
Best Practices To Diversify Chemistry Faculty

Marie Little Fawn Agan,¹ Reni Joseph,² Armando Rivera-Figueroa,³ Benny C. Chan,⁴ Abby R. O'Connor,⁴ Mary Jo Ondrechen,⁵ Wayne E. Jones, Jr.,⁶ Peter K. Dorhout,⁷ and Ann C. Kimble-Hill,^{8,*}

* denotes corresponding author.

¹Department of Chemistry and Biochemistry, Norwich University, Northfield, VT 05663; ²Department of Chemistry, St. Louis Community College, St Louis, MO 63122 ; ³Economic Development and Workforce Education, Los Angeles City College, Los Angeles, CA 90029; ⁴Department of Chemistry, The College of New Jersey, Ewing NJ 08628; ⁵Department of Chemistry and Chemical Biology, Northeastern University, Boston, MA 02115 ; ⁶Provosts Office and Department of Chemistry, University of New Hampshire, Durham, NH 03824; ⁷Office of the Vice President for Research and Department of Chemistry, Iowa State University, Ames, IA 50011; ⁸Department of Biochemistry and Molecular Biology, Indiana University Purdue University Indianapolis, Indianapolis, IN 46202.

ABSTRACT

Many academic institutions have looked at various ways to make their faculty a more diverse and inclusive group of people that better reflect the demographic swath of their current and future student bodies. This is even more so important in chemistry departments, where there has long been a discussion on the “leaky pipeline” for women and underrepresented groups. The work presented here

This is the author's manuscript of the article published in final edited form as:

Agan, M. L. F., Joseph, R., Rivera-Figueroa, A., Chan, B. C., O'Connor, A. R., Ondrechen, M. J., Jones, W. E., Dorhout, P. K., & Kimble-Hill, A. C. (2022). Best Practices to Diversify Chemistry Faculty. *Journal of Chemical Education*, 99(1), 435–443. <https://doi.org/10.1021/acs.jchemed.1c00508>

examines programs and policies at various departments aimed at increasing the diversity of their faculty applicant pool, and compares them against the reception of the general scientific community by way of applicant demographics and the use of a survey instrument designed to ascertain the advertisement language that lends to a more diverse applicant pool. The combination of these results is then used to generate a list of best practices that administrations and academic search committees can use to improve their ability to attract diverse talent.

KEYWORDS

Continuing education/ General Public; Administrative issues, Minorities in Chemistry, Women in Chemistry, Broadening Participation, STEM Pathways.

INTRODUCTION

The underrepresentation of minority faculty in Chemistry is a major concern. Although increased numbers of diverse faculty increase the success of minority students, the faculty landscape in the top 50 Collegiate Chemistry departments across the country continue to be racially homogenous and male dominated.¹ Traditionally, language used in policies and procedures was not all inclusive, and often not responsive to today's fast changing demographics. Over the years this has led to marginalization at many higher-education institutions.^{2, 3} In the last few years emphasis has shifted. It is now recognized that for higher-education institutions to function and be competitive, a broad range of diverse faculties are an important

factor in their success.⁴⁻⁷ This is especially true given the role that faculty play in creating a learning environment that directly impacts the students' persistence, retention, sense of belonging, integration and academic success.⁸⁻¹³ Although this affects many disciplines in academia, when it comes to chemical sciences the disproportionately low representation of women, minoritized ethnicities, LGBTQ+, and people with disabilities is strongly apparent.^{14, 15} Indeed the current trends in student demographics compared to the United States population demographics showcases the need for more drastic measures to improve the educational environment for these students that often lack a critical mass to extend a sense of self-empowerment and scientific identity.¹⁶ Even as measures have been made to improve gender parity in completing chemistry graduate degrees, the low representation of women in the faculty ranks in the training environment and effort towards improving scientific identity furthers the cycle of low representation in faculty ranks.¹⁷⁻¹⁹ Furthermore, it is also recognized that the diversification of the student body calls for a diverse representation in the faculty and research ranks. Hurtado (2001) showed a positive correlation with gender and ethnic faculty diversity with the diverse student classroom experience and education growth.²⁰ Llamas et al (2021) showed that the student-faculty racial/ethnicity demographics match had a direct and positive correlation with diverse student academic performance and graduation rates.²¹ Hence, with the goal of creating an inclusive and equitable climate for students, higher-education institutions are more often than ever trying to

hire more faculty from diverse backgrounds. However, sometimes a mark is missed, especially when it comes to language used in the job advertisement to attract and broaden the applicants' pool with diverse competitive candidates.

Specifically, this work is a coalescence of evidence gathered from social science studies on building inclusive language,²²⁻²⁴ reflections from current practices at representative institutions, and descriptions of survey-based trends in responses from different NSF-identified demographic groups in STEM¹⁴ to actual and potential language of advertisements. As a result, we recommend that all job advertisements should include a fully developed statement on Diversity, Equity, Inclusion (DEI) for the university or college to attract a broad applicant pool. This key step of ensuring a broad and diverse pool of applicants then can become pivotal for search committees to improve the institution's faculty demographics.

Recruitment of a diverse pool of faculty candidates must undergo a major change. This process begins with the language we use in our job advertisements. In particular, our research hypothesis is that language signals an inclusive culture within a department or institution might convey a very attractive career opportunity to potential applicants.²⁵ A job advertisement that is not written with inclusive language or tone might discourage qualified applicants from applying since words are powerful, and the choice of words, their placement, and their tone conveys a message that some candidates may not feel welcome among a larger community of inclusive-minded colleagues, regardless of their background. This work explores some of the

factors that diverse applicants may consider as they decide to which advertisements they will apply. The literature and generally approved best practices^{22, 26-33} developed from other academic disciplines informed our study to understand the efficacy of these approaches in faculty searches within the chemistry enterprise. Our survey results can now be used to better inform the approach that can be used to further the reach of these advertisements into communities underrepresented in STEM.

The authors recognize that changes to the existing hiring infrastructure and protocols are not an easy task. Universities, and hence departments, must follow state, local, and institutional laws, policies and guidelines. For these changes to occur we strongly recommend the department members to familiarize and participate as active as possible on different key institutional governance and service committees, such as: Academic Senate, Work Environment, Hiring Prioritization, Diversity and Tenure Committees, among others. This type of active participation will not only impact diversity in the hiring process, but furthermore, it may positively impact tenure rates of women and faculty of color.³⁴ In the same line, it has been shown that effective Diversity Committees may provide a most-needed infrastructure to impact processes such as hiring, where often challenges are retaining diverse faculty.³⁵

From this exploration, a search committee may glean and develop meaningful language and key words that will be encouraging to current or future faculty who are

underrepresented in the field of chemistry, which would contribute to a broader strategy of building a diverse pool of applicants.

Evidence Based Practices for Building Inclusive Language

Inclusive language used during a search should be one that involves equity-mindedness. This has been studied from students' perspective but it can be extrapolated for application in a search committee.³⁶

The equity-mindedness process goes beyond writing a reflective and engaging announcement.³⁷⁻³⁹ The entire process should be consciously involved in equity and changing the face of the institution. It is about critically and systematically reflecting on the hiring process practices.^{25, 26} It is about having hard and truthful conversations, that go beyond the typical scientific needs and environment of the institution.³⁸ It clearly recognizes the importance of a healthy, equitable and nurtured social environment.

Equity-minded competence in a search committee is evident when: (1) the search committee members have been trained and are clearly aware of the construct of identity; (2) the committee uses disaggregated data to identify patterns in identity specific outcomes; (3) and when the search committee reflects on identity specific consequences of taken practices and decisions by the committee, for all – students, the department, the institution, the community.^{29, 33, 40, 41}

For example, an equity-mindedness search should be characterized by race consciousness, where every member has been trained and is aware of how one's

beliefs, knowledge, and approaches can disadvantage racially/ethnically minoritized candidates, even when the intention is to be race-neutral. During the search process we must start with using an inclusive language that eliminates inequities and intentionally acknowledges diversity.

While studies have shown targeted interventions with administrative level positions such as deans and department chairs lead to a noticeable increase in awareness of barriers and solutions towards diversifying their faculty,^{42, 43} the literature suggests that the best way to communicate this equity-minded sentiment is via a well-crafted DEI statement.³¹ The wording should be such that it strongly suggests the university and the department are committed to furthering diversity throughout the campus.^{27, 28} A statement about Equal Opportunity/Affirmative Action must be included in every ad. This is different from the diversity statement that is being discussed. Having a diversity, equity, and inclusion statement may not be enough. Candidates should be encouraged to emphasize their diversity and how this would be advantageous to the university.²⁷ Furthermore, the job description should be as broad as possible. A narrow qualification list could lead to potential candidates excluding themselves from applying. Thus, careful wording of the job posting becomes important. One should try to avoid unconscious bias such as affinity bias (favoring those with similar social identities and interests), confirmation bias (focusing on information that confirms their existing belief system while disregarding information that which is contradictory), attribution bias (favoring

behaviors, circumstances and stereotypes aligned with their own identities and opposing non-majority identities), and halo/horns effect (undue favoring/opposing based on a singular perceived prestigious/negative trait).⁴⁴⁻⁴⁶ As part of the diversity process the position should be advertised broadly. Advertise in mainstream journals and journals or venues that are more geared towards females and other minorities, and or conferences that target minority scientists. When qualifications are listed avoid words such as replacement for or retired faculty member. New faculties are hired to make the institution look more progressive and not give the impression it is looking backwards.

Furthermore, the literature behind writing inclusive course syllabi and materials can provide a wealth of indicators for an institution striving to build an inclusive and welcoming community.^{47, 48} In organizational change domains, this language is oftentimes referred to as All-inclusive Multiculturalism (AIM).⁴⁹⁻⁵⁵ Some of the AIM suggestions that should be considered when building an inclusive advertisement include:

- Avoiding male binary dominant pronouns (e.g. he/she, man, woman);
- Placing emphasis on gender neutral language (e.g. person, individual, people);
- Making the nouns and pronouns more plural;
- Including feminine language such as collaboration and dedication;
- Avoiding words such as “exceptional” or “distinguished” that convey a requirement of membership in an elite group that can be interpreted as exclusive with respect to race or gender;

-
- Adding words that encourage candidates with strong record and promise to apply.

Barriers to entry, both perceived and real, may deter some of the best candidates from applying. Another area the ad should emphasize is a sense of belonging. The importance of cultivating in students a sense of belonging in science has been emphasized.^{43, 56-62} While studies of belonging and community among faculty have not been studies so extensively, belonging is a basic human need like food, water, and shelter that all of us seek. Candidates should be made to feel valued, wanted and welcomed at an institution. Ads should be worded such that this is emphasized. Anything that emphasizes community or belonging should be advertised.

[Beyond the Ad, Operational Strategies of Department and Search Committees and Department Dialogue](#)

Another factor in recruiting a diverse candidates is to look beyond the advertisement. Search committees today must take an active role in identifying and recruiting applicants, particularly diverse applicants if your institution is a Primarily White Institution (PWI) or in a non-urban or diverse setting. Leveraging campus wide strategic plans/priorities and vision/mission statements, the department and search committees can guide the review and selection processes to be more inclusive of a wider range of exceptional candidates. The goal of the searches is to find the “best” candidate, however, without strategies to counter biases disadvantage groups are further marginalized. If one of the goals of the search is to broaden the diversity of the department, many deeper institutional discussions need to occur using

fundamental social science theory on diversity, equity, and inclusion. More detailed best practice examples are described in the supplemental information including:

1. Strategies to build a diverse pool of candidates through advertising and formative data.
2. Strategic discussion of diversity and inclusion and bias in the department, which includes contextualizing what the “best” candidate could mean.
3. Carefully reviewing the candidate pool while addressing our biases.
4. Longer term strategies for future searches.

When these activities are coupled with a well-crafted, inclusive ad, the conversations to review candidates becomes more inclusive of a wider range of intellectual paths to not just diversify the pool but also identify outstanding candidates that may have been initially overlooked.

The lessons learned from the literature and reflective experiences then informed the design of two surveys to 1) determine the demographic impact of institutions using the suggestions gathered this far; and 2) determine the impact of people from various groups that have historically been underrepresented in the chemical enterprise. The results of these surveys were then used to identify a list of best practices and a rubric for writing faculty advertisements towards diversifying the applicant pool.

METHODS

Prior to administering each survey, the questionnaire was reviewed and approved for use by Indiana University's Institutional Review Board (IRB).

Demographics of Faculty Searches

Participants were asked to respond anonymously to a data mining survey tool. Survey questions on the institutional profile were determined using the Carnegie Classification categories.⁶³ The location and language questions were derived from Institute for Employment Research at the University of Warwick's Job Study,⁶⁴ HigherEdJobs Job Seeker Survey Results,⁶⁵ and the Pew Research Center 2015 report on digital job searches.⁶⁶ Demographics of applicants questions were adapted from the widely reported 2010 and 2019 iterations of the American Chemical Society salary survey.^{67, 68}

Academic institutions (American Chemical Society certified chemistry department chairs, author institutional partner department chairs and hiring specialists) were contacted to participate in the survey. Respondents included two Women's colleges, four Minority Serving Institutions (MSI), and 26 Predominantly White Institutions (PWI). Other institutional demographics are found in Supplemental Figures A-D and Supplemental Table A. Respondents answered questions with 5-point Likert scale (extremely likely-extremely unlikely or strongly agree-strongly disagree) choices and open-ended responses on their faculty advertisements placed from 2015-2020. Responses to the open-ended questions asking for the diversity, equity, and inclusion (DEI) language used in their ads were evaluated and scored by tracking the counts of specific words (e.g. encourage, equity, support, contribute, inclusive, welcome, explicit, specific, commitment, value, dedication, evidence, language, success, disability, and ideal), and were assigned a "point" for using each category of words in

their response. Non-responses were not assigned a score. All respondents with a “point” were counted, and a t-test comparison was performed across questions to identify trends in responses. Statistically significant differences in those scores have a p-value less than 0.05. All t-tests were performed as two-tailed with unequal variances in Excel. Correlations between questions were determined using Pearson coefficients in Excel.

Potential Applicant responses to DEI Advertisement Language

Participants were asked to anonymously respond to a survey divided into three parts: participant demographics, affinity for position postings, and Diversity, Equity and Inclusion (DEI) statements. Demographics questions were again adapted from the American Chemical Society salary survey.^{67, 68} The affinity for position postings questions were derived from Institute for Employment Research at the University of Warwick’s Job Study,⁶⁴ HigherEdJobs Job Seeker Survey Results,⁶⁵ and the Pew Research Center 2015 report on digital job searches.⁶⁶

The remaining DEI statement questions were written by one of the authors. These questions were designed to look for affinity based on the stated skill set/STEMM focus, location, new hiring practices, and DEI statements. Questions were designed on a 5-point Likert scale (extremely likely-extremely unlikely) on their initial impressions of the institution and the likelihood of applying for a sample faculty position based on the language in each of three sample advertisements with different DEI language and placement as previously discussed. Content validity of the

questions was established by use of the remaining authors with expertise in survey design who provided feedback on the clarity and accuracy of questions toward addressing the overall study goals.⁶⁹ The results obtained for these questions were used to measure Cronbach's alpha as determinant of internal consistency and reliability (α). The questions showed strong reliability above the reasonable scale reliability ($\alpha = 0.915$).⁷⁰ The individual questions were then tested to determine if they should be eliminated based on their reliability and item-total statistics.⁷¹ The testing of the indicator categories showed that when deleted, only questions containing the words location ($\alpha = 0.924$, $N=23$) and welcoming ($\alpha = 0.923$, $N=23$) increased the Cronbach's alpha scores. The increase of these indicators are higher (0.005) than the remaining (average=0.003). This was further corroborated by the individual question "I only apply to job postings in certain geographical locations" when deleted leading to a higher overall score ($\alpha = 0.922$, $N=24$). None of the other questions about the welcoming environment showed this phenomena. However, these differences may be relatively small in comparison to one another and these questions are reported within this work.

The DEI statement language questions were also tested by deleting all of those questions from the overall Cronbach's alpha, and determined to be important to the internal reliability of the survey by the most significant decrease in the score ($\alpha = 0.525$, $N=9$). The individual DEI related questions that had a significant decrease in Cronbach's alpha when deleted from the overall calculation were questions which

asked if the placement of the inclusive language in Ad #2 or Ad #3 showed an institutional commitment to building a DEI community ($\alpha = 0.905$ and 0.906 respectively, $N=24$). This result suggests that these questions were important for the reliability of the survey instrument.

Participants were recruited from the scientific community at large using direct emails and social media solicitation. The demographics of the respondents are described in Supplemental Tables 1-7. The demographic makeup of the survey participants closely mirrored the National Science Foundation Scientists and Engineers statistical data.¹⁴ In short, the participants included those that self-identified as Female (57%), and non-white race/ethnicities (29%) including Black/African descent, Latinx/Hispanic, Native American, and Asian/Pacific Islander. 60% of the participants identified as being in the physical sciences. 83% of the participants identified as working in academia. Participants responded with a similar distribution as currently working as postdoctoral scholars, early career, mid-career, and senior level career. 41% of the participants responded that they are not currently looking for a new role.

The correlation of the responses to advertisement language with their supplied personal identifiers were determined using student t-tests where statistically significant findings have a p-value less than 0.05. Responses to the open-ended questions asking for suggested diversity, equity, and inclusion (DEI) language were evaluated and scored by tracking the counts of specific words (e.g. encourage, equity,

support, contribute, inclusive, welcome, explicit, specific, commitment, value, dedication, evidence, language, success, disability, and ideal), and were assigned a “point” for using each category of words in their response. Non-responses were assigned a zero score. All respondents with a “point” were counted, and a t-test comparison with the self-identified gender/race/ethnicity of each respondent was made across these questions. Statistically significant differences in those scores have a p-value less than 0.05. All t-tests were performed as two-tailed with unequal variances in Excel.

RESULTS

Institutional Approaches Towards Inclusive Language

The institutional responses to the survey are summarized in Supplemental Figures E-Q and Supplemental Tables B-D. The institutional responses to the survey showed that overall, institutions are “somewhat likely” to include a statement on the institutions area of science, technology, engineering, math, or medicinal (STEMM) excellence, hiring focus, and surrounding area(s). These institutions also reported that on average they are more likely to provide a statement on the institution’s commitment to DEI Institutions. These institutions reported that they are least likely to provide a statement on the institution’s reputation for supporting new hires. Institutions that reported providing statements on their STEMM areas of excellence were more likely to self-report providing a statement their hiring focus and new hire support, but less likely to provide statements on DEI and the surrounding area(s). Furthermore, institutions that self-reported as being more likely to supply a DEI

statement had a low correlation with supplying statements on STEMM area of excellence, hiring focus, new hire support, and the surrounding area.

