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The Effects of Gender and Carnegie Classification on Personnel Ratings of Administrators and Chairs

Dan Li and Stephen L. Benton • The IDEA Center



Abstract

The authors conducted a study to investigate whether personnel ratings of administrators and department chairs differ by the ratees' gender and the Carnegie classification of their institutions. The authors inferred the genders (male or female) from first names and analyzed personnel ratings for 1,011 administrators and 762 department chairs respectively. Results indicated that administrators and chairs of both genders receive comparable ratings on their performance of administrative responsibilities, personal characteristics, leadership style, and summary judgments. Administrators at doctoral institutions were rated more favorably on administrative roles and leadership style than their counterparts at master's and baccalaureate institutions. Chairs at master's institutions were generally rated more highly than their peers at doctoral institutions.

Keywords: gender, leadership in higher education, academic department chair persons, evaluation

In the IDEA Leadership Feedback System (LFS), faculty and staff rate the effectiveness of their respective academic administrator or department chair. Two survey systems are included in the LFS, each designed to provide useful information for guiding professional-development efforts. The Feedback System for Administrators (FSA) is appropriate for upper-level administrators, such as presidents, vice presidents, deans, and directors in all units of university operations. The Feedback System for Chairs (FSC) provides feedback and analysis, along with a customized plan for professional development, based on priorities set by the respective academic department chair.

Although both systems are backed by validity and reliability evidence, the accuracy of the information that they yield can be compromised by factors unrelated to the ratee's performance (e.g., the administrator's race or gender), thereby creating construct

irrelevance or bias. Bias exists when a rater, department, or leader characteristic affects evaluations—either positively or negatively—but is unrelated to any criteria of effective leadership. The possibility of bias matters because these ratings could affect judgments of an administrator's effectiveness and her or his chances for advancement (Eagly, Johannesen-Schmidt, & van Engen, 2003). Thus the major purpose of this study was to investigate whether the administrator's or chair's gender affects faculty and staff ratings in the FSA and FSC. A secondary purpose was to test whether such differences vary by Carnegie institutional classification.

Gender and Higher-Education Leadership

Reporting on findings from the American Council on Education (ACE) American College President Study of 2012, Cook (2012) writes, In 1986, the first year of ACE's college president study, the demographic profile of the typical campus leader

was a white male in his 50s. He was married with children, Protestant, held a doctorate in education, and had served in his current position for six years. Twenty-five years later, with few exceptions, the profile has not changed. (p. 1)

Indeed. Although women made up the majority of students at all degree levels in 2015 (National Center for Education Statistics Fast Facts, <https://nces.ed.gov/fastfacts/display.asp?id=98>), they comprised only approximately 30% of university presidents in 2016 (Gagliardi, Espinosa, Turk, & Taylor, 2017).

The underrepresentation of women in leadership roles may affect not only their advancement and economic prosperity but the development of gender stereotypes. According to social-role theory (Eagly & Wood, 2012), gender stereotypes are perpetuated by observing men and women in sex-typical social roles. Based on those observations, people come to believe that each sex has typical and diverse attributes and behaviors. Because men hold approximately 70% of the top leadership positions in higher education, stereotypical male characteristics may dominate the criteria for ideal administrative behavior. Sex-role stereotypes about effective leadership could thus influence how women are evaluated. Female administrators, for instance, sometimes face prejudicial evaluations of their competence as leaders (Eagly et al., 2003), because certain behaviors that fulfill the prescriptions for good leadership (e.g., assertiveness) are sometimes judged less favorably when enacted by a woman than by a man (Eagly & Karau, 2002). In addition, women generally have to more carefully balance the best of masculine and feminine qualities, because they are expected to display competence while simultaneously

appearing extremely supportive and nurturing (Eagly, 2007).

