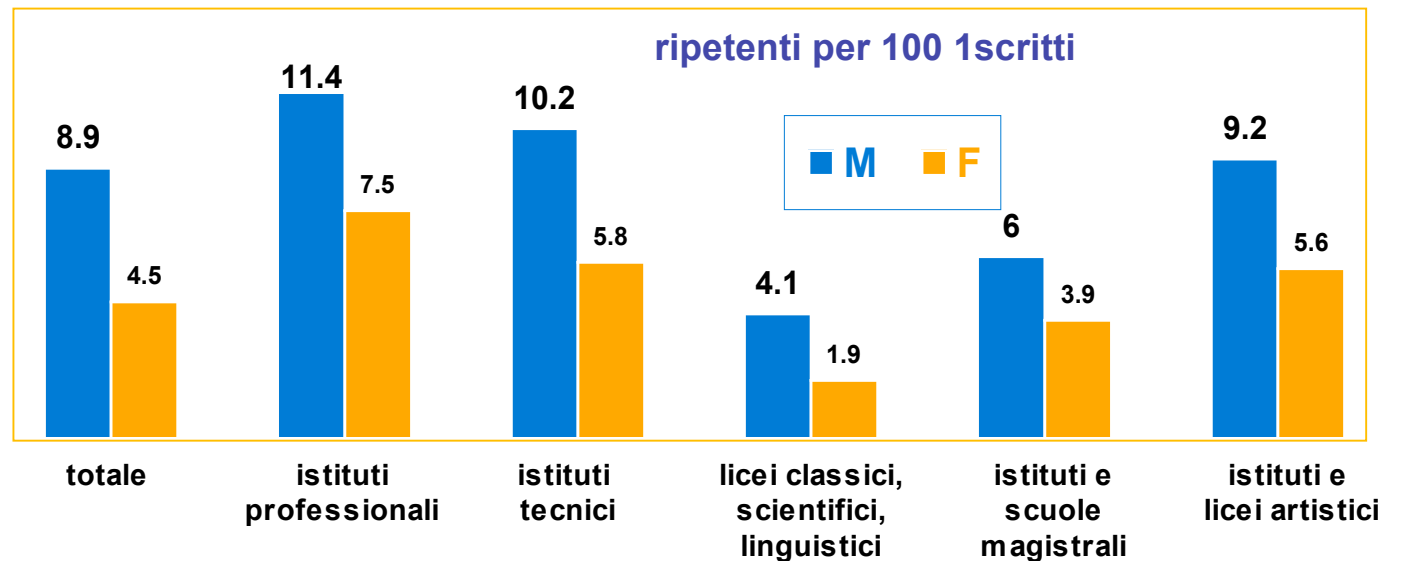
# Index of rejections in secondary school grouped by school kind and sex

(2001/02)



for all of the three school cycles the percentage of rejected females is always less than males; the best females' success seems to be associated to most selective steps

anyway the rejection index is lower for women, between students within the school type



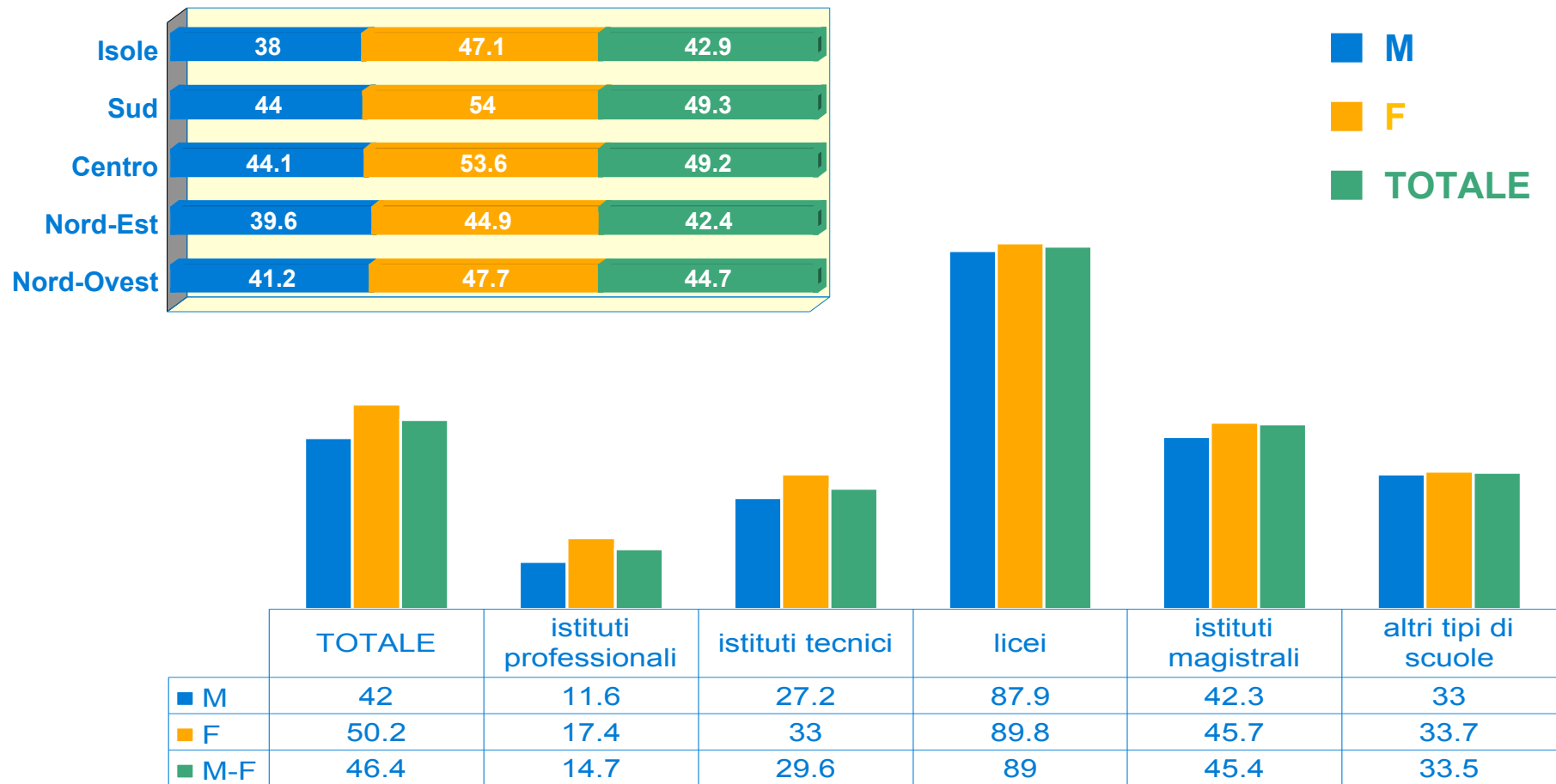
# Graduates grouped by school kind, final marks and sex

(1998)