While most of the institutions collected racial/ethnic demographics of their applicants, few reported having a mechanism for flagging the diverse candidates during the search committee review of applications. The institutions were evenly split between collecting gender demographics, however few institutions collect LGBTQ+ demographic data. The institutions with larger numbers of applicants are more likely to have larger populations of Native American and Hispanic/Latinx applicants. However, there was a negative correlation between number of applicants and Black or Female applicants. This suggests a difference in affinity to apply to postings based on racial groups, and possibly Black applicants respond to postings in a similar manner as previously reported where Females are more likely to discount applying to positions than Males.^{72, 73}

The institutions were then asked to supply the language that they used in their ad(s) for the reporting year. The language was aggregated by themes and scored for the number of DEI indicators in that language. Institutions were most likely to provide verbiage around themes on equal opportunity, disability, diversity, equality, and commitment. Statistical analysis of the scores suggested that there was no correlation between the likelihood to supply DEI language and providing statements on STEMM area of focus, and an inverse correlation with providing statements on the hiring focus and surrounding areas. Institutions with higher counts of DEI indicators

in their supplied language were more likely to provide statements on supporting new hires. Furthermore, having a higher DEI scores had a greater likelihood for having a mechanism to communicate diversity indicators of the applicant to the search committee while reviewing applications.

The DEI scores were then compared against their reported applicant demographics. The Pearson coefficients showed that there was an inverse correlation between the DEI score and the %Black/African descent (-0.4), Native American (-0.4), and Female (-0.2) applicants in their pool. This result suggests that these populations were less drawn to their DEI language. This is a similar result to other studies that have suggested people from minoritized identities “avoid environments in which they are perceived as regulatory, or symbolic, hires rather than being hired on their own merits” particularly in cities with white majority populations.⁷⁴ This result suggests that inclusive language alone is not enough to attract diverse applicants. However, there was a positive correlation between DEI score and the %Hispanic/Latinx (0.2) applicant. The combination of the results is interesting in that the Pew Research Center found Hispanics were less likely to view workplace diversity as important, and are 2.5 times less likely than Blacks to say there is not enough attention to diversity in STEM.⁷⁵ This result furthers our understanding as to how different racial/ethnic groups may have experienced science environments and may therefore look at this type of language differently than other groups. For example, a survey of STEM workers in the U.S. suggested that 62% of Blacks have experienced race based

discrimination compared to 42% of Hispanics.⁷⁵ Therefore this aspect of understanding identity specific trends should be studied further. While it was encouraging that so many of the participants perceived that they were providing language to attract more diverse talent, the demographics of the applicant pool surveys suggest that there is more work that can be done towards improving their appeal to more diverse applicants.

While it was encouraging that so many of the institutional participants perceived that they were providing language to attract more diverse talent, the demographics of their applicant pool suggest that there is more work that can be done towards improving their appeal to most diverse applicants.

Applicant Responses Towards Inclusive Language

Participant responses were used to determine where females and minority applicants would look for job advertisements and learn about jobs being posted. Supplemental Tables 1-3 shows the results based on gender and minority self-identification. These results suggest that Females and minorities reported being more likely to look at discipline specific trade journals, Institutional websites/job boards, employment websites, and connection sites like Facebook/twitter.

Females reported to be more likely to hear about jobs in electronic newsletters, networks, and visiting websites. Minorities also reported to be more likely to hear about jobs in electronic newsletters, networks, and visiting websites. There is also an

appreciable suggestion that headhunters/search firms play a role in minorities learning about job postings.

Participants were then asked a series of questions to determine which factors play a role in a potential applicant deciding if they should apply to a posting. The factors considered in the posting were their comparative skill set, geographical location, accepting and welcoming environments, and institutional language towards DEI, areas of excellence, hiring focus, reputation for supporting new hires, and surrounding area. In general, the Females and Non-Females responded to these questions with a similar mean and spread of responses. However, Minorities and Non-Minorities responded with similar means but statistically different spread of the responses. Supplemental Table 8 summarizes an example question that elicited a significant difference in the response based on minority status, where responses were gathered on a Likert scale from strongly agree (1) to strongly disagree (5).

Minority participants responded that they were most likely to only apply to job postings that they felt are in work environments that are accepting and welcoming to them. Females and Non-Minority participants were less likely to respond as strongly.

Participants were also asked to rate how likely the types of statements would prompt them to apply to a job posting based on a Likert scale of extremely likely (1) to extremely unlikely (5). The results with statistically different responses between the statements are summarized in Supplemental Table 9. The respondents had no statistically significant difference between Female/Non-Female as both groups

generally responded as being somewhat likely to apply to an advertisement based on having a commitment statement to diversity. However, there is a significant difference between how these groups responded to the various questions. All populations reported that the institution's commitment to new hires was more likely to prompt them to apply to an advertised position than the inclusion of DEI language. This commitment is not necessarily just in the salary or start-up package. Best practices now include clear tenure and promotion guidelines, professional development support, and more recently individualized development plans for all new faculty.

The scored free responses to the types of DEI language that the respondents suggested would encourage them to apply for a job also showed significant differences between the populations. The scored free responses to the types of DEI language that the respondents suggested would encourage them to apply for a job also showed significant differences between the populations (Supplemental Table 10). While there is no statistical difference based on gender, Minority participants are more likely to provide language towards DEI statements that encourage them to apply. In general, Females supplied more language around the themes of language, commitment, inclusion, and support while minorities supplied more language around the themes of language, support, and equity (Fig S5).

Participants were then shown and asked to evaluate three different ads. The first advertisement only contained the following DEI language:

“[Nonspecific University] is dedicated to diversity, equity and inclusion. In addition, it is the University's policy to provide reasonable ADA accommodations for qualified persons with disabilities. Nonspecific University is an EEO/AA Employer, M/F/D. More information about diversity and inclusion efforts at NU can be found at <https://faculty.nu.edu/diversity>.”

Supplemental Tables 11-13 summarize the participant responses to the advertisement language and compared those responses to their likelihood of applying to ads with DEI language. Overall, none of the populations were very impressed with the DEI language of this ad from any dimension. The results also suggest that minorities were the least likely to apply to this ad based on the language towards expertise and expectation when they are looking for DEI commitment. All groups had statistically similar amounts of DEI indicators that they looked for in ads as they suggested to make this ad more appealing. Female participants suggested that more language is needed around the themes of language, commitment, and equity; while minority participants suggested that more language around the specific and equity-based themes.

Often, underrepresented minorities are discouraged from applying to department faculty openings because they feel the language in the position advertisement is not welcoming and is perceived to be generic, despite typical stated commitments to diversity (e.g. EEO/affirmative action statements). Leibbrandt & List (2018) found that typical EEO statements decreases the appeal of an advertisement to marginalized people, particularly for positions located in majority population cities, as they are then seen as symbolic and disingenuous hires to reach diversity targets.⁷⁴ They specifically saw a trend of these statements being seen as “tokenism”. In fact,

our survey participants often noted that the language appeared to be a “template”. A participant quote that summarizes this trend across all demographics was the following: “This seems like a standard job ad. There is nothing there that signals that they support faculty of color.”

Based on the social science literature, we also invited survey participants to respond to a more elaborate advertisements that was suggested to be more appealing to marginalized prospective applicants. The participants were then shown the second advertisement that contained the following additional DEI language:

“Interested individuals should include a statement outlining their approach to integrating diversity in their pursuit of academic excellence in their cover letter or separately along with their curriculum vitae.....

About the school:.... NU is dedicated to diversity, equity and inclusion as our mission contains three foundational pillars: representational diversity, inclusive working and learning environment, and cultural competence. We highly encourage applications from women and underrepresented minorities as NU is strongly committed to achieving excellence through cultural diversity. In addition, it is the University's policy to provide reasonable ADA accommodations for qualified persons with disabilities. Candidates must be sensitive to the needs of and possess an interest in working in an academic community that is diverse with regard to gender, race, color, ethnicity, nationality, sexual orientation or identity, disability status, protected veteran status, and religion.”

Supplemental Tables 14-18 summarize the participant’s responses to the advertisement language and compared those responses to their likelihood of applying to ads with DEI language. In general, this language was more likely to attract Females and Minority participants, with the most likely group being females. There was also a trend where minority participants were less likely to think that the language reflects the institution’s desire to be a DEI educational environment. The

addition of the language in the about the school section led Females and non-Minorities to be more likely to think that the language reflects the institution's desire to build a DEI faculty constituency. Furthermore, all groups had statistically similar amounts of DEI indicators that they looked for in ads as they suggested to make this ad more appealing. Figure S7 summarizes the themes that were supplied to make this advertisement more appealing. In general, Females again suggested the use of more language around the themes of language, commitment, and inclusion. However, there were fewer participants that suggested that more around the theme of support and there was an increase of participants suggesting the theme of encouragement. Minorities shifted to have fewer suggestions around themes of language, support and equity; and while having more suggestions around themes of commitment, specificity, inclusion, and encouragement. In general, the comments could be summarized with the following participant quote: "It appears that this is a stronger departmental priority based on their request for information about diversity in the cover letter and the language in the 3rd paragraph."

The participants expressed comments towards the language showing more of an effort to be genuine in their DEI effort, however there were comments towards the "order of topics in the ad still shows that D&I is taking a back seat to research". In anticipation of these types of comments, the participants were shown the final advertisement that contained the following DEI language:

“NU is dedicated to diversity, equity and inclusion as our mission contains three foundational pillars: representational diversity, inclusive working and learning environment, and cultural competence. We highly encourage applications from women and underrepresented minorities as NU is strongly committed to achieving excellence through cultural diversity. In addition, it is the University's policy to provide reasonable ADA accommodations for qualified persons with disabilities. Candidates must be sensitive to the needs of and possess an interest in working in an academic community that is diverse with regard to gender, race, color, ethnicity, nationality, sexual orientation or identity, disability status, protected veteran status, and religion. Nonspecific University is an EEO/AA Employer, M/F/D. More information about diversity and inclusion efforts at NU can be found at <https://faculty.nu.edu/diversity>.

Interested individuals should include a statement outlining their approach to integrating diversity in their pursuit of academic excellence in their cover letter or separately along with their curriculum vitae...”

Supplemental Tables 19-22 summarizes the participant responses to the advertisement language and compared those responses to their likelihood of applying to ads with DEI language. This advertisement language led to Females and Minorities reporting statistically smaller amounts of DEI indicators to make this ad more appealing. Females and non-minorities had the most statistically different response to this advertisement compared to the commitment to DEI educational environment where they both saw this ad more favorably. Furthermore, Minority participants suggested statistically significant fewer numbers of themes than in response to Ad#1.

SUMMARY OF BEST PRACTICES

While this study reports the responses of small populations of institutions and potential diverse applicants, the overall demographics of the survey participants is a close reflection of the actual population which is by far more diverse than the faculty of the top 50 chemistry departments in the United States. However, more studies are

needed to be understand the perceptions of diverse applicants, particularly in how they perceive templated language. These results should broaden the understanding of what may play a role in attracting diverse talent and leads to the following recommendations for best practices in writing an inclusive advertisement.

1. Diversity statement beyond the EEO statement;
2. Gender Neutral language;
3. Detailed job description;
4. Make advertisement welcoming to all candidates;
5. Provide examples of commitment to supporting all new hires.

In the qualification section of the ad, one should list what is required and what is simply preferred. This section should summarize job responsibilities in detail. Emphasize the institution is committed family friendly policies and dual career opportunities. In this section salary range should also be presented. To keep the text succinct, the advertisement may refer applicants to a URL address for more detailed information and example programs and campus affinity groups that demonstrate the institutions' commitment to diversity – this will help diverse candidates connect better and feel more welcome to apply, an example is: <https://inclusion.uci.edu/>. Furthermore, a rubric for evaluating advertisement language has been developed based on these best practices and is available in the supporting information. The ad is just the beginning of the search process, additional best practices to conduct the search using equitable and inclusive processes are available in the supporting information.

ASSOCIATED CONTENT

Supporting Information

The Supporting Information is available on the ACS Publications website at DOI:

10.1021/acs.jchemed.XXXXXXX.

Institutional Applicant Survey Tool (PDF)

Institutional Applicant Demographics and Responses with Figures A–Q and Supplemental Tables A–E (PDF)

Potential Applicant Survey Tool (PDF)

Potential Applicant Demographics and Responses with Figures S1–S6 and Supplemental Tables 1–22 (PDF)

Rubric for an inclusive ad (PDF)

Beyond the ad- An example of inclusive search process developed through best hiring practices (PDF)

AUTHOR INFORMATION

Corresponding Author

*E-mail: ankimble@iu.edu

ACKNOWLEDGMENTS

The authors are thankful to Dr. Murrell Godfrey (University of Mississippi) for discussions on content framing. We are thankful to the American Chemical Society Department of Education Programs for their assistance in soliciting data from

chemistry departments and programs. Data collection and analysis was conducted with the approval of Indiana University's Institutional Review Board (IRB).

REFERENCES

1. Downey-Mavromatis, A.; Widener, A., Racial and ethnic diversity of US chemistry faculty has changed little since 2011. *Chemical & Engineering News* November 9, 2020, 2020.
2. Reuben, E.; Sapienza, P.; Zingales, L., How stereotypes impair women's careers in science. *Proceedings of the National Academy of Sciences* **2014**, *111* (12), 4403-4408.
3. Moss-Racusin, C. A.; Dovidio, J. F.; Brescoll, V. L.; Graham, M. J.; Handelsman, J., Science faculty's subtle gender biases favor male students. *Proceedings of the National Academy of Sciences* **2012**, *109* (41), 16474-16479.
4. Lorenzo, R.; Voigt, N.; Schetelig, K.; Zawadzki, A.; Welppe, I.; Brosi, P., The mix that matters: Innovation through diversity. *The Boston Consulting Group* **2017**, 26.
5. Gaither, S. E.; Apfelbaum, E. P.; Birnbaum, H. J.; Babbitt, L. G.; Sommers, S. R., Mere Membership in Racially Diverse Groups Reduces Conformity. *Social Psychological and Personality Science* **2018**, *9* (4), 402-410.
6. Homan, A. C., Dealing with diversity in workgroups: Preventing problems and promoting potential. *Social and Personality Psychology Compass* **2019**, *13* (5), e12465.
7. Reynolds, A.; Lewis, D., Teams solve problems faster when they're more cognitively diverse. *Harvard Business Review* **2017**, 30.
8. Furr, S. R.; Elling, T. W., African-American students in a predominantly-White university: factors associated with retention. *College Student Journal* **2002**, *36*, 188+.
9. Quarterman, J., An assessment of barriers and strategies for recruitment and retention of a diverse graduate student population. *College Student Journal* **2008**, *42*, 947+.
10. Pascarella, E. T.; Terenzini, P. T., Patterns of Student-Faculty Informal Interaction beyond the Classroom and Voluntary Freshman Attrition. *The Journal of Higher Education* **1977**, *48* (5), 540-552.
11. Eimers, M. T.; Pike, G. R., Minority and Nonminority Adjustment to College: Differences or Similarities? *Research in Higher Education* **1997**, *38* (1), 77-97.
12. Lee, J. A., Students' perceptions of and satisfaction with faculty diversity. *College Student Journal* **2010**, *44*, 400+.
13. Cole, D.; Griffin, K. A., Advancing the Study of Student-Faculty Interaction: A Focus on Diverse Students and Faculty. In *Higher Education: Handbook of Theory and Research: Volume 28*, Paulsen, M. B., Ed. Springer Netherlands: Dordrecht, 2013; pp 561-611.

-
14. Burke, A. Science and Engineering Labor Force. <https://nces.nsf.gov/pubs/nsb20198/demographic-trends-of-the-s-e-workforce> (accessed 2021-02-20).
 15. Bhalla, N., Strategies to improve equity in faculty hiring. *Molecular Biology of the Cell* **2019**, *30* (22), 2744-2749.
 16. Wilson, Z. S.; McGuire, S. Y.; Limbach, P. A.; Doyle, M. P.; Marzilli, L. G.; Warner, I. M., Diversifying Science, Technology, Engineering, and Mathematics (STEM): An Inquiry into Successful Approaches in Chemistry. *Journal of Chemical Education* **2014**, *91* (11), 1860-1866.
 17. Kuck, V. J.; Marzabadi, C. H.; Buckner, J. P.; Nolan, S. A., A Review and Study on Graduate Training and Academic Hiring of Chemists. *Journal of Chemical Education* **2007**, *84* (2), 277.
 18. Nolan, S. A.; Buckner, J. P.; Kuck, V. J.; Marzabadi, C. H., Analysis by Gender of the Doctoral and Postdoctoral Institutions of Faculty Members at the Top-Fifty Ranked Chemistry Departments. *Journal of Chemical Education* **2004**, *81* (3), 356.
 19. Howe, M. E.; Schaffer, L. V.; Styles, M. J.; Pazicni, S., Exploring Factors Affecting Interest in Chemistry Faculty Careers Among Graduate Student Women: Results from a Local Pilot Study. *Journal of Chemical Education* **2021**. DOI: 10.1021/acs.jchemed.1c00502.
 20. Hurtado, S. Linking Diversity and Educational Purpose: How Diversity Affects the Classroom Environment and Student Development. In *Diversity Challenged: Evidence on the Impact of Affirmative Action*, Orfield, G., Ed.; Harvard Education Publishing Group: Cambridge, MA, 2001; pp 187-
 203. <https://files.eric.ed.gov/fulltext/ED456199.pdf> (accessed 2021-09-23).
 21. Llamas, J. D.; Nguyen, K.; Tran, A. G. T. T., The case for greater faculty diversity: examining the educational impacts of student-faculty racial/ethnic match. *Race Ethnicity and Education* **2021**, *24* (3), 375-391.
 22. O'Meara, K.; Culpepper, D.; Templeton, L. L., Nudging Toward Diversity: Applying Behavioral Design to Faculty Hiring. *Review of Educational Research* **2020**, *90* (3), 311-348.
 23. Testy, K. Y., Best Practices for Hiring and Retaining a Diverse Law Faculty. *Iowa Law Review* **2011**, *96* (5).
 24. Gasman, M.; Kim, J.; Nguyen, T.-H., Effectively recruiting faculty of color at highly selective institutions: A school of education case study. *Journal of Diversity in Higher Education* **2011**, *4* (4), 212-222.
 25. Gaucher, D.; Friesen, J.; Kay, A. C., Evidence that gendered wording in job advertisements exists and sustains gender inequality. *Journal of Personality and Social Psychology* **2011**, *101* (1), 109-128.
 26. Highhouse, S.; Stierwalt, S. L.; Bachiochi, P.; Elder, A. E.; Fisher, G., Effects of advertised human resource management practices on attraction of african american applicants. *Personnel Psychology* **1999**, *52* (2), 425-442.

