

## **College Teaching Styles by Gender**

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*Abstract:* College-level teachers employ a number of different teaching styles. Some evidence exists that gender is a factor in the selection of those styles. In particular, the hypothesis is that women are more likely to use discussion and other student-focused approaches, while men are more likely to use lecture and computer-assisted methods. A survey of all instructors at Mesa State College gathered information about the teaching styles used in lower-division and upper-division courses. Data provided some support for the hypothesis, but when controlling for academic school, differences were no longer significant.

## Review of Literature

Recent years have produced many studies about the relationship between gender and college teaching. Some have focused on the impact of gender and student evaluations, with mixed results. Basow and Silberg (1987), Centra and Gaubatz (1998), Feldman (1992), and Nuhfer (2002) found that gender of instructor was not a significant predictor of overall student evaluations. Whitworth, Price, and Randall (2002), however, found that female instructors were consistently rated higher than were males. Bachen, McLaughlin, and Garcia (1999) concluded that female students gave higher ratings to female than to male instructors, but male students' evaluations did not vary by instructor's gender. The apparently contradictory findings are partly due to the difference in evaluative instruments that were used.

Whether or not they find overall gender differences in evaluations by students, studies consistently find that male and female instructors are perceived differently in ways that are consistent with stereotypically gendered expectations of communication and interactive patterns (Kimmel, 2000). Basow (1995) found that male instructors were perceived by students to be more knowledgeable, but female instructors were thought to be more sensitive and respectful of student ideas.

Gendered perceptions of instructors might be related to differences in teaching styles. Lacey, Saleh, and Gorman (1998) found male instructors' styles to be more dominant and exacting, while female's styles were more informal and open toward students and their ideas. Similarly, Crawford and MacLeod (1990) found that female instructors were perceived by students to be more effective in creating a participatory climate for their students.

The literature generally agrees that female instructors tend to use teaching techniques that are more interactive, such as class discussions, small-group discussions, and group projects. Such approaches are consistent with anti-hierarchical organization and other elements of feminist pedagogy. Men, then would be more likely to use less personal approaches such as lecture and in-class computer applications. The present research tests those hypotheses.

Limitations of most studies that find significant gendered differences in teaching styles are twofold. First, they rely on reported perceptions by students, rather than direct observation by researchers. A more serious limitation is that such studies have not generally considered the effect of gendered differences in the kinds of courses that are taught. The present research will control for subject matter for the gender differences that are found.

## Methods

As part of the Self-Study for continued accreditation from the North Central Association, Mesa State College conducted a survey of all faculty members in fall, 2002. Twenty-two questions about teaching techniques were included in the survey. Each question was asked of those teaching lower division, upper division, and graduate level classes. The number of faculty teaching graduate courses was small, so their responses were omitted from the present study.

Respondents answered question on a scannable questionnaire. The scanner results were tabulated into Excel, then opened in the MicroCase data analysis system.

A total of 221 responses were received, a response rate of about 80%. Part-time faculty were least likely to respond. The gender question was either left blank or was not readable by the scanner in seven responses. While the number of responses varied slightly from question to question, most lower-division questions received 189 responses (41% women and 59% men) and most upper-division questions received 142 responses (44% women and 56% men). Women are slightly over-represented in the sample, since 40% of all Mesa State faculty members are women.

A scale adapted from Mattice and Richardson (1993) and Keim and Biletzky (1999) was used to operationalize teaching practices. For each question about a particular instructional techniques, possible responses were: 0) Not applicable; 1) Never; 2) Rarely; 3) Sometimes; 4) Most of the time; 5) Always. The “Not applicable” responses were converted to missing data. ANOVA means were calculated for each question, first by gender and then by school (Business and Professional Studies; Humanities and Social Sciences; and Humanities and Social Sciences).

## **Results**

Altogether, there were twenty-two questions, with separate data for lower-division and upper-division courses. Of the forty-four possibilities, only three were found to be significant by gender at the .05 level. By contrast, 32 of the of the possibilities were significant by school. Clearly, the school in which one teaches is a much better predictor of teaching styles than is gender (see Table 1).

In lower-division courses, women were significantly more likely to use small-group discussions, while men were more likely to use lecture. These results appear to be consistent with the hypothesis. The only significant upper-division difference was that women were more likely to use Power-Point slides. This fails to support the hypotheses, and remains an unexplained finding.