TIPI DI SCUOLA E SESSO	voto di diploma			
	36-41	42-47	48-53	54-60
<b>TIPI DI SCUOLA</b>				
TOTALE	34,8	29,8	18,7	16,6
istituti professionali	41,0	31,7	17,1	10,2
istituti tecnici	38,8	29,5	17,0	14,7
licei	24,6	29,0	22,1	24,4
istituti magistrali	40,9	30,2	17,1	11,9
altri tipi di scuole	28,5	31,1	23,8	16,6
<b>SESSO</b>				
<b>Maschi</b>	<b>42,2</b>	<b>29,7</b>	<b>15,1</b>	<b>13,0</b>
<b>Femmine</b>	<b>28,3</b>	<b>29,9</b>	<b>21,9</b>	<b>19,8</b>

**19.8% of women has finished high school with a mark equal or better than 54 (vs 13.0% of men) while only 28.3% of high school graduated women has a lower mark (vs 42.2% of men)**

# Class of 1998 graduates who are attending university in 2001 grouped by sex and kind of school



**women (50,2%) are more concerned with university studies than men (42,0%)**

## Class of 1998 graduates who entered university, grouped by sex and state of their studies

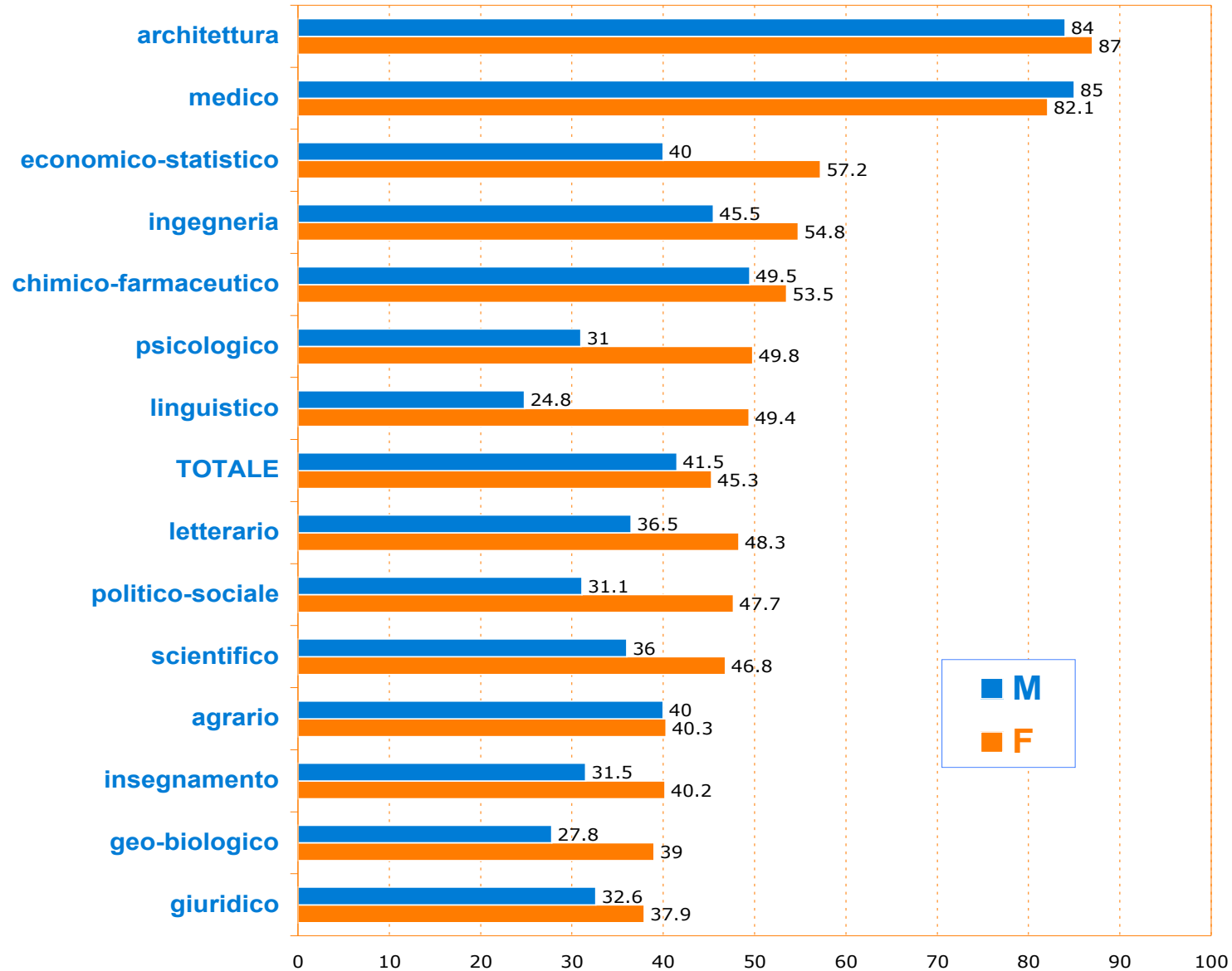
	nel 2001 studiano	hanno interrotto	totale (V.A.=100,0)
<b>TIPI DI SCUOLA</b>			
TOTALE	89,6	10,4	247.499
istituti professionali	76,1	23,9	14.973
istituti tecnici	82,8	17,2	71.521
licei	95,5	4,5	131.998
istituti magistrali	87,6	12,4	22.813
altri tipi di scuole	84,8	15,2	6.194
<b>SESSO</b>			
<b>Maschi</b>	<b>88,2</b>	<b>11,8</b>	<b>106.520</b>
<b>Femmine</b>	<b>90,7</b>	<b>9,3</b>	<b>140.979</b>