-
27. Slaughter, J. E.; Sinar, E. F.; Bachiochi, P. D., Black applicants' reactions to affirmative action plans: Effects of plan content and previous experience with discrimination. *Journal of Applied Psychology* **2002**, 87 (2), 333-344.
 28. McNab, S. M.; Johnston, L., The impact of equal employment opportunity statements in job advertisements on applicants' perceptions of organisations. *Australian Journal of Psychology* **2002**, 54 (2), 105-109.
 29. Avery, D. R.; McKay, P. F., Target practice: An organizational impression management approach to attracting minority and female job applicants. *Personnel Psychology* **2006**, 59 (1), 157-187.
 30. Avery, D. R.; McKay, P. F.; Wilson, D. C., What are the odds? How demographic similarity affects the prevalence of perceived employment discrimination. *Journal of Applied Psychology* **2008**, 93 (2), 235-249.
 31. Avery, D. R.; Volpone, S. D.; Stewart, R. W.; Luksyte, A.; Hernandez, M.; McKay, P. F.; Hebl, M. R., Examining the Draw of Diversity: How Diversity Climate Perceptions Affect Job-Pursuit Intentions. *Human Resource Management* **2013**, 52 (2), 175-193.
 32. Jerald, M. C.; Cole, E. R.; Ward, L. M.; Avery, L. R., Controlling images: How awareness of group stereotypes affects Black women's well-being. *Journal of Counseling Psychology* **2017**, 64 (5), 487-499.
 33. Bilimoria, D.; Buch, K. K., The Search is On: Engendering Faculty Diversity Through More Effective Search and Recruitment. *Change: The Magazine of Higher Learning* **2010**, 42 (4), 27-32.
 34. Porter, S. R., A Closer Look at Faculty Service: What Affects Participation on Committees? *The Journal of Higher Education* **2007**, 78 (5), 523-541.
 35. Leon, R. A.; Williams, D. A., Contingencies for Success: Examining Diversity Committees in Higher Education. *Innovative Higher Education* **2016**, 41 (5), 395-410.
 36. Dowd, A. C.; Bensimon, E. M., *Engaging the "race question": Accountability and equity in US higher education*. Teachers College Press: 2015.
 37. Aaker, J. L.; Brumbaugh, A. M.; Grier, S. A. *Non-target Markets and Viewer Distinctiveness: The Impact of Target Marketing on Advertising Attitudes*; Stanford University, Graduate School of Business: 2000.
 38. Brumbaugh, A. M., Source and Nonsource Cues in Advertising and Their Effects on the Activation of Cultural and Subcultural Knowledge on the Route to Persuasion. *Journal of Consumer Research* **2002**, 29 (2), 258-269.
 39. Oliver-Hoyo, M. T.; Jones, L. L.; Kelter, P. B.; Bauer, C. F.; Clevenger, J. V.; Cole, R. S.; Sawrey, B. A., Hiring and Promotion in Chemical Education. *Journal of Chemical Education* **2008**, 85 (7), 898.
 40. Grier, S. A.; Brumbaugh, A. M., Noticing Cultural Differences: Ad Meanings Created by Target and Non-Target Markets. *Journal of Advertising* **1999**, 28 (1), 79-93.
 41. Ashforth, B. E.; Mael, F., Social Identity Theory and the Organization. *Academy of Management Review* **1989**, 14 (1), 20-39.

-
42. Greene, J.; Lewis, P. A.; Richmond, G. L.; Stockard, J., Changing the Chairs: Impact of Workshop Activities in Assisting Chemistry Department Chairs in Achieving Racial and Ethnic Diversity. *Journal of Chemical Education* **2011**, 88 (6), 721-725.
43. Stachl, C. N.; Hartman, E. C.; Wemmer, D. E.; Francis, M. B., Grassroots Efforts To Quantify and Improve the Academic Climate of an R1 STEM Department: Using Evidence-Based Discussions To Foster Community. *Journal of Chemical Education* **2019**, 96 (10), 2149-2157.
44. Nalty, K., Strategies for confronting unconscious bias. *The Colorado Lawyer* **2016**, 45 (5), 45-52.
45. Forgas, J. P., She just doesn't look like a philosopher...? Affective influences on the halo effect in impression formation. *European Journal of Social Psychology* **2011**, 41 (7), 812-817.
46. Prestia, A. S., Sabotaging Success:: The Role of Unconscious Bias. *Nurse Leader* **2019**, 17 (6), 561-564.
47. Sekaquaptewa, Denise & Takahashi, Koji & Malley, Janet & Herzog, Keith & Bliss, Sara. (2019). An evidence-based faculty recruitment workshop influences departmental hiring practice perceptions among university faculty. *Equality, Diversity and Inclusion: An International Journal*. 38. 10.1108/EDI-11-2018-0215 (accessed 2021-09-23).
48. Plaut, V.; Welle, B.; Smith, M., Inviting everyone in. *Scientific American* **2014**, 311 (4), 52-57.
49. Stevens, F. G.; Plaut, V. C.; Sanchez-Burks, J., Unlocking the Benefits of Diversity: All-Inclusive Multiculturalism and Positive Organizational Change. *The Journal of Applied Behavioral Science* **2008**, 44 (1), 116-133.
50. Plaut, V. C.; Garnett, F. G.; Buffardi, L. E.; Sanchez-Burks, J., "What about me?" Perceptions of exclusion and Whites' reactions to multiculturalism. *Journal of Personality and Social Psychology* **2011**, 101 (2), 337-353.
51. Jacobson, A. N.; Matson, K. L.; Mathews, J. L.; Parkhill, A. L.; Scartabello, T. A., Lesbian, gay, bisexual, and transgender inclusion: Survey of campus climate in colleges and schools of pharmacy. *Curr Pharm Teach Learn* **2017**, 9 (1), 60-65.
52. Guimond, S.; Crisp, R. J.; De Oliveira, P.; Kamiejski, R.; Kteily, N.; Kuepper, B.; Lalonde, R. N.; Levin, S.; Pratto, F.; Tougas, F.; Sidanius, J.; Zick, A., Diversity policy, social dominance, and intergroup relations: predicting prejudice in changing social and political contexts. *J Pers Soc Psychol* **2013**, 104 (6), 941-58.
53. Celeste, L.; Baysu, G.; Phalet, K.; Meeussen, L.; Kende, J., Can School Diversity Policies Reduce Belonging and Achievement Gaps Between Minority and Majority Youth? Multiculturalism, Colorblindness, and Assimilationism Assessed. *Pers Soc Psychol Bull* **2019**, 45 (11), 1603-1618.
54. Wilton, L. S.; Good, J. J.; Moss-Racusin, C. A.; Sanchez, D. T., Communicating more than diversity: The effect of institutional diversity statements on expectations and performance as a function of race and gender. *Cultural Diversity and Ethnic Minority Psychology* **2015**, 21 (3), 315-325.

-
55. Astin, A. W., Diversity and Multiculturalism on the Campus: How Are Students Affected? *Change* **1993**, 25 (2), 44-49.
56. O'Meara, K.; Griffin, K. A.; Kuvaeva, A.; Nyunt, G.; Robinson, T. N., Sense of belonging and its contributing factors in graduate education. *International Journal of Doctoral Studies* **2017**, 12, 251-279.
57. Campbell, C. M.; O'Meara, K., Faculty Agency: Departmental Contexts that Matter in Faculty Careers. *Research in Higher Education* **2014**, 55 (1), 49-74.
58. Pascale, A. B., "Co-Existing Lives": Understanding and Facilitating Graduate Student Sense of Belonging. *Journal of Student Affairs Research and Practice* **2018**, 55 (4), 399-411.
59. Twale, D. J.; Weidman, J. C.; Bethea, K., Conceptualizing Socialization of Graduate Students of Color: Revisiting the Weidman-Twale-Stein Framework. *Western Journal of Black Studies* **2016**, 40 (2), 80-94.
60. Ong, M., Body Projects of Young Women of Color in Physics: Intersections of Gender, Race, and Science. *Social Problems* **2014**, 52 (4), 593-617.
61. Xu, C.; Lastrapes, R. E., Impact of STEM Sense of Belonging on Career Interest: The Role of STEM Attitudes. *Journal of Career Development* **2021**, DOI:10.1177/08948453211033025 (accessed 2021-09-23).
62. Rainey, K.; Dancy, M.; Mickelson, R.; Stearns, E.; Moller, S., Race and gender differences in how sense of belonging influences decisions to major in STEM. *International Journal of STEM Education* **2018**, 5 (1), 10.
63. The Carnegie Classification of Institutions of Higher Education. <http://carnegieclassifications.iu.edu/> (accessed 2021-09-23).
64. Green, A.; Hoyos, M.; Li, Y.; Owen, D. *Job Search Study: literature review and analysis of the Labour Force Survey*; 9781847129253; Department for Work and Pensions: London, 2011; pp ix, 106 p.
65. Job Seeker Survey Results. <https://www.higheredjobs.com/articles/surveys.cfm> (accessed 2021-09-23).
66. Smith, A. (2015) *Searching for work in the digital era*; Pew Research Center: Washington, D.C. <http://www.pewinternet.org/2015/11/19/searching-for-work-in-the-digital-era/> (accessed 2021-09-14).
67. Hanson, D. (2021). *Employment & Salary Survey*. Cen.acs.org. <https://cen.acs.org/articles/89/i50/Employment-Salary-Survey.html> (accessed 2021-09-23).
68. Campos-Seijo, B. (2021). *The employment outlook for chemists*. Cen.acs.org. [The employment outlook for chemists \(acs.org\)](https://cen.acs.org/articles/89/i50/Employment-Salary-Survey.html) (accessed 2021-09-23).
69. Niemeyer, E. D.; Zewail-Foote, M., Investigating the Influence of Gender on Student Perceptions of the Clicker in a Small Undergraduate General Chemistry Course. *Journal of Chemical Education* **2018**, 95 (2), 218-223.
70. Taber, K. S., The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. *Research in Science Education* **2018**, 48 (6), 1273-1296.

-
71. Guspatni, G.; Kurniawati, Y., Validity and Reliability Testing of an e-learning Questionnaire for Chemistry Instruction. *IOP Conference Series: Materials Science and Engineering* **2018**, 335, 012102.
72. Mohr, T. S., Why women don't apply for jobs unless they're 100% qualified. *Harvard Business Review* **2014**, 25.
73. Hengel, E. (2021). Peere.org. Retrieved 23 September 2021, from [Publishing while female - Are women held to higher standards? Evidence from peer review. \(peere.org\)](https://www.peere.org/publication/publishing-while-female-are-women-held-to-higher-standards-evidence-from-peer-review) (accessed 2021-09-23).
74. Leibbrandt, A.; List, J. A. *Do equal employment opportunity statements backfire? Evidence from a natural field experiment on job-entry decisions*; National Bureau of Economic Research: 2018.
75. Funk, C.; Parker, K., (2017) *Blacks in STEM jobs are especially concerned about diversity and discrimination in the workplace*. Pew Research Center: Washington, D.C. www.pewsocialtrends.org/2018/01/09/blacks-in-stem-jobs-are-especially-concerned-about-diversity-and-discrimination-in-the-workplace/ (accessed 2021-09-23).

Improving STEM faculty applicant pool- applicant demographics

Start of Block: Default Question Block

Intro

You are invited to participate in a research project being conducted at Indiana University designed to study mechanisms that could be implemented to increase the diversity of the applicants that apply to Science, Technology, Engineering, Math, and Medicine (STEMM) faculty searches.

We aim to understand what factors, and to what degree these factors are related to the decision of diverse applicants to apply to a search solicitation. This project will provide implications for facilitating the most appropriate language for future search committees that desire to diversity their faculty. **The questions are designed to anonymously acquire information about the language that you use in your faculty ads and the corresponding racial/ethnic/gender/LGBTQ+ demographics of your applicant pool. These questions can be answered for a singular search ad or as an aggregate of searches in a *singular year* from 2015-2020.**

If you agree to participate, we would like you to complete an online survey. You are free to stop taking this survey if you prefer not to answer any question. It will take approximately 10 minutes to complete. Confidentiality research data will be kept anonymous and secure (encrypted and stored in a locked file) for up to 10 years and will then be deleted. The questionnaire is anonymous and confidential - your name and email will never be attached to your answers.

Taking part in this research study is entirely voluntary. If you do not wish to participate in this study, you are free to decline. You may also withdraw from this project at any time, without consequences or recrimination. You will NOT be asked for an explanation for your withdrawal. Should you choose to withdraw after finishing the survey, please advise the project manager or any member of the research team. In the case of early withdrawal from the study, data will be destroyed immediately.

If you have any questions about this project, please contact Ann Kimble-Hill (ankimble@iu.edu) at Indiana University School of Medicine. If you have questions about the rights of research subjects, please contact the Office of Research Compliance by email researchcompliance@iu.edu.

Thank you very much for your consideration.

Q1 Do you agree to participate in this survey?

▼ Yes ... No

Skip To: Q1D2 If Do you agree to participate in this survey? = Yes

Skip To: End of Survey If Do you agree to participate in this survey? = No

Page Break

The following questions are designed to anonymously categorize your institution.

Q3 Does your institution serve a single sex?

- Yes- Male
 - Yes- Female
 - No
-

Q4 Does your institution have one of the following designations?

- Historically Black Colleges and Universities
 - Hispanic Serving Institutions
 - Tribal Colleges and Universities
 - Minority Institutions
 - No- Predominantly White Institution
 - Other, please specify _____
-

Q5 What is/are the general area(s) of study or research for the advertisement? Check all that apply.

- Medical Sciences
 - Life Sciences
 - Physical Sciences
 - Engineering
 - Mathematics & Statistics
 - Social Sciences
 - Other, please specify _____
-

Q6 Which of the following best describes your institution's Carnegie Classification?

- Doctoral University
 - Doctoral/Professional University
 - Master's College and University
 - Baccalaureate College
 - Associate's Dominant College
 - Special Focus Institution (2Yr)
 - Special Focus Institution (4Yr)
-

Page Break _____

The following questions are designed to understand how applicants could find out about your job postings

Q7 Where does your department usually post for job postings? Check all that apply.

- Discipline specific trade journals & job boards
 - General trade journals & job boards
 - Gender specific trade journals & job boards
 - Ethnicity specific trade journals & job boards
 - Institution websites & job boards
 - Employment websites
 - Connection sites (e.g. Facebook, Twitter, LinkedIn)
 - Other, please specify _____
-

Q8

Please rate how likely these statements are likely to be written into your job postings:

The advertisement includes a statement on the institution's areas of STEMM excellence.	▼ Extremely likely ... Extremely unlikely
The advertisement includes a statement on the institution's hiring focus.	▼ Extremely likely ... Extremely unlikely
The advertisement includes a statement on the institution's commitment to diversity, equity, and inclusion.	▼ Extremely likely ... Extremely unlikely
The advertisement includes a statement on the institution's reputation for supporting new hires.	▼ Extremely likely ... Extremely unlikely
The advertisement includes a statement on the institution's surrounding area(s).	▼ Extremely likely ... Extremely unlikely

Q9 Please supply the diversity, equity, inclusion and respect language that is used in your ad(s)?

Page Break

The following questions are designed to anonymously determine the **demographics of your applicant pool**. These questions can be answered for a **singular search ad or as an aggregate of searches** in a singular year.

Q10 What year was the ad(s) placed?

- 2015
 - 2016
 - 2017
 - 2018
 - 2019
 - 2020
-

Q11 What were the total number of applicants to your search?

- 0-100 applicants
 - 101-200 applicants
 - 201-400 applicants
 - 401+ applicants
-

Q12 Does your institution collect racial/ethnic demographic information from your applicants?

- Yes
- No

Skip To: Q17 If Does your institution collect racial/ethnic demographic information from your applicants? = No

Skip To: Q13 If Does your institution collect racial/ethnic demographic information from your applicants? = Yes

Page Break

Q13 Does your institution have a mechanism for communicating diversity indicators on applicants when the search committee is reviewing applications?

Yes

No

Q14 What was the total percentage (%) of applicants having **Black or African** Descent?

0%

1-5%

6-10%

11-20%

21-50%

51-70%

71-100%

Q15 What was the total percentage (%) of applicants having **Native American** (Including Native Hawaiian, American Indian, or Alaska Native) Descent?

- 0%
 - 1-5%
 - 6-10%
 - 11-20%
 - 21-50%
 - 51-70%
 - 71-100%
-

Q16 What was the total percentage (%) of applicants having **Hispanic or Latinx** ethnicity?

- 0%
 - 1-5%
 - 6-10%
 - 11-20%
 - 21-50%
 - 51-70%
 - 71-100%
-

Page Break

Q17 Does your institution collect gender demographic information from your applicants?

Yes

No

Skip To: Q17 If Does your institution collect gender demographic information from your applicants? = Yes

Skip To: Q19 If Does your institution collect gender demographic information from your applicants? = No

Page Break

Q17 What was the total percentage (%) of applicants having declared a **female gender** (e.g. cis, trans)?

- 0%
 - 1-5%
 - 6-10%
 - 11-20%
 - 21-50%
 - 51-70%
 - 71-100%
-

Q18 What was the total percentage (%) of applicants having declared a **non-binary gender** (e.g. non-binary, third gender, prefer to self-describe)?

- 0%
 - 1-5%
 - 6-10%
 - 11-20%
 - 21-50%
 - 51-70%
 - 71-100%
-

Page Break

Q19 Does your institution collect LGTBQ+ demographic information from your applicants?

Yes

No

Skip To: Q20 If Does your institution collect LGTBQ+ demographic information from your applicants? = Yes

Skip To: End of Survey If Does your institution collect LGTBQ+ demographic information from your applicants? = No

Page Break

Q20 What was the total percentage (%) of applicants identified as being **non-heterosexual** (e.g. gay, lesbian, bisexual, pan-sexual, etc.)?

- 0%
 - 1-5%
 - 6-10%
 - 11-20%
 - 21-50%
 - 51-70%
 - 71-100%
-

Q21 What was the total percentage (%) of applicants identified as being **non-gender conforming** (e.g. trans, non-binary, queer, spectrum of expression, etc.)?

- 0%
- 1-5%
- 6-10%
- 11-20%
- 21-50%
- 51-70%
- 71-100%

End of Block: Default Question Block

Institutional Survey Demographics & Responses

Figures

Figure A. Year advertisements were placed by reporting MSI, WC, and PWI institutions.

Figure B. General areas of study or research for the advertisements placed by reporting MSI, WC, and PWI institutions.

Figure C. Carnegie classification demographics of institutions participating in survey.¹

Figure D. Where the respondents placed job advertisements

Figure E. Institutions self-report of their advertisement including a statement on the institution's areas of Science, Technology, Engineering, Math and Medicine (STEMM) excellence.

Figure F. Institutions self-report of their advertisement including a statement on the institution's areas of hiring focus.

Figure G. Institutions self-report of their advertisement including a statement on the institution's commitment to diversity, equity, and inclusion.

Figure H. Institutions self-report of their advertisement including a statement on the institution's reputation for supporting new hires.

Figure I. Institutions self-report of their advertisement including a statement on the institution's surrounding area(s).

Figure J. Institutions self-report of whether their practice is to collect racial/ethnic demographic information from applicants.

Figure K. Institutions self-report of whether their practice is to communicate diversity indicators of applicants to the search committee.

Figure L. Institutions self-report of whether their practice is to collect gender demographic information from applicants.

Figure M. Institutions self-report of whether their practice is to collect LGBTQ+ demographic information from applicants.

Figure N. Institutions self-report of total number of applicants to their advertisement.

Figure O. Types of DEI language supplied.

Figure P. Distribution of applicant gender demographics from WC (A), MSI (B) and PWI (C) Respondents.

Figure Q. Distribution of applicant racial/ethnic demographics from MSI (A) and PWI (B) Respondents.

Tables

Supplemental Table A. Averaged minoritized racial/ethnicity and gender demographics of applicants.

Supplemental Table B. Average score of supplied advertisement DEI language.

Supplemental Table C. Averaged applicant responses and Pearson correlation (r) of responses to likelihood of including language towards specific statements.

Supplemental Table D. Pearson correlation (r) of %applicant demographics to supplied advertisement language DEI score.

Supplemental Table E. Pearson correlation (r) of %applicant demographics to total number of applicants.

