

Gender: an invisible but substantial variable in higher education

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Abstract

This article presents a quantitative reading on the Universidad Industrial de Santander full time teachers 'distribution by gender' unbundled by different variables that contribute to the visibility of subjects related to gender equity in Higher Education as a necessary step for the construction of gender indicators and so on to visualize discrimination at these level. The methodology used for the research was the Cross qualitative one and 2011 full time teachers were taken as primary reference, based on the statistic information provided by the institution. A data base was raised to allow a statistic analysis on the correlation of the different variables. From the given results gender differences stand out as the 71.2% of full time teachers are men and a 28.8% women evidencing significant differences by faculty and University level programs as well as functions, remuneration and rhythm and teaching career advancement.

Keywords: Higher education, equity of gender, gender, professors, University

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Introduction

There are few aspects investigated in education system, such as gender and its relationship to history, processes and operation of Higher Education Institutions –HEIs, a very important field of analysis to understand how speeches on university are built and legitimated, and how, aspects such as gender, impact functional distribution of higher education (Ovando Crespo, 2007).

It is important to see that gender is a variable of scarce attention at university life (Bonder, 1988), in part because of the assumption that discrimination, inequality, and inequity between men and women is a problem which has little or nothing to do with HEIs institutional and academic life. However, gender is a cultural construction crossed by power relationships (Restrepon, Franco & Quiroz, 2011), which causes a concrete effect, although invisible, on organization arrangements of the University (Palomar, 2005), assuming, in addition, that HEIs are organizations extremely complex and hierarchised (Rosovsky, 2010), where gender and power are a part of configuration of social relationships.

Notwithstanding, gender equal opportunity is a matter that has acquired importance in international agenda (World Bank, 2012), as a product of pressure exercised by women organizations, and feminist movements, it is also an important topic in social studies as an object (Decree 1279, 2002, 2002), and investigation and intervention (Bonder, 1988), proposing along the last decades, to review existing problem regarding situation of women rights as related to men rights, concretely at labor and social scope.

Obviously, gender relationships surge on the basis of inequality traditionally built in societies, where women have mainly suffered and faced discrimination because of their condition. This matter is added to the fact that, higher education is a detoning fuse of equality levels in contemporary society, since it has acquired a growing and important role, in developing individual capabilities and social of human beings (Freidson, 2006). According to Unesco, women access to Higher Education System is critical at every level (Ovando Crespo, 2007), creating a series of relationships, which may be an indicator of gender unequal opportunity, at the university in teaching, administrative, and student scope.

The research allowed a reading centered on distribution per sex of full time teachers at Industrial de Santander University–UIS, broken down by various variables which contribute to construction and review of matters related to gender equal opportunity in higher education. The two data show difference per sex, both in level and functions, such as remuneration, and promotion rhythm in teacher ranking advancement, which results in a detailed reading of an institution in particular; but which may show general situation of Colombian HEIs, with the aggravating thing of evidencing low production institutional data according to sex in most of higher education system.

Materials and methods

Distribution per sex may be assumed as a social dimension of the various phenomena associated to gender, not only as an operating variable to distribute and analyze certain phenomena, but as a clear reflection on how men and women interaction place is assumed in the various education structures. The work approaches deep problems such as inequity, discrimination, as well as problems which from social distribution, men and women should face, because of the social slanting implied by cultural construction of imaginaries on what men and women should and may assume as situations socially naturalized.

This research is quantitative and transversal. Teacher plant of the University, 2011, was taken as a reference, based on statistic information provided by the institution. A data base was prepared which allowed a statistic analysis on the correlation of the various variables through statistic package for social studies –SPSS.

Results

Teachers and gender at UIS

UIS Organization structure should be considered within standards and general conditions regulating higher education system in Colombia, specially, the State University System –SUS. Because of its juridical nature as a public university and official institution, it should define the type of labor according to regulation ceiling established through Law 30, 1992, General Law of Education, but governed, in addition, by multiple domestic and regional regulations. Within this general framework, higher education is defined as a permanent process to promote potential integral development of human beings, and which purpose is full development of students and their academic and professional formation (Gonzalez & Schalm, 2005), ethic and social, including all members of university community.