**women turn out to be more persistent than men**



# Percentage of success in graduation grouped by faculty and sex

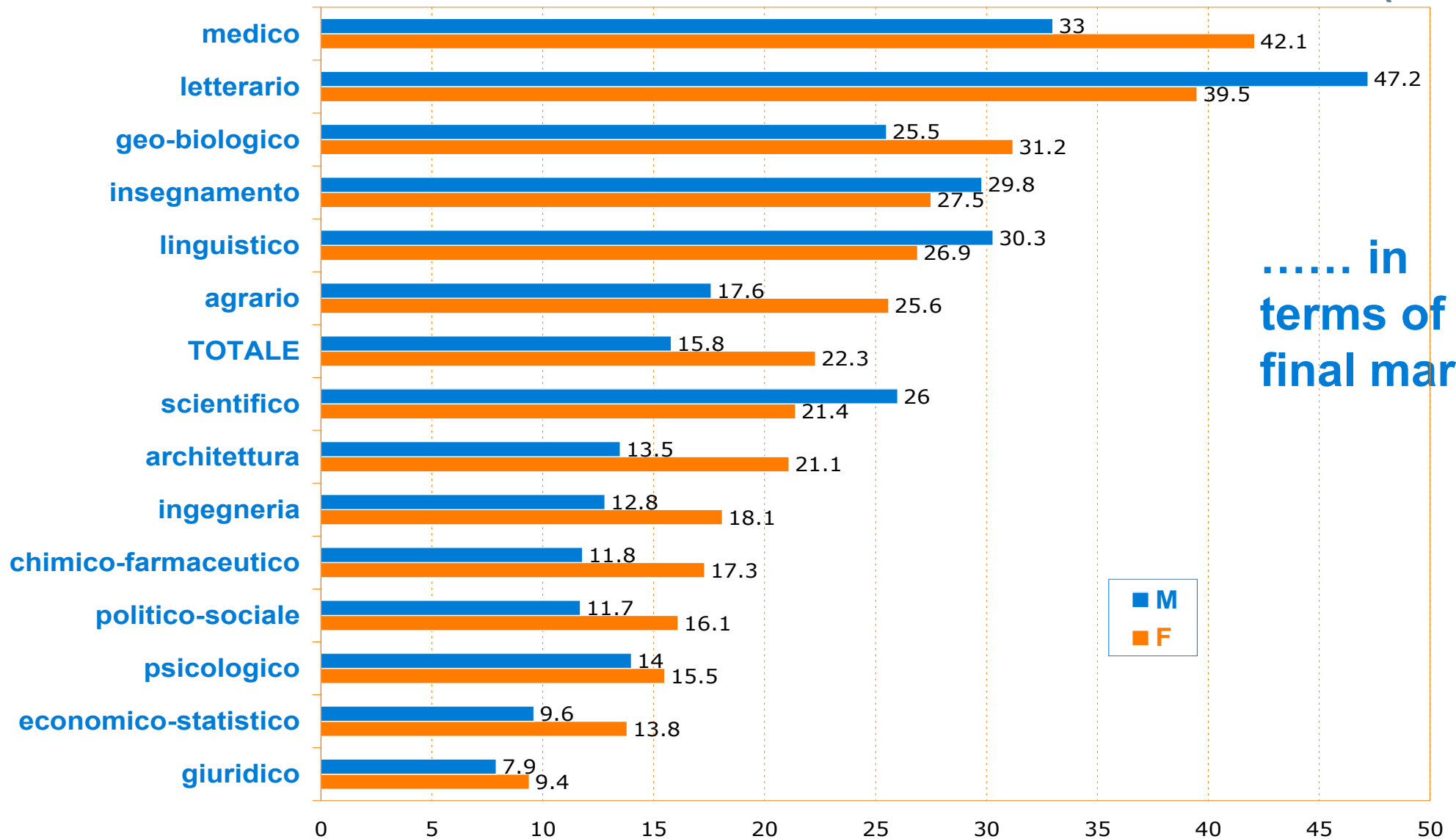
(2001)



women  
have more  
success  
than men  
both in  
graduation  
and .....

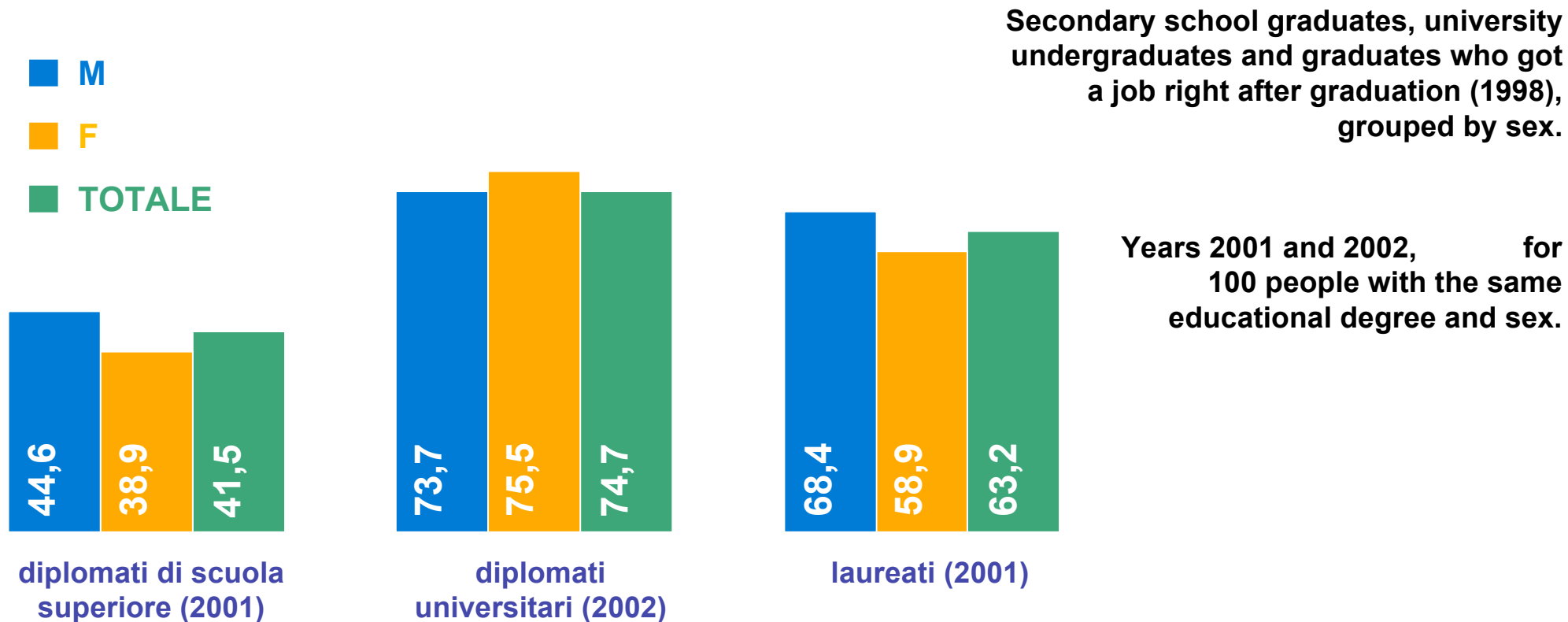
# Graduates *magna cum laude* grouped by faculty and sex

(2001)



..... in terms of final marks

# Labour force participation and educational attainment



going to university is convenient: after three years from graduation, 75% of university undergraduates and 63% of graduates has got a job, with respect to 41.5% of secondary school graduates only

**BUT .....**

..... a bit less to women!

## Unemployment rates by age class, educational degree and sex

(2002)

	licenza media	diploma di scuola superiore	titolo universitario	
	15 - 19 anni	20 - 24 anni	25 - 29 anni	30 - 34 anni
SESSO				
<b>Maschi</b>	<b>29,1</b>	<b>22,6</b>	<b>19,4</b>	<b>6,2</b>
<b>Femmine</b>	<b>42,5</b>	<b>29,1</b>	<b>21,2</b>	<b>9,8</b>
<b>TOTALE</b>	<b>34,4</b>	<b>25,8</b>	<b>20,4</b>	<b>8,0</b>

