

Report on WLUFAs Salaries

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Executive summary

Using the July 16, 2010 salary data:

- The average annual salary for WLU faculty (excluding Librarians and ‘in residence’ faculty) is \$111,700 while the median salary is \$106,550.
- WLU faculty salaries generally increase with both age and rank, just like at other Ontario universities, but WLU shows less salary compression and inversion among younger faculty than at other universities .
- Women faculty at WLU still earn less than men, on average, after adjusting for age and rank but the differences are not large and are partly attributable to lower proportions of women working in the higher paid Faculties of Business and Science.

Using 2009/10 OCUFA data for faculty:

- WLU’s overall average and median faculty salaries rank 14th out of the 16 Ontario universities considered.
- If all faculty employed at the other Ontario universities (i.e. excluding WLU) were put into one group, their average salary would be \$119,744 according to the 2009/10 OCUFA data. Thus, WLU’s average salary of \$107,088 is \$12,656 or 11.82% below the average paid to other faculty in Ontario.

- WLU's faculty are, on average, younger and hold lower ranks than faculty at the other Ontario universities. Salary comparisons should adjust for these differences since salaries increase with both age and rank.
- After adjusting for differences in the distributions of age and rank, WLU faculty earn, on average, \$9,649 or 9.01% less than faculty at the other Ontario universities. This overall salary gap is a little higher than what was estimated for 2006/07 and 2007/08, but likely within the confidence intervals of the estimates.
- In 2006/07 and 2007/08, the salary gap (i.e. the difference between WLU faculty and the Ontario average) was smaller for full professors and older faculty than it was for younger and lower ranked faculty. By 2009/10, the salary gap for full professors had increased so the difference between full professors and the lower ranks has narrowed. By 2009/10, the salary gap had increased for older WLU faculty and decreased for younger faculty, so the difference in the salary gap between younger and older faculty has also declined. The fixed dollar (at \$1,800) "Ontario System Adjustment" salary increase in the current collective agreement likely contributed to the narrowing of the differences as well as the various caps on CDIs and partial CDIs.

Using 2009/10 CAUT data for Librarians:

- The average salary for WLU librarians ranks 10th of the 16 universities considered. If all librarians employed at the other Ontario universities (i.e. excluding WLU) were put into one group, their average salary would be \$89,208. Given WLU's average salary is \$85,757, WLU's librarians earn \$3,451 or 6.12% less, on average, than librarians employed at other Ontario universities.

1. Faculty Salaries at WLU: 2010/11

I was provided with a spreadsheet showing the birth date, sex, annual salary, type of appointment, rank appointment date, rank, department, highest degree, year of first degree, and year of highest degree for all WLUFAs as of July 16, 2010, so this provides salaries for the 2010/11 academic year.

Figure 0.5 shows a histogram of the 2010/11 annual salaries for faculty. Each bar represents a salary range of \$4,500. Librarians and faculty with the 'in residence' rank are excluded from Figure 0.5 and Figures 1, 2, 3, and 4 that follow. There are only seven (7) 'in residence' faculty so their exclusion or inclusion makes very little difference to the analysis below.

Figure 0.5 shows that faculty annual salaries range from \$65,000 to \$180,000 and that the distribution of salaries is tri-modal with concentrations around \$80,000, just under \$100,000, and around \$140,000. Although the existence of three modes complicates a description of the distribution, it is clear that the left shoulder of the distribution is quite narrow and steep while the right shoulder declines more gradually and extends further to the right. This means that the mean or average salary for WLU faculty should exceed the median and this is certainly the case. Given the data supplied, the average faculty salary is \$111,700 while the median is \$106,550. The average salary exceeds the median for faculty at most Ontario universities, but as will be shown below (using 2009/10 OCUFA data), the difference between the mean and median salary is particularly large at WLU.

