STATUS OF WOMEN ACADEMICS IN EARTH SCIENCES

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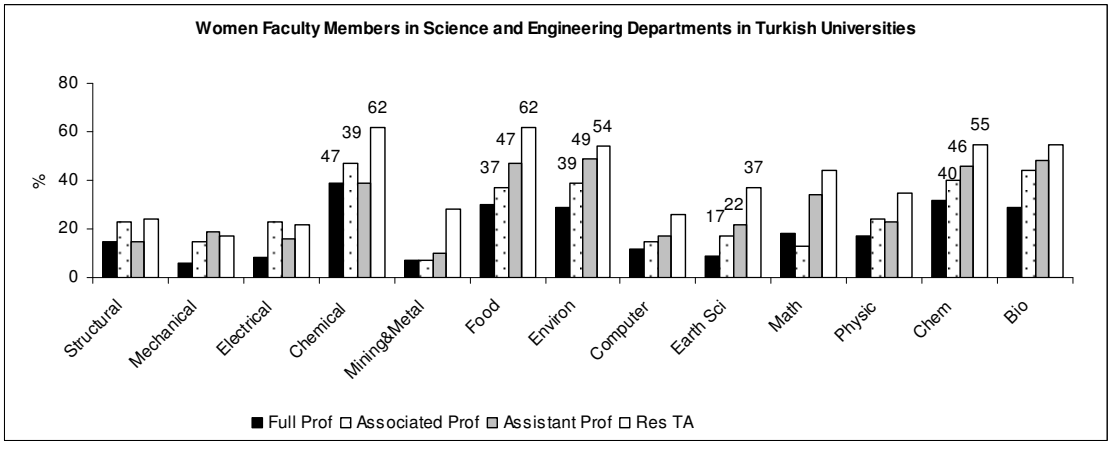
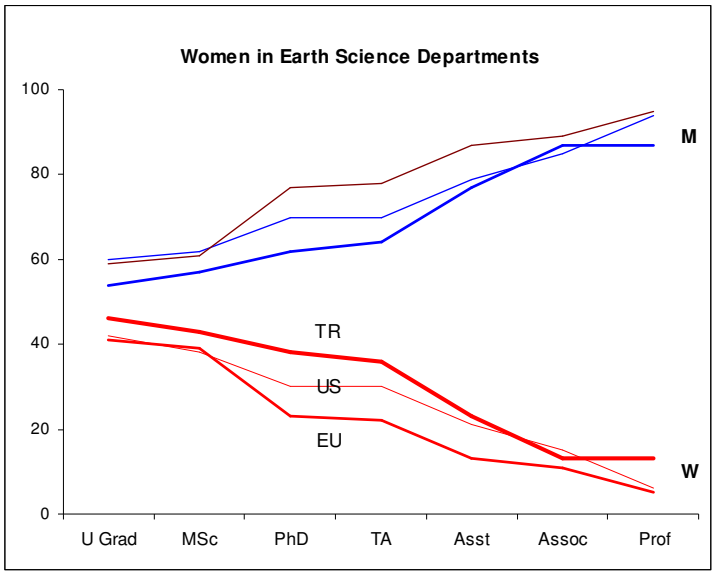
Many studies have been conducted on the status of women in earth sciences at all levels (Crawford *et al*. 1987; Wolfe 1999; Loder 1999; Schiebinger 2002; Holmes and O'Connell 2005; Bell *et al*. 2003). In general, the representation of women in senior scientific positions remains low. In the European countries, women constitute less than 10 percentages of full-time professors. In US the proportion of women in earth science departments has risen up to 14% (Holmes and O'Connell 2005). From 1990 to 2000, the representation of women in natural sciences rose from 8% to 12%, while the percentage of women in the graduate student population has increased to 33% (DeWett *et al*. 2002). In this study, the data show that greater amount of women (28%) is represented in the Turkish universities. Last 20 years the number of female students in the earth sciences and related engineering departments has significantly increased in Turkey (up to 48%, ÖSYM 2008), as well as in Europe and US (ETAN 2000; NSF 2004; WIS 2005).