Source: Eurostat, EFT

# Unemployment rates by age class, educational degree, sex and country

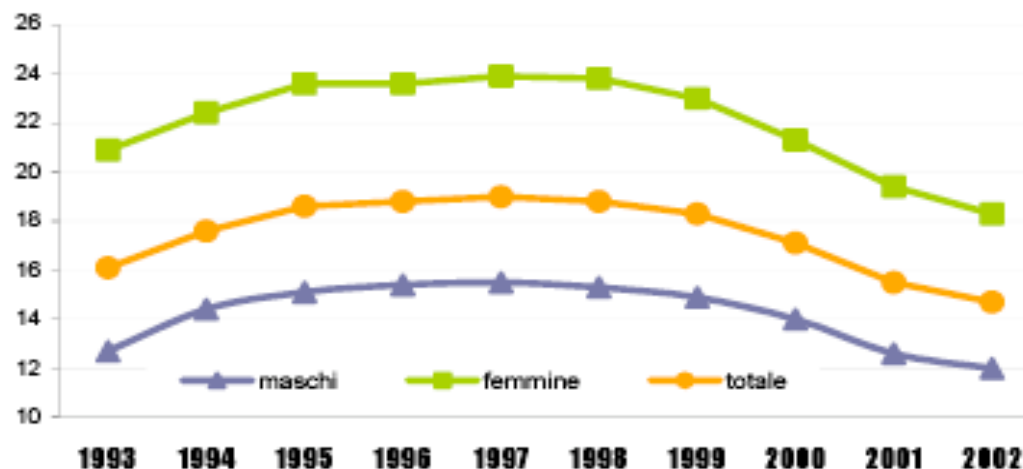
	Diploma di scuola secondaria superiore	Titolo universitario	
	20-24enni	25-29enni	30-34enni
Regno Unito	8,4	1,7	2,8
Stati Uniti	7,9	2,4	2,0
Germania	6,6	3,8	2,9
Belgio	14,7	5,1	2,7
Francia	14,6	7,8	5,2
Portogallo	9,7	8,1	1,9
Spagna	18,7	14,4	7,2
<b>Italia</b>	<b>26,7</b>	<b>18,9</b>	<b>8,4</b>

Italy shows, for any class and age, higher unemployment rates than the rest of developed countries but unemployment is decreasing

(2001)

unemployment rates of 20-34 years old

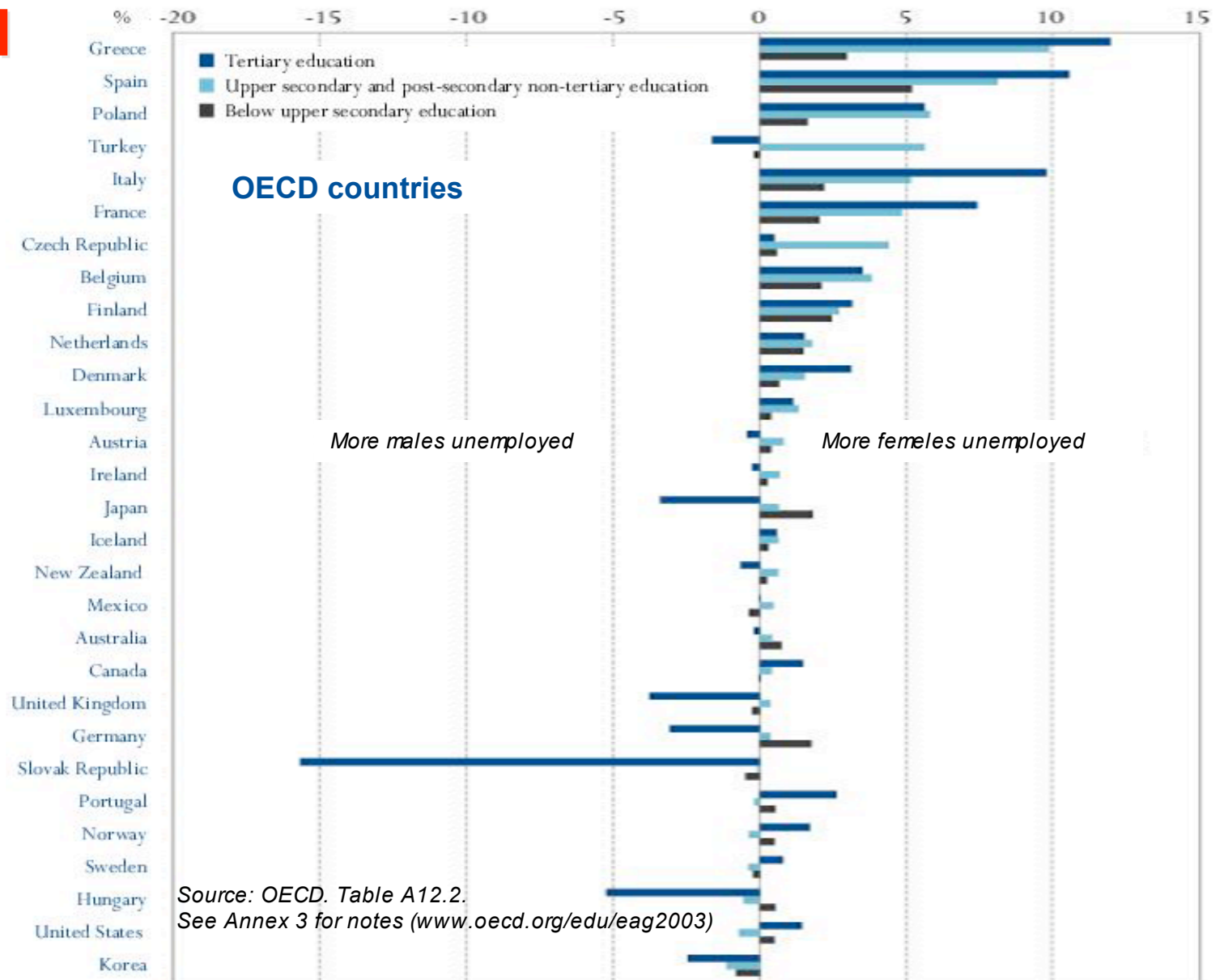
(1993-2002)



women gave high contribution in decreasing unemployment: females' unemployment rate decreased from 23,9% in 1997 to 18,3% in 2002

# Differences between unemployment rates of females and males, by educational level, for 30 to 44-year-old (2001)

the difference between unemployment rates of female and males is yet very strong not only in Italy but in most countries!



Countries are ranked in descending order of the gap in unemployment rates of females to males who have completed upper secondary education or post-secondary non-tertiary education.