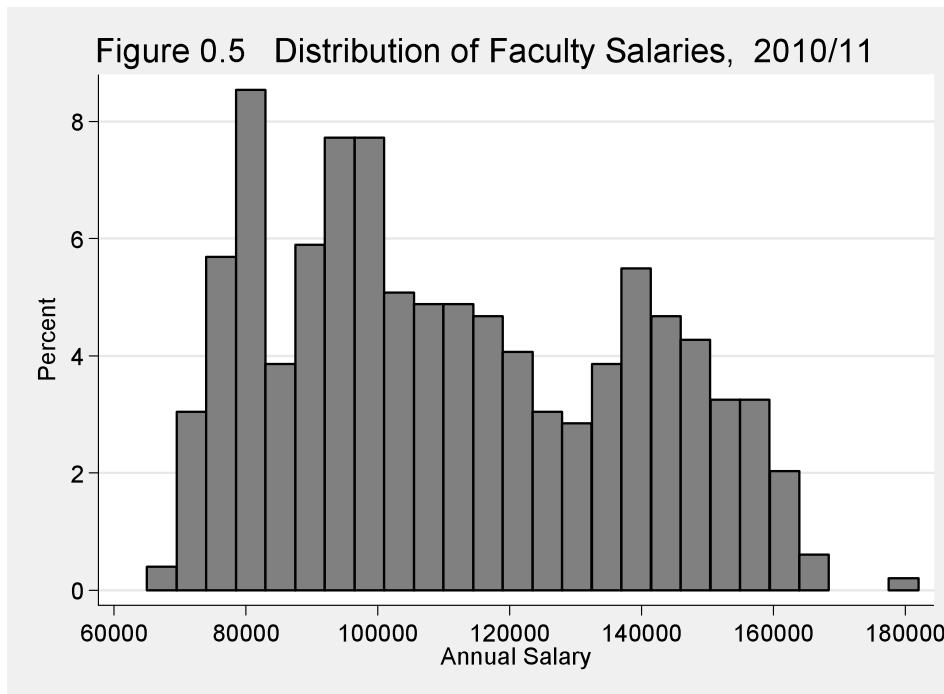
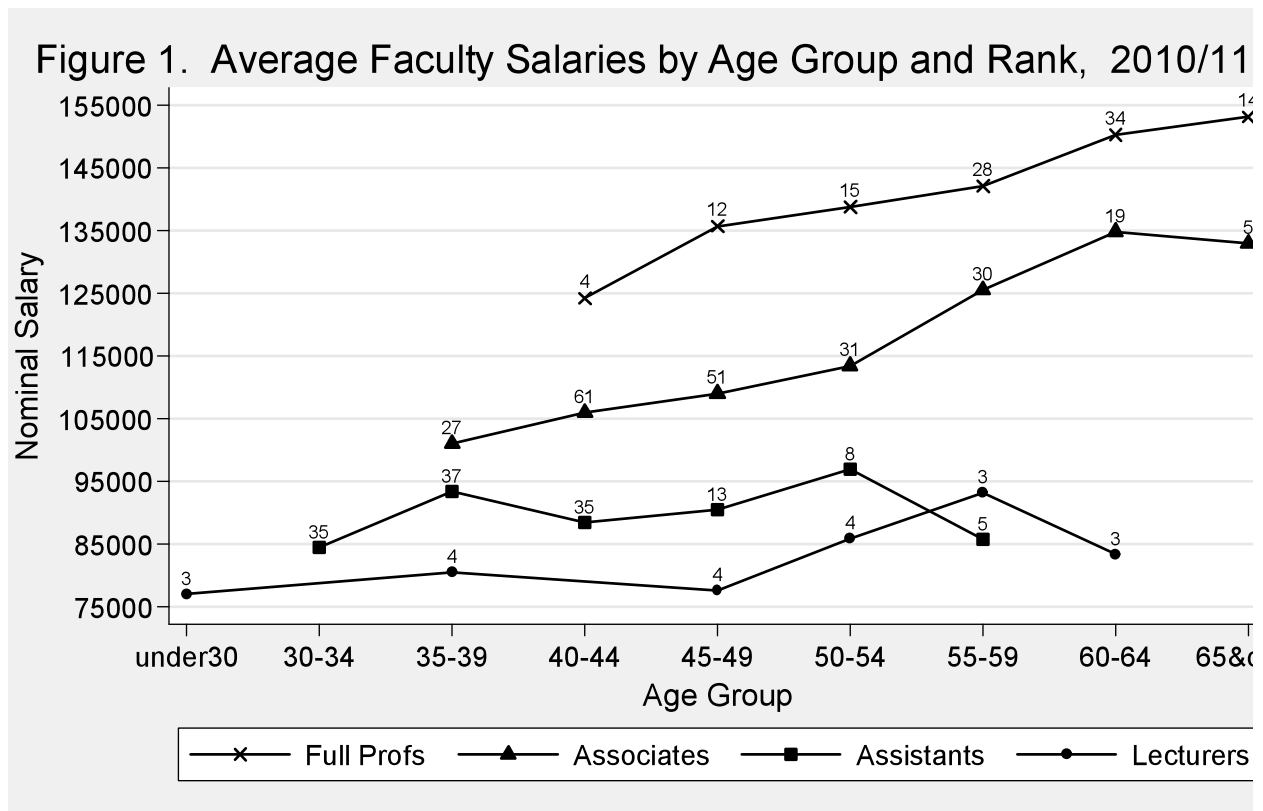


Figure 1 uses the 2010/11 salary data to show average salaries for WLU faculty by age group and rank. The height of the marker shows the average salary and the number above the marker shows the number of faculty in that age/rank category. Age is meant to proxy experience. The experience may have been at WLU, at some other school or institution, or even outside of academe. Regardless of the type of experience, the assumption is that the time was spent doing something worthwhile, which generated valuable experience and which Figure 1 and Table 5a show is related to higher earnings. No salary is shown if there are fewer than three faculty in an age/rank category. Again, Librarians are excluded from Figure 1 and the Figures that follow, as are faculty with the ‘in residence’ rank.

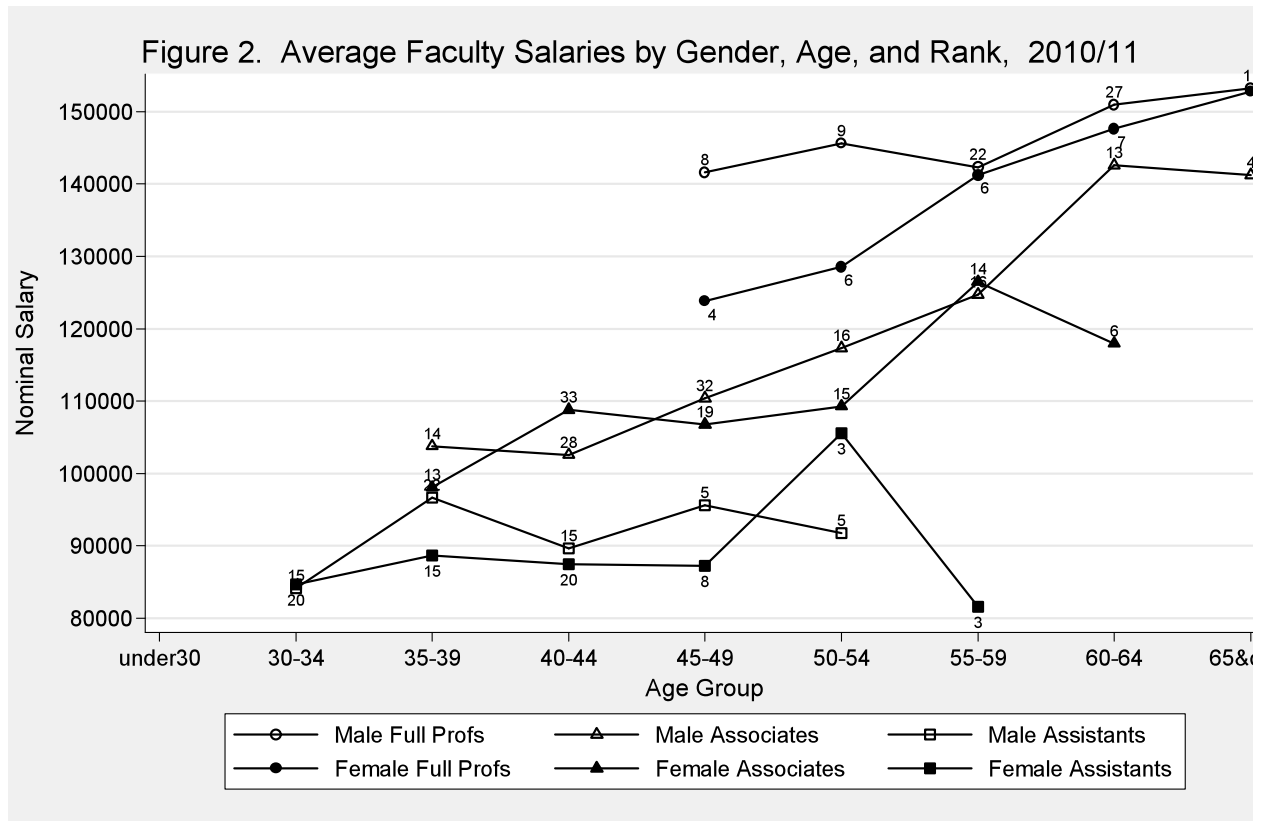
Figure 1 shows clearly that WLU faculty salaries increase with higher rank, even after controlling for age. Put another way: if we consider only faculty in the same age group, those at higher ranks earn higher salaries, on average.

