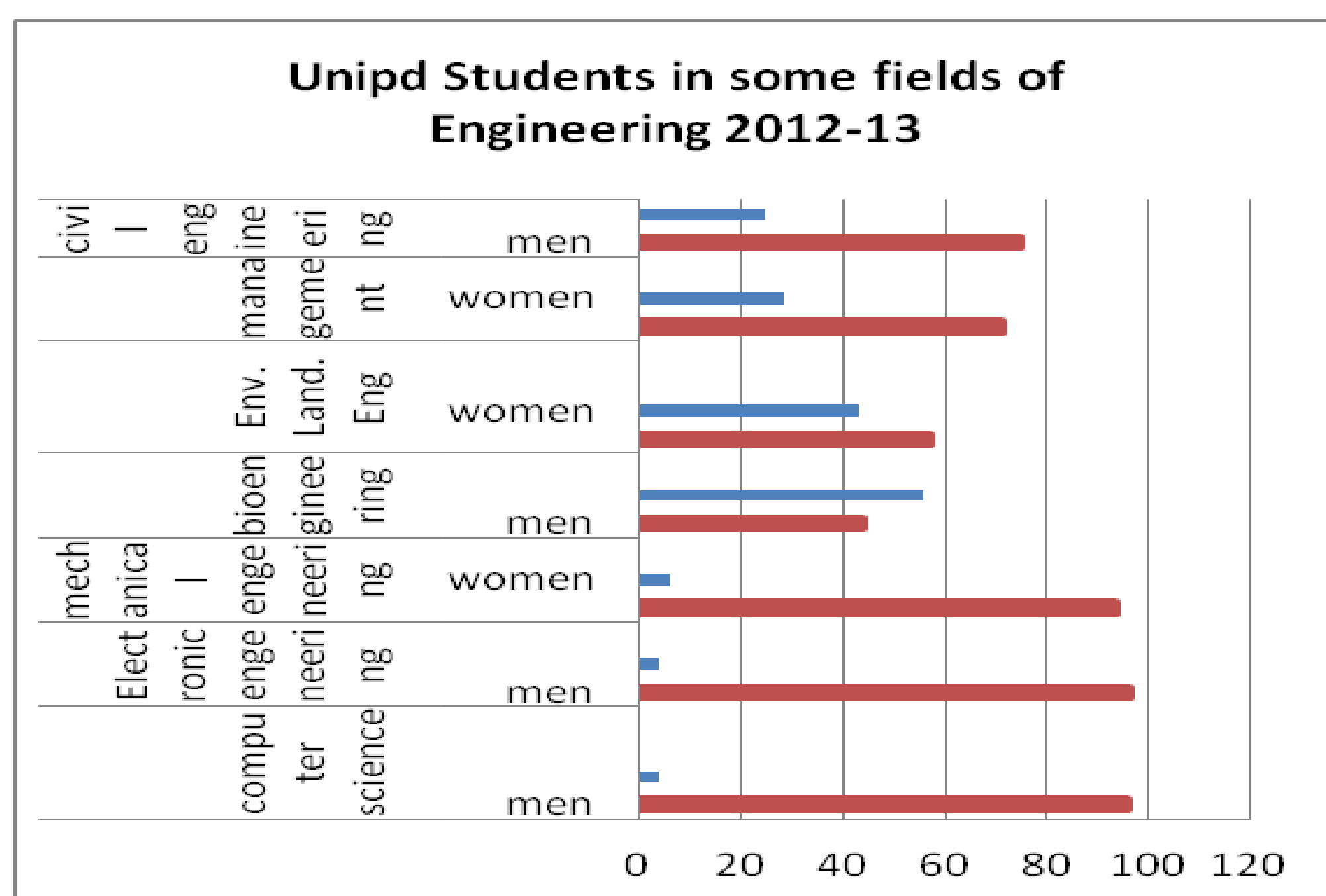


Gender Based Segregation in Education: New and Old Behaviors

Silvana Badaloni (DEI, University of Padua); Lorenza Perini (DEI, University of Padua); Julia Di Campo (FISSPA, University of Padua)

MAIN CONTENTS

The research takes into account the presence of women in scientific faculties (i.e. the faculty of Engineering) at the University of Padua as a case study, **proposing an in-deep analysis of the different curricula**, in order to show that a change in the scenario of a stereotyped world of hard science as a male world is possible (new behaviors), and considering also a step behind -the choose of the high school- as a crucial point, a time when the influence of the family and of many other cultural factors (the media for example) is particularly strong (old behaviors).