**Table 1—Gender and School Differences.**

Activity	Gender						School							
	Lower Division			Upper Division			Lower Division				Upper Division			
	Womn	Men	Prob.	Womn	Men	Prob.	Bus Prof	Phys Sci	Hum SoSci	Prob	Bus Prof	Phys Sci	Hum SoSci	Prob
Class discussion	3.685	3.621	0.640	4.111	3.974	0.381	3.818	3.255	3.845	0.000	40.86	3.610	4.303	0.001
Small group discussion	3.043	2.562	0.004	3.355	3.018	0.079	2.968	2.315	3.026	0.000	3.457	2.659	3.354	0.002
Class demonstrations	3.522	3.207	0.102	3.262	3.243	0.926	3.563	3.436	3.219	0.342	3.394	3.241	3.226	0.765
Field trips	1.867	1.958	0.765	2.327	1.956	0.100	1.556	2.319	1.792	0.015	2.094	3.371	2.034	0.447
Group projects	2.836	2.473	0.061	3.306	3.203	0.605	3.129	2.400	2.618	0.025	3.829	3.122	3.032	0.003
Guest lecturers	2.353	2.211	0.325	2.803	2.571	0.122	2.583	1.889	2.462	0.000	2.971	2.366	2.754	0.009
Hands-on activities	3.611	3.380	0.209	3.533	3.479	0.764	3.938	3.421	3.380	0.059	3.765	3.488	3.377	0.288
In-class quizzes	3.411	3.573	0.404	3.302	3.231	0.746	3.781	3.552	3.361	0.248	3.457	3.366	3.119	0.391
Individual presentations	2.861	2.560	0.115	3.565	3.528	0.886	2.719	2.352	2.975	0.014	3.743	3.293	3.652	0.131
Critical thinking	4.014	4.066	0.707	4.403	4.397	0.965	4.030	3.736	4.232	0.007	4.543	4.189	4.462	0.126
Lecture	3.789	4.113	0.015	3.778	4.026	0.085	3.903	4.3386	3.679	0.000	3.971	4.357	3.621	0.000
Overhead transparencies	2.915	2.978	0.765	2.855	2.3835	0.929	3.033	3.404	2.642	0.004	2.800	3.286	2.621	0.029
Power-Point slides	2.408	2.156	0.269	2.705	2.165	0.024	2.844	2.448	1.888	0.003	3.265	2.476	1.908	0.000
Other in-class comp. applcns.	2.282	2.424	0.484	2.550	2.603	0.806	2.552	2.789	1.975	0.001	2.909	2.976	2.197	0.001
Question/answer reviews	3.292	3.411	0.490	3.210	3.273	0.750	3.742	3.621	3.037	0.001	3.697	3.452	2.909	0.002
Simulations/role playing	2.091	2.000	0.636	2.339	2.222	0.579	1.230	0.848	1.233	0.001	2.688	1.727	2.385	0.004
Videotapes/films	2.562	2.441	0.491	2.726	2.494	0.226	2.667	2.018	2.793	0.000	2.829	1.951	2.910	0.000
Student research projects	2.700	2.554	0.459	3.677	3.870	0.263	2.677	2.073	3.013	0.000	3.909	3.561	3.881	0.209
Writing activities	3.620	3.372	0.199	4.133	4.117	0.981	3.594	2.768	3.939	0.000	4.314	3.850	4.197	0.095
Objective exams	3.795	4.042	0.151	3.540	3.526	0.951	4.065	4.241	3.639	0.004	3.971	3.976	3.045	0.000
Essay, other subjective exams	3.000	3.011	0.958	3.645	3.740	0.660	2.844	2.636	3.321	0.005	3.400	3.350	4.076	0.004
Written feedback on tests, assignments	4.114	3.844	0.144	4.333	4.127	0.278	4.129	3.810	4.000	0.434	4.343	4.119	4.139	0.683

1=Never; 2=Rarely; 3=Sometimes; 4=Most of the time; 5=Always  
 Shaded rows are significant at the .05 level or lower.

The data suggest that, since the school in which one teaches is a more powerful predictor of styles, the few gender differences might be spurious. As Table 2 indicates, faculty members are not evenly distributed around campus by gender. Respondents from the School of Business and Professional Studies, unlike the faculty as a whole, has a majority of women, largely because the Department of Nursing and Allied Health is housed in that school. All thirteen respondents from that department were female.

The gender distribution in the School of Humanities and Social Sciences is quite similar to that of the College as a whole. In Physical Sciences and Math, however, women are significantly under-represented relative to the College.