References

Abbreviations

DEIR = Diversity, Equity, Inclusion, and Respect

MSI = Minority Serving Institution

PWI = Predominantly White Institution

WC = Women's College and University

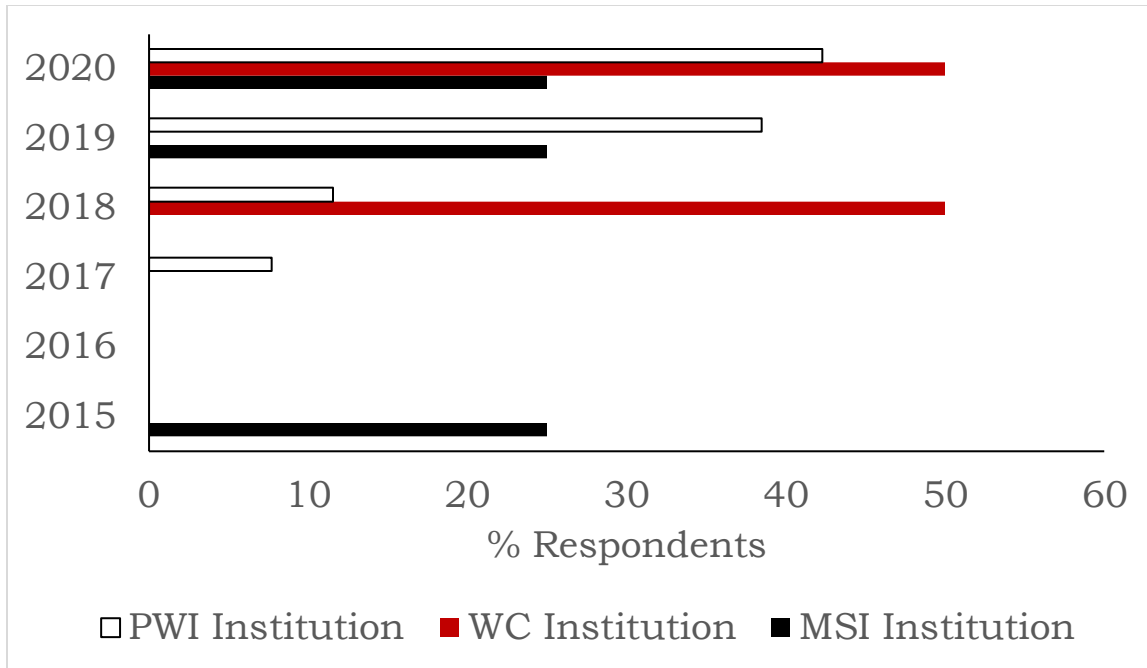


Figure A. Year advertisements were placed by reporting MSI, WC, and PWI institutions.

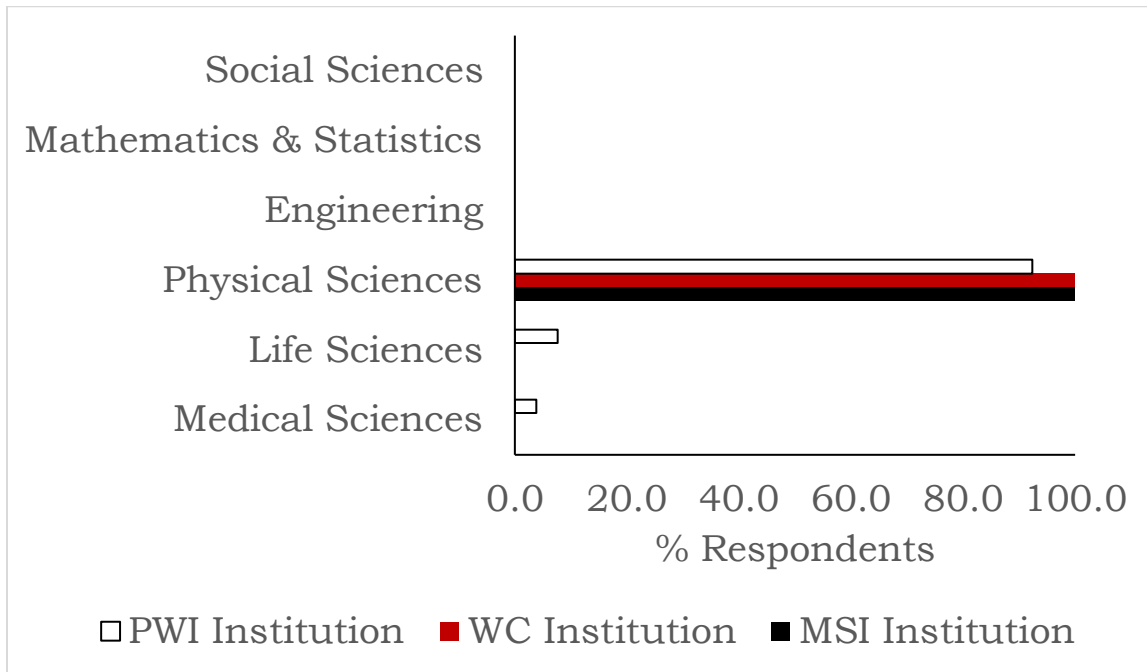


Figure B. General areas of study or research for the advertisements placed by reporting MSI, WC, and PWI institutions.

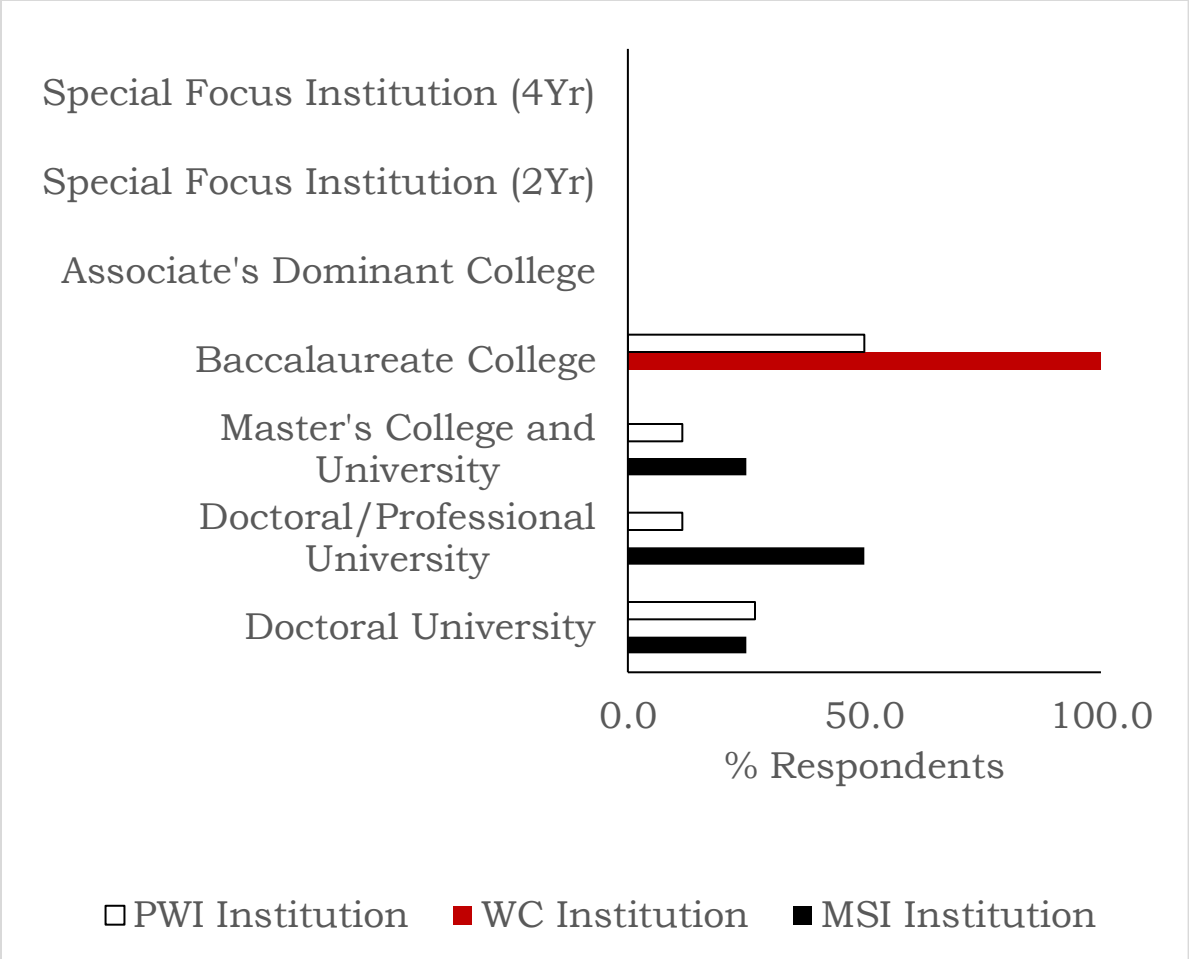


Figure C. Carnegie classification demographics of institutions participating in survey.¹

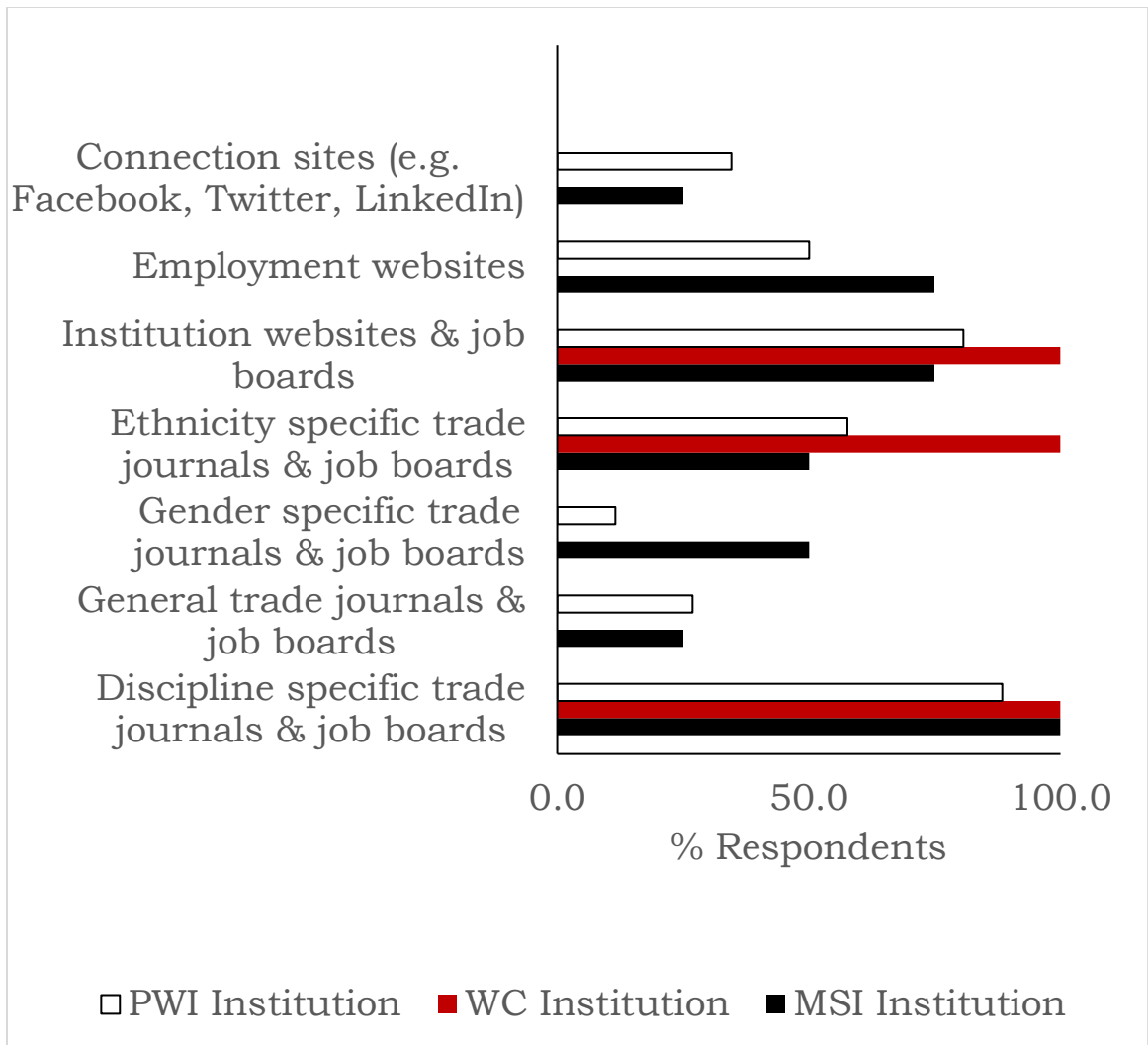


Figure D. Where the respondents placed job advertisements

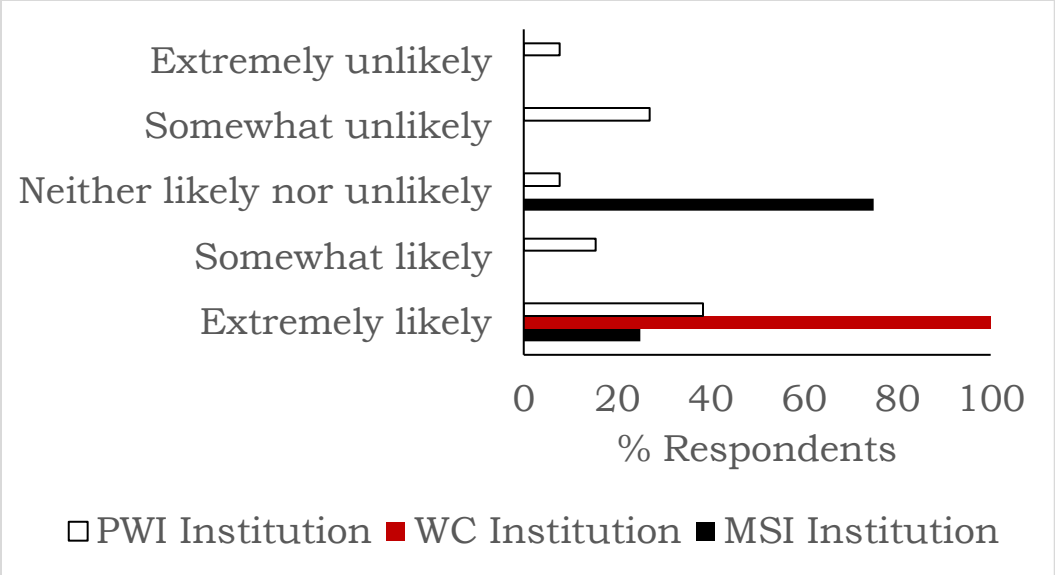


Figure E. Institutions self-report of their advertisement including a statement on the institution’s areas of Science, Technology, Engineering, Math and Medicine (STEMM) excellence.

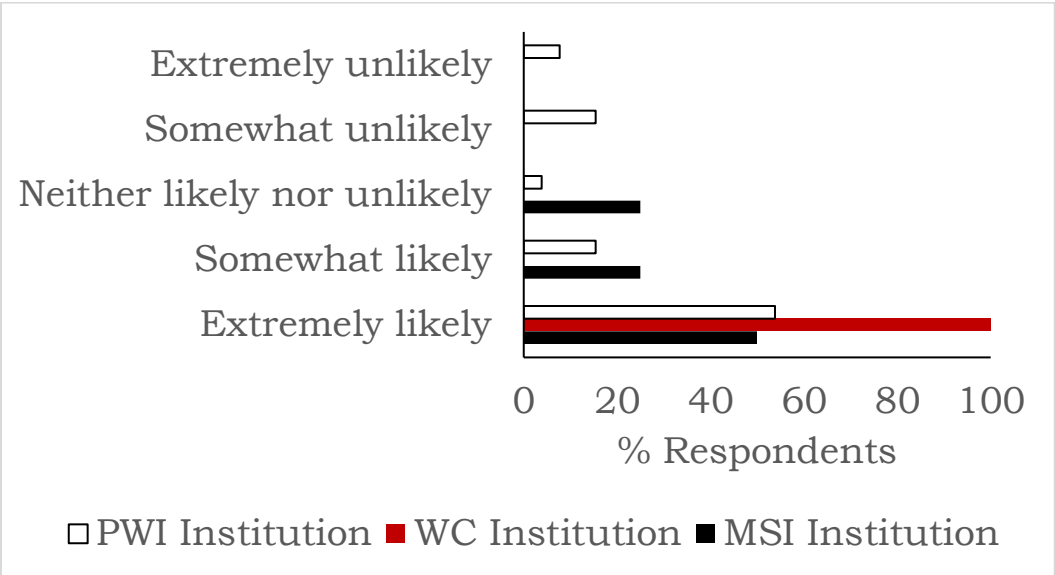


Figure F. Institutions self-report of their advertisement including a statement on the institution’s areas of hiring focus.

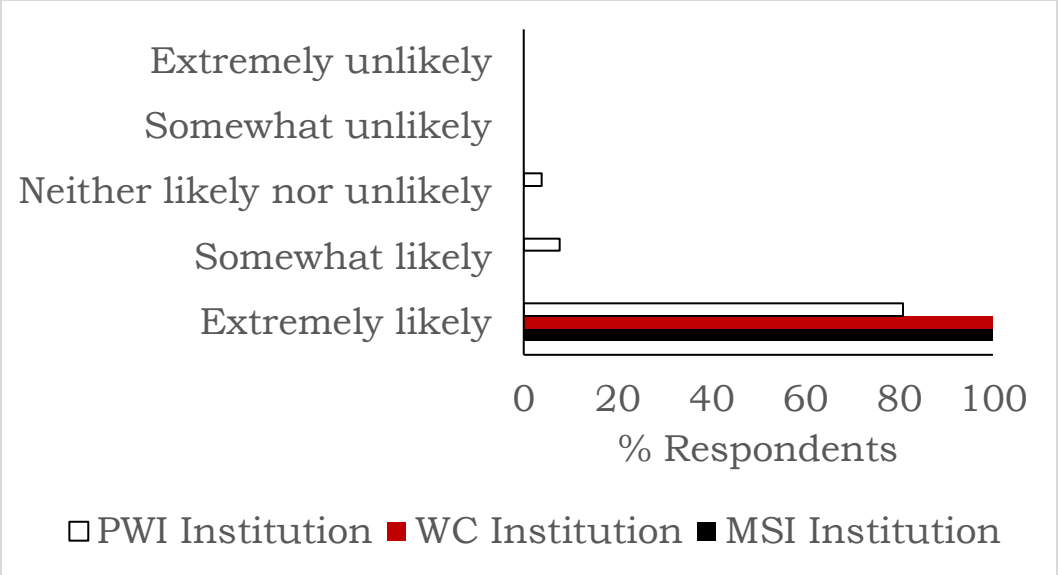


Figure G. Institutions self-report of their advertisement including a statement on the institution’s commitment to diversity, equity, and inclusion.