EDUCATIONAL SEGREGATION. A CASE STUDY

A two year survey involved 810 students between age 10 and 14 attending elementary and middle schools in the Venice area showing the existence of very clear and deep-rooted stereotypes that contribute to the perpetration of the phenomenon of "educational segregation". The project was realized for the first time in the school year 2011/2012 and proposed again in 2012/13 thanks to the outcomes obtained. The main aim was that to realise "sensitive teaching methodology towards gender differences", promoting a critical consideration to knock down rooted stereotypes and ideological barriers by three different moments:

assessment of the stereotypes presence among students; practical actions to start new interpretative real patterns; deconstruction of existant stereotypes.

MASKED IMAGES. WHAT DO WE SEE?

Twelve images were proposed portraying in 11 cases women and only in one case a man. Their faces were properly covered to make impossible to understand if it was a man or a woman. What viewers perceived were only bodies. Pictures of soldier women, flight pilot women, female taxi-drivers, spacemen, female footballers, female moto riders and F1 female pilots. The only picture of a man was that of a soldier with a child in his arms pictured during a war action in Afghanistan.



For image 3 the answering people affirmed it was a woman in 70% of the cases. It is a control picture was then put in portraying fire woman her face uncovered. For the second (covered) 76% of people answered it was a man.

SCHOOL FOR EVERYBODY?

It exists a common idea that some schools are just for female and some schools are just for male. The evaluation concerns above all the vocational institutes but high school for classical studies, languages, artistic courses and pedagogical sciences are evaluated as more suitable for girls, on the contrary the scientific school and military academy only for boys. (Figure 5)

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STATEMENTS

Given that among the different curricula in the general category of "Science" the presence of women is still a significant minority (She figures, 2013); **Given that** the general trends in Italy and at the Unipd strongly confirm the Eu scenario (Unipd, 2013); this research aims to point out that, in an in-deep analysis of the different curricula offered by the faculty of Engineering at Unipd (a.y. 2012-2013) some interesting data are hidden, opening the way to some considerations about the presence of women:

CONSIDERATIONS

The first is that **girls who choose a scientific field of study tend to break away from the established stereotypes** preferring most interdisciplinary and innovative curricula, closer to life-science, as well as to climate changes and renewable energies. The whole percentage of women students at the Faculty of Engineering in a.y. 2012-13 is 19,2% (17,3% in a.y. 2009-2010). The number is still very low compared to the other disciplines, nevertheless it is worth noting that, although women students enrolled in **Computer Science** are still only 3,9% in **Electronic Eng.** 3,7% and in **Mechanic Eng.** the 6,1%, on the other side, women in **Management** are 28,5%; in **Civil Eng.** 24,8% and -most of all- in **Bioengineering** are 56,0%, and **Environmental and Landscape Eng.** 42,9%, **improving the percentage of the previous Unipd survey of 14 and 4,5 points respectively.**

These results show that women students, when they choose to study Engineering, **are well selective and tend to distance themselves from what is perceived as the most common stereotype of an Engineer** – tough, heavy allied with machines and technology and most of all male, preferring new pilot courses oriented to the fields related to the environment and to life sciences.

So the key word is INTERDISCIPLINARITY

DO GENDER STEREOTYPES EXIST?

For the quantitative analysis two anonymous semi-structured questionnaires are distributed. Particular questions were asked to students to know if, according their opinion, the males were "tendentially aggressive" while on the contrary the females "tendentially more quiet and friendly". Girls confirm this stereotypes more than boys.

Data confirm the presence of multiple stereotyped ideas and the tendency to attribute to girls negative characteristics more frequently.

SCHOOL AND WORK : LEARNING AND WORK SEGREGATION

The second step of the survey tried to provide an answer to the following question: "Do preconceptions exist to influence on the chooses of study or work?" "Are there jobs only for men or only for women?"