For associate and full professors, average salaries also increase strongly with age, after controlling for rank. This means that among faculty of a given rank (full or associate professor), older faculty earn more than younger faculty, on average. Associates aged 65 and older are a small exception. The age-salary profile for assistant professors is much less steep and it is disrupted by the high average salary for associates aged 35-39. Aside from the 35-39 group, average salaries do rise with age, albeit modestly, for associates aged 30 to 54. Average salaries are essentially flat for Lecturers aged 29 to 49 and then are higher for older lecturers. Note, however, that there are less than 25 lectures altogether and the numbers of lecturers in each age category are quite small. This means that the averages are less reliable since one salary can have a large effect on the average.



The WLU distributions of salaries across age groups and ranks shown in Figure 1 are typical of those at other Ontario Universities in that salaries rise with age and rank even after controlling for the other. WLU salaries are unlike those in other Ontario universities in that they show very little salary compression and inversion by age, after adjusting for rank. In many other Ontario universities (and for the Ontario system as a whole) the youngest age group in a rank earns a higher average salary than the next age group or even the next two or three age groups. This is called salary inversion. Many other Ontario universities also have salary compression. With compression, the age-salary profiles (within a rank) have long flat segments where younger faculty earn essentially the same average salaries as colleagues who are 5, 10 or even 15 years older. As noted, WLU faculty salaries show very little of this salary compression and inversion.

Salary differences by gender are an important issue and Figure 2 shows average salaries by age, rank and gender. The hollow markers show the averages for men and the solid markers show the averages for women. Again, the height of the marker shows the average salary and number shows the number of faculty in that category. Figure 2 shows that both women's and men's average salaries increase with age and rank in the manner shown in Figure 1.



Given the same age and rank, the average salary for women faculty is generally less than men's but there are several exceptions and cases where the male and female averages are quite close. Very simple regression analysis estimates the average difference between men and women's salaries to be roughly \$4,060 after adjusting for age and rank. This represents 3.6% differential when compared to the overall average salary (omitting librarians and 'in residence' faculty). Please note that this is a very simple minded analysis of a much more complicated and subtle issue. It is intended to give only a very rough, 'first pass' type of analysis of the differences between male and female faculty salaries.

Part of the difference between men and women's salaries (which is not considered in the simple analysis above) is differences due to discipline. Figure 3 shows average salaries by age group and faculty where only the largest faculties -- Arts, Business, Science, and Brantford -- are considered. To provide more detail, I have partitioned the Faculty of Arts into a Humanities portion (Arts-Hum) and a Social Science portion (Arts-SocSci).

The Humanities portion of the Faculty of Arts (Arts-Hum) consists of the departments of:

Archaeology	Archaeology & Classical Studies	Communication Studies
English & Film Studies	French Language & Literature	History

Languages & Literature
Women's Studies

Philosophy

Religion & Culture

The Social Science portion of the Faculty of Arts (Arts-SocSci) consists of the departments of:

