Characteristics of Faculty Position Advertisements Associated with Applicant Diversity

Karen B. Schmaling
Washington State University

Arthur W. Blume
Washington State University

Dana L. Baker
Washington State University

This pilot study examined the associations between faculty position advertisement characteristics and the gender and ethnicity of applicants. Eighteen advertisements were coded for required and preferred qualifications, types of materials to submit, and type of application closure. More women applicants were associated with positions that required more types of application materials, and that had flexible closing dates. The proportion of ethnic minority applicants was not significantly associated with advertisement parameters, but medium-sized effects were discussed in terms of their implications. These preliminary data suggest that attending to the details of constructing faculty position advertisements may enhance applicant diversity.

INTRODUCTION

Diversifying university faculties has become a goal for many campuses in the United States. The use of proactive strategies for ensuring diverse faculty applicants has been associated with greater diversity among the faculty, such as administratively enforced policies to ensure diverse applicant pools, and efforts to improve campus and community climate (Opp & Smith, 1994). Search committees have developed best practices as a result of practices that have been found to be effective (Turner, 2002). However, despite many years of research and efforts to diversify, the Academy continues to be greatly underrepresented by faculty of color (Turner, González, & Wood, 2008) and women in certain fields (Leslie, Cimpian, Meyer, & Freeland, 2015).

The job advertisements and position descriptions for faculty searches are important steps in determining who applies and is hired. Search committees and human resource professionals may devote a great deal of time crafting the language for an advertisement before approving circulation. Indeed, language matters when it comes to job advertisements. In a series of experimental studies, it was found that a tendency to use masculine wording in job advertisements within male dominated fields -- and that the masculine wording was interpreted in the context of male dominance -- was associated with less interest in the position by women (Gaucher, Friesen, & Kay, 2011). One could also imagine that the wording of job advertisements might reflect the current constitution and perceptions of an academic department and that a department of mostly male faculty might be inadvertently unaware of the use of

masculine wording in advertisements. As well, one could also imagine that advertisement wording may convey different messages across race and ethnicity, other dimensions of diversity, and their intersections.

When the goal is to diversify the faculty, wordsmithing an advertisement to encourage diverse applicants to apply requires care (Collier & Zhang, 2016). Moody (2004) suggests first and foremost that the language in an advertisement must highlight that the institution is committed to diversifying itself in key ways, such as with infusing diversity into the curriculum, improving the university's climate for diversity, and prioritizing research on underrepresented populations. Researchers have found that job description language indicating that the position required diversity expertise, for example, was associated with a greater likelihood of a diversity hire (Smith, Turner, Osei-Kofi, & Richards, 2004). In that same study, regular searches that did not highlight diversity requirements often resulted in a racial majority hire (Smith et al., 2004). Given this body of literature, the inclusion of qualifications related to diversity in a faculty job advertisement may make sense if the goal is to increase faculty diversity.

On the other hand, the required qualifications for a position also have the power to restrict who may apply. The AAC&U publication *Diversifying the faculty: A guidebook for search committees* (Turner, 2002), gave the following recommendation: "Search committees must guard against... a position description that will "define out" candidates of color... to yield a wide and inclusive pool... label qualifications *preferred* instead of *required...*" (p. 17). A study that examined required qualifications for hiring athletic directors in Texas public school systems found that requiring the applicant to also serve as head football coach, an arguably gender limited expectation, was a barrier to women being hired to the positions (Whisenant, Miller, & Pedersen, 2005). This particular study highlights how required qualifications may wittingly or unwittingly restrict a hiring pool in ways that will make a diverse hire less likely. Concerns related to the ability of required qualifications to restrict who applies have been cited for reasons to reduce the number of required qualifications or changing as many qualifications as possible from required to preferred (Adams & Bargerhuff, 2005). In fact, current best practices include – in addition to the recommendation that preferred requirements be used rather than required -- that language in job ads should convey flexibility rather than rigidity about requirements when appropriate (Turner, 2002).

Additionally, more serious consideration of specifications on job advertisements by ethnic minority and women applicants increases the chance that they see numerous expectations in an advertisement, question whether they are qualified even if they are, and self-select themselves out of the process by not applying (Collier & Zhang, 2016). Especially with early career faculty applicants, there may be a certain sense of insecurity due to inexperience. One example is the imposter phenomenon (Clance & O'Toole, 1987), an insecure and flawed belief that one is not competent despite evidence to the contrary, and therefore will be exposed by one's peers. The imposter phenomenon tends to impact early career applicants in particular (Hutchins, 2015). The net result is that competent people often overcompensate by being exceptionally productive and engaging in perfectionism and workaholism (Parkman, 2016).