Stereotypically masculine and feminine qualities are often cited to distinguish between *communal* and *agentic* attributes (Eagly & Karau, 2002, p. 574). Communal attributes, for example, which express concern for the welfare of others, are usually more strongly associated with women. In contrast, agentic characteristics, which include assertiveness, control, and confidence, are more typically ascribed to men. Some aspects of administrative roles and personal characteristics assessed on the FSA and FSC touch upon both communal and agentic attributes. For example, communal attributes are found in items that ask personnel to judge the administrator's trustworthiness and understanding, care and concern about faculty morale and the personal welfare of individual faculty members, and promotion of inclusiveness and diversity. Items closely aligned with agentic attributes include communicating the department's needs to the dean, clearly communicating expectations to faculty, exercising practical judgment, being enterprising, displaying knowledge and expertise, and exhibiting decisiveness.

Consequently, in this study, we investigated whether faculty and staff ratings of academic administrators and department chairs differ by the gender of those being rated. Because women are more likely to be leaders in community colleges and comprehensive four-year institutions than in elite research universities (Allan, 2011), we thought it worthwhile to also examine whether any observed gender differences exist among levels of Carnegie classifications. Specifically, we asked the following research questions.

Research Question 1. Do personnel ratings of the administrator's effectiveness differ by the

administrator's gender and the Carnegie classification of the institution?

Research Question 2. Do faculty ratings of the department chair's effectiveness differ by the chair's gender and the Carnegie classification of the institution?

Method

Data Source

Data were collected through web-based surveys administered in the IDEA LFS. The FSA was used to gather impressions from 54,593 personnel, who completed ratings of 1,011 unique academic administrators from 77 institutions during the years 2013 to 2017. The median number of faculty and staff surveyed per academic unit was 32. In addition, the FSC was employed to assess perceptions of 11,169 faculty, who rated 762 unique academic department chairs from 54 institutions during the years 2013 to 2016. The median number of faculty surveyed per department was 16. If an administrator or chair had been rated on multiple occasions, we selected data from the most recent survey to ensure the independence of observations. To reduce bias introduced by units with low response rates, we restricted the analytic sample to units with a personnel response rate of at least 50%. Data were aggregated for each administrator and chair, and the analyses in this report were performed on the aggregated data sets.

Measures

Feedback System for Administrators. On the Impressions of Administrators form, personnel responded to questions about their respective administrator's performance of key roles, as well as his or her leadership style, personal characteristics, and overall job performance. They first judged the administrator's performance of 10 key administrative roles pertaining to planning, consulting,

communicating, expertise, and community building. The scale comprised the following: 1 = *definite weakness*; 2 = *more a weakness than a strength*; 3 = *in between*; 4 = *more a strength than a weakness*; 5 = *definite strength*; and CJ = *cannot judge*. Factor analysis, using principal components analysis (PCA), previously revealed that personnel ratings consisted of a single factor (Benton & Li, 2018). Scores for each administrator were therefore averaged across the 10 items to create the variable "administrative roles."

In addition, personnel rated their administrator on 15 personal characteristics, using 7-point semantic differential scales in which higher scores indicated personal traits associated with exemplary administrators (e.g., consistency, trustworthiness). PCA indicated that the ratings formed two dimensions (Benton & Li, 2018)—interpersonal characteristics (10 items) and leadership style (5 items)—and scores were thus averaged to form two separate variables. Finally, personnel made summary judgments about their administrator's overall performance, applying the same 5-point scale mentioned earlier, by responding to the following two items: "Overall, this administrator has provided excellent leadership" (overall performance) and "I have confidence in the administrator's ability to provide future leadership in this position" (future leadership).

Feedback System for Chairs. On the Faculty Perceptions of Chair instrument, faculty provided perceptions of their chair's execution of key responsibilities, as well as personal characteristics, administrative methods, and overall job performance. They first assessed the chair's execution of 21 responsibilities that concerned administrative support, personnel management, program leadership and support, building image and reputation,

and developing positive climate. Respondents used the following scale: 1 = *poor*; 2 = *fair*; 3 = *in between*; 4 = *good*; 5 = *outstanding*; and X = *omit response*. Because PCA previously showed that faculty ratings formed a single dimension (Archie, Benton, & Li, 2018), scores for each chair were averaged to form the variable “administrative responsibilities.”