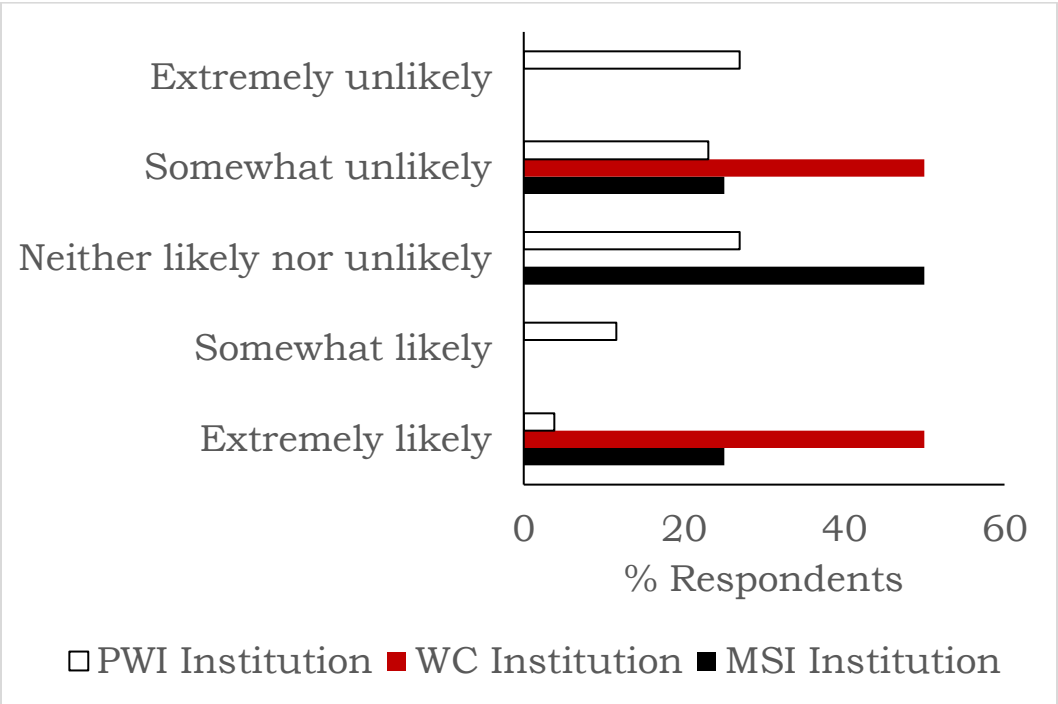


Figure H. Institutions self-report of their advertisement including a statement on the institution’s reputation for supporting new hires.

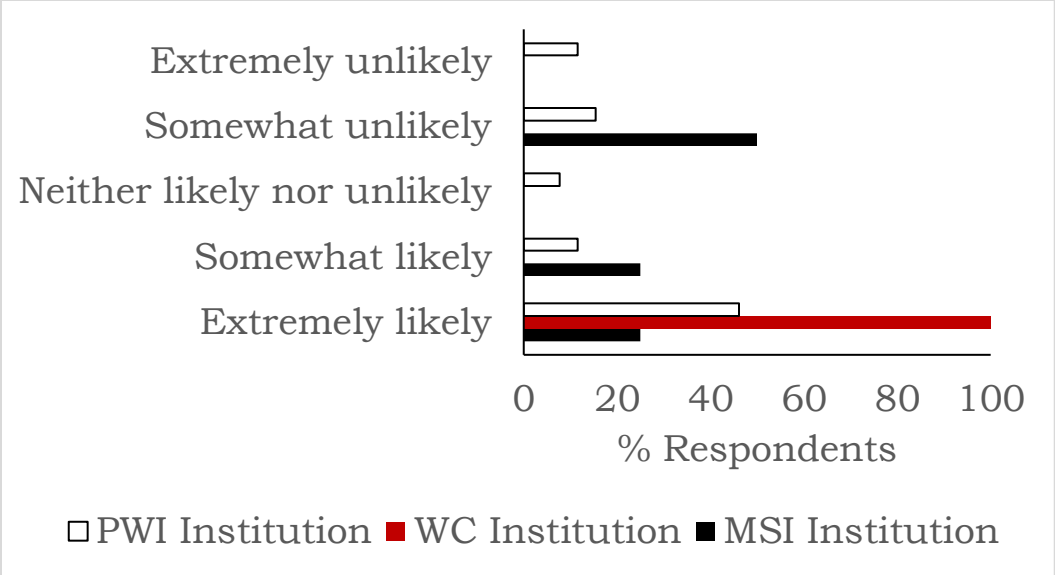


Figure I. Institutions self-report of their advertisement including a statement on the institution’s surrounding area(s).

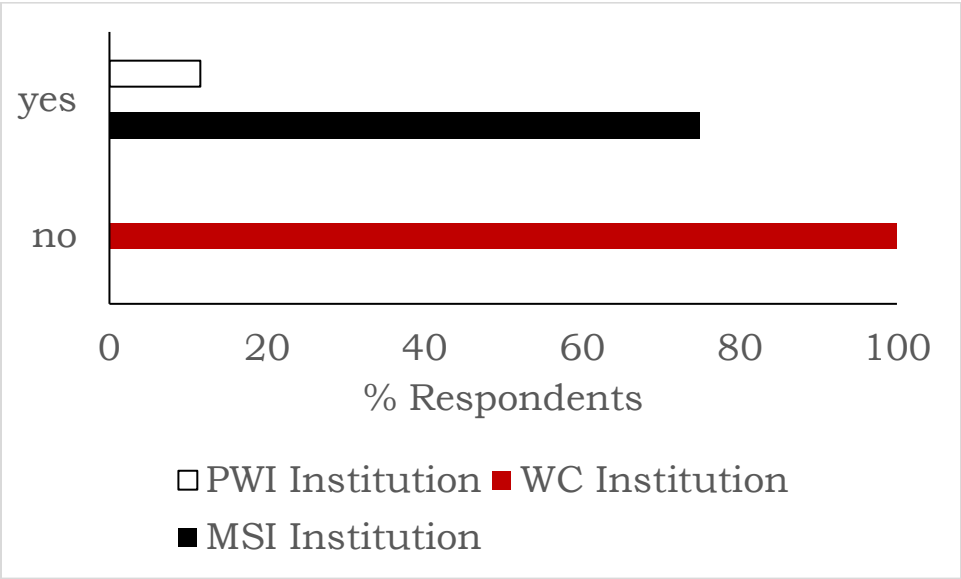


Figure J. Institutions self-report of whether their practice is to collect racial/ethnic demographic information from applicants.

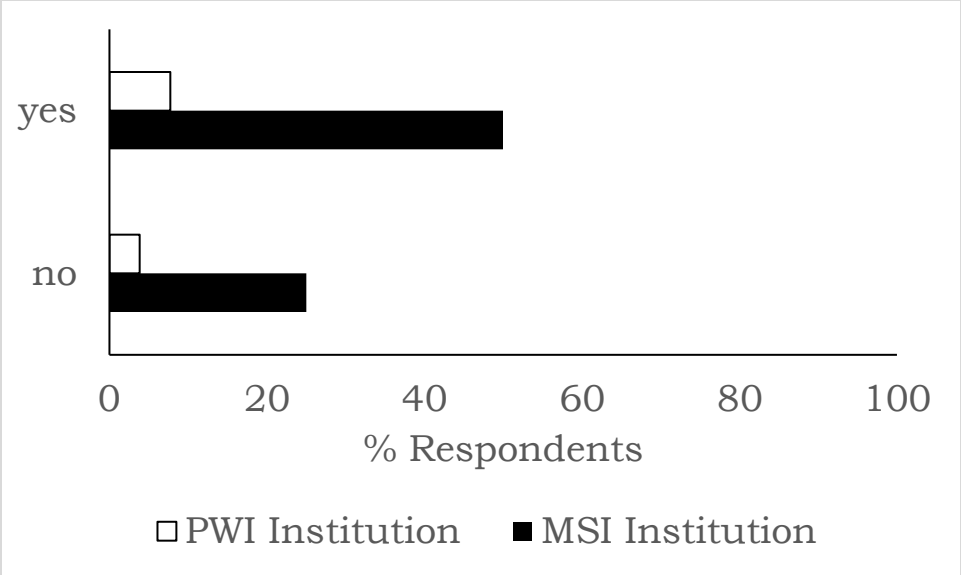


Figure K. Institutions self-report of whether their practice is to communicate diversity indicators of applicants to the search committee.

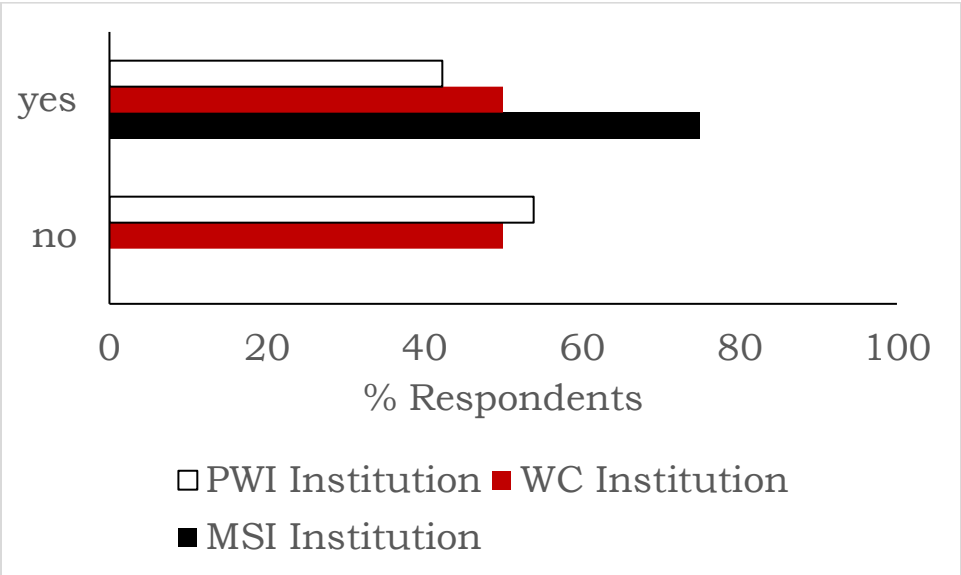


Figure L. Institutions self-report of whether their practice is to collect gender demographic information from applicants.

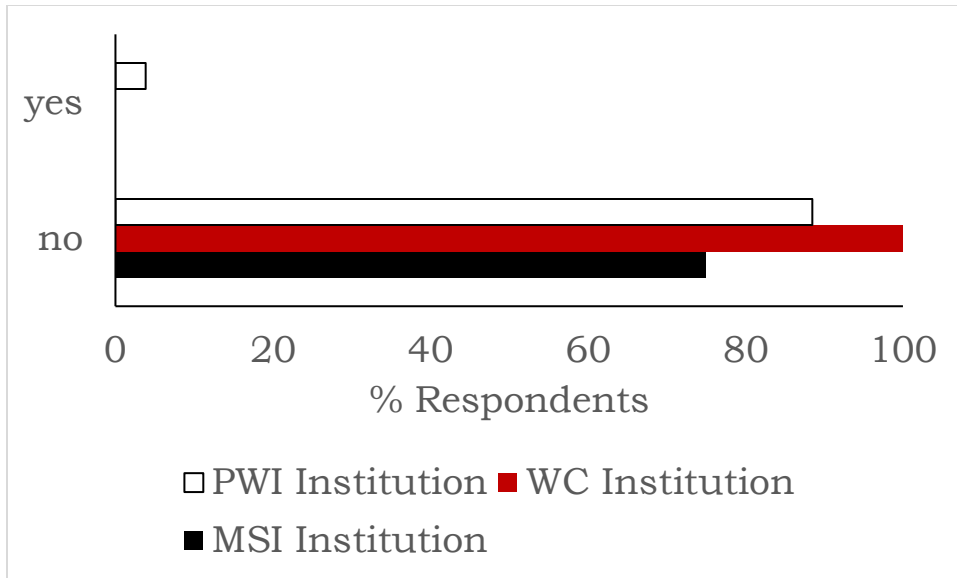


Figure M. Institutions self-report of whether their practice is to collect LGBTQ+ demographic information from applicants.

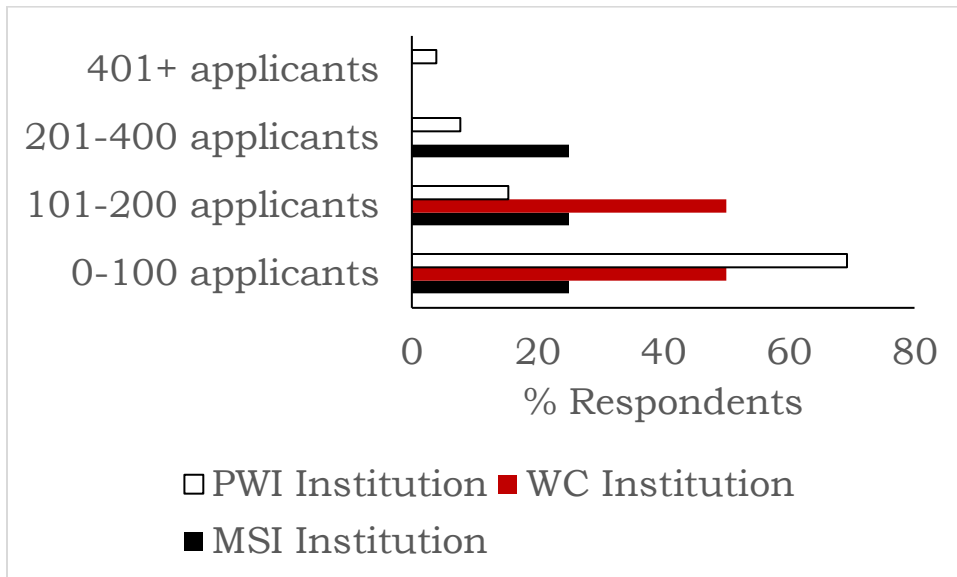


Figure N. Institutions self-report of total number of applicants to their advertisement.

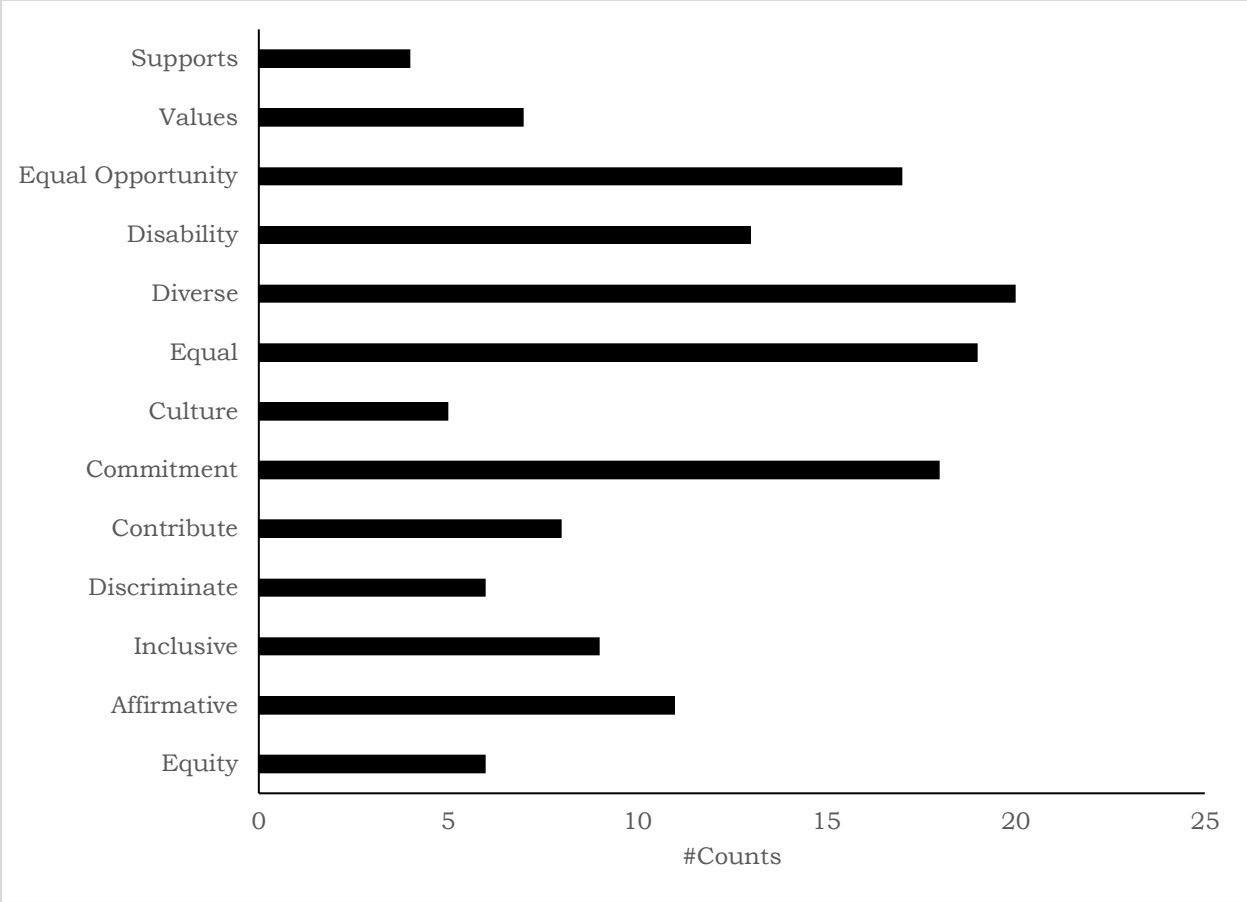


Figure O. Types of DEI language supplied. Sum of the total number of responses that included DEI language towards each of the 16 themes that arose from the participating institutions.