Anthropology

Geography & Environment Studies

Global Studies

North American Studies

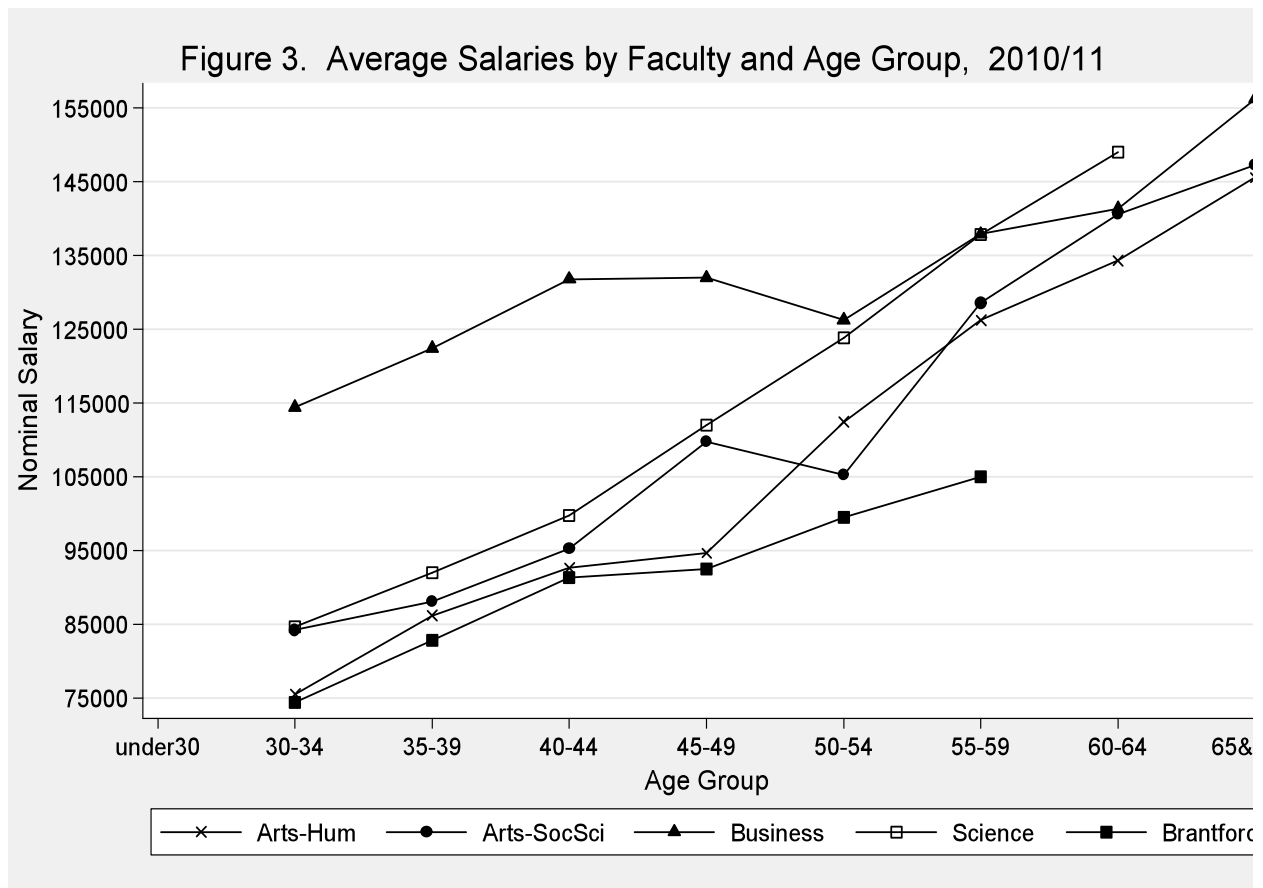
Political Studies

Psychology

Sociology

The assignment of some departments to Humanities or Social Science could easily be challenged, but the assignment above yields roughly equal numbers of faculty in each category, and moving some departments from one category to the other makes little difference to the analysis below. I recognize that Brantford is not an academic faculty, but it was listed as a separate faculty in the data spreadsheet.

Figure 3 shows that Business faculty generally earn the highest salaries, especially for younger faculty where the differences are startlingly large. Salaries in the faculty of Science generally have the second highest average salaries, although they are highest for faculty aged 60-64 and tied for highest for those aged 55-59. Average salaries in the Faculty of Arts are below those in Business and Science for every age category, and those in Arts-Hum are below those in Arts-SocSci in all but one age category. These differences by academic faculty are not unique to WLU. They are similar to what is found in other Ontario universities.



Controlling for age, the average salaries of Brantford faculty are consistently the lowest among those shown in Figure 3. The low salaries for Brantford faculty can be attributed to lower ranks. Even after adjusting for age, Brantford faculty have a much lower proportion of full professors (virtually none, in fact) and a higher proportion of assistant professors than the other Faculties. The actual differences in the proportions of ranks (by age group) is not shown here but is available upon request.

Figure 4 shows average salaries by age group and faculty where the smaller faculties of Music and Social Work are also included. Education has too few faculty to be included. Figure 4 shows that Music faculty are generally in the middle of the distribution. Members in Social Work generally have lower average salaries than members in other academic faculties, but the oldest age category is a strong exception.

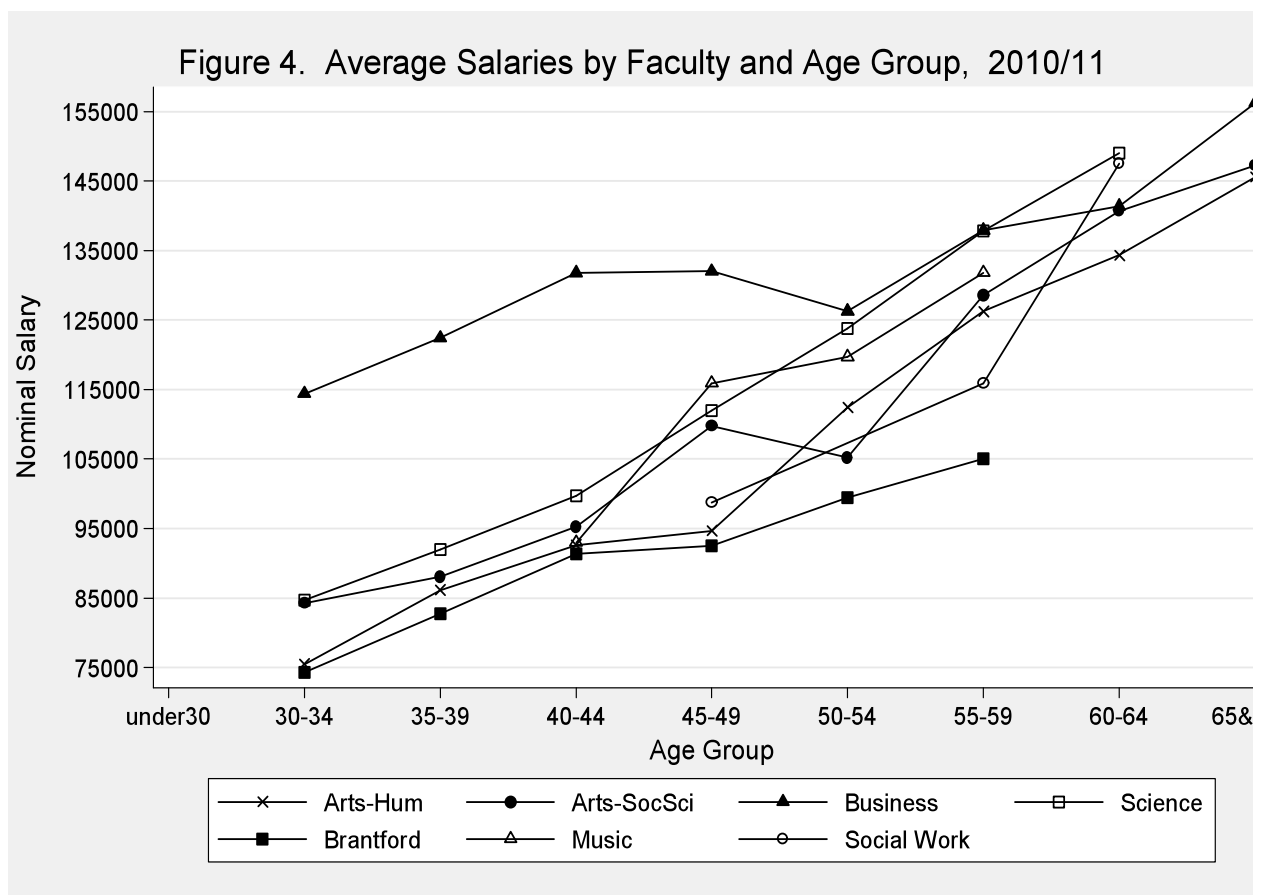


Table 1 shows the distribution of members by faculty and gender including the Library and ‘in residence’ faculty. It is clear that women members make up a relatively higher proportion of the lower paid Arts-Humanities departments, and relatively lower proportions of the higher paid Business and Science Faculties, which accounts for a part of the overall salary differences by gender shown in Figure 2.