Faculty also judged to what degree 11 personal characteristics (e.g., problem-solving ability, trustworthiness) represented a strength or a weakness for the chair. Response options were as follows: 1 = *definite weakness*; 2 = *more a weakness than a strength*; 3 = *in between*; 4 = *more a strength than a weakness*; 5 = *definite strength*; and X = *omit response*. Archie et al. (2018) found that the ratings could be explained by one underlying factor, so scores were averaged to form the variable “personal characteristics.” Next, using the same scale, faculty judged to what extent 21 administrative methods represented a strength or a weakness. The methods pertained to democratic practice, providing structure, supporting faculty, promoting a positive climate, and promoting department advancement. Again, Archie et al. found that the ratings could be explained by a single dimension, and scores were thus averaged to form the variable “administrative methods.” Finally, faculty assessed the chair’s overall performance, applying the 5-point scale of 1 (*strongly disagree*) to 5 (*strongly agree*), with the option to omit a choice, in response to the following two items: “I have confidence in the chair’s ability to provide future leadership to the department (future leadership) and “Overall, this chair has provided excellent leadership” (overall performance).

Results

Comparisons of Composite Scores by the Administrator’s Gender and Institutional Carnegie Classification

We performed a 2 × 4 (Gender [male, female] × Carnegie classification [Associate, Baccalaureate, Master’s, Doctoral]) between-subjects multivariate analysis of variance (MANOVA) to answer the first research question of whether composite scores differ by administrators’ gender and their institution’s Carnegie classification. Type I error rate (i.e., the significance level) was set at .05.

We inferred administrator gender from first names using an R package, “gender” (Version 0.5.1; Mullen, 2015), which analyzes historical demographic data to calculate the gender proportion of individuals with a given name and birth-year range (Blevins & Mullen, 2015). We used historical data (1930–2012) from the U.S. Social Security Administration and specified the range of birth years as 1943 to 1995, which was conservative, given that the surveys were administered from 2013 to 2017. To mitigate ambiguities introduced by gender-neutral names, we retained only administrators whose predicted proportion of one gender based on their names was at least 90% and then assigned the predominant gender.

Table 1 displays the analytic sample composition. The majority of administrators were from doctoral institutions. Women tended to represent a lower proportion of administrators in institutions granting advanced degrees.

Table 1
Number of Administrators by Gender and Carnegie Classification (N = 579)

Carnegie classification	Female		Male	
	<i>n</i>	%	<i>n</i>	%
Associate	18	50	18	50
Baccalaureate	29	45	36	55
Master's	62	38	103	62
Doctoral	124	40	189	60

Administrative roles, interpersonal characteristics, and leadership style, as composite scores, were computed respectively for each administrator. Given the strong correlation between personnel ratings of overall performance and future leadership

($r = .98$), we created the fourth composite score, summary judgments, by averaging the ratings on the two summary-measure items. Descriptive statistics for the composite scores by administrator gender and Carnegie classification are presented in Table 2.

Table 2
Means and Standard Deviations of Composite Scores as a Function of Administrator Gender and Carnegie Classification of Their Institution

Source	Associate		Baccalaureate		Master's		Doctoral	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Administrative roles								
Female	4.27	0.58	3.87	0.58	4.01	0.55	4.14	0.52
Male	3.94	0.74	3.95	0.53	3.95	0.53	4.11	0.48
Total	4.11	0.68	3.92	0.55	3.97	0.54	4.12	0.49
Interpersonal characteristics								
Female	5.87	0.79	5.50	0.79	5.67	0.79	5.80	0.70
Male	5.68	0.80	5.65	0.65	5.63	0.70	5.78	0.65
Total	5.77	0.79	5.58	0.71	5.65	0.73	5.79	0.67
Leadership style								
Female	5.93	0.74	5.46	0.65	5.65	0.69	5.75	0.65
Male	5.43	0.94	5.49	0.62	5.56	0.63	5.74	0.58
Total	5.68	0.87	5.48	0.63	5.59	0.65	5.74	0.61
Summary judgments								
Female	4.37	0.63	3.90	0.66	4.04	0.61	4.20	0.59
Male	3.96	0.84	3.99	0.59	3.98	0.61	4.19	0.54
Total	4.16	0.76	3.95	0.61	4.00	0.61	4.19	0.56

Note. $N = 579$.