Here there are the comparisons between the outcomes obtained from elementary students and the middle school students.

Figure 3 shows the elementary student answers, evident are many stereotypes tied to the job. The situation is similar for the middle school students (Figure 4); the stereotypes are consolidated during the age showing precise ideas: caregiver jobs for women and other jobs for men.

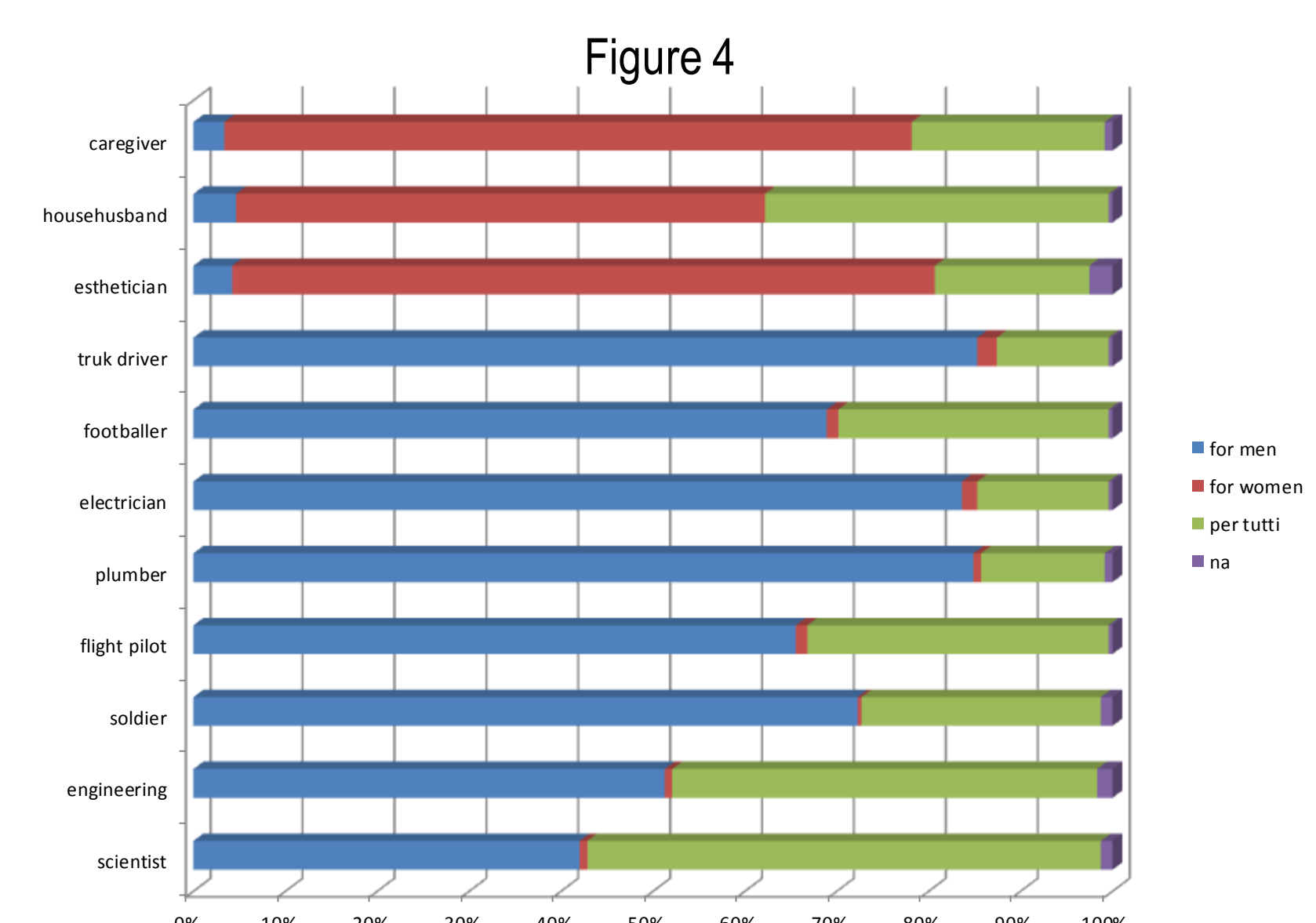
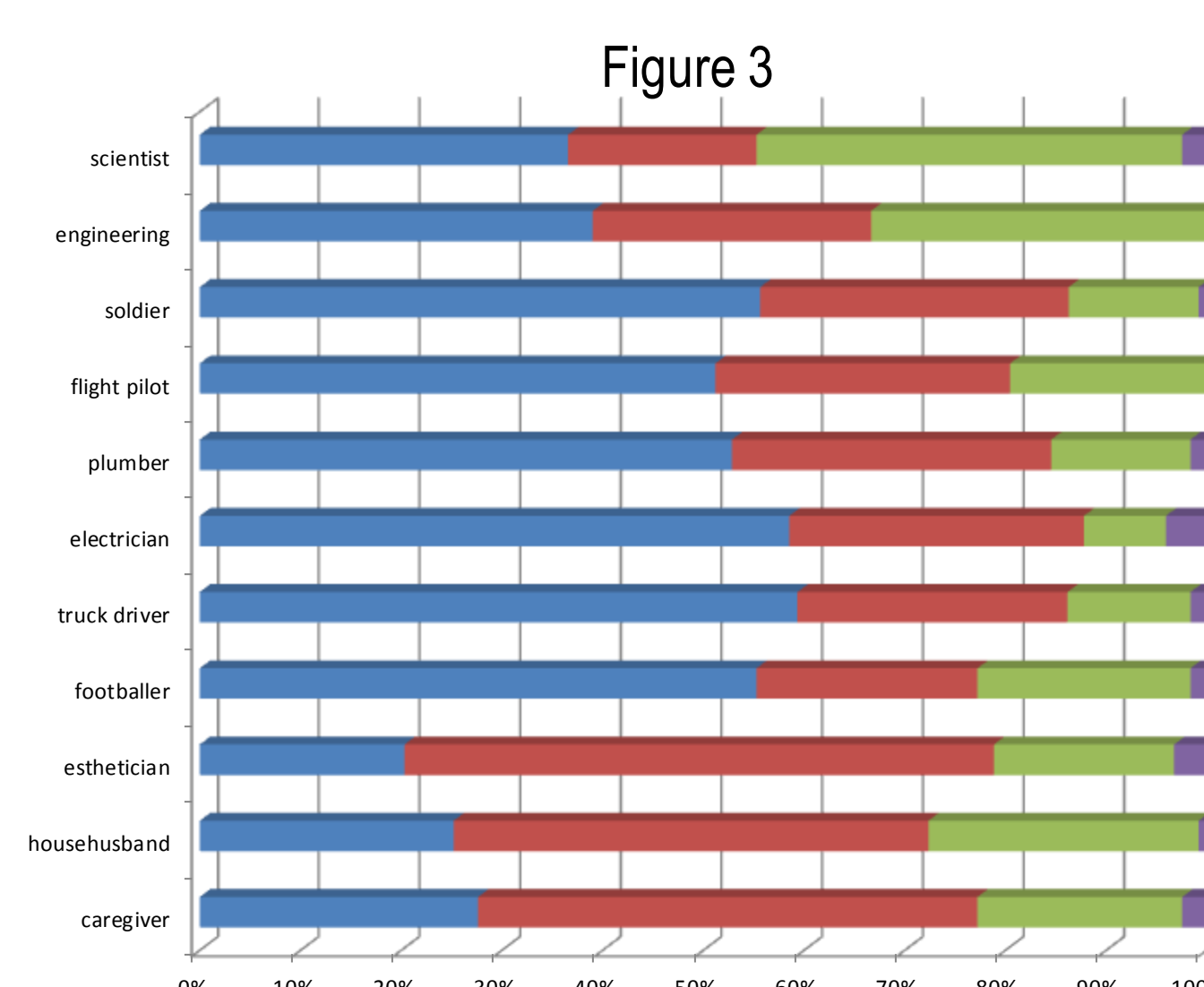
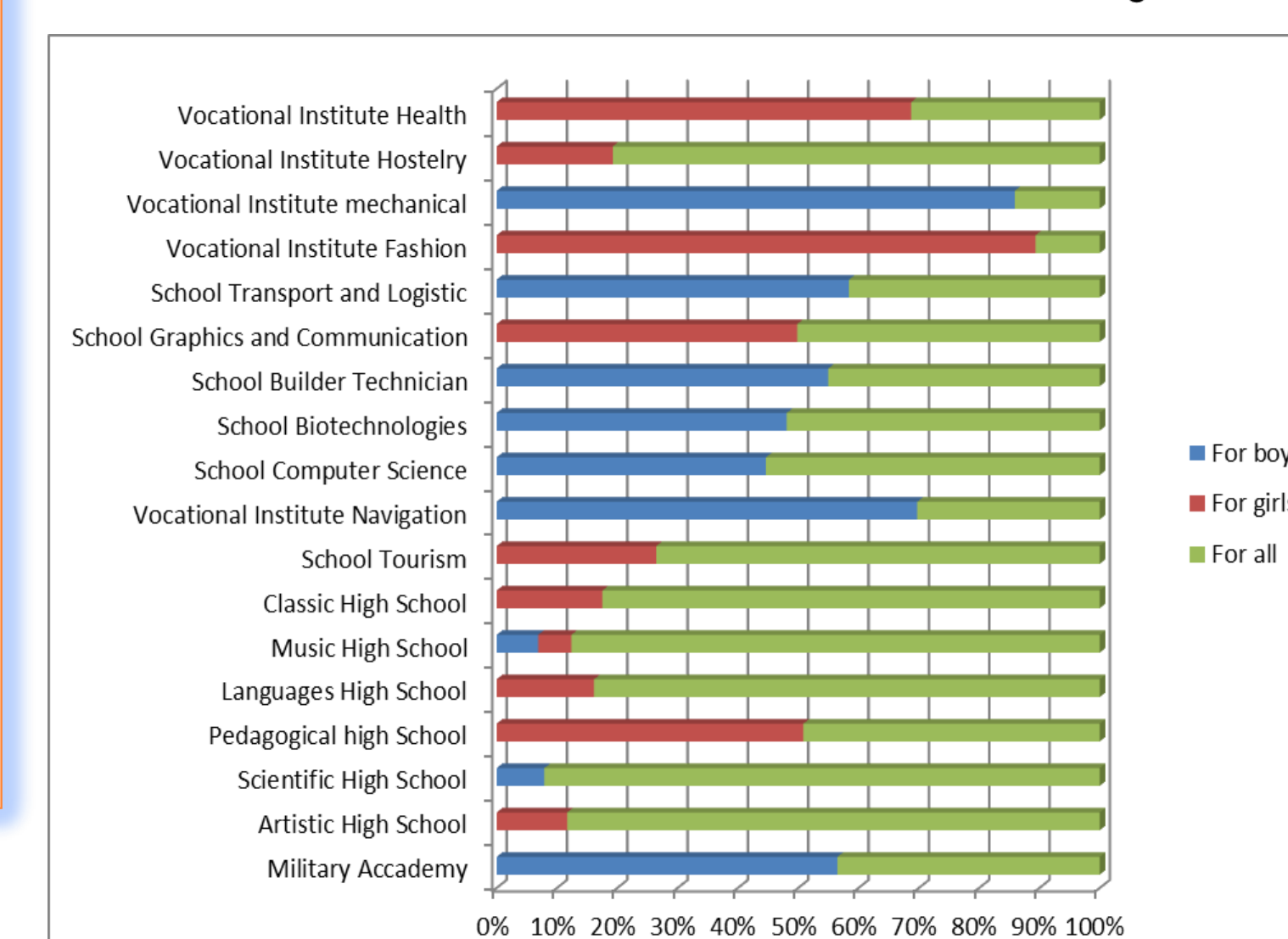


Figure 5



This results indicate the urgent need to educate students to a great autonomy of thought and toward the capacity of developing critical thinking in order to foster and promote diversity as a cornerstone not only to increase creativity and thus encouraging the advancement of science, but to promote social innovation and to better address the future choices and of young people in the labor market.