The gendered distribution for the female students in the field of engineering (Zengin-Arslan 2002) also exists for the women faculty distribution in many fields in Turkish universities. As the highest percentage of women faculty (tenured) is employed in chemistry, biology, food and environmental sciences, there is also a remarkable increase in earth sciences related fields (Fig. 1).



Although Turkey has higher precentages of women faculty (Loder 1999; Schiebinger 2000) the data show that women still highly skewed and underpresented in many fields in earth sciences and higher level in earth science departments (Okay *et al*. 2004).



Currently, there is a growth in research assistant and specialist positions, followed by assistant professors (22%). Although young women are not attracted into doctoral programs, for instance, 48% of research assistants in geology departments are women. The data indicate that portion of PhD's are similar to the portion of assistant professor position (23%). The great proportion of women (24%) is working in earth sciences departments of Turkish universities (Okay *et al*. 2005).

A gender-based distribution in working fields in earth sciences: while most men are working in general geology, most women are paleontologists followed by mineralogists, seismologists (Holmes and O'Connell 2003; Okay *et al*. 2005). Women are under-represented, for example, in general geology, engineering geology (and other geo-related fields). Most women in the universities are assistant professors while most men are professors. There are two steps that women leak out and/or spend time the academic system which creates an effective filter, reducing women in earth science departments. The largest proportion of women hired into assistant professor position has received their PhD's in the last 10 years. Women tend to spend more time at the lower ranks in the academic pipeline, based on the slow increasing rate of women (up to 9%) compared to men, although their proportion in geosciences will continue to grow significantly, they will be still under-represented at least another 20 years in the earth science related departments in Turkey.

The under-representation of women in science in worldwide, has generated considerable debate and some improvement. Women's participation in the sciences has increased, but there is still need to do change in the culture of science, and its traditional pathways that will create gender equity and reduce the conditions that leave women disadvantaged.

References

Bell, R.E., *et al*., 2003. Righting the balance: gender diversity in the geosciences, *EOS Trans. AGU* 84 (31): 292-293.

Crawford, M.L., *et al*., 1987. Women in (geo) academia: students and professors revisited. *Geology*, 15 (8): 773-774.

DeWett, C.B., *et al*., 2002. Biological Clocks and Tenure Timetables: Restructuring the Academic Timeline. *GSA Today*, 1-7.

ETAN, 2000. Promoting excellence through mainstreaming gender equity, Brussels: EC.

Holmes, M.A., O'Connell, S., 2005. Where are the women geoscience professors? *NSF/AWG Workshop Report, 40*.

Loder, N., 1999. Gender discrimination "undermines science". Nature, No. 6760, vol. 402: 337.

NSF, 2004. Women minorities, and persons with disabilities in Science and Engineering, http://www.nsf.gov/sbe/wmpd/start.htm

Okay, N., *et al*., 2004. Current Status of women in Geosciences: A case study from Turkey. *32nd Int'l Geol. Cong*., Florence, Italy (226-6): 1030.

Okay, N., *et al*., 2005. Female students and women geoscientists in Turkey, *13. ICWES*, Seul, S. Korea, p. 145.

OSYM, 2008. http://www.osym.gov.tr

Schiebinger, L., 2002. Eurepean Women in Science. *Science in Context*. 15(4): 473-481.

WIS, 2005. Women in Science: Statistics and Indicators:

http://europa.eu.int/comm/research/science-society/women/wssi/index_en.html

Wolfe, C.J., 1999. Numbers of Women Faculty in the Geosciences Increasing, but Slowly. *Eos, Transactions, Am. Geophys. Union, 80*, 133-136.

Zengin-Arslan, B., 2002. Women in engineering education in Turkey: understanding the gendered distribution. *Int. J. Eng*., 18(4): 400-408.

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