Table 1. Number of Male and Female Members by faculty 2010/11
(including Librarians and 'in residence' faculty)

Academic Faculty	Number of Faculty			Percentage Female
	Female	Male	Total	
Arts-Hum	47	52	99	47.5
Arts-SS	41	64	105	39.0
Brantford	27	37	64	42.2
Business	39	66	105	37.1
Education	5	1	6	83.3
Library	15	3	18	83.3
Music	13	12	25	52.0
Science	27	45	72	37.5
Social Work	16	7	23	69.6
Total	230	287	517	44.5

2. Faculty Salaries at WLU compared to other Ontario universities, 2009/10 data:

2a. Data

All universities in Canada are required to submit data on the salaries, ages, ranks and other characteristics of their faculty to Statistics Canada. Statistics Canada produces a compilation of this data for OCUFA, and OCUFA distributes them to its member universities. The OCUFA salary data are used to show the position of WLUFA faculty salaries relative to the salaries paid at other universities in Ontario.

2009/10 salary data are used for the comparisons below and they show annual faculty salaries as of October of 2009. They are the most recent data available. There is a lot of inertia in the relative average salary differences across schools from year to year, so the 2009/10 data should provide credible estimates of the salary gap between WLUFA members and the Ontario system. Comments on expected differences for 2010/11 are given below.

Unfortunately, even using 2009/10 data, three large Ontario universities (Toronto, Ryerson, and Waterloo) have not completed the required data submission and their data are missing from Statistics Canada's most recent (supplementary) data release. One cannot leave Toronto out of the analysis since its size and salary levels have a huge impact on the salary comparisons. To adjust for the missing Toronto data, Toronto's 2008/09 salaries are scaled up by the "across the board" increase received in July 2009 (retroactively) according to the Teplitsky arbitration award. Ryerson and Waterloo are left out of the analysis since one school (Ryerson) has below average salaries while the other (Waterloo) has above average salaries, and so their impacts should mostly cancel out. Sensitivity analysis of the impact of not including Ryerson and Waterloo was done using the final 2008/09 OCUFA salary data. The results showed that excluding Ryerson and Waterloo changed the estimates by only \$5, so I am very confident that their effects really do cancel out.

This yields the following set of fifteen comparator schools:

Carleton	Guelph	Lakehead	Laurentian
McMaster	Nipissing	Ottawa	Queens
Toronto	Trent	UOIT	Western
Windsor	WLU	York	

OCADU and Algoma are also omitted from the comparator list since they are only recently converted from community colleges. RMC is also omitted because they negotiate with the federal government and so their labour relations system is quite different from other Ontario universities. Including any of Algoma, RMC, and/or OCADU would make little difference to the overall results shown below because they are all small schools and their inclusion would have little impact on the Ontario system averages.

The data cover the salaries of all full time research and teaching faculty; both genders; all degrees and subjects; holding the ranks of lecturer (or lower) and assistant, associate or full professor. Faculty holding administrative positions up to but not including Dean or any sort of Dean (e.g. assistant, associate or vice Dean) are included. Thus the salaries of Chairs, Directors, and co-ordinators are included in the data. The data exclude medical and dental faculty, visiting faculty (i.e. those with a permanent affiliation to another university or organization), and faculty on unpaid leave or leave of absence.

Reported salaries are the annual or nominal rate plus any administrative stipends.

The salary data are disaggregated by rank (full professor, associate professor, assistant professor, and lecturer or lower (which will just be called lecturer below) and ten age categories (under 30, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, and 70 and over).

In order to ensure the confidentiality, Statistics Canada withholds the average salary data if there are fewer than three faculty in a category. Further, the number of faculty in each category are randomly rounded to multiples of 3.

2b. Comparisons of simple averages

Table 2 shows average and median salaries and number of faculty at each university in 2009/10, ranked by average salary. WLU's 2009/10 average faculty salary of \$107,088 is near the bottom of the comparison group, ranking 14'th out of the 16 universities shown. WLU's average salary is \$8,646 or 8.07% below the average of the two middle ranked schools (Western and Brock).

If Ryerson and Waterloo were included in the data set, it is virtually certain that their average salaries would be higher than WLU's. Thus WLU's average salary actually ranks 16'th out of 18 Ontario universities.

The second last column of Table 2 shows that WLU's salary ranking would not change if median rather than average salaries were compared. As shown in Table 2 and noted above, median salaries are below average salaries at most universities, but the difference is very large at WLU. Indeed, WLU has the second largest difference between average and median salaries, in both dollar and percentage terms, of all the universities shown. Western has the largest difference, but it is not much larger than the difference at WLU. This means that if the administration wants to talk about overall median salaries rather than overall average salaries then you can do that and still have a strong argument that you are very underpaid compared to the other Ontario schools. WLU's 2009/10 median faculty salary of \$101,375 is \$9,450 or 9.32% below the average of the two middle ranked schools (Western and Brock).

Table 2. Average and Median Salaries, 2009/10

Rank	University	Mean	Median	# Faculty
1	Toronto*	\$ 133,073	\$ 129,576	2,052
2	Queens	126,100	125,375	687
3	Trent	123,775	119,325	234
4	York	123,246	120,550	1,365
5	McMaster	120,429	123,325	744
6	Guelph	118,531	117,850	765
7	Western	116,478	110,000	1,002
8	Brock	114,990	111,650	549
9	Windsor	113,682	108,500	498
10	Laurentian	113,059	110,175	360
11	Ottawa	112,105	109,750	1,074
12	Carleton	110,728	110,375	789
13	Lakehead	109,755	109,300	282
14	WLU	107,088	101,375	483
15	UOIT	100,031	97,350	138
16	Nipissing	90,796	91,025	168

* estimated from 2008/09 data. See above.