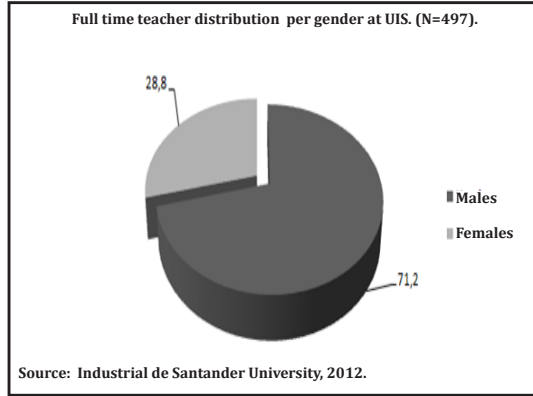
Within this framework, UIS professors hold a hierarchic level in the university structure, and their definition, functions, job hiring link and, in general, conditions regulating their development within the institution, depend on such hierarchic level. Regarding gender situation, Colombian regulations governing universities do not explicitly approach this matter although, because it is a condition, it should obey the law developed in Colombia in terms of gender. Several HEIs have included in their institutional reports some information broken down in men and women (Industrial de Santander University, 2011).

In the case of teachers, information basis is oriented to an analysis of those holding conditions of career teachers belonging to the employee plant, which is understood in terms of formal hiring link to the institution, as those full time teachers¹, registered in the Teacher List of the University, distinguishable from other types of labor link, such as cathedra teacher, occasional teacher, ad-honorem teacher, and guest teacher. Current UIS teacher plant is composed of 497 teachers, considering all departments and academic units.

1.UIS (2007) Teacher regulation. Compilation of rules in effect. Ediciones, UIS, Bucaramanga

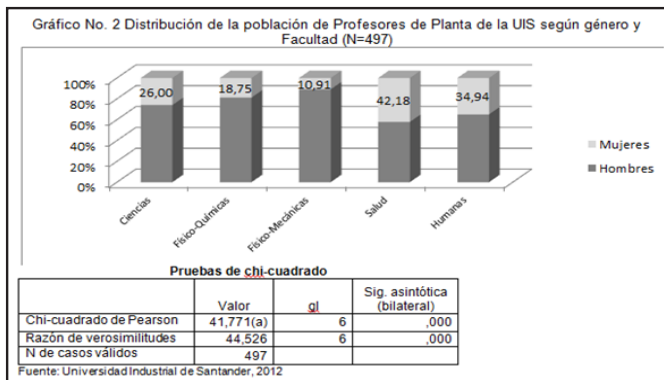
The university has a marked difference of men and women presence in its teacher plant, in fact, 28.8% out of the total plant are women, which represents data of general interest in the analysis of men and women share at UIS. As insisted, such marked difference in gender should be understood within the historical formation context of the university, in academic programs which exercise major strength and social presence at the institution, and in the industrial project itself of the university.

Graphic Nr. 1.



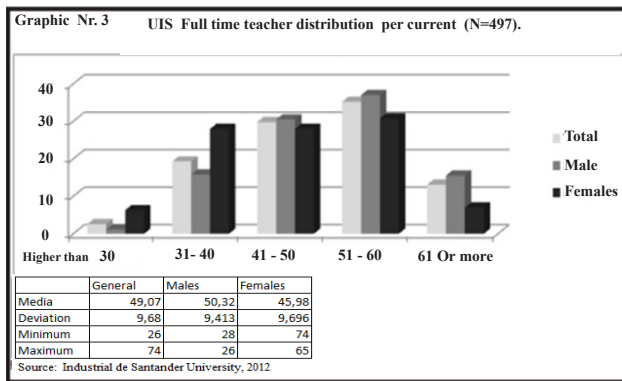
This slant of gender presence/share at UIS is kept in 5 Faculties running the academic programs at the University. Only, as seen in graphic 2, there is a better balance at Faculties of Health and Humanities, where, historically there are programs taken more by women than men, which is the case of Nursing at the Faculty of Health; and Social Work, at the Faculty of Human Sciences and, as obvious, statistical meaning ($p < 0.05$), is very high at this relationship.

Graphic Nr. 2.