The imposter phenomenon has been found to commonly occur early among ethnic minorities, when they are undergraduate and graduate students (Ewing, Richardson, James-Myers, L., & Russell, 1996; Peteet, Montgomery, & Weekes, 2015). Women are likely to have greater imposter related fears than men (Kumar & Jagacinski, 2006). The imposter phenomenon among women and ethnic and racial minorities in academia may be a consequence of societal biases and stereotypes that send messages that certain groups are not expected to do well within the academic world (Trotman, 2009). Certainly evidence of bias exists, including a study that found significant negative associations between expectations for natural talent in a discipline and number of women and African Americans represented in certain fields (Leslie et al., 2015). So, with regard to seeking diverse faculty hires, it is worth considering if too many qualifications in a faculty ad may discourage diverse applicants from applying for the position.

Although there have been recommendations regarding how to craft advertisements to facilitate applications from women and ethnic minorities, we were unable to identify previous studies that examined the effectiveness of advertisement characteristics in terms of the diversity of the resulting applicant pools. The purpose of the present study was to conduct a pilot examination of the associations

between advertisement characteristics and the diversity of faculty applicant pools in terms of gender and ethnicity.

METHODS

Materials and Procedure

The study focused on a small, suburban campus of a large, land-grant research university. The advertised position descriptions of interest were for tenure-track, non-administrative faculty positions in any discipline and were posted during four consecutive academic years that garnered 10 or more applicants. Eighteen positions met these inclusion criteria. Applicants who applied to these positions were asked to provide their gender and ethnicity to Human Resources; this information was unlinked to the applications and was unavailable to the search committees. Following the closure of each search, we obtained a summary table of applicants' gender and ethnicity.

Advertisement Characteristics

The authors independently reviewed each advertised position description for counts of the numbers of required qualifications, preferred qualifications, and types of materials to be submitted (e.g., CV, cover letter, research statement, teaching statement, letters of recommendation, sample publications, teaching evaluations, etc.). Finally, the type of search closure was noted as either a hard close (i.e., a firm date by which applications had to be submitted), or a soft (e.g., a date when application review would begin) or unspecified closure (the latter two categories were combined for analysis based on their functional similarity). Differences in counts among the authors were discussed until consensus was reached.

Data Analysis

Descriptive statistics were used to characterize the applicants to each search. Spearman's rho nonparametric correlations were used to examine the strength of associations between position description and applicant characteristics, with the exception of point-biserial correlations used for the type of application closure with applicant characteristics.

RESULTS

Characteristics of the Applicants

The faculty searches were in disciplines in the sciences, engineering, mathematics, business, and education, but there were no searches in the arts or humanities. The numbers of applicants to these searches ranged from 12 (clinical psychology) to 223 (sociology). Table 1 shows the total applications received for each position (which includes those who did not disclose their gender and/or their ethnicity), and the percent of those applications that were from women and people of color.

TABLE 1
APPLICANT CHARACTERISTICS

	Total	% Women	% Ethnic Minority
Accounting	17	.46	.83
Computer Science	13	.08	.31
Computer Science	35	.13	.64
Education:			
Educational Leadership	56	.54	.36
Teaching & Learning	86	.45	.33
Engineering:			
Electrical	41	.10	.56
Mechanical	88	.03	.63
Mechanical	82	.05	.57
Environmental Chemistry	123	.40	.50
Environmental Hydrology	121	.16	.45
Management	55	.26	.52
Mathematics (statistics)	82	.30	.57
Microbial Ecology	104	.40	.29
Political Science	141	.21	.24
Psychology:			
Clinical	12	.42	.25
Industrial/Organizational	44	.45	.32
Social (Health)	37	.73	.30
Sociology	223	.54	.23

Characteristics of the Advertisements

The advertisement characteristics are summarized in Table 2. These searches included between two and nine required qualifications, and an additional one to 24 preferred qualifications. In terms of the application process, between three and six different types of materials needed to be submitted (e.g., cover letter, cv, transcripts, letters of recommendation, statements of teaching, research, etc. interests).

TABLE 2
ADVERTISEMENT CHARACTERISTICS

	Qualifications Required	Preferred	Types of application materials	Type of closing
Accounting	8	8	4	Soft
Computer Science	5	1	3	Hard
Computer Science	6	2	3	Hard
Education:				
Educational Leadership	7	3	5	Soft
Teaching & Learning	5	3	5	Soft
Engineering:				
Electrical	5	2	3	Hard
Mechanical	5	2	3	Hard
Mechanical	6	2	3	Hard
Environmental Chemistry	9	2	6	Soft

Environmental Hydrology	2	5	6	Soft
Management	3	24	4	Soft
Mathematics (statistics)	5	2	6	Soft
Microbial Ecology	9	7	5	Hard
Political Science	3	3	4	Hard
Psychology:				
Clinical	3	2	3	Soft
Industrial/Organizational	4	2	6	Soft
Social (Health)	4	1	5	Soft
Sociology	2	1	4	Hard

Association between Applicant and Advertisement Characteristics

Table 3 lists the correlations between position description and applicant characteristics. Because of the preliminary nature of this study and the small sample size, Table 3 also shows the sample size needed to achieve statistical significance for those coefficients that were not significant with $N = 18$.