2c. Adjusting the comparisons for differences in the size of the universities and differing ages and ranks of faculty

Rankings or other comparisons of each university’s average or median salaries (like those shown in Table 2) are seriously flawed because they implicitly give the same (equal) weight to all of the schools regardless of their size. Thus, in Table 2, the 1,365 faculty members at York (earning their average salary of \$123,246 among them) are given the same weight as the 138 UOIT faculty who are earning their average salary of \$100,031.

A weighted average of the average salaries at the other universities (where the weights equal the number of faculty at the university) provides a much better comparison for WLU’s salaries since it corrects for the flaw described above. The weighted average provides an estimate of the overall average salary paid to all other Ontario faculty; i.e. the average salary calculated over all of the faculty employed at the other Ontario universities. Put another way, if you put all of the faculty employed at all of the universities shown in Table 2 (but excluding WLU) into one large group, the average salary of that group is given by the weighted average. Table 3 shows the Ontario system average faculty salary (calculated from the weighted average) and the comparison to the WLU average salary

Table 3. Comparison of Average Salaries Paid to Faculty 2009/10

Average faculty salary paid at the 15 other Ontario Universities (excluding WLU)	= \$ 119,744	
WLU Average Salary	= \$ 107,088	
Difference	= \$ 12,656	=> 11.82 %

Table 3 shows that the average faculty salary at WLU is \$12,656 or 11.82% below the overall average salary earned by faculty at the other 15 universities in the comparison group.

Comparisons of average salaries are also flawed because the composition of faculty by age and rank varies across the comparison universities. The graphs above show that faculty salaries rise strongly with both age and rank, so differences in the distributions of ages and ranks across universities can make simple comparisons of average salaries unreliable. For example, consider a university that has higher proportions of older and higher ranked faculty. The average salary at that university will be higher than the average salary at other universities even if its faculty earn exactly the same amounts as similarly aged and ranked faculty at the other universities. The higher overall average salary would simply be due to the higher proportion of older and higher ranked faculty, and not because they are earning more than faculty at other universities in the same rank and age group.

Table 4a shows the percentage of faculty in each age and rank category at WLU, 2009/10, while Table 4b shows the percentage at the other Ontario universities.

Table 4a. Percentage of Faculty by age and rank, WLU, 2009/10

WLU	Age Group										
	Rank	under30	30_34	35_39	40_44	45_49	50_54	55_59	60_64	65_69	70plus
Professor	0.00	0.00	0.63	1.26	3.14	1.89	5.66	5.66	3.77	0.00	22.22
Associate	0.00	0.00	3.77	13.21	6.92	7.55	5.03	3.77	0.63	0.00	40.12
Assistant	0.00	8.18	10.06	6.92	3.77	1.89	1.26	0.00	0.00	0.00	32.10
Lecturer	0.63	0.00	0.63	0.63	1.26	0.63	0.63	0.63	0.00	0.00	5.56
All Ranks	0.62	9.32	14.91	21.12	15.53	12.42	12.42	9.94	3.73	0.00	

Table 4b. Percentage of Faculty by age and rank, Ontario System, 2009/10

Ontario System	Age Group										
	Rank	under30	30_34	35_39	40_44	45_49	50_54	55_59	60_64	65_69	70plus
Professor	0.00	0.00	0.17	1.49	3.99	5.96	6.52	7.50	3.68	0.06	29.15
Associate	0.03	0.48	5.42	8.63	8.01	5.68	4.58	3.68	1.38	0.03	37.93
Assistant	0.42	5.56	8.40	5.06	2.92	1.77	1.12	0.87	0.25	0.00	26.49
Lecturer	0.23	0.70	0.76	0.93	0.76	1.01	0.93	0.90	0.14	0.00	6.43
All Ranks	0.67	6.83	14.84	16.05	15.51	14.31	13.27	12.90	5.48	0.14	

Table 4c shows the percentage of faculty in each age/rank category at WLU minus the percentage in the Ontario system, so a positive value means relatively more faculty in that age/rank category at WLU.

The bottom row of Table 4c shows the difference in the percentages of faculty in each age group, regardless of rank, and it shows that WLU continues to have substantially younger faculty compared to the Ontario system. WLU has higher proportions of faculty in all of the age categories between 30 and 49 years of age, and lower proportions in all of the age categories of 50 and above. The difference for the under 30 age category is very small and represents only very small numbers of faculty at WLU and in the Ontario system. If all faculty are assigned ages equal to the midpoint of their age group, the average age of WLU faculty is 1.63 years younger than the average over the other Ontario universities (47.04 years for WLU compared to 48.67 for the Ontario system), and this is a big difference for this type of comparison.

Table 4c. Percentage of faculty at WLU minus percentage in Ontario system, for each age/rank category, 2009/10. (Positive means WLU has more)

Differences	Age Group										
	Rank	under30	30_34	35_39	40_44	45_49	50_54	55_59	60_64	65_69	70plus
Professor	0.00	0.00	0.46	-0.23	-0.85	-4.07	-0.86	-1.84	0.09	-0.06	-6.93
Associate	-0.03	-0.48	-1.65	4.58	-1.09	1.87	0.45	0.09	-0.75	-0.03	2.19
Assistant	-0.42	2.61	1.66	1.86	0.85	0.12	0.13	-0.87	-0.25	0.00	5.61
Lecturer	0.40	-0.70	-0.13	-0.30	0.50	-0.38	-0.30	-0.27	-0.14	0.00	-0.87
All Ranks	-0.05	2.49	0.07	5.07	0.01	-1.88	-0.84	-2.96	-1.75	-0.14	

The rightmost column of Table 4c shows the differences in the percentages of faculty at each rank, regardless of age. WLU has a much lower proportion of faculty at the full professor rank compared to other Ontario universities. Correspondingly, WLU has a higher proportion of associate professors and a much higher proportion of assistant professors than the Ontario system. The proportion of lecturers is lower at WLU, but the difference is small.

It is also important to check for any significant differences in the age distributions within each rank. There is some variation along the rows of Table 4c, but there is nothing that I believe is notable and relevant to the salary comparison.

The different distributions of age and ranks means that the average salaries shown in Tables 2 and 3 overstate the true extent to which WLU salaries are below the salaries in other Ontario universities. That is to say, WLU's average faculty salary is lower partly because WLU's faculty are younger and hold lower ranks than faculty at other Ontario universities, and only partly because they are paid less than faculty at other universities who are in the same age group and rank. Tables 5a, 5b, and 5c show how much less, for each age and rank category.