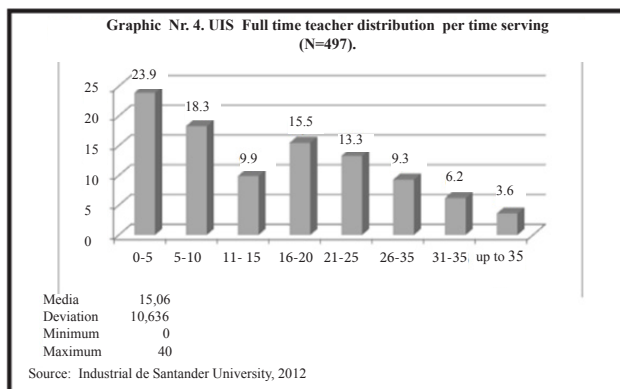
A Higher unbalance regarding men and women teachers at UIS is shown at Faculties of Engineering, Physic-Mechanic and Physic-Chemical, followed by a lower presence of teacher women at the plant of the Faculty of Sciences.

Age is another important indicator: average age of full time teachers is 49 years, and a typical deviation of 9.68 points, in a rank between 26 and 74, which means a old-aged teacher population. Just 2.6% of teachers is 30 or less, in spite of opening processes such as hiring young talent which responds to the need for generation renewal of teacher plant.



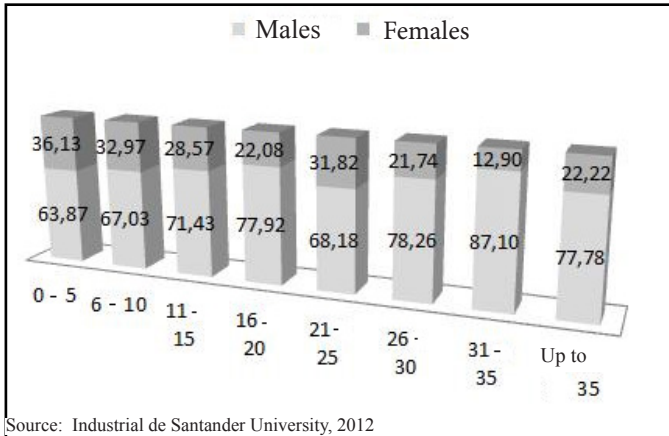
Gender is a variable which is not related to age of UIS full time teachers, difference between men and women is not considerable, as seen in graphic 3. This situation is critical in higher education, because universities, such the UIS, are very slow in processes of generation change of teachers.

It is also interesting, if high average of teacher age is associated to the time serving (in years) the university. While the average age is 49 years, average time at UIS is 15 years. This event may mean a high rotation of personnel entering and leaving the teacher career, also, because of conditions and requirements to join teacher career, there is an effect of contracting teachers holding a wide academic background, which, suggests, an old age to join the UIS.



In spite of the average of 15 years serving the UIS, data are very disperse concentrating about 40% in less than 10 years, and 23.9% of the total between 0 and 5 years of formal employment with the university.

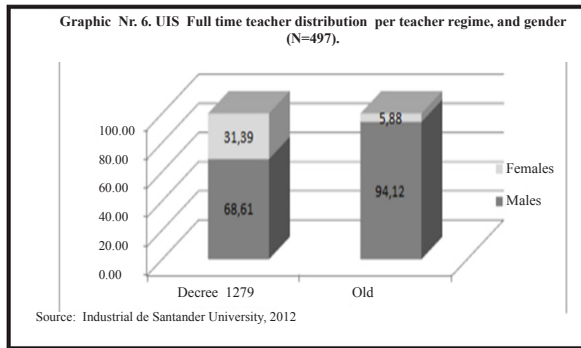
Graphic Nr. 5. UIS Full time teacher distribution per time serving and gender (N=497).