# Differences between unemployment rates of females and males, by educational level, for 30 to 44-year-old

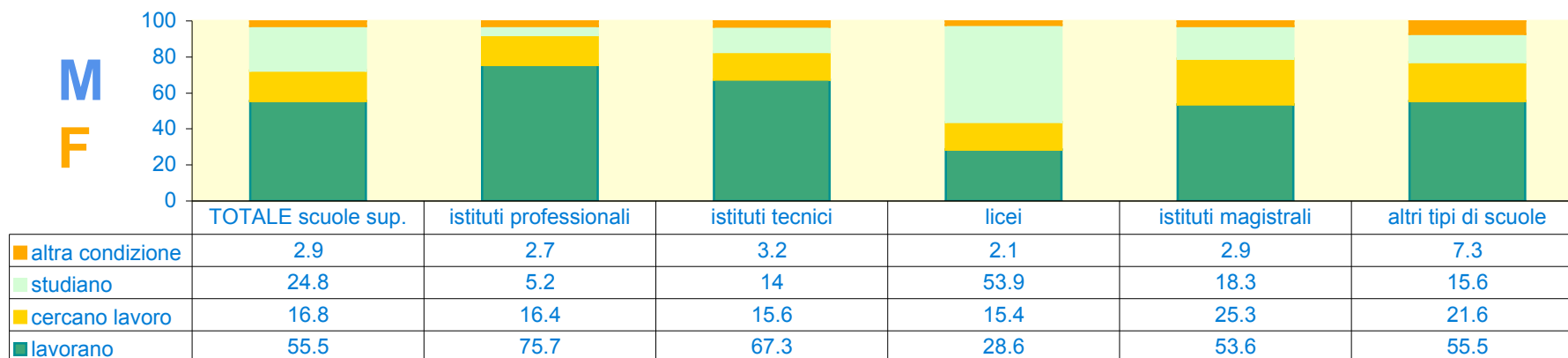
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(2001)

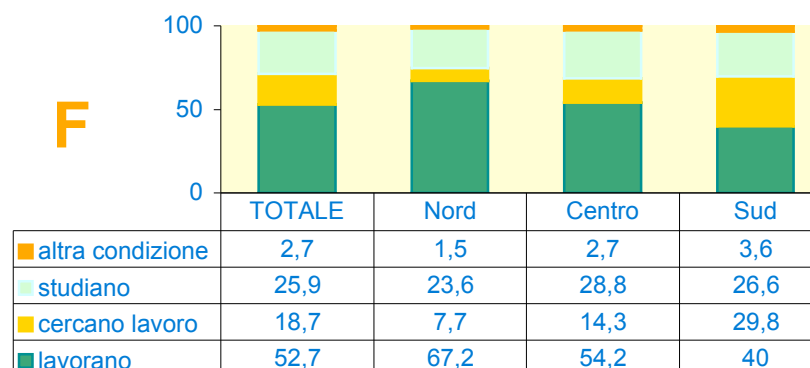
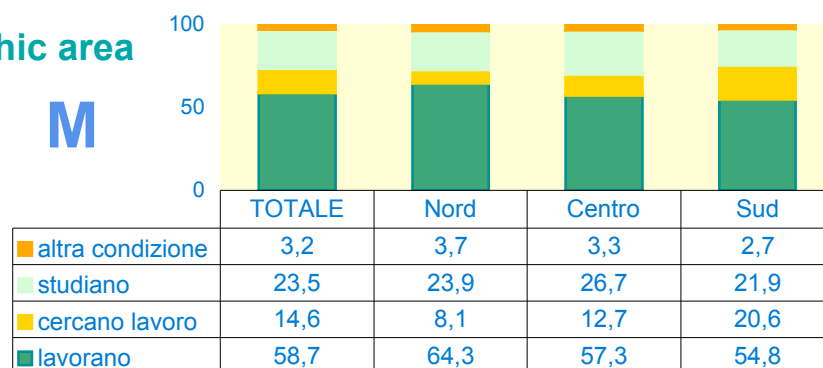
- unemployment rates decreases with educational attainment in most OECD countries
- the disadvantage for females is visible for one-third of countries and the unemployment rates for females with less than upper secondary attainment are particularly high
- the gender gap in unemployment rate decreases with increasing educational attainment and at the tertiary level is much narrower, even in the countries where a large gender disparity is a general phenomenon

# Class of 1998 graduates grouped by employment condition in 2001, sex, kind of school and geographic area

## kind of school



## geographic area



- the more professional the kind of school attended, the more the employment though the extent of this trend strongly depends on the geographic area
- employment rate for males is 58,7% vs 52,7% for women; just a slight difference with respect to that in 30-34 years old group, which is about 20 points percent unfavourable to women (maybe exiting very early the employment market?)
- facing the difficulties of getting a job, many secondary graduates choose to study: 27,7% hasn't got nor is searching a job and 24,8% goes on studying



## Class of 1998 graduates searching for a job in 2001 grouped by sex, kind of school attended and geographic area (unemployment rates)

TIPI DI SCUOLA E RIPARTIZIONI GEOGRAFICHE	M - F	M	F
<b>TIPI DI SCUOLA</b>			
TOTALE SCUOLE SUPERIORI	23,2	19,9	26,2
istituti professionali	17,8	15,3	19,9
istituti tecnici	18,8	18,2	19,6
licei	35,0	31,4	37,7
istituti magistrali	32,9	17,3	33,9
altri tipi di scuole	28,0	23,0	30,1
<b>RIPARTIZIONI</b>			
Nord	10,7	11,2	10,3
Centro	19,6	18,2	20,9
Mezzogiorno	35,1	27,3	42,7

- unemployment rates are high both for men and women but the difference between sexes increases together with increasing absolute rate of unemployment
- the geographic area has a deep impact on unemployment rates both for men and women

## Class of 1998 graduates who are studying in 2001 grouped by sex, kind of school attended and geographic area

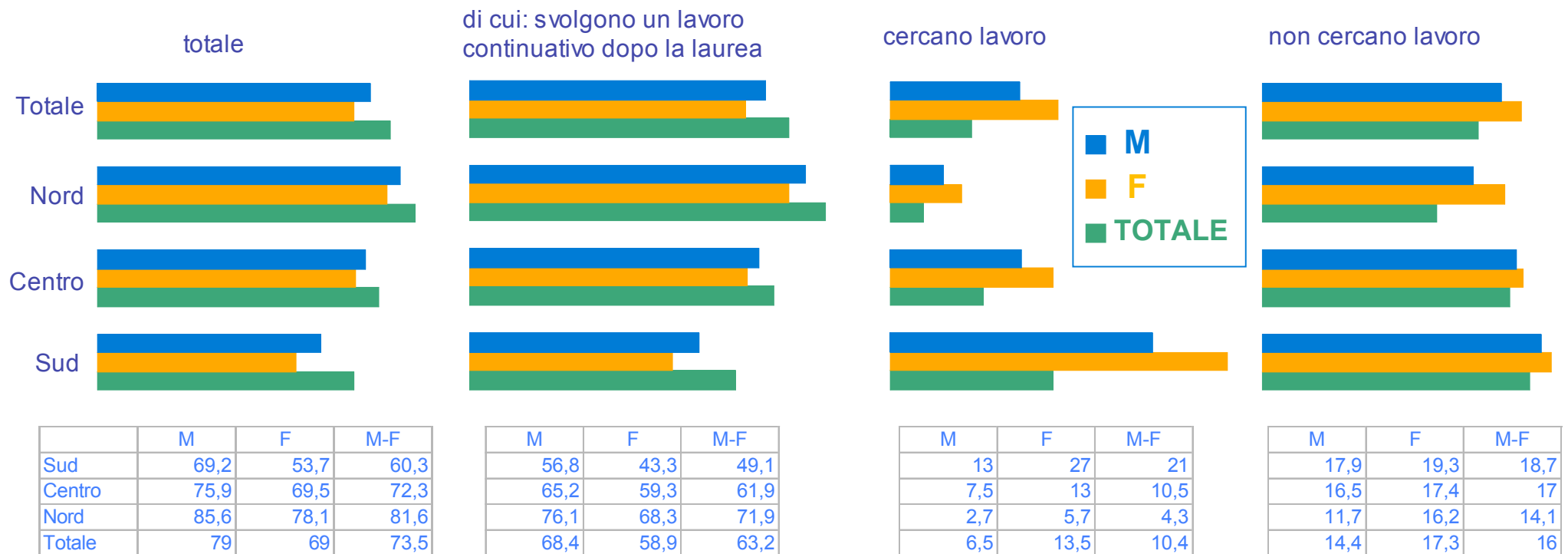
TIPI DI SCUOLA E RIPARTIZIONI GEOGRAFICHE	M - F	M	F
<b>TIPI DI SCUOLA</b>			
TOTALE SCUOLE SUPERIORI	47,1	42,6	51,0
istituti professionali	15,7	12,3	18,5
Istituti tecnici	30,7	28,4	33,9
licei	88,9	87,4	90,0
istituti magistrali	45,9	38,1	46,8
altri tipi di scuole	36,1	35,5	36,3
<b>RIPARTIZIONI</b>			
Nord	44,0	42,6	47,3
Centro	50,1	40,1	53,2
Mezzogiorno	48,2	42,8	53,0