**Table 2: Gender by School**

Gender	Bus/Prof		Phys Sci/Math		HumSocSci		Total	
	#	%	#	%	#	%	#	%
Female	25	58.1	23	39.0	39	44.8	87	46.0
Male	18	41.9	36	61.0	48	55.2	102	54.0

It is quite possible, then, that what appear to be gender differences might, instead, be different styles called for by the nature of the subject taught. Tables 3, 4, and 5 address that possibility. In each of the three cases in which gender difference were originally significant, the direction of the differences remained in each school. However, none of these in-school gender differences remained significant. Only the gender difference in use of lecture by faculty in Humanities and Social Science was close to being significant at the .05 level.

**Table 3: Lower Division Small-Group Discussion Scores, by Gender and School**

Gender	School					
	BusProf		PhysSci		HumSocSci	
	Mean	Prob.	Mean	Prob.	Mean	Prob.
Female	3.875	0.839	3.286	0.822	3.286	0.955
Male	3.813		3.235		3.235	

**Table 4: Lower Division Lecture Scores, by Gender and School**

Gender	School					
	BusProf		PhysSci		HumSocSci	
	Mean	Prob.	Mean	Prob.	Mean	Prob.
Female	3.929	0.804	4.238	0.171	3.472	0.054
Male	4.000		4.472		3.867	

**Table 5: Upper Division Power-Point Slides Scores, by Gender and School**

Gender	School					
	BusProf		PhysSci		HumSocSci	
	Mean	Prob.	Mean	Prob.	Mean	Prob.
Female	3.529	0.269	2.813	0.232	2.143	0.138
Male	3.000		2.269		1.694	

**Conclusion and Discussion**

The present data confirm only three significant gender differences in teaching style. At least two of these (small group discussion more common for women, lecture more common for men) confirm previous literature. All three differences, however, become spurious when school is controlled for.

More specific discipline data was available, but analysis of that information was not possible because of the small number of respondents in some disciplines. Given available data, the conclusion must be that apparent gender differences are the result of the nature of the courses taught rather than differences between the teaching styles of men and women.

Further research using a larger multi-college sample might better address the issue. The ability to control by discipline taught, rather than by school, would be especially helpful. It is reasonable to expect, however, that discipline differences would remain better predictors of teaching styles than would gender differences. Even so, it remains important to note that it may be larger gendered dynamics that create the gendered discipline variations. In that sense, gender would remain the primary independent variable after all.

References

- Bachen, C. M., M. M. McLoughlin, and S. S. Garcia. 1999. "Assessing the Role of Gender in College Students' Evaluation of Faculty." *Communication Education* 48(3):193-210.
- Basow, S. A. 1999. "Student Evaluations of College Professors: When Gender Matters." *Journal of Educational Psychology* 87(4):656-65.
- Basow, S. A., and Silberg, N. T. 1987. Student Evaluations of College Professors: Are Female and Male Professors Rated Differently? *Journal of Educational Psychology* 79:308-314.
- Centra, J. A., and Gaubatz, N. B. 1998. "Is There Gender Bias in Student Ratings of Instruction?" *Journal of Higher Education* 70:17-33.
- Crawford, M. and M. MacLeod. 1990. "Gender in the Classroom: An Assessment of the 'Chilly Climate' for Women." *Sex Roles* 23:101-22.
- Feldman, K. A., 1992. "College Students' View of Male and Female College Teachers: Part I—Evidence from the Social Laboratory and Experiments." *Research in Higher Education* 33:317-75.
- Keim, M.C. and P. E. Biletzky. 1999. "Teaching Methods used by Part-Time Community College Faculty." *Community College Journal of Research and Practice*. 23:8:727.
- Kimmel, M. S. 2000. *The Gendered Society*. New York: Oxford University Press.
- Lacey, C. H., A. Saleh, and R. Gorman. 1998. "Teaching Nine to Five: A Study of the Teaching Styles of Male and Female Professors." Paper presented at the Annual Women in Educational Leadership Conference, Lincoln, Nebraska. October 11-12. (Eric No. ED442334).
- Mattice, N. J. and R. C. Richardson. 1993. *College of the Canyons Survey of Teaching Practices*. ERIC Document Reproduction Service No. ED 357 776.
- Nuhfer, 2002. *Of What Value are Student Evaluations?* Idaho State University Center for Teaching and Learning.
- Whitworth, J. E., B. A. Price, and C. H. Randall. 2002. "Factors That Affect College of Business Student Opinion of Teaching and Learning." *Journal of Education for Business* May/June:282-89.