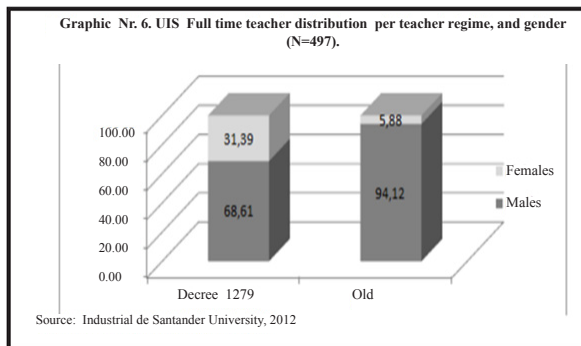
Time of employment relationship broken down per gender, shows that the number of men in every rank of experience is higher, however, an interesting data is that in the first and second rank (up to 10 years serving), women hold a higher participation than in levels per years served. This fact may show a major participation by women in teacher plant, and a major capability of women to apply and compete, in the though selection process, and teacher (men – women) hiring at the university.

Another important topic about teacher hiring at the university, is the type of regimen governing teacher career. Decree 1279 (2002), set forth the new salary scale and social benefits of state university teachers. This event causes an administrative situation which divides the teacher plant between old regime (teachers who in 2002 did not accept the new regulation), and 1279 regime.

At the UIS, just 10.3% of active teachers of teacher ranking/career belong to the old regimen, and the great majority, 89.7% are governed by Decree 1279. In terms of gender, as seen in the graphic below, women participation in old regime is lower than those under decree 1279, 2002. This fact reinforces the idea that, Decree 1279 being compulsory for teachers joining after 2002, women has increased their presence at UIS teacher plant after 2002.



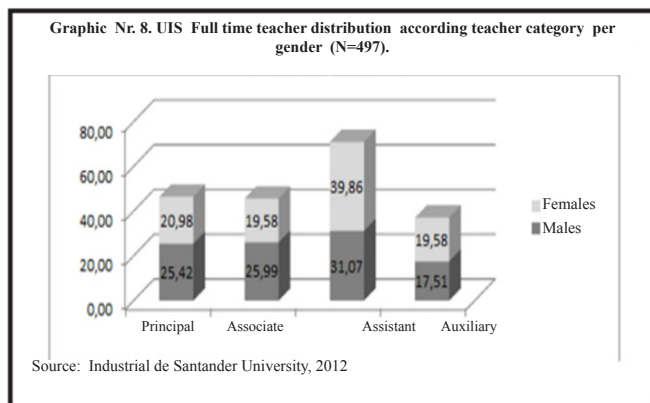
WIn addition to the regime, a look at curriculum of full time teachers plant per gender, results very interesting. Women overpass men in doctoral formation with 31.4% out of the total woman teachers, while Master and Specialization are more balanced. This is a very important data, if we take into account that higher academic level supposes better labor and salary conditions. The University requires a master degree as a minimum for candidates to enter the teacher career, only in exceptional cases, such as in Arts program, undergraduates are hired.



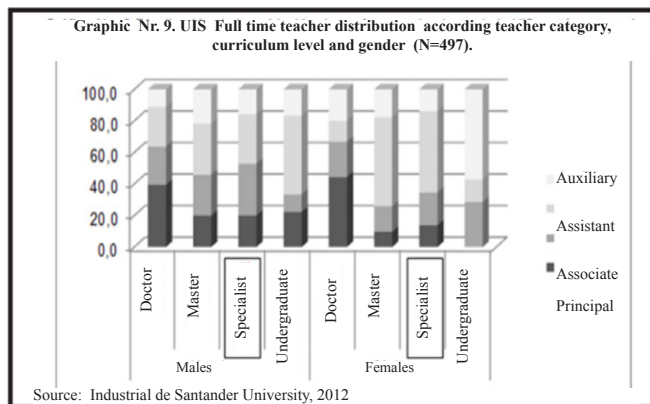
In addition to the regime and curriculum level, teacher raking at the university is divided into four categories, where all teachers are located, in accordance with Decree 1279. The four categories (from junior to senior) are: auxiliary, assistant, associated and principal/titular. Per gender, there is a marked balance between men and women in teacher categories, although women are slight overpassed by principals and associated at the UIS, while women overpass men in categories of assistant and auxiliary. If considered that about 75.0% of female teachers hold doctorate and master degrees, and that this is an important criterion for advancement/promotion within the Teacher List, then the question about gender difference in Teacher list, is asked.