- the amount of secondary graduates, already working or not, who carry on studying is actually high: about a half of youngsters (47,1%)
- women (51.0%) are more concerning with carrying on studies than males and they are the leading group in every kind of school attended and geographic area

# Class of 1998 graduates grouped by employment condition, geographic area and sex

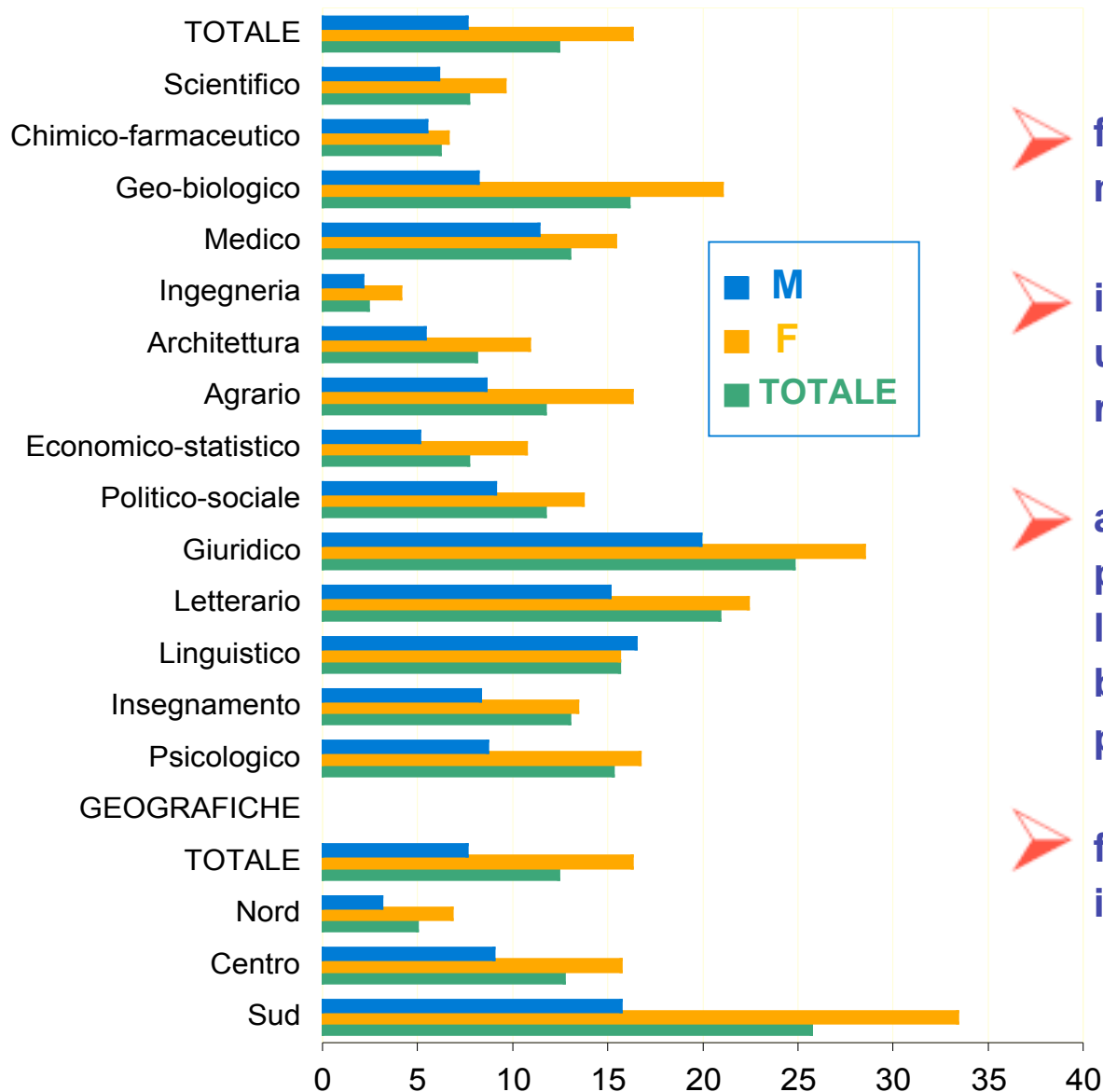
## LAVORANO

## NON LAVORANO



- there's a strong difference of both men and women employment in the geographic-based analysis: 81,6% in the North, 72,3% in the Centre and 60,3% in the South
- 69% of university graduated women are employed, with respect to 79% of men and only 58,9% of women have maintained the same job since graduation, with respect to 68,4% of males
- gender differences become deeper and deeper in some geographic areas: in the North 68,3% of women with respect to 76,1% of men have maintained the same job since graduation (+11,4%), in the South they are 43,3% of women and 56,8% of men (+13,5%)