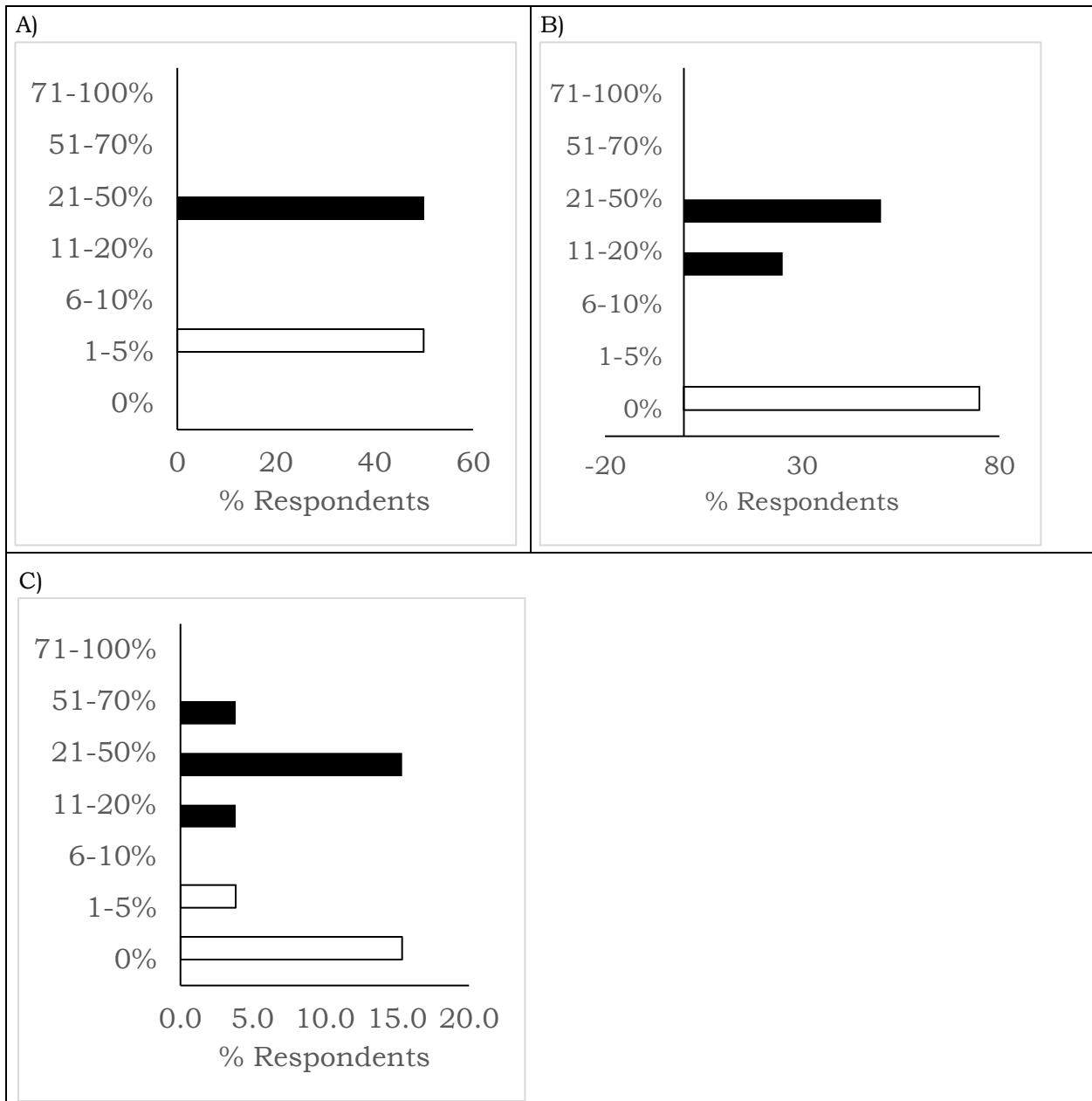


Figure P. Distribution of applicant gender demographics from WC (A), MSI (B) and PWI (C) Respondents.

Percentage of applicants self-identifying as Female (Black), Non-binary (white).

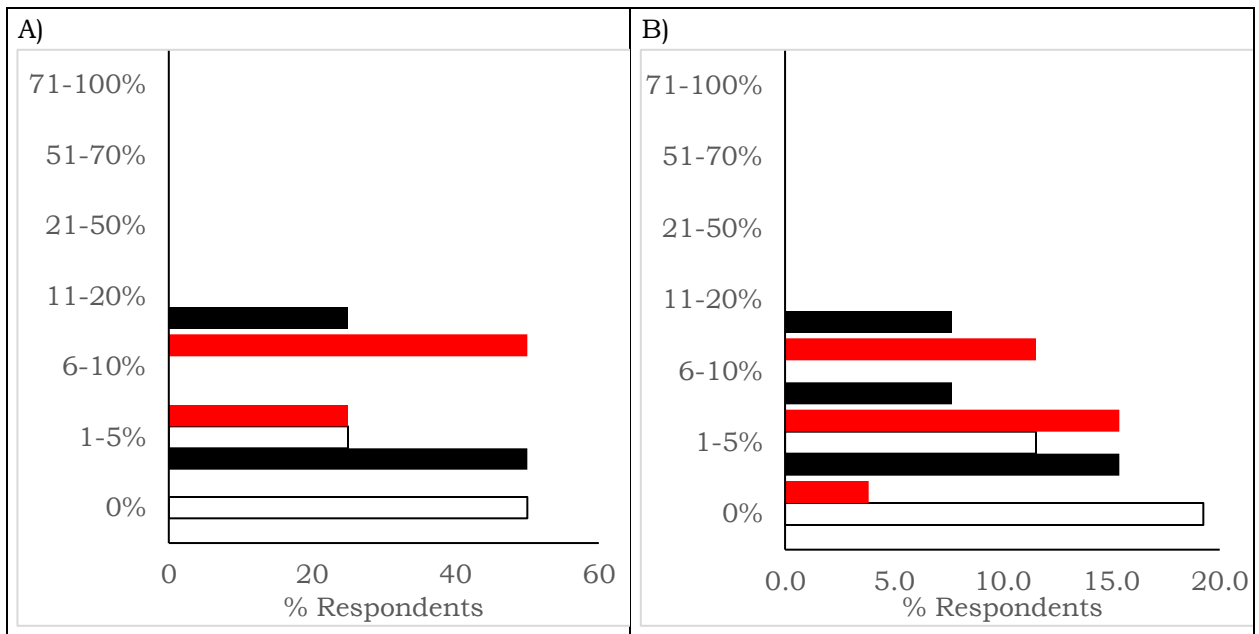


Figure Q. Distribution of applicant racial/ethnic demographics from MSI (A) and PWI (B) Respondents.

Percentage of applicants self-identifying as Black/African Descent (Black), Hispanic/Latinx (red), and Native Americans (white).

Supplemental Table A. Averaged minoritized racial/ethnicity and gender demographics of applicants

		% applicants Black/African Descent	% Native American (Including Native Hawaiian, American Indian, or Alaska Native) Descent	% Hispanic or Latinx ethnicity	%female gender (e.g. cis, trans)?	%non- binary gender (e.g. non- binary, third gender, prefer to self- describe)?
WC	0%	0	0	0	0	0
	1-5%	0	0	0	0	50
	6-10%	0	0	0	0	0
	11-20%	0	0	0	0	0
	21-50%	0	0	0	50	0
	51-70%	0	0	0	0	0
	71-100%	0	0	0	0	0
MSI	0%	0	50	0	0	75
	1-5%	50	25	25	0	0
	6-10%	0	0	50	0	0
	11-20%	25	0	0	25	0
	21-50%	0	0	0	50	0
	51-70%	0	0	0	0	0
	71-100%	0	0	0	0	0
PWI	0%	0.0	19.2	3.8	0.0	15.4
	1-5%	15.4	11.5	15.4	0.0	3.8
	6-10%	7.7	0.0	11.5	0.0	0.0
	11-20%	7.7	0.0	0.0	3.8	0.0
	21-50%	0.0	0.0	0.0	15.4	0.0
	51-70%	0.0	0.0	0.0	3.8	0.0
	71-100%	0.0	0.0	0.0	0.0	0.0

Supplemental Table B. Average score of supplied advertisement DEI language

	WC	MSI	PWI	Total
average	7	6	4	5
stdev	3	3	2	2
count	2	4	25	31

Supplemental Table C. Averaged applicant responses and Pearson correlation (r) of responses to likelihood of including language towards specific statements.

(Likert scale: 1- very likely, 5- very unlikely)

	The advertisement includes a statement on the institution's areas of STEMM excellence.	The advertisement includes a statement on the institution's hiring focus.	The advertisement includes a statement on the institution's commitment to diversity, equity, and inclusion.	The advertisement includes a statement on the institution's reputation for supporting new hires.	The advertisement includes a statement on the institution's surrounding area(s).
average	2.4	1.9	1.1	3.4	2.3
stdev	1.4	1.3	0.4	1.3	1.5
r _{STEMM excellence}	1.00	0.64	-0.04	0.48	0.01
r _{DEI commitment}	-0.04	0.07	1.00	-0.10	0.01
r _{new hire support}	0.48	0.57	-0.10	1.00	0.34
r _{DEI Score}	-0.04	-0.12	0.35	0.14	-0.30

Supplemental Table D. Pearson correlation (r) of %applicant demographics to supplied advertisement language DEI score.

	% Black or African Descent	% Native American (Including Native Hawaiian, American Indian, or Alaska Native) Descent	% Hispanic or Latinx ethnicity	% Female gender (e.g. cis, trans)
r _{DEI Score}	-0.40	-0.40	0.23	-0.25

Supplemental Table E. Pearson correlation (r) of %applicant demographics to total number of applicants.

	% Black or African Descent	% Native American (Including Native Hawaiian, American Indian, or Alaska Native) Descent	% Hispanic or Latinx ethnicity	% Female gender (e.g. cis, trans)
r _{DEI Score}	-0.68	0.53	0.25	-0.37

References

1. The Carnegie Classification of Institutions of Higher Education. <http://carnegieclassifications.iu.edu/>.

Improving STEM Faculty Applicant Pool Diversity

Start of Block: Default Question Block

You are invited to participate in a research project being conducted at Indiana University designed to study mechanisms that could be implemented to increase the diversity of the applicants that apply to Science, Technology, Engineering, Math, and Medicine (STEMM) faculty searches.

We aim to understand what factors, and to what degree these factors are related to the decision of diverse applicants to apply to a search solicitation. This project will provide implications for facilitating the most appropriate language for future search committees that desire to diversity their faculty.

If you agree to participate, we would like you to complete an online survey. You are free to stop taking this survey if you prefer not to answer any question. It will take approximately 20-25 minutes. Confidentiality research data will be kept anonymous and secure (encrypted and stored in a locked file) for up to 10 years and will then be deleted. The questionnaire is anonymous and confidential - your name and email will never be attached to your answers.

Taking part in this research study is entirely voluntary. If you do not wish to participate in this study, you are free to decline. You may also withdraw from this project at any time, without consequences or recrimination. You will NOT be asked for an explanation for your withdrawal. Should you choose to withdraw after finishing the survey, please advise the project manager or any member of the research team. In the case of early withdrawal from the study, data will be destroyed immediately.

If you have any questions about this project, please contact Ann Kimble-Hill (ankimble@iu.edu) at Indiana University School of Medicine. If you have questions about the rights of research subjects, please contact the Office of Research Compliance by email researchcompliance@iu.edu.

Thank you very much for your consideration.

Do you agree to participate in this survey?

▼ Yes (1) ... No (2)

Page Break

The following questions are designed to anonymously determine the demographics of the respondent.

With which gender do you most identify?

- Male (1)
 - Female (2)
 - Non-binary/third gender (3)
 - Prefer to self-describe (4) _____
 - Prefer not to disclose (5)
-

Please specify your racial background (choose all that apply)

- White (Caucasian) (1)
 - Black or African Descent (2)
 - Native American (Including Native Hawaiian, American Indian, or Alaska Native) (3)
 - Asian (Including Pacific Islanders) (4)
 - Other, please specify (5) _____
 - Prefer not to disclose (6)
-

Are you of Hispanic or Latino ethnicity?

- Yes (1)
 - No (2)
 - Prefer not to disclose (3)
-

What is/are your general area(s) of study or research? Check all that apply.

- Medical Sciences (1)
 - Life Sciences (2)
 - Physical Sciences (3)
 - Engineering (4)
 - Mathematics & Statistics (5)
 - Social Sciences (6)
 - Other, please specify (7) _____
-

What sector best describes where you currently work?

- Academic (1)
 - Government (2)
 - Industry (3)
 - Non-profit (4)
 - Policy/Communications (5)
 - Retired/Not currently working (6)
 - Other, please specify (7) _____
-

Which of the following categories best represents your current role?

- Undergraduate scholar (1)
 - Graduate/Professional School Student (2)
 - Post-doctoral scholar/fellow (3)
 - Early Career (0-9 yrs post-graduation) (4)
 - Mid-Career (10-19 yrs post-graduation) (5)
 - Senior Level Career (20+ yrs post-graduation) (6)
 - Retired/Not currently working (7)
 - Other, please specify (8) _____
-

Are you currently looking for a new role?

- Yes (1)
- Depends on the opportunity (2)
- No (3)
- Gave up looking for a new role (4)

Page Break

The following questions are designed to understand how applicants find out about job postings

Where do you usually look for job postings? Check all that apply.

- Discipline specific trade journals & job boards (1)
 - General trade journals & job boards (2)
 - Gender specific trade journals & job boards (3)
 - Ethnicity specific trade journals & job boards (4)
 - Institution websites & job boards (5)
 - Employment websites (6)
 - Connection sites (e.g. Facebook, Twitter, LinkedIn) (7)
 - Other, please specify (8) _____
-

How do you usually hear about job postings? Check all that apply.

Electronic newsletters or automatically generated emails from posting sites (1)

Friends & Colleagues (2)

Visit various websites periodically (3)

Head hunters or search firms (4)

Other, please specify (5) _____

Page Break

The following questions are designed to understand how applicants prioritize applying to job postings

I will apply to any job posting that I think requires my skill set.

- Strongly agree (1)
 - Somewhat agree (2)
 - Neither agree nor disagree (3)
 - Somewhat disagree (4)
 - Strongly disagree (5)
-

I only apply to job postings in certain geographical locations.

- Strongly agree (1)
 - Somewhat agree (2)
 - Neither agree nor disagree (3)
 - Somewhat disagree (4)
 - Strongly disagree (5)
-

I only apply to job postings in work environments that I think are accepting and welcoming to me.

- Strongly agree (1)
 - Somewhat agree (2)
 - Neither agree nor disagree (3)
 - Somewhat disagree (4)
 - Strongly disagree (5)
-

I only apply to job postings located in a surrounding environment that I think are accepting and welcoming to me.

- Strongly agree (1)
 - Somewhat agree (2)
 - Neither agree nor disagree (3)
 - Somewhat disagree (4)
 - Strongly disagree (5)
-

The language an institution includes in their diversity, equity, and inclusion statement weighs in my decision to apply for that position.

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Please rate how likely these statements are to prompt you to apply to a job posting.
Information written in the job posting:

The advertisement includes a statement on the institution's areas of STEMM excellence . (1)	▼ Extremely likely (1) ... Extremely unlikely (5)
The advertisement includes a statement on the institution's hiring focus . (2)	▼ Extremely likely (1) ... Extremely unlikely (5)
The advertisement includes a statement on the institution's commitment to diversity . (3)	▼ Extremely likely (1) ... Extremely unlikely (5)
The advertisement includes a statement on the institution's reputation for supporting new hires . (4)	▼ Extremely likely (1) ... Extremely unlikely (5)
The advertisement includes a statement on the institution's surrounding area(s) . (5)	▼ Extremely likely (1) ... Extremely unlikely (5)

What types of language in the diversity, equity, and inclusion statement encourages you to apply for a position?

Page Break

The following questions are designed to understand how applicants perceive diversity, equity, and inclusion statements in job postings.

The following three (3) sample ads are written to be generic and non-specific to any institution, city, or state. Please read the following sample ads and reply to the associated questions.

Page Break

Sample Ad #1:

Nonspecific University (NU) is seeking applications for tenure-track faculty positions in STEMM specific disciplines as a part of the School's rapid hiring initiative. Candidates should have expertise in various disciplines including in STEMM; and will be expected to develop a research program in their fields that will build upon and synergize with existing strengths and focused investments within the related departments of NU. The successful candidate will be expected to sustain an independent extramurally funded research program, participate in an established and growing educational community, teach/train students and fellows, and engage in multi-disciplinary research interactions complementary to their scientific interests.

Interested individuals should include their cover letter, curriculum vitae, summary of future research plans, and the names and contact information for 3-5 references in electronic format at <http://jobs.nu.edu/postings/>. The search committee will begin considering complete applications on an on-going basis until the positions are filled. Questions can be directed to jobs-notreal@nu.edu.

About the school: Nonspecific University is the largest non-specific and not-real school in the US and is annually ranked among the top schools in the US by US News & World Report. NU is dedicated to diversity, equity and inclusion. In addition, it is the University's policy to provide reasonable ADA accommodations for qualified persons with disabilities. Nonspecific University is an EEO/AA Employer, M/F/D. More information about diversity and inclusion efforts at NU can be found at <https://faculty.nu.edu/diversity>. More information about the rapid hiring initiative can be found at <https://rapidhiring.nu.edu/notreal>.

About the surrounding environment: Everydaytown is the 10th largest city in the United States and is growing and thriving economically thanks to a strong corporate base anchored by the physical and life sciences. The vibrant downtown is a bustling commercial center, entertainment destination and residential neighborhood. The surrounding suburbs have been ranked the #1 place to live in the country and are consistently ranked in the top 25 year after year. The city enjoys a vibrant quality of life, rich amenities and flourishing art, music, and food culture, as well as internationally recognized amateur and professional sports teams and outdoor recreation areas. Please check out Visit Everydaytown (<https://www.visitourcity.com/>) to learn more about our city.

Please share your response to the language included in **Sample Ad #1**:

<p>I am likely to apply to this job posting based on the included language towards expertise and expectations. (1)</p>	<p>▼ Strongly agree (1) ... Strongly disagree (5)</p>
<p>I am likely to apply to this job posting based on the included diverse, equitable, and inclusive environment language. (2)</p>	<p>▼ Strongly agree (1) ... Strongly disagree (5)</p>
<p>The language of this job posting shows that the institution desires to be a diverse, equitable, and inclusive educational environment. (3)</p>	<p>▼ Strongly agree (1) ... Strongly disagree (5)</p>
<p>The language of this job posting shows that the institution desires to be a diverse, equitable, and inclusive faculty constituency. (4)</p>	<p>▼ Strongly agree (1) ... Strongly disagree (5)</p>
<p>The placement of inclusive language showed that the institution had a commitment to building a diverse, equitable, and inclusive community. (5)</p>	<p>▼ Strongly agree (1) ... Strongly disagree (5)</p>

Optional: Please provide feedback on language and placement of verbiage that would make **Sample Ad #1** more appealing to you.

Page Break

Sample Ad #2:

Nonspecific University (NU) is seeking applications for tenure-track faculty positions in STEMM specific disciplines as a part of the School's rapid hiring initiative. Candidates should have expertise in various disciplines including in STEMM; and will be expected to develop a research program in their fields that will build upon and synergize with existing strengths and focused investments within the related departments of NU. The successful candidate will be expected to sustain an independent extramurally funded research program, participate in an established and growing educational community, teach/train students and fellows, and engage in multi-disciplinary research interactions complementary to their scientific interests.

Interested individuals should include a statement outlining their approach to integrating diversity in their pursuit of academic excellence in their cover letter or separately along with their curriculum vitae, summary of future research plans, and the names and contact information for 3-5 references in electronic format at <http://jobs.nu.edu/postings/>. The search committee will begin considering complete applications on an on-going basis until the positions are filled. Questions can be directed to jobs-notreal@nu.edu.

About the school: Nonspecific University is the largest non-specific and not-real school in the US and is annually ranked among the top schools in the US by US News & World Report. NU is dedicated to diversity, equity and inclusion as our mission contains three foundational pillars: representational diversity, inclusive working and learning environment, and cultural competence. We highly encourage applications from women and underrepresented minorities as NU is strongly committed to achieving excellence through cultural diversity. In addition, it is the University's policy to provide reasonable ADA accommodations for qualified persons with disabilities. Candidates must be sensitive to the needs of and possess an interest in working in an academic community that is diverse with regard to gender, race, color, ethnicity, nationality, sexual orientation or identity, disability status, protected veteran status, and religion. Nonspecific University is an EEO/AA Employer, M/F/D. More information about diversity and inclusion efforts at NU can be found at <https://faculty.nu.edu/diversity>. More information about the rapid hiring initiative can be found at <https://rapidhiring.nu.edu/notreal>.