When analyzing the three variables: teacher category, curriculum level, and gender, a significant association is found ($p < 0.05$), between male teachers and female teachers

holding a Master. It is established that among men holding a Master, there is better location at the teacher ranking (principal / associate), as compared to women holding a Master where there is a higher concentration in the rank assistant teacher. It is also true that women holding a doctorate degree are better ranked than men, although 20% of this subgroup are ranked in the auxiliary teacher level.



And for analysis of these variables, it is important to consider that ranking within the Teacher List is conditioned to another aspects, specially those related to academic productivity, positions held, experience time, and other.

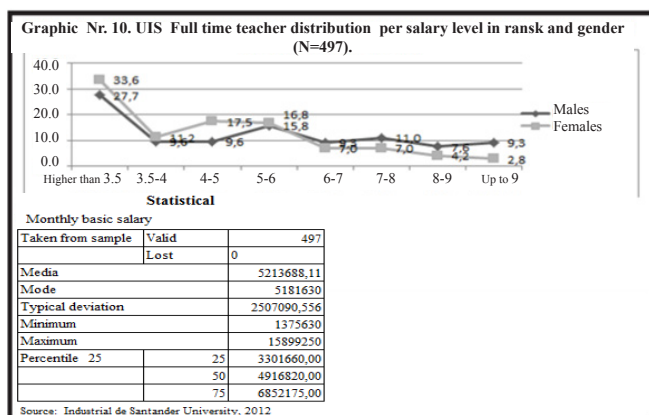


Another important reference in this reading, is academic productivity, which is measured on the basis of activities, formation products, and research, regulated by the same Decree 1279, 2002.

According to association measurements, there is no concrete evidence that gender condition impacts recognition to productivity, however, as stated above, women seem to remain more time in Assistant level, which, added to this aspect of recognition for productivity, may provide grounds to state hypothesis regarding teacher ranking and gender condition

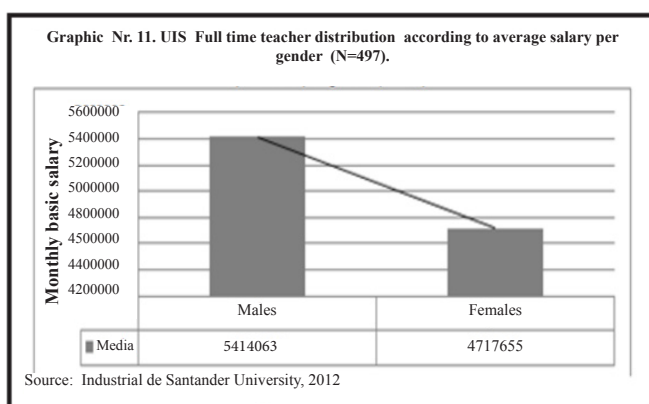
at UIS: women show a lower advancement rhythm than men in the Teacher List, specially from Axuliary to Assistant, productivity being one of the most sensible requirements.

As shown in Graphic 10, gender condition of full time teachers at UIS, is different per salary level. Up to five million pesos of monthly basic salary, in lower salaries there is a major participation of women, while, in higher levels, woman salary assignment is decreased as compared to men.



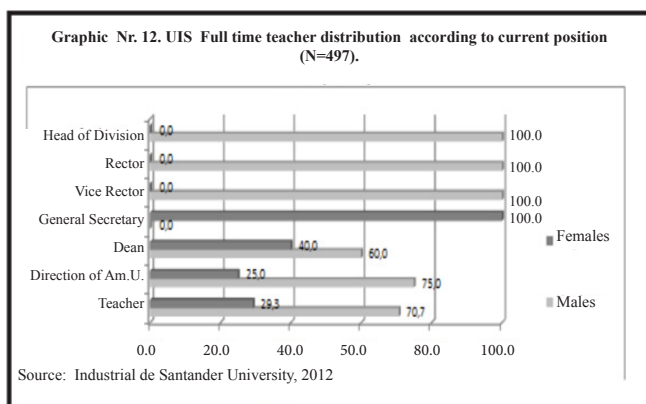
In general terms, there is high salary variation between full time teachers where, experience, productivity, and the title pose direct impact. Minimal data found on monthly salary were 1 million 375 pesos, up to maximum salaries of 15 million 899 thousand pesos for reference year 2010. As graphically evidenced, a half of teachers, of both genders, earn less than 5 million pesos (4 million, 916 thousand).