Table 5a. WLU Average Salaries, by age group and rank, 2009/10

WLU	Age Group											
	Rank	under30	30_34	35_39	40_44	45_49	50_54	55_59	60_64	65_69	70plus	All Ages
Professor				126,931	130,998	136,260	137,905	144,301	149,017			139,253
Associate			101,312	103,948	104,270	111,044	124,282	131,030				110,102
Assistant		81,546	87,373	86,468	88,132	85,537	80,781					85,877
Lecturer					73,485							76,980

All Ranks		81,623	90,998	98,815	104,405	109,587	124,427	134,887	146,257		107,088
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Table 5a shows the average faculty salaries at WLU, 2009/10, by age group and rank. Table 5b shows the average salary for faculty in each age/rank category at the other Ontario universities where the number of faculty in each category, at each university, is explicitly taken into account in the calculation of the average.

Recall that an empty cell means Statistics Canada does not report an average salary because there are no faculty in that age/rank category, or too few to maintain confidentiality.

Table 5b. Ontario System Average Salaries, by age group and rank, 2009/10

Ontario System	Age Group										All Ages
	under30	30_34	35_39	40_44	45_49	50_54	55_59	60_64	65_69	70plus	
Professor			173,548	138,546	142,963	144,251	149,279	154,890	158,478		149,245
Associate		113,502	110,705	115,029	116,845	120,016	126,059	130,600	139,179		119,241
Assistant	95,387	92,497	93,484	95,949	95,931	96,538	102,591	104,489	117,874		95,185
Lecturer	56,536	75,733	82,014	84,598	93,373	99,620	101,072	103,334	113,717		90,901
All Ranks	85,417	92,743	99,760	109,485	118,190	125,571	133,096	140,880	149,700	136,532	119,744

Table 5c Differences between WLU and Ontario System Average Salaries , 2009/10
(positive means the WLU faculty earn more)

Diffs	Age Group										All Ages
	under 30	30_34	35_39	40_44	45_49	50_54	55_59	60_64	65_69	70plus	
Professor				-11,615 -9.15%	-11,965 -9.13%	-7,991 -5.86%	-11,374 -8.25%	-10,589 -7.34%	-9,461 -6.35%		-9,992 -7.18%
Associate			-9,393 -9.27%	-11,081 -10.66%	-12,575 -12.06%	-8,972 -8.08%	-1,777 -1.43%	430 0.33%			-9,139 -8.30%
Assistant		-10,951 -13.43%	-6,111 -6.99%	-9,481 -10.96%	-7,799 -8.85%	-11,001 -12.86%	-21,810 -27.00%				-9,308 -10.84%
Lecturer					-19,888 -27.06%						-13,921 -18.08%
All		-11,120	-8,762	-10,670	-13,785	-15,984	-8,669	-5,993	-3,443		-12,656

Ranks	-13.62%	-9.63%	-10.80%	-13.20%	-14.59%	-6.97%	-4.44%	-2.35%	-11.82%
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Top number in each cell is the difference in dollars. Bottom number is the percentage difference. Table 5c shows the WLU average salary minus the Ontario system average salary (so a negative value means that WLU faculty are paid less). The top number in each cell of Table 5c is the dollar difference and the bottom number is the percentage difference. An empty cell means that the average salary for that age/rank category was not reported due to too few faculty (or no faculty) in that category.

Table 5c shows that WLU faculty salaries are almost all below the average paid at other Ontario universities after controlling for differences in ages and ranks (i.e. when WLU faculty are only compared to other Ontario faculty in the same rank and age group). Every cell in Table 5c but one has a negative value indicating that the WLU average salary for that age/rank category is below the average paid at other Ontario universities.

The rightmost column of Table 5c shows the average salary differences by rank, regardless of age. The dollar differences for full professors, associates, and assistants are surprisingly similar at between 9,000 and 10,000 dollars. The percentage differences increase as you go to lower ranks, from -7.18 for fulls to -8.30 for associates to -10.84 for assistants, because the (roughly) same dollar difference is compared to a lower average salary at lower ranks. This represents a substantial narrowing in the differences between ranks compared to 2007/08. My previous salary report showed that the salary gap (i.e. WLU compared to the Ontario system) for full professors in 2007/08 (-\$5,761 or -4.37%) was much smaller than the salary gap for the other ranks (-\$8,109 or -7.87% for associates and -\$9,096 or -11.54% for assistants). The 2008 fixed dollar (at \$1,800) "Ontario System Adjustment" salary increase in the current collective agreement likely helped narrow the difference between full professors and the next two ranks because it provided a larger percentage increase to lower ranked (i.e. lower paid) faculty. The various caps on CDIs and partial CDIs also likely contributed.

The dollar difference between WLU and the Ontario system is much larger for lecturers' salaries (-\$13,921), yielding a very large percentage difference. On average, WLU lecturers earn more than 18% less than the average paid at other Ontario universities and this is a big increase from the -12.6% difference reported in my previous salary report for 2007/08. The fact that the 2008 \$1,800 "Ontario System Adjustment" was not paid to all WLUFA members, may have contributed to the very large and increased salary gap for lecturers, but this is just speculation on my part.

The bottom row of Table 5c shows the average salary differences by age group, regardless of rank. It is clear that the salary gaps for younger and middle aged faculty are larger, in dollar terms, than those for older faculty. Given that older faculty also have higher salaries, on average, the differences in the percentage salary gaps between the age groups are even larger. This difference between older and younger faculty was even more pronounced in the 2007/06 data. Again, the 2008 \$1,800 "Ontario System Adjustment" likely helped narrow the difference between young and old because it provided a larger percentage increase to younger (i.e. lower paid) faculty. And again, the various caps on CDIs and partial CDIs also likely contributed.

The last notable feature of Table 5c concerns the salaries of older associate professors. The average salary differences between WLU and other Ontario schools is much smaller for associates aged 55 and above. According to this run of the data, WLU associates aged 60-64 actually earn more than the average of similarly aged and ranked faculty at other universities. This is the only age/rank category where that is the case. Given the above, it seems clear that the caps and partial CDIs bind much harder on full professors than they do on associates.