TABLE 3
CORRELATIONS OF APPLICATION COMPONENTS WITH APPLICANT
CHARACTERISTICS (N = 18)

	% Women		% Ethnic Minority	
	r	N for $p < .05$	r	N for $p < .05$
Number of Qualifications:				
Required	-0.07	> 100	0.35	32
Preferred	0.02	> 100	0.21	88
Types of Application				
Materials	0.52[*]		-0.26	58
Type of closing[1]	-0.58[*]		-0.09	> 100

Note: [*] $p < .05$; [1] soft/unspecified = 1; hard = 2

Greater proportions of women applicants were associated with greater numbers of types of application materials and soft or unspecified advertisement closings. The numbers of required and preferred qualifications were unrelated to the proportions of women in the applicant pools.

None of the correlations between advertisement characteristics and the proportions of ethnic minority applicants achieved statistical significance. However, the association of greater proportions of ethnic minority applicants and more required qualifications had a moderate coefficient (Cohen, 1992) that would be significant with 32 searches. This pattern is inconsistent with the recommendation by Turner (2002) to decrease required qualifications because ethnic minorities may be less likely to apply to positions with increasing numbers of required qualifications.

DISCUSSION

This study was a novel, albeit pilot, examination of the association between faculty advertisement characteristics and the resulting gender and racial/ethnic composition of applicant pools across searches in diverse disciplines.

None of the associations between the proportions of ethnic minority applicants and applicant characteristics achieved statistical significance. However, some of the coefficients were moderately-sized (Cohen, 1992) and sample size calculations showed that, for example, increasing numbers of required qualifications would be significantly associated with increasing proportions of ethnic minority applicants with 32 searches. This coefficient was of interest because it was in contrast with a recommendation to decrease required qualifications so that applicants of color would not disqualify themselves as being unlikely to fit the position (Turner, 2002) – this recommendation would be in line with trying to avert imposter phenomenon reactions by applicants. An alternative perspective of the results might be that ethnic minority faculty applicants are aware of the biases against their competence and legitimacy as faculty (Bavishi, Madera, & Hebl, 2010), and are prepared to persevere, i.e., majority applicants' privilege may extend to selecting 'easier' positions to apply to with fewer requirements, whereas minority applicants may not experience such selectivity. Or, advertisements with more qualifications might be viewed by potential applicants as transparent, whereas fewer position requirements could be interpreted as vague and more prone to search committee interpretation and biases. As the sample size calculations suggested that some associations would be significant with several dozen searches – which would not be unusual for a large research university to field in an annual search cycle – these results warrant further examination.

The results suggested that applicant gender did not vary significantly based on the number of required or preferred qualifications. A more flexible approach to closing the timeframe for applications was associated with greater proportions of women applicants. Applicants may interpret this flexibility as a sign of more generalizable institutional flexibility, which may be appealing as women are more likely to take family leave (Armenia & Gerstel, 2006) and potentially other flexible institutional policies. Also, a greater proportion of women applicants was associated with increased numbers of types of application materials. This result could be seen as women tending to choose or to follow-through on complex, multicomponent tasks. Multitasking behavior – "the scheduling and interleaving of multiple activities" (Mäntylä, 2013, p. 514) – seems more common among women than men, but evidence that women have reliably superior multitasking abilities, or choose to multitask, is sparse and mixed (Buser, & Peter, 2012; Mäntylä, 2013; Stoet, O'Connor, Conner, & Laws, 2013).

This study has several limitations. The small sample size and the limited variability in the disciplines searched preclude strong inferences and generalizations. Applicants were asked to disclose their gender and ethnicity to human resources, and although they were assured that this information was not available to the search committees, not all applicants provided these data, which may have affected the resulting proportions of women and minorities in unknown ways; the validity of these self-reported data are also unknown. Furthermore, because self-reported gender and ethnicity were provided in summary format for each search, we do not know the gender and ethnicity of the hired candidates and the extent to which advertisement characteristics were related to the diversity of the hired faculty.

Recruiting and retaining underrepresented faculty is a broadly shared goal in higher education. The results of this study suggest that characteristics of faculty advertisements are related to who applies. The modification of advertisement characteristics may be a relatively simple and fruitful strategy to help diversify the future of the professoriate. Future research can address the limitations of this study and extend it to larger sample, more varied disciplines, and across institutions.

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