As seen, notwithstanding the notable difference in monthly salary among UIS full time teachers, this difference is more marked when considering gender: men earn a salary average of 15% over women, as shown in graphic 11.



The topic of salary is a concerning indicator for analysis of gender of teachers, notwithstanding, as stated, there are many factors which may impact its reading.

Another important aspect is teacher ranking per position of UIS full time teachers, notwithstanding the fact that all of them are governed by the same career law, some of them perform either academic or administrative positions, for different terms, and election procedures. Position as Rector (1), Vice Rector (3), and Head of Division (2), are held by men, while the post of General Secretary (1) is held by a woman. Posts as Dean office (5), and Direction of Academic Units (54), there is a higher presence of men (60% in Dean office, and 75% Direction of Academic Units), than women of 40% and 25% respectively.



Notwithstanding the fact that senior positions at the university are held by men, also showing a higher percentage of male share in all positions, except the General Secretary, there is no association statistically significant in this sense, in part, due to lower general share of women in teacher plant, 28.8% of the total.

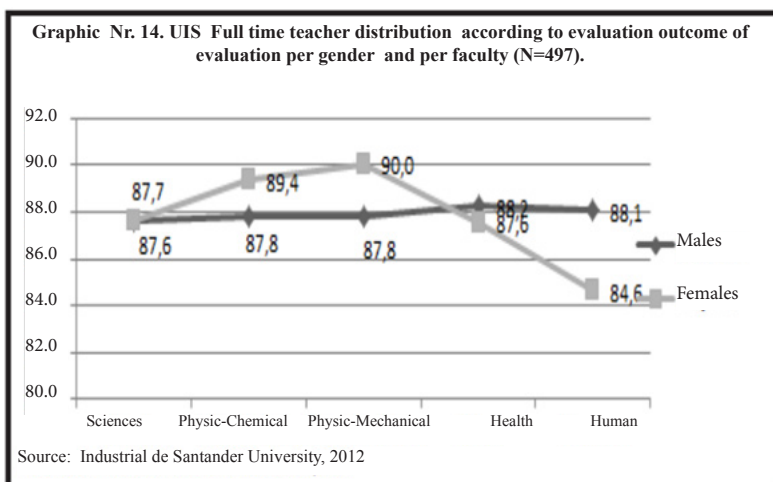
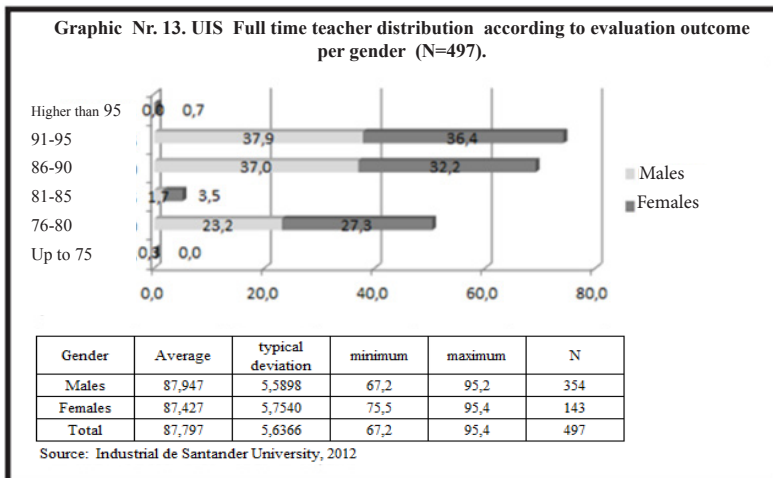
Another interesting variable for higher education institutions is teacher evaluation. At the UIS this issue is very important due to administrative and academic impact. Currently, teacher evaluation at the university, is performed under quantitative terms, by undergraduate students and graduate, who in each academic semester participate by means of an evaluation form, which yields evaluation results within a 0 to 100 points scale.