The results of the MANOVA and subsequent univariate analyses are summarized in Table 3. The only significant multivariate effect was found for the main effect of Carnegie classification, $F(12, 1710) = 2.18, p < .05, \eta_p^2 = .043$. Univariate analyses of variance

(ANOVAs) revealed that the Carnegie classification effect resided weakly in administrative roles ($\eta_p^2 = .024$), leadership style ($\eta_p^2 = .020$), and summary judgments ($\eta_p^2 = .026$).

Table 3

Multivariate and Univariate Analyses of Variance for Administrator Gender \times Carnegie Classification Effects for Composite Scores

Source	Univariate									
	Multivariate		Administrative roles		Interpersonal characteristics		Leadership style		Summary judgments	
	<i>F</i>	η^2	<i>F</i>	η^2	<i>F</i>	η^2	<i>F</i>	η^2	<i>F</i>	η^2
Gender (G)	2.18	.015	2.02	.004	0.07	<.001	3.70	.006	1.96	.003
Carnegie classification (C)	2.11*	.043	4.59**	.024	2.47	.013	3.79*	.020	5.09**	.026
G \times C	1.04	.022	1.16	.006	0.49	.003	1.64	.009	1.53	.008

Note. Multivariate *F* ratios were generated from Pillai's statistic. * $p < .05$. ** $p < .01$.

Post hoc tests with the Bonferroni correction ($p < .05$) revealed the following effects of Carnegie classification on the composite scores of personnel ratings. Administrators at doctoral institutions tended to receive higher ratings on their performance of the administrative roles ($M = 4.12$) than did their counterparts at baccalaureate ($M = 3.92$) and master's ($M = 3.97$) institutions. They also received better ratings on leadership style ($M = 5.74$) than did administrators at baccalaureate institutions ($M = 5.48$). Similarly, administrators at doctoral institutions were rated more favorably overall ($M = 4.19$) than were those from baccalaureate ($M = 3.95$) and master's ($M = 4.00$) institutions.

Comparisons of Composite Scores by the Chair's Gender and Institutional Carnegie Classification

We next performed a 2×3 (Gender [male, female] \times Carnegie classification [Associate and Baccalaureate, Master's, Doctoral]) between-subjects MANOVA on the second research question of whether composite scores differ by chairs' gender and their institutions' Carnegie classification. We inferred chair gender from first names, using the same procedures described previously. Table 4 displays the analytic sample composition. The majority of chairs were from doctoral institutions. Women represented a lower proportion of chairs across all levels of institutions. Given the low number of chairs from associate-level institutions ($n = 10$), we combined their data with those from baccalaureate institutions for the subsequent analyses.

Table 4
Number of Administrators by Gender and Carnegie Classification (N = 746)

Carnegie classification	Female		Male	
	<i>n</i>	%	<i>n</i>	%
Associate	4	40	6	60
Baccalaureate	12	38	20	62
Master's	85	37	146	63
Doctoral	149	32	324	68

Administrative responsibilities, personal characteristics, and administrative methods, as composite scores, were computed respectively for each chair. Given the strong correlation between faculty ratings of confidence in future leadership and excellent leadership ($r = .98$), we created the fourth

composite score, summary judgments, by averaging the ratings on the two summary-measure items. Descriptive statistics for the composite scores by chair gender and Carnegie classification are presented in Table 5.

Table 5
Means and Standard Deviations of Composite Scores as a Function of Chairs' Gender and Carnegie Classification of Their Institutions

Source	Associate and baccalaureate		Master's		Doctoral	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Administrative responsibilities						
Female	4.03	0.56	4.11	0.52	3.95	0.58
Male	4.00	0.64	4.12	0.54	3.93	0.59
Total	4.01	0.61	4.12	0.53	3.94	0.58
Personal characteristics						
Female	4.11	0.61	4.23	0.50	4.07	0.55
Male	4.15	0.61	4.26	0.54	4.07	0.58
Total	4.13	0.60	4.25	0.52	4.07	0.57
Administrative methods						
Female	4.06	0.57	4.18	0.52	4.00	0.56
Male	4.08	0.61	4.17	0.55	3.96	0.58
Total	4.07	0.59	4.17	0.53	3.97	0.57
Summary judgments						
Female	4.15	0.66	4.21	0.64	4.03	0.71
Male	4.16	0.69	4.24	0.63	4.03	0.70
Total	4.16	0.67	4.23	0.63	4.03	0.70

Note. $N = 736$.

