

Analysis of the 2001 Society for Technical Communication--Salary Survey

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Abstract

The 2001 STC-HNA Chapter Salary Survey was analyzed in-depth to determine trends that lie beneath the surface of the collected data. Raw data from the hard copy surveys were manually entered into an Access database and then sorted to determine trends linking gender to education and experience in two industries. Benefits data were not analyzed because of the difficulty in assigning a dollar value to specific benefits. Data were compared for respondents in the top two local industries, computer software (36 respondents) and government (22 respondents). The data on earnings by men and women showed a consistent disparity. Almost without exception, women earned less despite equal education, experience, or job level. Averaging the mean salaries for women and men shows men earned about \$35K more than women overall despite individual category survey results wherein women earn more than men in two experience categories (2-5 years and 16-25 years). Even in comparisons on the most direct levels, women earned significantly less for the same work in the same job fields as men. Comparisons to national STC data for 1997-2001 indicate that this is a prevalent trend.

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INTRODUCTION

In fall of 2001, the Society for Technical Communication- Huntsville/North Alabama Chapter (STC-HNA) surveyed its membership and their colleagues to determine salary statistics for the local area for that year. As in surveys of previous years, the 2001 survey provided valuable data in general terms. There was, however, a need for a more in-depth analysis of the 2001 data using a combination of factors from the responses to determine trends that may lie below the surface. Previous researchers recommended gender and its relation to wages as specific point for analysis.

This report will analyze the data by combining several categories from responses to examine how these combinations may be affecting the salary ranges presented in the original survey. Categories and responses draw on both the published survey results and the raw data that the 2001 survey team collected.

The analysis leaves out benefits data because the monetary value of benefits is difficult to analyze since they are of such a wide variety and are rarely equal across the board between employers. The monetary value of benefits has a direct and lasting impact on pay scale, but the 2001 survey did not collect data necessary to assign monetary value to reported benefits. That survey asked only asked if participants had benefits such as health and dental insurance.

THE 2001 SALARY SURVEY DATA

The 2001 STC-HNA Salary Survey had 109 usable responses. Of these, 92 were full time, salaried employees and 17 were either Agency Contracted on an hourly basis or self-employed. Agency contract or self-employment responses were not analyzed for this report because they may not be “full-time” and directly equivalent to salaried positions.

In some cases individuals did not answer all questions on the survey. Of omitted questions, the gender question impacts the survey and this analysis most, and seven respondents did not answer this question. This is noted because the overall survey group was small and loss of this data had a significant impact on percentages.

METHODS

All of the responses were numbered and manually entered into a database program in order to sort the data properly and easily. Various sort functions were executed after entry and allowed grouping of answers for analysis. An independent party performed spot-checks to double check accuracy to reduce human error in transferring data from paper to computer.

I used the Access database query capability to pool selected information after entering the data from the 2001 survey into the database. Access allowed queries on gender, experience, education, employment level, type of industry, years with employer, and the number of Technical Communicators at each company. I then sorted and analyzed the data by combining categories to obtain as direct a comparison as possible.

I used simple combinations of two categories to determine the scope of the raw data (e.g., gender and industry, gender and education, and so on). The data was then compared to national surveys undertaken by the National Headquarters of STC and other data available from the Bureau of Labor and Statistics when possible.

Multiple categories were combined in a second round to make the most direct comparisons based on gender, industry, education, and experience. Data on years with employer and number of fellow technical communicators was used to help rectify potential discrepancies in pay scale.

RESULTS

The results of the data analysis were divided into several categories: Gender, Education and Gender, Experience and Gender, and Level and Gender. These dual-combination analyses are followed by a more specific analysis of multiple factors within the two most highly represented industry fields from the 2001 survey: Computer Software and Government. Within these two industries, factors compared are education, employment level, years of experience and salary.

Gender

Women now outnumber men in many of the traditionally "male-dominated" job fields. The Employment Policy Foundation states in an analysis of a 2000 Bureau of Labor Statistics report that "women now account for 46% of the total U.S. workforce" (EPF 1). This trend is very evident in technical communication, a field formerly dominated by men.

Of the 92 salaried respondents, 56 (60.86%) were women and 30 (32.60%) were male. This places the STC-HNA chapter results below the national level of 69.6% in women participants but the numbers for participating men slightly higher than the 2001 national numbers (STC 4). Although the percentage for women participants is lower in the local HNA survey it is important to note that 6 of the local respondents did not indicate gender. If those 6 respondents had been women it would have helped close the gap between the local and national numbers (see Table 1).