About the surrounding environment: Everydaytown is the 10th largest city in the United States and is growing and thriving economically thanks to a strong corporate base anchored by the physical and life sciences. The vibrant downtown is a bustling commercial center, entertainment destination and residential neighborhood. The surrounding suburbs have been ranked the #1 place to live in the country and are consistently ranked in the top 25 year after year. The city enjoys a vibrant quality of life, rich amenities and flourishing art, music, and food culture, as well as internationally recognized amateur and professional sports teams and outdoor recreation areas. Please check out Visit Everydaytown (<https://www.visitourcity.com/>) to learn more about our city.

Please share your response to the language included in **Sample Ad #2**:

<p>I am likely to apply to this job posting based on the included language towards expertise and expectations. (1)</p>	<p>▼ Strongly agree (1) ... Strongly disagree (5)</p>
<p>I am likely to apply to this job posting based on the included diverse, equitable, and inclusive environment language. (2)</p>	<p>▼ Strongly agree (1) ... Strongly disagree (5)</p>
<p>The language of this job posting shows that the institution desires to be a diverse, equitable, and inclusive educational environment. (3)</p>	<p>▼ Strongly agree (1) ... Strongly disagree (5)</p>
<p>The language of this job posting shows that the institution desires to be a diverse, equitable, and inclusive faculty constituency. (4)</p>	<p>▼ Strongly agree (1) ... Strongly disagree (5)</p>
<p>The placement of inclusive language showed that the institution had a commitment to building a diverse, equitable, and inclusive community. (5)</p>	<p>▼ Strongly agree (1) ... Strongly disagree (5)</p>

Optional: Please provide feedback on language and placement of verbiage that would make **Sample Ad #2** more appealing to you.

Page Break

Sample Ad #3:

Nonspecific University (NU) is seeking applications for tenure-track faculty positions in STEMM specific disciplines as a part of the School's rapid hiring initiative. Candidates should have expertise in various disciplines including in STEMM; and will be expected to develop a research program in their fields that will build upon and synergize with existing strengths and focused investments within the related departments of NU. The successful candidate will be expected to sustain an independent extramurally funded research program, participate in an established and growing educational community, teach/train students and fellows, and engage in multi-disciplinary research interactions complementary to their scientific interests.

NU is dedicated to diversity, equity and inclusion as our mission contains three foundational pillars: representational diversity, inclusive working and learning environment, and cultural competence. We highly encourage applications from women and underrepresented minorities as NU is strongly committed to achieving excellence through cultural diversity. In addition, it is the University's policy to provide reasonable ADA accommodations for qualified persons with disabilities. Candidates must be sensitive to the needs of and possess an interest in working in an academic community that is diverse with regard to gender, race, color, ethnicity, nationality, sexual orientation or identity, disability status, protected veteran status, and religion. Nonspecific University is an EEO/AA Employer, M/F/D. More information about diversity and inclusion efforts at NU can be found at <https://faculty.nu.edu/diversity>.

Interested individuals should include a statement outlining their approach to integrating diversity in their pursuit of academic excellence in their cover letter or separately along with their curriculum vitae, summary of future research plans, and the names and contact information for 3-5 references in electronic format at <http://jobs.nu.edu/postings/>. The search committee will begin considering complete applications on an on-going basis until the positions are filled. Questions can be directed to jobs-notreal@nu.edu.

About the school: Nonspecific University is the largest non-specific and not-real school in the US and is annually ranked among the top schools in the US by US News & World Report. More information about the rapid hiring initiative can be found at <https://rapidhiring.nu.edu/notreal>.

About the surrounding environment: Everydowntown is the 10th largest city in the United States and is growing and thriving economically thanks to a strong corporate base anchored by the physical and life sciences. The vibrant downtown is a bustling commercial center, entertainment destination and residential neighborhood. The surrounding suburbs have been ranked the #1 place to live in the country and are consistently ranked in the top 25 year after year. The city enjoys a vibrant quality of life, rich amenities and flourishing art, music, and food culture, as well as internationally recognized amateur and professional sports teams and outdoor recreation areas. Please check out Visit Everydowntown (<https://www.visitourcity.com/>) to learn more about our city.

Please share your response to the language included in **Sample Ad #3**:

<p>I am likely to apply to this job posting based on the included language towards expertise and expectations. (1)</p>	<p>▼ Strongly agree (1) ... Strongly disagree (5)</p>
<p>I am likely to apply to this job posting based on the included diverse, equitable, and inclusive environment language. (2)</p>	<p>▼ Strongly agree (1) ... Strongly disagree (5)</p>
<p>The language of this job posting shows that the institution desires to be a diverse, equitable, and inclusive educational environment. (3)</p>	<p>▼ Strongly agree (1) ... Strongly disagree (5)</p>
<p>The language of this job posting shows that the institution desires to be a diverse, equitable, and inclusive faculty constituency. (4)</p>	<p>▼ Strongly agree (1) ... Strongly disagree (5)</p>
<p>The placement of inclusive language showed that the institution had a commitment to building a diverse, equitable, and inclusive community. (5)</p>	<p>▼ Strongly agree (1) ... Strongly disagree (5)</p>

Optional: Please provide feedback on language and placement of verbiage that would make **Sample Ad #3** more appealing to you.

End of Block: Default Question Block

Potential Applicant Pool Survey Demographics & Responses

Figures

Figure S1. Responses by gender to the question “Where do you usually look for job postings?” (A), “How do you usually hear about job postings?” (B).

Figure S2. Responses by race/ethnicity to the question “Where do you usually look for job postings?” (A), “How do you usually hear about job postings?” (B).

Figure S3. Types of DEI language supplied that would encourage applying for a position.

Figure S4. Types of DEI language supplied that would encourage applying to Ad #1.

Figure S5. Types of DEI language supplied that would encourage applying to Ad #2.

Figure S6. Types of DEI language supplied that would encourage applying to Ad #3.

Tables

Supplemental Table 1. With which gender do you most identify?

Supplemental Table 2. Please specify your racial background (multiple choice)

Supplemental Table 3. Are you of Hispanic or Latinx ethnicity?

Supplemental Table 4. What is/are your general area(s) of study or research? (multiple choice)

Supplemental Table 5. What sector best describes where you currently work?

Supplemental Table 6. Which of the following categories best represents your current role?

Supplemental Table 7. Are you currently looking for a new role?

Supplemental Table 8. Responses to the question “I only apply to job postings in work environments that I think are accepting and welcoming to me”.

Supplemental Table 9. Summary of participant ratings as to how likely to a statement would prompt them to apply to a job posting

Supplemental Table 10. Responses to the question “What types of language in the diversity, equity, and inclusion statement encourages you to apply for a position?”

Supplemental Table 11. Summary of responses to Sample Ad #1 expertise and expectations language.

Supplemental Table 12. Summary of responses to Sample Ad #1 DEI language.

Supplemental Table 13. Comparison of the scores of suggested language with the feedback of language in Sample Ad #1

Supplemental Table 14. Summary of participant ratings as to how likely they are apply to sample ad #2 based on the included diverse, equitable, and inclusive environment language.

Supplemental Table 15. Summary of participant ratings as to how likely they are to view language of sample ad #2 as the institution desiring to be a diverse, equitable, and inclusive educational environment.

Supplemental Table 16. Summary of participant ratings as to how likely they are to view language of sample ad #2 as the institution desiring to be a diverse, equitable, and inclusive faculty constituency.

Supplemental Table 17. Summary of responses to Sample Ad #2 DEI language.

Supplemental Table 18. Comparison of the scores of suggested language with the feedback of language in Sample Ad #2

Supplemental Table 19. Comparison of the scores of suggested language with the feedback of language in Sample Ad #3

Supplemental Table 20. Summary of participant ratings as to how likely they are to view language of sample ad #3 as the institution desiring to be a diverse, equitable, and inclusive faculty constituency.

Supplemental Table 21. Summary of responses to Sample Ad #3 DEI language.

Supplemental Table 22. Comparison of the scores of suggested language with the feedback of language in Sample Ad #3

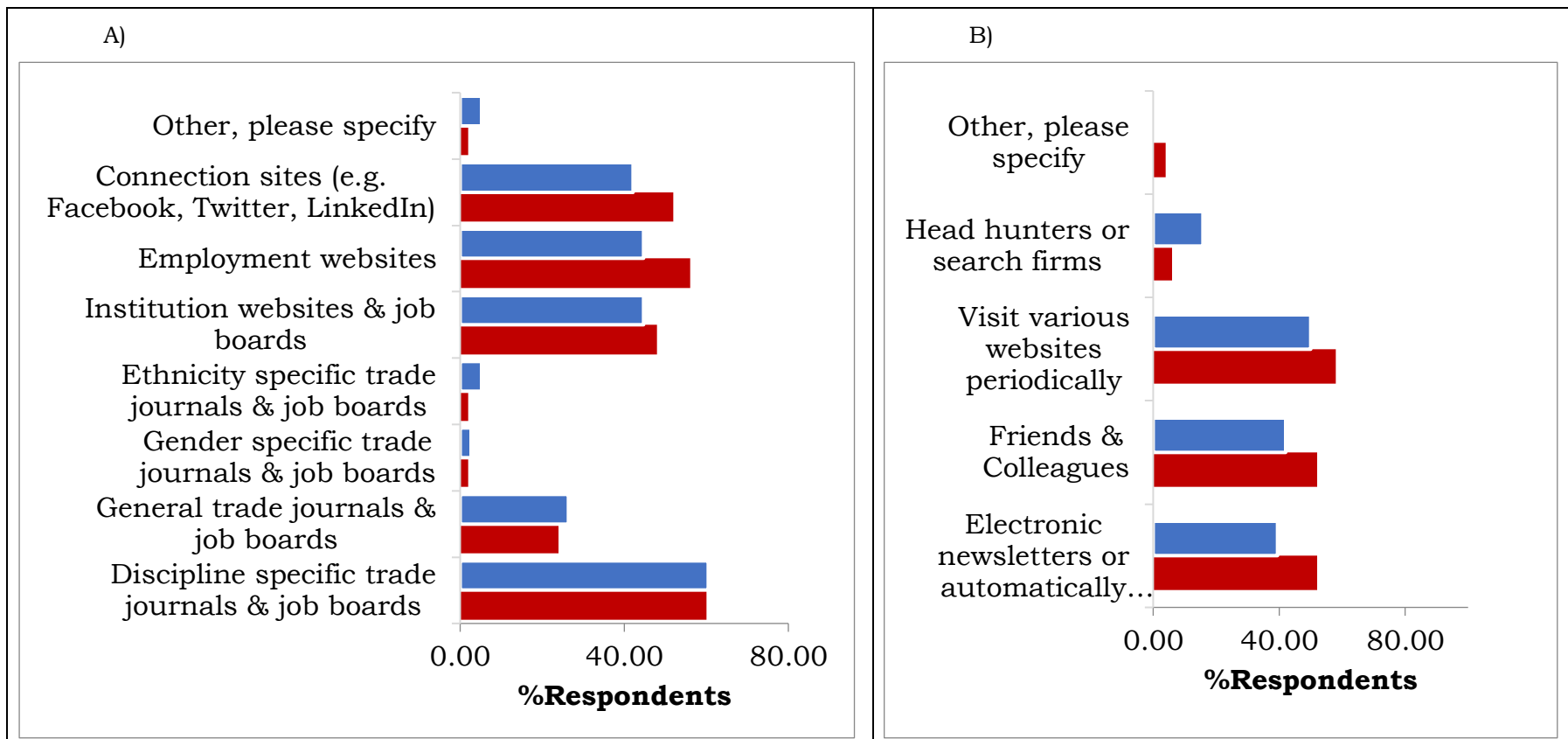


Figure S1. Responses by gender to the question “Where do you usually look for job postings?” (A), “How do you usually hear about job postings?” (B).

% Responses broken down by %Female (red) vs %Non-Female (blue)

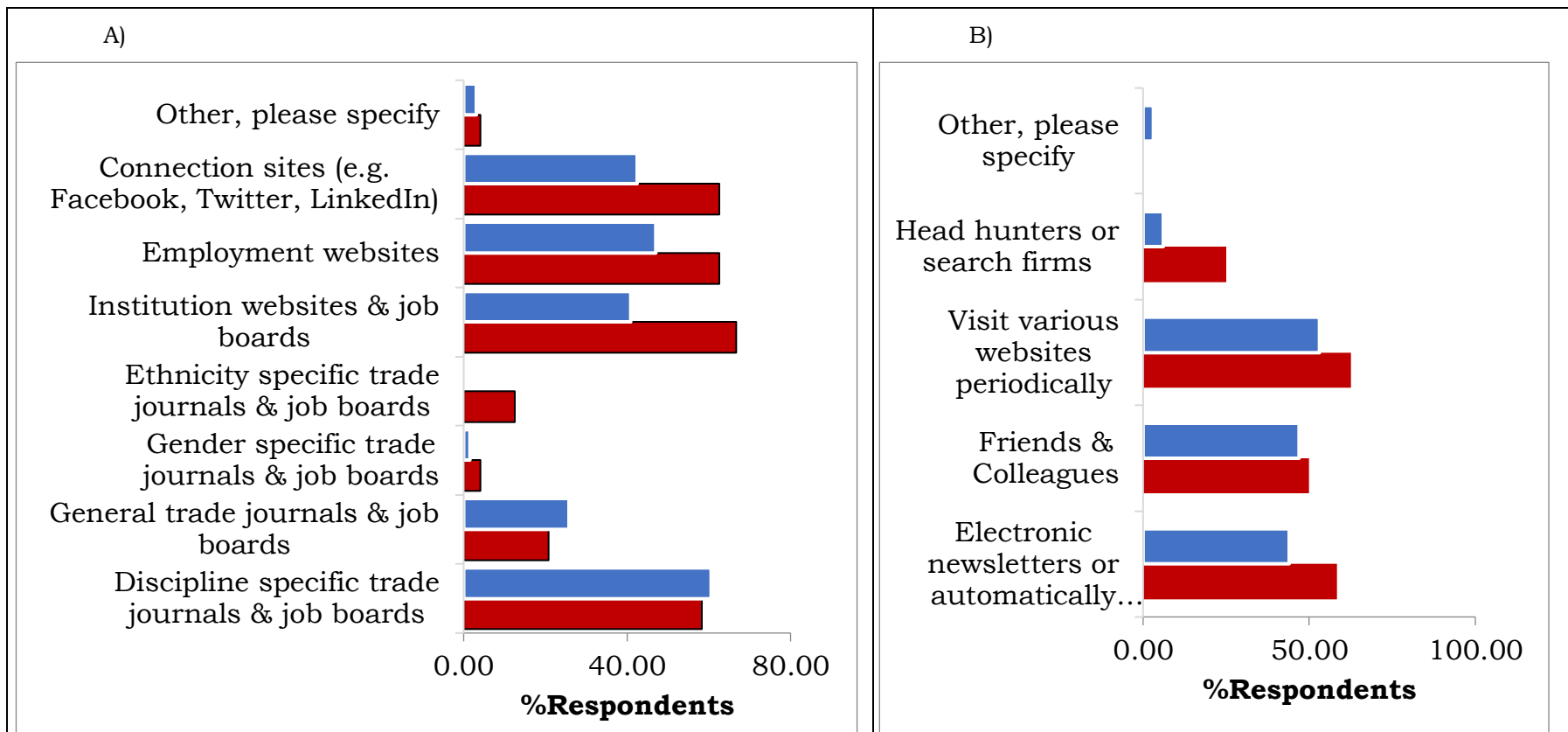


Figure S2. Responses by race/ethnicity to the question “Where do you usually look for job postings?” (A), “How do you usually hear about job postings?” (B).

% Responses broken down by Minority (red) vs Non-Minority (blue).

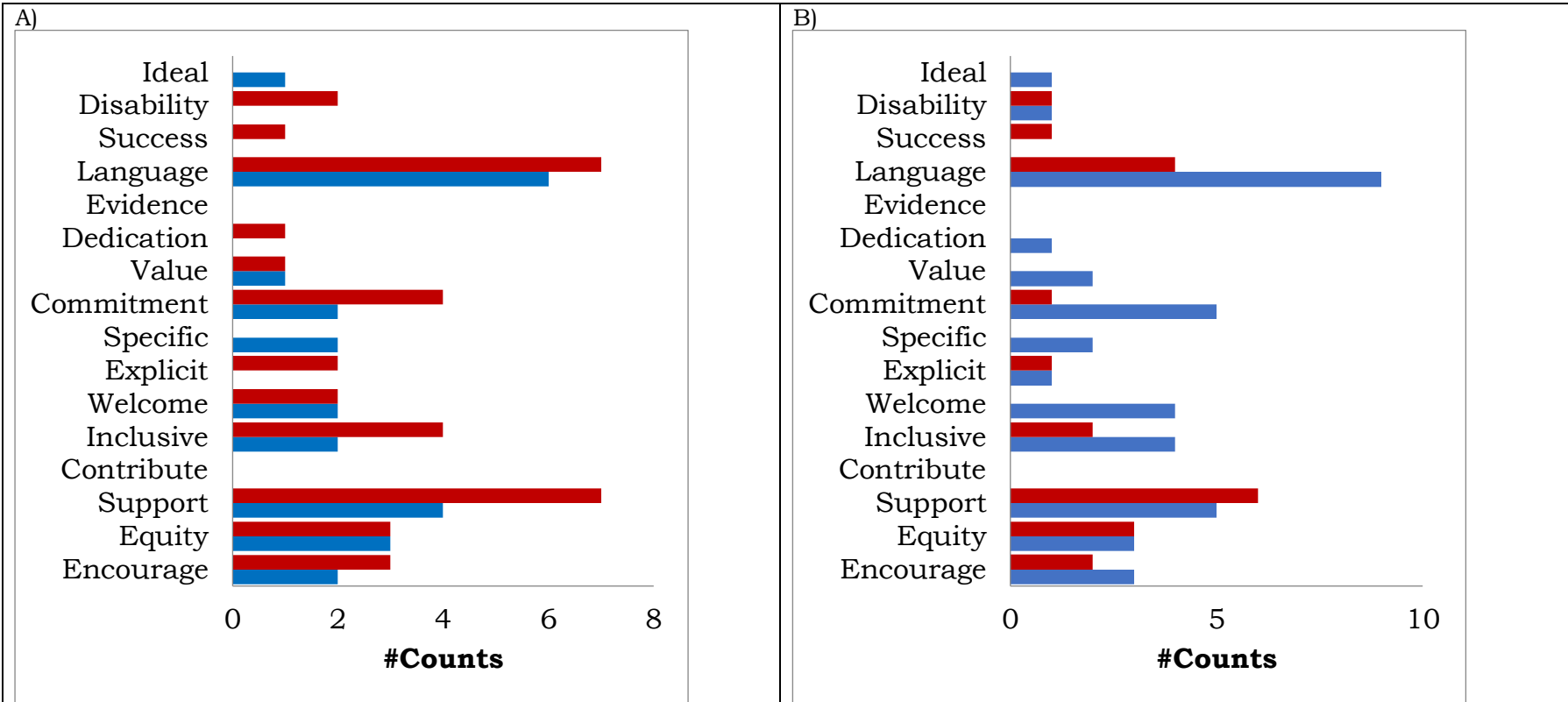


Figure S3. Types of DEI language supplied that would encourage applying for a position. Sum of the total number of responses that included DEI language towards each of the 16 themes that arose from the participants based on A) Female (red) vs Non-Female (blue); and B) Minority (red) vs Non-Minority (blue).