The results of the MANOVA and subsequent univariate analyses are summarized in Table 6. The only significant multivariate effect was found for the main effect of Carnegie classification, $F(8, 1450) = 2.86, p < .01, \eta_p^2 = .031$. Univariate ANOVAs revealed that the

Carnegie classification effect resided weakly in administrative responsibilities ($\eta_p^2 = .018$), personal characteristics ($\eta_p^2 = .018$), administrative methods ($\eta_p^2 = .022$), and summary judgments ($\eta_p^2 = .016$).

Table 6

Multivariate and Univariate Analyses of Variance for Chair Gender \times Carnegie Classification Effects for Composite Score

Source	Univariate									
	Multivariate		Administrative responsibilities		Personal characteristics		Administrative methods		Summary judgments	
	<i>F</i>	η^2	<i>F</i>	η^2	<i>F</i>	η^2	<i>F</i>	η^2	<i>F</i>	η^2
Gender (G)	1.58	.009	0.03	<.001	0.16	<.001	0.01	<.001	0.03	<.001
Carnegie classification(C)	2.86**	.031	6.57**	.018	6.91**	.018	8.37***	.022	6.10**	.016
G \times C	0.71	.008	0.10	<.001	0.05	<.001	0.14	<.001	0.03	<.001

Note. Multivariate *F* ratios were generated from Pillai's statistic. * $p < .05$. ** $p < .01$. *** $p < .001$.

Post hoc tests with the Bonferroni correction ($p < .001$) revealed the following effects of Carnegie classification on the composite scores of faculty ratings of chairs. Chairs at master's-level institutions tended to receive higher ratings than chairs at doctoral institutions on performance of administrative responsibilities ($M_{\text{master's}} = 4.12$ and $M_{\text{doctoral}} = 3.94$); personal characteristics ($M_{\text{master's}} = 4.25$ and $M_{\text{doctoral}} = 4.07$); administrative methods ($M_{\text{master's}} = 4.17$ and $M_{\text{doctoral}} = 3.97$); and summary judgments ($M_{\text{master's}} = 4.23$ and $M_{\text{doctoral}} = 4.03$).

Discussion

The results of the current study can be summarized as follows. First, across major levels of Carnegie classifications, administrator gender has no statistically significant or practically meaningful effect on personnel ratings of administrative roles, interpersonal characteristics, leadership style, and summary judgments. Second, across

major levels of Carnegie classification, chair gender likewise has no statistically significant or practically meaningful effect on faculty ratings of administrative responsibilities, personal characteristics, administrative methods, and summary judgments. Faculty and staff rate their respective administrator or chair very similarly regardless of whether it is a man or a woman. Third, administrators at doctoral institutions receive higher overall ratings and higher ratings on administrative roles than do their counterparts at master's and baccalaureate institutions. Fourth, administrators at doctoral institutions receive higher ratings on leadership style than do those at baccalaureate institutions. Fifth, chairs at master's-level institutions receive higher ratings on administrative responsibilities, personal characteristics, administrative methods, and overall summary judgments than do their counterparts at doctoral institutions.

The absence of meaningful gender differences in this study does not necessarily mean that gender bias does not exist in evaluations of administrators and department chairs. Previous research has shown that women sometimes face prejudicial evaluations of their performance, in part because they are expected to balance communal and agentic attributes (Eagly & Krau, 2002). They are expected to be both nurturing and competent. Decision makers must therefore recognize that personnel evaluations could be prone to biases due to individual and collective expectations about sex-typical social roles. Such bias could systematically harm one gender by influencing individual personnel ratings, faculty committees, decision makers, and other parties. However, the current study finds no evidence of favoritism toward either gender in aggregated personnel ratings that is strong enough to systematically affect evaluations, as long as ratings do not serve as the only measure of leadership effectiveness, and decision makers do not make too much of too little.