# University graduates in 1998 searching for a job grouped by faculty, geographic area and sex



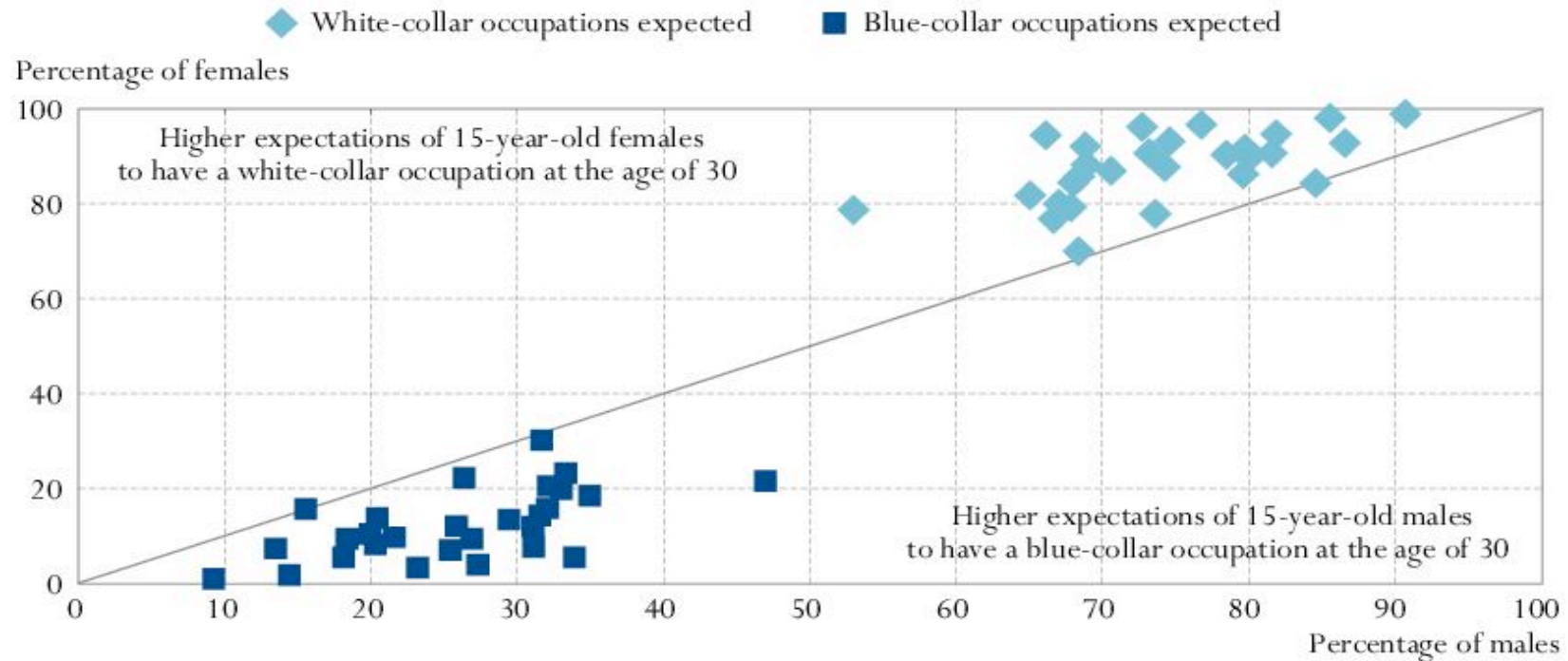
➤ **females' unemployment rate is higher than men's for every group**

➤ **in the South the unemployment rate for university graduated women is 33,4% with respect to 15,7% for men**

➤ **analysis by faculty attended shows particularly the crisis of law (24,8%) and literature (20,8%) groups, and also of geo-biology (16,1%), language (15,6%) and psychology (15,3%) groups**

➤ **females are still choosing faculties of low interest for job market**

Expectations of 15-year-old students to have a white-collar or blue-collar occupation at the age of 30, by gender (2000)



*each symbol represents one country, with diamonds representing the percentage of students expecting a white collar occupation at the age of 30 and the square the percentage of students expecting to have a blue collar occupation*

➤ in 40 out of 42 the countries females seem to have higher expectation towards their future occupations than males (even though there is considerable variation between countries for both genders)

**BUT .....**

..... **BUT**

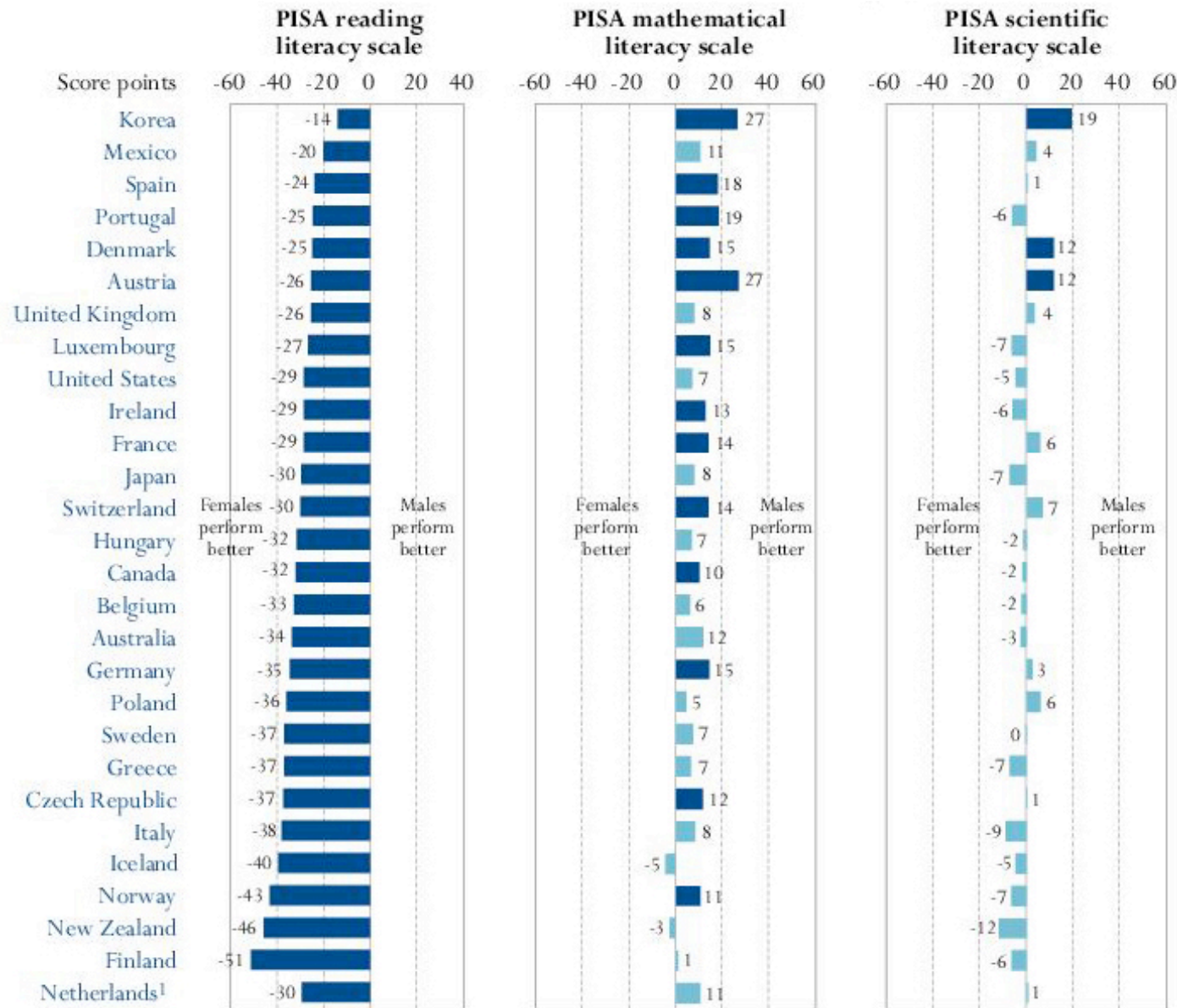
- **20% of females students expect to be in life sciences or health related professions compared to only 7% of males and 9% of females vs 3% of males expect to be in occupations associated with teaching**
- **18% of male students vs 5% of females expect careers associated with physics, mathematics or engineering and 6% of males vs less than 1% of females expect occupations associated to metal, machinery and related trades**