In standard terms, the UIS conceives teacher evaluation as a system of appreciation of work quality by the corresponding teacher, and his/her growth potential²

Evaluation of teacher performance is realized by the students; they complete an evaluation form, per semester, and per course. The basis of this information is taken in the sense of general average of teachers, independently from the number of courses, or students on which such evaluation was carried out. Between men and women there is no meaningful

² UIS (2007) Teacher Regulation, Article 57. Compilation of standards in effect. UIS: Bucaramanga city

statistical difference related to teacher evaluation. UIS teachers have made an evaluation average of 87,8 points out of 100. Women have a little lower average than men, 87,4 women, against 87,9 men.w



Per faculty where teachers serve, and gender, the highest difference is more obvious at the Faculty of Humanities, where women are under the average of evaluation of men, as well as at the Faculty of Health, although the gap between women average and men average is much minor that at the most traditional and male Faculties; women evaluation at Engineering is higher than men, and at the Faculty of Sciences, the average is almost the similar.

Discussion

Universities, as seen through UIS case, are complex organizations and highly hierarchised (Rosovsky, 2010). Power distribution, as inferred from qualitative data presented, is associated to men and women distribution, reaffirming male dominion at decision making level (Restrepo, Franco & Quiroz, 2011), and lower woman participation in advancement dynamics within teacher ranking.

An important fact in the specific case of the UIS, is such high male share in teacher plant, although in some programs this trend is broken, it is only where there is female tradition at university careers.

Paying attention to the matter of teachers, as held by Sandra Acker (2000), women are at disadvantage in a profession historically designed and dominated by men, which is seen in some careers, functions, and levels at the university.

In addition, man and women distribution by rank, shows that both hold positions at every level, but it relies on an inclusion policy of the institution regarding gender (Ovando Crespon, 2007). There is obvious inequality, specially in concentration of female teachers in the lowest category of the Teacher List.

Teaching is a scenery where it becomes obvious gender relationships performed by teachers within HEIs. Although changes of culture, pressed specially by women and domestic policies on woman inclusion in the field of science, progress has been made, (Estebanez, 2007), men are still the protagonists in this stage.

Obviously, existing inequality produces as an immediate consequence, higher inequality in labor market, since it directly impacts salary matters. In this manner, traditional characteristic inequity between sexes continues to be reproduced.

Conclusions

The run over through the various types of quantitative information on the matter of teachers at the UIS, confirms such numerical difference in many aspects of institutional life.

The first to be stressed is that from the total teacher plant at the UIS, just 50,63% are teachers (Industrial de Santander University-UIS, 2011), not to mention the high contracting level of occasional personnel, and high sub-contracting at this university; 2 employees under this mode, per each one on full time basis.

71.2% of total full time teachers at the university are men, and 28.8% women, showing a high difference per faculty and program; Engineering with a high male share, and humanities and some health programs and sciences are highly held by women. In addition, not to consider gender, it is a concern that, just 15.1% of the total teachers (1,228 total) is on full time basis, and just 7.5% of all teachers serving in the various contracting modes, hold

doctorate degrees (Industrial de Santander University-UIS, 2011). It is also important to stress how from 24.0% of all teachers, have been hired for less than five years for UIS teacher plant, and how women hiring is much less dynamic than men.

In terms of curriculum, 29% of plant teachers report doctorate level, women share being slightly higher than men share. In addition, in spite of this fact, men seem to show a better promotion dynamics by teacher category, and better salary compensation.

The above is opposed to teacher performance evaluation, which did not show important statistical difference, although per faculty and, paradoxically, women achieve a better grading average at engineering faculties.

This general panorama on the total teachers, its comparison per faculty, academic level, dedication, salary level, teacher list/rank, and evaluation, shows the wide gender gap regarding distribution of men and women share at the UIS. It is obvious, in addition, the unbalance per gender between teachers at faculties of Engineering, Physic-Mechanics, and Physic-Chemistry, and at the faculty of Sciences which are the largest and traditional faculties at the university.

Information analyzed in this article, clearly shows the status of higher education in Colombia, since, full time teachers are actually the ones supporting the quality education level, and mission duties of the university; it is evidenced an unequal relationship between teacher plant, and temporal pay-roll which results in an insufficient teacher plant, which guarantees the various processes, adding to this issue, gender inequality studied by this document within the teacher plant.

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