The strongest effects observed in the current study were found between levels of Carnegie classification. Upper-level administrators employed in doctoral institutions generally earned higher marks overall and on how well they fulfilled key administrative roles than those at the master's and baccalaureate levels, although the effects were not strong. Nothing in the list of roles hints at why administrators at doctoral institutions should have had a distinct advantage. There are no questions, for example, about supporting research or graduate-level education or securing external funding. Instead, the roles concern generic leadership qualities, such as planning (e.g., "Establishing sound priorities"); consulting (e.g., "Being an effective team member"); communicating (e.g., "Communicating relevant information to

appropriate constituencies"); expertise (e.g., "Displaying knowledge/expertise required for this position"); and community building (e.g., "Contributing positively to the institution's image").

Similarly, the skills found in leadership style, for which doctoral-level administrators received higher ratings than did those at the baccalaureate level, are fairly common. They concern democratic practice (e.g., "Receptiveness to ideas"); structuring (e.g., "Organized"); vigor (e.g., "Decisive"); interpersonal sensitivity (e.g., "Understanding"); integrity (e.g., "Trustworthy"); and steadiness (e.g., "Consistent"). Although the current study cannot explain the observed differences by Carnegie classification, future researchers may want to investigate whether doctoral institutions offer more resources to support administrators. For example, is there more opportunity for professional development, more plentiful governance structures to support decision making (e.g., tenure, promotion)? Are the terms of appointment different across institutional classifications, or are administrators more frequently brought in from outside the university?

In contrast to the findings regarding administrators, department chairs at master's-level institutions were rated more highly on all elements of the evaluation than were those at the doctoral level. Again, nothing in the content of the FSC offers a particular advantage to those leading master's-degree programs over those heading up doctoral programs. Regarding administrative responsibilities, the FSC contains a mix of items that pertain to administrative support (e.g., "Guiding the development of a sound long-range plan to carry out departmental programs"); personnel management (e.g., "Facilitating successful

recruitment and selection of promising faculty”); program leadership and support (e.g., “Facilitating curriculum development”); building image or reputation (e.g., “Promoting a positive image of the department to off-campus constituencies”); and developing positive climate (e.g., “Developing collegiality/cooperation among faculty members”). The personal characteristics concern such attributes as the ability to resolve issues (e.g., “Problem solving ability”); interpersonal skills (e.g., “Demonstrates caring”); trustworthiness (e.g., “Fairness”); steadiness (e.g., “Consistency”); and openness (e.g., “Flexibility/adaptability in dealing with individuals/situations”).

The FSC’s administrative methods encompass the entire range of leadership behaviors, including democratic practice (e.g., “Explains the basis for his/her decisions”); structuring (e.g., “Maintains definite standards of performance”); supporting faculty (e.g., “Looks out for the personal welfare of individual faculty members”); promoting a positive climate (e.g., “Encourages teamwork among members of the faculty”); and promoting department advancement (e.g., “Allocates faculty responsibilities in an effective and equitable manner”).

Limitations

Several limitations should be considered when interpreting the findings from the current study. First, participating administrators, chairs, and personnel were not randomly selected, and thus findings may not be

generalizable to all disciplines and institutions. Nonetheless, the samples were large and included departments from all major Carnegie classifications. Second, although inferring gender based on first names is becoming an increasingly common practice when direct measures are not available, this method has certain drawbacks.

Administrators and department chairs with gender-neutral or uncommon names, as well as those from cultures where first names are less gender-typed, may be underrepresented in the samples due to uncertainty in estimation. Third, the gender of the personnel who completed the ratings could also be an important covariate. However, we were unable to control for it because all evaluation forms were anonymous. Fourth, the correlational methods employed do not establish a cause-effect relationship between Carnegie classification and personnel ratings of administrators and chairs.

Implications

The gender of the administrator or chair and its interaction with Carnegie classification are not related in a meaningful way to the scores produced in the IDEA LFS. A more potent effect on personnel ratings is found not between men and women but between levels of Carnegie classification. When used in conjunction with other sources of evidence, average scores on the FSA and FSC are practical measures of faculty and staff perceptions of their administrator or chair’s effectiveness.

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T: 800.255.2757
T: 785.320.2400

301 South Fourth St., Suite 200
Manhattan, KS 66502-6209
E: info@IDEAedu.org
IDEAedu.org