Table 5c shows that there is a large range of salary differences between WLU and the Ontario system across the different age/rank categories. Table 4c shows that there are also differences in the distributions of ages and ranks between WLU faculty and the rest of the Ontario system. The differences in the salary gaps and proportions of faculty affected in each age and rank category form a large amount of complex information. Thus, it is difficult to describe or summarize the whole picture accurately and either side can pick specific numbers and comparisons to muddy the waters in negotiations.

Fortunately, the total effect of all of the differences shown in Tables 4 and 5 can be distilled into one number that can then be used in a straight forward and effective manner in negotiations. The basic idea is to adjust the average salaries at the other universities for the differences in ages, ranks, and number of faculty between WLU and the Ontario system. This is done by calculating the average salary for each age/rank category in the Ontario system (excluding WLU). The category system averages are weighted averages which take differences in the number of faculty (due to differences in university size) into account. The system average salary in each age/rank category is then weighted by the proportion of faculty in that category at WLU. This provides an estimate of what the average salary in the Ontario system (excluding WLU) would be if they had the same age/rank distribution as WLU. The adjusted system average can then be compared to the actual WLU average salary to produce a salary comparison that controls for (or adjusts fully for) the differences in the distributions of both ranks and ages between WLU and the Ontario system.

The average salary paid to faculty at other Ontario universities, in 2009/10, if they had the same distributions of ages and ranks as WLU, is estimated to be \$116,737. Recall that WLU's average salary according to this data run is \$107,088. Thus, after adjusting (simultaneously) for differences in faculty ages and ranks, the average faculty salary at WLU is \$9,649 or 9.01 percent below the Ontario system average. These results are summarized in Table 6

Table 6. Average Salary Comparison, Adjusted for Age and Rank, 2009/10

Average faculty salary paid at other Ontario Universities, if they had WLU's distributions of age and rank (Toronto 2009 estimated)	= \$ 116,737	
WLU Average Salary	= \$ 107,088	
Difference	= \$ 9,649	=> 9.01%

In earlier reports, the overall salary gap was estimated to be 8.83% for 2006/07 and 8.16% for 2007/08. One must include confidence intervals around these estimates, especially because of the random rounding of faculty numbers and salaries withheld to maintain confidentiality. Thus my overall conclusion is that WLU's faculty salaries are roughly in the same position relative to other Ontario universities as they were before the start of the current collective agreement. At worst, WLU's salaries have eroded slightly compared to the Ontario system. This seems consistent with the salary increases negotiated in the current collective agreement. The July 2008 increase, with its \$1,800 fixed dollar increment plus 3% scale increase, was above the average increase negotiated at other Ontario universities for 2008. However, the July 2009 increase, with its 2.5% scale increase is below the average increase for Ontario. Thus one would not expect any significant change in WLU's level of salaries compared to the system.

The above refers to the overall salary gap, averaged over all WLU faculty. The analysis of Table 5c showed that WLU's younger and lower ranked faculty gained a bit of ground since the last analysis and are not as far below the Ontario system averages as they were in 2006/07 or 2007/08. Conversely WLU's older and higher ranked faculty lost ground since the last analysis and are further below the Ontario system averages, compared to the estimates for 2006/07 or 2007/08.

As for the current situation, WLU's 2.5% July 2010 scale increase was a bit below the average increase for Ontario. Thus one would expect the overall salary gap between WLU and the Ontario system to be slightly higher than 9.01% in 2010/11.

3. Librarian Salaries at WLU compared to other Ontario universities, 2009/10 data:

Analysis of librarians' salaries is not as straightforward as the analysis of faculty salaries. This is partly due to the relatively small number of librarians at WLU and at other Ontario universities. Consequently, small differences in which librarians are included in or excluded from the data can result in large differences in the calculated average salaries and the salary comparisons.

CAUT Data

CAUT recently published data on 2009/10 librarians' salaries and some of these data are shown in Table CL-1, below. The advantage of the CAUT data is that CAUT includes only librarians who belong to the same association for negotiating salaries, which would be WLUFA in this case. CAUT also includes full time equivalent salaries for part time librarians.

Table CL-1 shows that the average salary for WLU librarians is below the middle of the distribution, ranking 10th out of the 16 libraries shown.

The average salary of librarians employed at the other Ontario universities (i.e. excluding WLU, and given the data in Table CL-1) is \$89,208. This overall average salary is the weighted average of the average salaries at each school. Hence, it adjusts for the fact that different universities have different numbers of librarians and so the average salaries reported in Table CL-1 refer to (or cover) different numbers of librarians. Put another way, if you put all of the librarians employed by all of the universities shown in Table CL-1 (but excluding WLU) into one large group, the average salary of that group would be \$89,208. Given that WLU's librarians' average salary is \$85,757, WLU's librarians earn \$3,451 or 6.12% less, on average, than librarians employed at other Ontario universities.

WLU's librarians earn less than the average over other Ontario universities despite the fact that they are a bit older and have substantially more experience than the other librarians in the Ontario system. If one were to adjust for the differences in age and experience, the estimated salary gap between them and other Ontario librarians would be even larger than the 6.12% shown above.

Table CL-1 Librarian Salaries, 2009/10, CAUT data

Rank	University	Num	Average Salary	Average Age	Years since 1 st Library Degree	Years as Academic Librarian	Years in Rank
1	Trent	8	\$120,905	52	24	21	11
2	Laurentian	8	\$107,063	50	21	19	8
3	York	44	\$105,731	46	16	--	10
4	Carleton	26	\$104,201	50	21	19	10
5	Brock	18	\$94,665	46	17	16	8
6	Toronto	142	\$92,004	50	22	--	--
7	Windsor	23	\$91,400	47	18	19	9
8	Queen's	39	\$88,626	46	18	17	7
9	Ottawa	37	\$88,493	44	--	--	--
10	Wilfrid Laurier	22	\$85,757	48	27	37	9
11	Guelph	26	\$84,614	46	20	--	5
12	Ryerson	28	\$83,988	45	18	15	8
13	Waterloo	28	\$83,063	49	20	17	4
14	Lakehead	11	\$82,830	45	18	--	8
15	McMaster	35	\$80,653	--	--	15	--
16	Western	56	\$67,737	45	14	10	2
Simple average (excluding WLU)			91,732	47.2	19.0	16.8	7.5
Simple Median (excluding WLU)			88,626	46.0	18.0	17.0	8.0

Weighted avg (excluding WLU)	89,208			
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