Gender Equality at University: Evidence From IRIS Survey

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IRIS is

an indicator for measuring students' performance in learning process during their 1st year of University

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IRIS

IRIS takes into account both the effectiveness, and the efficiency of the process.

- ☐ **Effectiveness is the rating obtained in the first year**

- ☐ **Efficiency represents the number of credits earned in the 1st year.**

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IRIS value

is obtained by calculating the **ratio** between
what the student has really done (in terms of
marks and credits earned)
and **how much he could have done** if he had
passed all his curriculum exams with the
highest ratings(60CFU*x31**)

*standard value
CFU/year

**31=30 cum
laude

$$IRIS = \frac{\sum_{1}^{n} V_i \cdot CFU_i}{1,860} \cdot 100$$
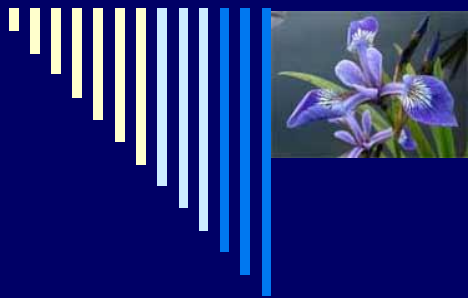
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IRIS trends

"*female students are more successful than their male colleagues*".

The *cross-sectional* survey covered **19.555** freshmen of University of Genova belonging to 4 Academic Years

'04-'05; '05-'06; '06-07; '07-'08; '09-'10

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IRIS

Not only a numerical supremacy of females: 55% vs 45% males, but also academic:

$$IRIS_f = 41 \text{ vs } IRIS_m = 34$$

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IRIS

Supremacy that occurs not only in humanities Faculties, but also in the in technical / scientific ones just like **Sciences** and **Engineering** where the girls are only 31%.

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The problem

To show their superiority in the technical / scientific Faculties, girls must first prove their "courage" to enter and overcome hard stereotypes

io imparo
e cos'altro faccio?
io asciugo i piatti
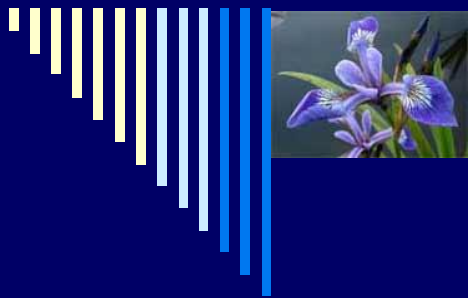
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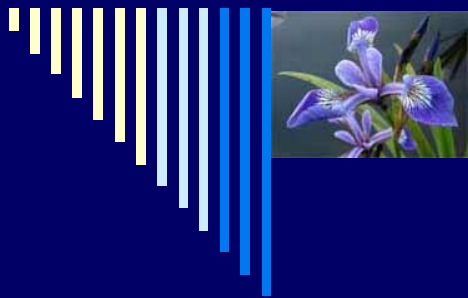
The problem

Old stereotypes which still:

- influence educational choices

- cause a gender segregation in the labour market

- an underrepresentation in crucial and well-paid professional sectors

IRIS

….so, males avoid certain disciplines, considering them too feminised

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IRIS

… while girls are convinced to be not up to some Faculties

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IRIS: a focus by gender

In this gender survey, IRIS

confirms a well known fact

So it is an

accurate indicator

of the learning process performance ...

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IRIS

… and it aims to assess the effectiveness of the actions that the Parties concerned (schools, university, families) decide to carry out for improving learning.

Participants

A.Y. 2009/2010

☐ **5,048 'pure matriculated'** at University of Genova

☐ **56% are female gender**

☐ into **5 university Schools**

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Method

- **Comparative evaluation** per gender and type of university Schools
- **Topic:** the *performances* of pure matriculated students in A.Y. 2009/2010
- **Data** provided by the Statistical Office of the University of Genova
- **Analysis** (descriptive, correlation, regression)

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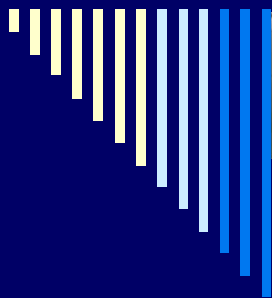
% freshmen A.Y. 2009/2010 IRIS = 0 per Schools and gender

	Math, Physical and Natural Science	Medical and Pharmaceutical Sciences	Social Sciences	Humanities	Polytechnic	Total
Males	**27.4**	**19.7**	**23.7**	**25.2**	**23.6**	**23.3**
Females	**23.4**	**10.4**	**14.5**	**14.8**	**10.1**	**13.8**

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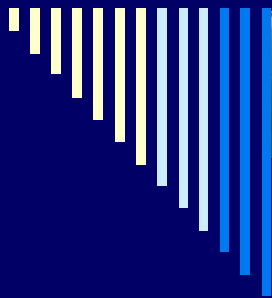
Coefficient of the correlation between diploma and academic performances per Schools and per gender

	Males	Females	Total	Distance Males - Females
Math, Physical and Natural Science	0.501	0.313	0.413	0.188
Medical and Pharmaceutical Sciences	0.466	0.368	0.412	0.098
Social Sciences	0.494	0.502	0.510	-0.008
Humanities	0.416	0.465	0.457	-0.049
Polytechnic	0.419	0.330	0.401	0.089

(correlation are significant at p-value <0,001)

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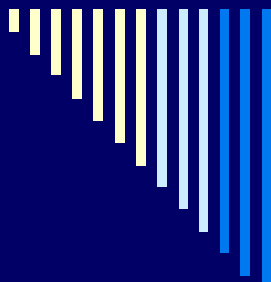
A regression model: gender by School

	Math, Physical and Natural Science	Medical and Pharmaceutical Sciences	Social Sciences	Humanities	Polytechnic	Total
(Costant)	-8.79	-12.57*	-24.32***	-10.15	-5.09	-16.09***
Female	-6.56*	6.21***	0.87	-5.21	7.17***	2.75***
No Genova	-4.66	1.06	-2.85**	-6.30***	-1.86	-2.60***
Technical	-13.34**	0.06	-8.44***	-14.90***	-11.54***	-8.29***
Vocational	-16.726	-8.67	-14.55***	-28.31***	-11.26	-14.55***
Diploma	0.74***	0.58***	0.92***	0.95***	0.62***	0.78***
% of explained variance compared to the null model	17.82	14.78	25.64	25.52	17.12	23.63%
(male from Liceo of Genova)						

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Some conclusions

Medical and Pharmaceutical Sciences & Polytechnic	Social Sciences & Humanities	Math, Physical and Natural Science
IRIS=0 → more **males** Diploma: less predicatability for **females** Academic achievement: better for **females**	IRIS=0 → more **males** Diploma: predictability for **males** and **females** Academic achievement: gender is not significant	IRIS=0 → more **males** and **females** Diploma: less predicatability for **males** Academic achievement: better for **males**
Stronger guidance activities for males	**Stronger guidance activities in high education and for males at the first year**	**Stronger guidance activities for all the students at the first academic year and stronger guidance for females**

Thank you for your attention

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