Table 1 -- Gender Breakdown

Gender	HNA Salaried	Percentage (%) of HNA '01 Respondents	National STC '01 Respondents	% of 862 STC '01 Respondents
Women	56	60.86	600	69.60
Men	30	32.60	261	30.27
No Response	6	6.52	1	.001
Total	92	99.98	862	99.87

Source: 2001STC-HNA Raw Data and STC 2001 Communicator Salary Survey. 48.8 (2001): Supplement

Industry and Gender

Industry and gender were the initial two categories combined to determine what industry types contained the most overall responses and how women and men were represented within those industries. Of the eighteen different industries represented, the Computer Software industry had the most respondents followed by Government and Telecommunications (see Table 2). Women were 68.5% of respondents in the computer software industry, and 66.6% of those in government, a distribution similar to the overall percentages of women responding to the survey. Low manufacturing industry responses could have been affected by the economic slowdown between late 2000 and third quarter 2001. The manufacturing industry suffered the highest job-loss rate in the US during that period (BLS 01-05 1, Langdon et al. 3). Despite this individual

industry downturn, Department of Labor statistics show that document production careers have expanded (BLS 01-06 1).

Table 2 -- Industry and Gender.

** Indicates at least one person did not specify gender in that industry*

Industry	Total Respondents	Gender	Number of Respondents	% of Respondents
Computer Software	36*	Women	24	26.08
		Men	11	11.95
Government	22*	Women	14	15.21
		Men	7	7.60
Telecommunications	8*	Women	3	3.26
		Men	4	4.34
Engineering/Construction	4*	Women	3	3.26
		Men	0	0
Computer Hardware	4	Women	2	2.17
		Men	2	2.17
Manufacturing	2*	Women	1	1.08
		Men	0	0
Army/NASA Contractor	1	Women	1	1.08
		Men	0	0
Computer Based Training	1	Women	0	0
		Men	1	1.08
Computer Service	1	Women	0	0
		Men	1	1.08
Computer Technician	1	Women	1	1.08
		Men	0	0
Engineering	1	Women	1	1.08
		Men	0	0
HVAC	1	Women	1	1.08
		Men	0	0
Internet Service Provider	1	Women	1	1.08
		Men	0	0
Information Technology	1	Women	1	1.08
		Men	0	0
Information Technology Serv	1	Women	1	1.08
		Men	0	0
Software Developer	1	Women	1	1.08
		Men	0	0
Technical Consultant	1	Women	0	0
		Men	1	1.08
Ultra Wideband	1	Women	0	0
		Men	1	1.08

Source: 2001STC-HNA Raw Data

Education and Gender

The analysis of education combined with gender shows the highest levels of education for both women and men in the category of bachelor's degrees (Table 3). This is a standard trend also found in the data from the National STC surveys from 1997 to 2001 (STC '97 4, STC '98 6, STC '99 4, STC '00 4, STC '01 4). Men in the bachelor degree category made the same as women with Master's degrees in the HNA survey, outpacing their women counterparts by \$10K. In 2001, women with bachelor's degrees in the HNA survey earned \$47K. This is only slightly more than the 2000 national average earnings of \$46K (BLS OOO 52). (See queries 1 and 2)

Of the remaining categories that had comparable responses, men's earnings also outpaced women's, with one exception: women with Master's degrees earned 21% more than men with master's degrees. According to U.S. Government data for the nation in 2001, women continued to earn only 76% of what their male counterparts earned (BLS 02 1). This percentage has been stagnant since 1998 (BLS 99 01). Although not a direct comparison, the difference could be interpreted as an indicator that local opportunities for women are better. However, higher earnings for women within the HNA survey may simply be a factor of having more women respondents.

Table 3 -- Education and Gender.

Education Level	Gender	Base	% within Gender Group	% of Total Respondents	Mean Salary in \$
HS/GED	Women	2 of 56	3.57	2.17	52K
	Men	0 of 30	0.00	0.00	0
2 year degree/cert.	Women	2 of 56	3.57	2.17	35K
	Men	7 of 30	23.33	7.60	54K
Bachelors	Women	33 of 56	58.92	35.86	47K
	Men	18 of 30	60.00	19.56	57K
Master's	Women	15 of 56	26.78	16.30	57K
	Men	5 of 30	16.66	5.43	45K
No-response	Women	4 of 56	7.14	4.34	41K
	Men	0 of 30	0.00	0.00	0

Source: 2001STC-HNA Raw Data

Experience, Level and Gender

Experience and level of employment are related categories for studying salary. The analysis of gender and experience shows men out earning women in four of the six categories. Averaging the mean salaries for women and men shows that men earned approximately \$35K more than women overall despite individual category survey results that women earn more than men in 2-5 years and 16-25 years experience categories (Table 4).

Table 4 -- Experience and Gender.

Experience (Years)	Gender	Base	Percentage (%) within Gender Group	Percentage (%) of Total Respondents	Mean Salary in \$
<2	Women	3 of 56	5.35	3.2	33K
	Men	2 of 30	6.66	2.1	48K
2-5	Women	14 of 56	25.0	15.2	44K
	Men	3 of 30	10.0	3.2	41K
6-10	Women	8 of 56	14.28	8.6	48K
	Men	6 of 30	20.0	6.4	55K
11-15	Women	11 of 56	19.64	11.9	48K
	Men	8 of 30	26.66	8.6	61K
16-25	Women	19 of 56	33.92	20.6	57K
	Men	10 of 30	33.33	10.8	55K
26+	Women	1 of 56	1.18	1.0	62K
	Men	1 of 30	3.33	1.0	67K

Source: 2001STC-HNA Raw Data

Women earned more than men at the same level in two of the six categories, but men continued to dominate the pay scale in the remaining four categories (Table 5).