**warning !!!**

**students' perceptions of what occupations lie ahead for them can effect their academic performance as well as the courses and educational pathways that they pursue**

**IN FACT .....**

# Gender differences in performance of 15-year-olds on the PISA reading, mathematical and scientific literacy scales (2001)



- Difference between males' and females' scores is statistically significant
- Difference between males' and females' scores is not statistically significant

- in every single country and in average, females reach higher levels of performance in reading literacy than males. This difference is not only universal but also large: 32 points on average
- in mathematical literacy, there are statistically significant differences in about half the countries, in which males perform better: the average gap is 11 points
- in scientific literacy too many data are not statistically significant

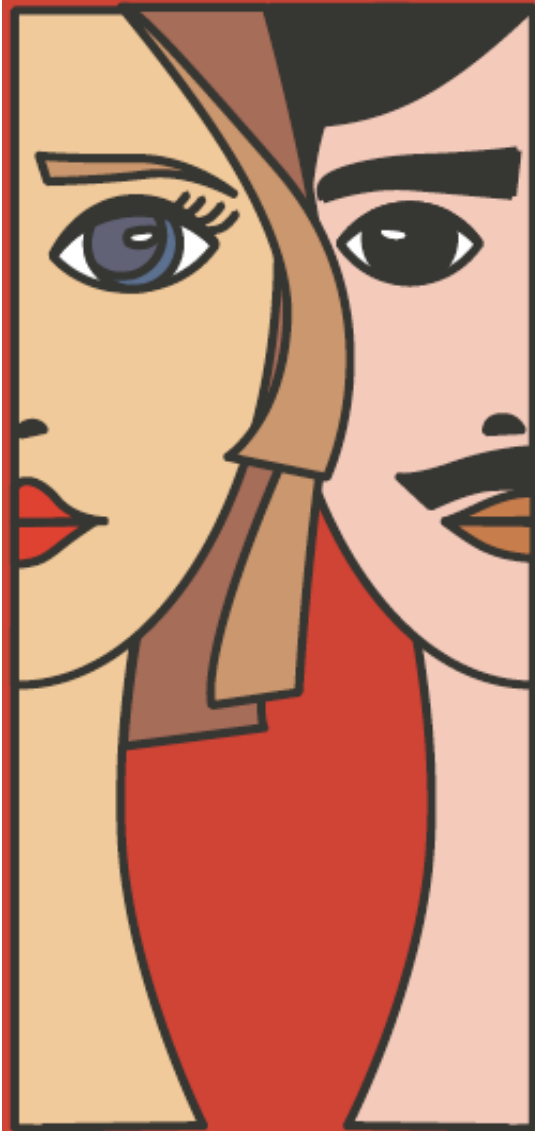
**then .....**

**an important policy objective should be to strengthen the role that education systems play in moderating gender differences in occupational expectations and, to the extent that these are related to gender patterns in student performance and student interest, to reduce performance gaps in different subject areas**



# Gender issues: women's participation in education and work

## Translations and International Standard Classification of Education



### primary education level (isced 12)

scuola elementare: primary school

scuola media: inferior school

### secondary education level (isced 34)

scuole superiori: high school,

istituti professionali o tecnici: professional or technical school

licei scientifici: scientific high school

licei classici o linguistici : literature or language high school

scuole e istituti magistrali : teaching school

licei e istituti d'arte: arts high school

### tertiary education level (isced 5 )

corsi di laurea: university faculties

scientifico: science

medico: medicine

ingegneria: engineering

agrario economico: agrarian economics

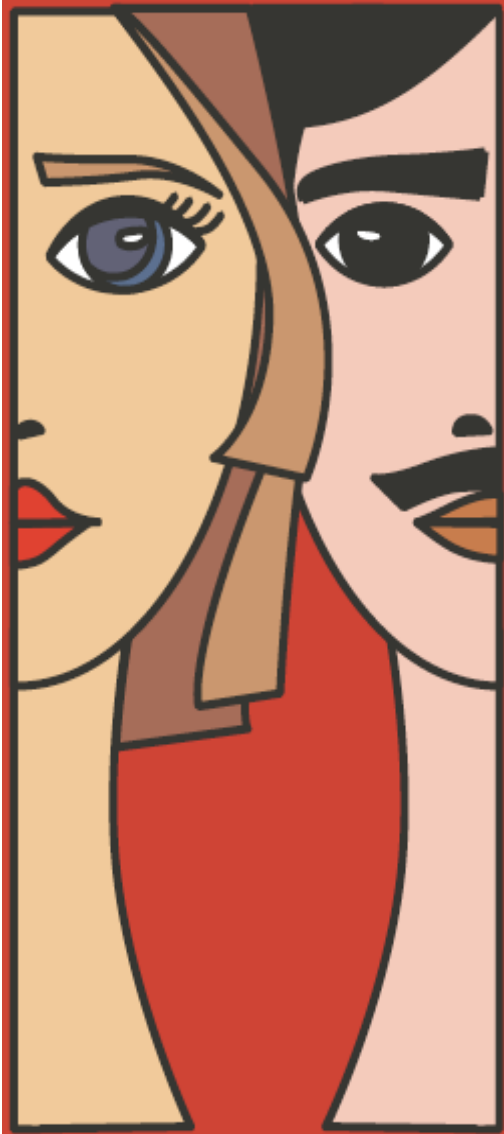
politico/sociale: politics/social

giuridico: law

letterario: literature

# Gender issues: women's participation in education and work

## REFERENCES:



A. Zuliani, "Le trasformazioni del vivere: il lavorare delle donne"  
Workshop "Lavorare e vivere con pari opportunità" Napoli 28-29 gennaio  
2000

Istat (2001), Donne all'università, Bologna, Il Mulino

Istat, (2003) I diplomati e lo studio: Percorsi di studio e di lavoro dei  
diplomati: Indagine 2001. Roma, Istat, Collana Informazioni n.30

Istat, (2003), I laureati e il mercato del lavoro: Inserimento professionale  
dei laureati. Indagine 2001. Roma, Istat, Collana Informazioni n. 31

Istat, (2003), Diplomati e mercato del lavoro: Percorsi di studio e di lavoro  
dei diplomati. Indagine 2001. Roma, Istat, Collana Informazioni n. 44

Istat, (2004), I laureati e lo studio: Inserimento professionale dei laureati.  
Indagine 2001. Roma, Istat, Collana Informazioni n. 8

OECD, Education at a glance, OECD Indicators, 2003 Edition

P. Bertolazzi, G. Bucci, G. liberati, D. Muscolino, M.L. Paciello,  
A.M. Paoletti, "Pari opportunità nelle istituzioni di ricerca:  
statistiche - normativa - azioni positive"

Atti del convegno - Roma 4 giugno 2002; 2004

L.L. Sabbadini: "Come cambia la vita delle donne"  
Istat e Ministro per le Pari Opportunità, 2004