Table 5 -- Level and Gender.

* One man indicated entry level at \$75-80K, which is unusual

Level	Gender	Base	Percentage (%) within Gender Group	% of Total Respondents	Mean Salary in \$
Entry	Women	4 of 56	7.14	4.34	34K
	Male	2 of 30	6.66	2.17	52K*
Mid Level Non Supervisor	Women	23 of 56	41.07	25.00	46K
	Male	9 of 30	30.00	9.78	42K
Mid Level Supervisor	Women	8 of 56	14.28	8.69	53K
	Male	3 of 30	10.00	3.26	63K
Senior Level Non Supervisor	Women	14 of 56	25.00	15.21	52K
	Male	12 of 30	40.00	13.04	59K
Senior Level Supervisor	Women	4 of 56	7.14	4.34	66K
	Male	3 of 30	10.00	3.26	61K
No Response	Women	3 of 56	5.35	3.26	48K
	Male	1 of 30	3.33	1.08	43K

Source: 2001STC-HNA Raw Data

Computer Software Industry Comparison

The software development industry was one of the highest reported industries in the 2001 HNA Survey. This career field is also expected to have some of the steepest gains between 2000 and 2010 (Women’s Bureau 1, BLS OOO 02 11).

Despite the high response rate in this field, a direct comparison of industry, education level, experience and salary could be made in only six instances. Comparisons were based on level, education, and experience. Data on years with current employer was included as supporting information.

In all of the cases in which individuals held bachelor's degrees, men invariably earned more at all levels. Even in the most direct comparison of bachelor degree holders with 11-15 years experience and 10 years with their current employer, women earned less than men (Table 6).

Table 6 – Software Industry w/ Bachelor’s Degree

Level	Gender	Education	Experience in years	Years w/ Current Employer	Mean Salary in \$
Entry	Women	Bachelors	< 2	12 months	25-30K
	Male	Bachelors	<2	15 months	30-35K
Mid Level Non-Supervisor	Women	Bachelors	11-15	1	35-40K
	Male	Bachelors	11-15	14	45-50K
Senior Non-Supervisor	Women	Bachelors	11-15	10	35-40K
	Male	Bachelors	11-15	10	40-45K

Source: 2001STC-HNA Raw Data

Women in the computer software industry fared better after obtaining a master’s degree. In these two cases, women earned more or equal pay to their male counterparts (Table 7).

Table 7 – Senior Non-Supervisor with Master’s Degree

Level	Gender	Education	Experience in years	Years w/ Current Employer	Mean Salary in \$
Senior Non-Supervisor	Women	Master’s	2-5	2	45-50K
	Male	Master’s	2-5	3.5	35-40K
Senior Non-Supervisor	Women	Master’s	11-15	4	60-65K
	Men	Master’s	11-15	12	60-65K

Source: 2001STC-HNA Raw Data

Government Comparison

In the government comparison, only two instances provided a direct comparison. Surprisingly, this example shows an unexpectedly large pay difference. This large disparity in pay could be attributed to the 12 year difference in time with current employer because the Government Service (GS) level of government personnel is directly tied to their longevity. However, it is difficult to understand why the supervisory level, education level and experience do not bring the wage levels closer together in this case.

Table 8 – Government Comparison.

Level	Gender	Education	Experience in years	Years w/ Current Employer	Mean Salary in \$
Senior Non-Supervisor	Women	Master’s	16-25	10	45-50K
	Men	Master’s	16-25	22	60-65K

Source: 2001STC-HNA Raw Data

CONCLUSION

Overall women respondents earned less than their male counterparts. Comparisons to the national data for both 2001 and previous years indicate that this is a prevalent trend despite occasional reversals in the local survey.

Women earned less, and almost without exception the wage disparity appears to be independent of any of the factors available in the survey results. In the occasions where women did earn more, those occurrences seemed to be more of an anomaly than a pure reversal of trends or leveling of the playing field.

RECOMMENDATIONS

Future surveys by the STC-HNA Chapter should be both more specific and more generic in order to provide researchers a greater ability to make one-to-one comparisons.

More Specific

- Respondents should be required to complete all blocks in the survey. This requirement would alleviate the burden of "guess-work" when attempting to establish an exact correlation.
- Narrow the pay scale option field. The \$5K range option does not give a close enough comparison.

More Generic

-- Future surveys should also require selecting from a pre-established list of industry fields and remove the "Other" option. Removing this option from the survey will force respondents to select the closest field that represents what they do, also allowing for a more direct comparison of data.

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