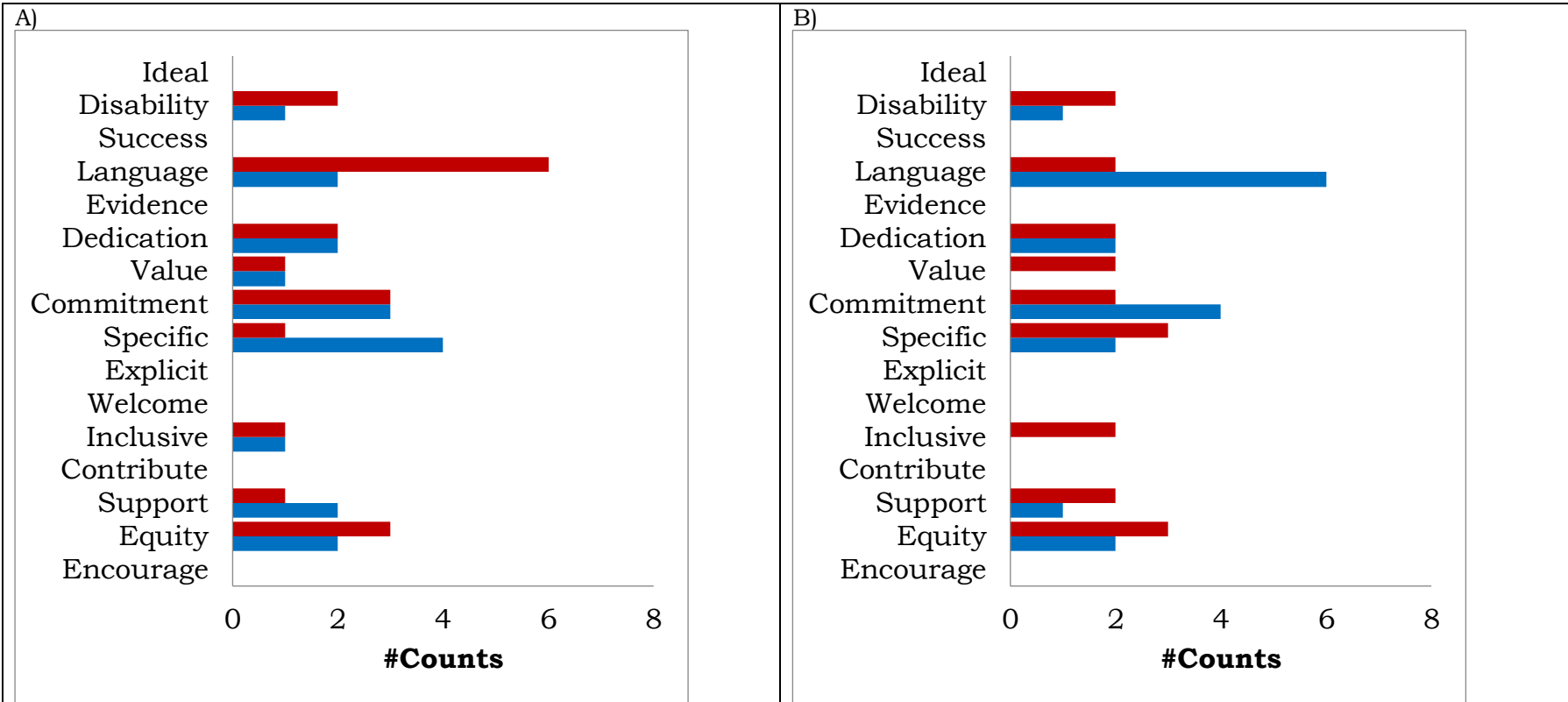


Figure S4. Types of DEI language supplied that would encourage applying to Ad #1. Sum of the total number of responses that included DEI language towards each of the 16 themes that arose from the participants based on A) Female (red) vs Non-Female (blue); and B) Minority (red) vs Non-Minority (blue).

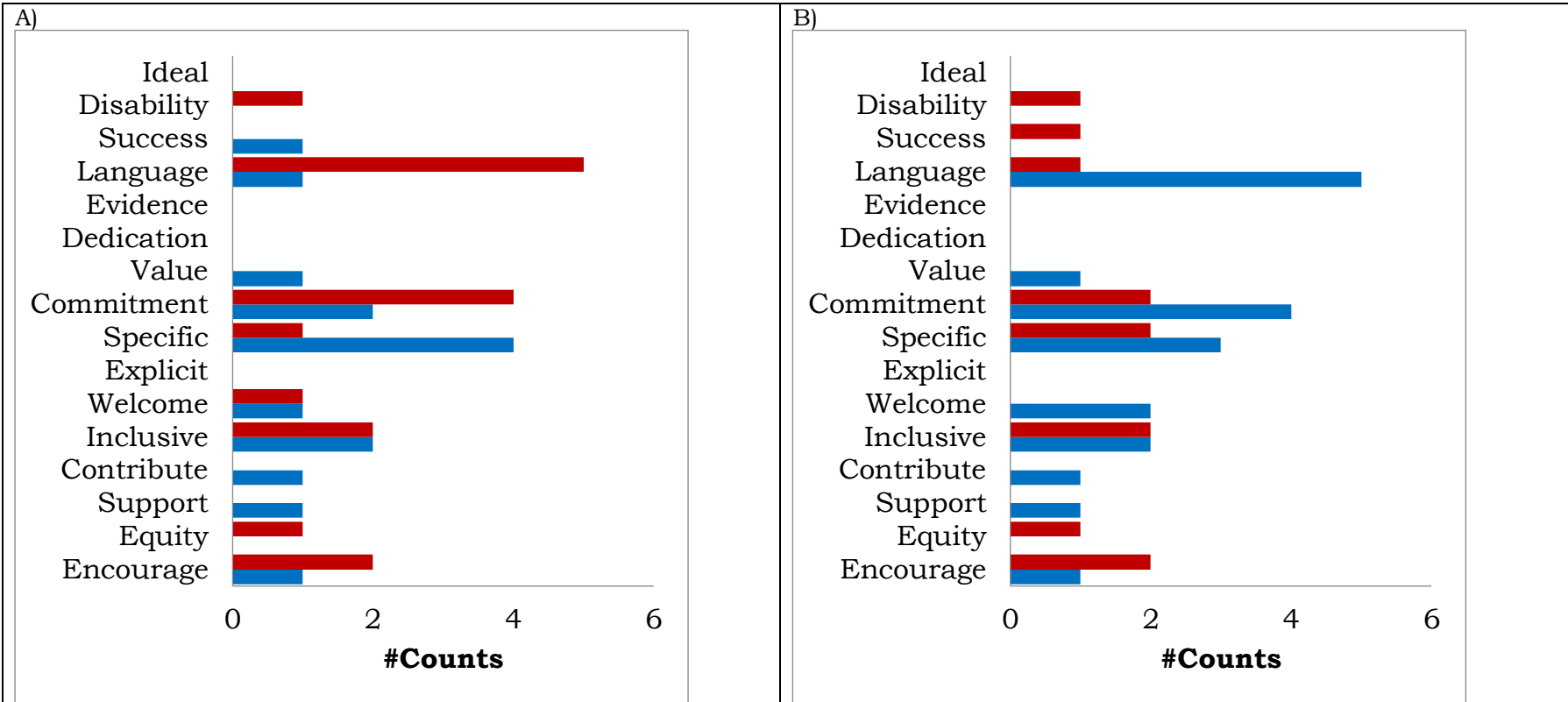


Figure S5. Types of DEI language supplied that would encourage applying to Ad #2. Sum of the total number of responses that included DEI language towards each of the 16 themes that arose from the participants based on A) Female (red) vs Non-Female (blue); and B) Minority (red) vs Non-Minority (blue).

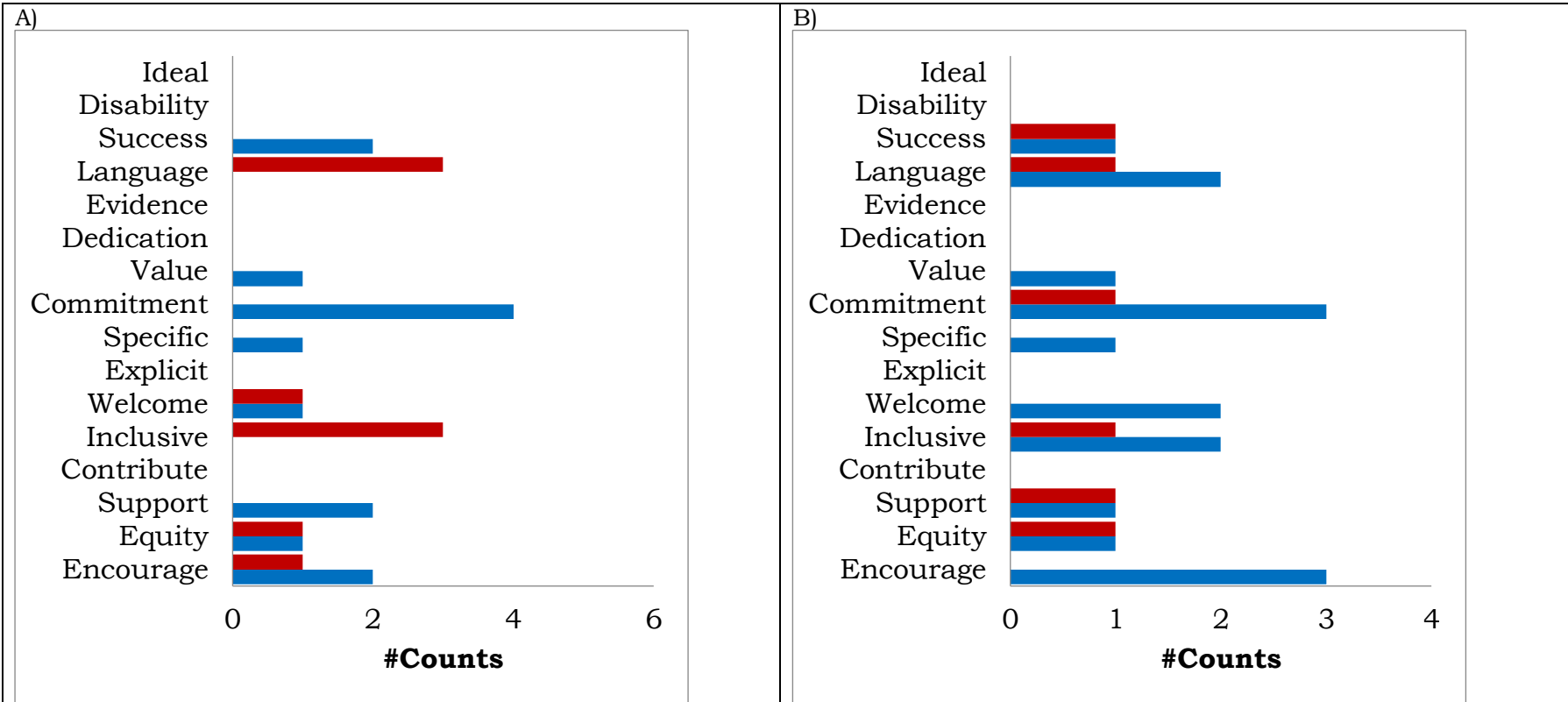


Figure S6. Types of DEI language supplied that would encourage applying to Ad #3. Sum of the total number of responses that included DEI language towards each of the 16 themes that arose from the participants based on A) Female (red) vs Non-Female (blue); and B) Minority (red) vs Non-Minority (blue).

Supplemental Table 1. With which gender do you most identify?	Total Count	%Total
Male	25	28.1
Female	51	57.3
Non-binary/third gender	3	3.4
Prefer to self-describe	1	1.1
Prefer not to disclose	0	0.0
Did not answer	9	10.1

Supplemental Table 2. Please specify your racial background (multiple choice)	Total Count	%Total
White (Caucasian)	60	71.4
Black or African Descent	7	8.3
Native American (Including Native Hawaiian, American Indian, or Alaska Native)	4	4.8
Asian (Including Pacific Islanders)	10	11.9
Other, please specify	3	3.6
Prefer not to disclose	0	0.0

Supplemental Table 3. Are you of Hispanic or Latinx ethnicity?	Total Count	%Total
Yes	3	3.4
No	77	86.5
Prefer not to disclose	0	0.0
Did not answer	9	10.1

Supplemental Table 4. What is/are your general area(s) of study or research? (multiple choice)	Total Count	%Total
Medical Sciences	8	7.5
Life Sciences	18	16.8
Physical Sciences	64	59.8
Engineering	8	7.5
Mathematics & Statistics	1	0.9
Social Sciences	5	4.7
Other, please specify	3	2.8

Supplemental Table 5. What sector best describes where you currently work?

	Total Count	%Total
Academic	74	83.1
Government	0	0.0
Industry	3	3.4
Non-profit	1	1.1
Policy/Communications	0	0.0
Retired/Not currently working	0	0.0
Other, please specify	2	2.2
Did not answer	9	10.1

Supplemental Table 6. Which of the following categories best represents your current role?

	Total Count	%Total
Undergraduate scholar	0	0.0
Graduate/Professional School Student	5	5.6
Post-doctoral scholar/fellow	12	13.5
Early Career (0-9 yrs post-graduation)	25	28.1
Mid-Career (10-19 yrs post-graduation)	26	29.2
Senior Level Career (20+ yrs post-graduation)	12	13.5
Retired/Not currently working	0	0.0
Other, please specify	0	0.0
Did not answer	9	10.1

Supplemental Table 7. Are you currently looking for a new role?

	Total Count	%Total
Yes	22	27.8
Depends on the opportunity	23	29.1
No	32	40.5
Gave up looking for a new role	2	2.5

Supplemental Table 8. Responses to the question “I only apply to job postings in work environments that I think are accepting and welcoming to me”.

(Likert scale: 1- strongly agree, 5- strongly disagree)

	Female	Non-Female	Minority	Non-Minority
Mean	2.0	1.9	1.40	2.18
Stdev	1.1	1.1	0.60	1.13
count	44.0	25.0	20.00	49.00
P(T<=t) two-tail	0.7		4.1E-04	

Supplemental Table 9. Summary of participant ratings as to how likely to a statement would prompt them to apply to a job posting

(Likert scale: 1- strongly agree, 5- strongly disagree)

	The advertisement includes a statement on the institution's commitment to diversity.	The advertisement includes a statement on the institution's reputation for supporting new hires.	The advertisement includes a statement on the institution's commitment to diversity.	The advertisement includes a statement on the institution's reputation for supporting new hires.
	Female		Non-Female	
Mean	2.1	1.7	2.1	1.6
Stdev	1.0	0.7	0.9	0.7
count	44.0	44.0	25.0	25.0
P(T<=t) two-tail	0.01		0.03	
	Minority		Non-Minority	
Mean	1.8	1.7	2.3	1.6
Stdev	0.8	0.7	1.0	0.7
count	20.0	20.0	49.0	49.0
P(T<=t) two-tail	0.83		3.2E-04	

Supplemental Table 10. Responses to the question “What types of language in the diversity, equity, and inclusion statement encourages you to apply for a position?”

	Female	Non-Female	Minority	Non-Minority
Mean	0.7	0.5	0.91	0.62
Stdev	1.3	1.0	1.20	1.16
count	51.0	51.0	23.00	66.00
P(T<=t) two-tail	0.3		3.2E-01	

Supplemental Table 11. Summary of responses to Sample Ad #1 expertise and expectations language.

(Likert scale: 1- very likely, 5- very unlikely)

	The advertisement includes a statement on the institution's commitment to diversity.	Sample Ad #1: I am likely to apply to this job posting based on the included language towards expertise and expectations.	The advertisement includes a statement on the institution's commitment to diversity.	Sample Ad #1: I am likely to apply to this job posting based on the included language towards expertise and expectations.
	Female		Non-Female	
Mean	2.14	2.61	2.1	2.2
Stdev	0.98	1.20	0.9	1.1
count	44.00	33.00	25.0	24.0
P(T<=t) two-tail	0.07		0.9	
	Minority		Non-Minority	
Mean	1.75	3.41	2.3	2.4
Stdev	0.79	1.00	1.0	1.2

count	20.00	17.00	49.0	40.0
P(T<=t) two-tail	0.04		0.6	

Supplemental Table 12. Summary of responses to Sample Ad #1 DEI language.

(Likert scale: 1- very likely/strongly agree, 5- very unlikely/strongly disagree)

	The advertisement includes a statement on the institution's commitment to diversity.	Sample Ad #1: I am likely to apply to this job posting based on the included diverse, equitable, and inclusive environment language.	The advertisement includes a statement on the institution's commitment to diversity.	Sample Ad #1: I am likely to apply to this job posting based on the included diverse, equitable, and inclusive environment language.
	Female		Non-Female	
Mean	2.1	3.1	2.1	3.1
Stdev	1.0	1.2	0.9	1.2
count	44.0	33.0	25.0	33.0
P(T<=t) two-tail	6.03E-04		1.4E-03	
	Minority		Non-Minority	
Mean	1.8	3.4	2.3	3.4
Stdev	0.8	1.2	1.0	1.2
count	20.0	17.0	49.0	17.0
P(T<=t) two-tail	3.33E-05		1.6E-03	
	The advertisement includes a statement on the institution's commitment to diversity.	Sample Ad #2: The language of this job posting shows that the institution desires to be a diverse, equitable, and inclusive educational environment.	The advertisement includes a statement on the institution's commitment to diversity.	Sample Ad #2: The language of this job posting shows that the institution desires to be a diverse, equitable, and inclusive educational environment.
	Female		Non-Female	
Mean	2.14	3.30	2.1	3.3
Stdev	0.98	1.24	0.9	1.4
count	44.00	33.00	25.0	24.0
P(T<=t) two-tail	3.59E-05		1.9E-03	
	Minority		Non-Minority	
Mean	1.75	3.53	2.3	3.2
Stdev	0.79	1.23	1.0	1.3
count	20.00	17.00	49.0	40.0
P(T<=t) two-tail	2.26E-05		7.1E-04	

	The advertisement includes a statement on the institution's commitment to diversity.	Sample Ad #1: The language of this job posting shows that the institution desires to be a diverse, equitable, and inclusive faculty constituency.	The advertisement includes a statement on the institution's commitment to diversity.	Sample Ad #1: The language of this job posting shows that the institution desires to be a diverse, equitable, and inclusive faculty constituency.
	Female		Non-Female	
Mean	2.1	3.4	2.1	3
Stdev	1.0	1.1	0.9	1
count	44.0	33.0	25.0	24.0
P(T<=t) two-tail	3.7E-06		5.3E-04	
	Minority		Non-Minority	
Mean	1.8	3.7	2.3	3
Stdev	0.8	1.2	1.0	1
count	20.0	17.0	49.0	40.0
P(T<=t) two-tail	2.6E-06		1.6E-04	
	The advertisement includes a statement on the institution's commitment to diversity.	Sample Ad #1: The placement of inclusive language showed that the institution had a commitment to building a diverse, equitable, and inclusive community	The advertisement includes a statement on the institution's commitment to diversity.	Sample Ad #1: The placement of inclusive language showed that the institution had a commitment to building a diverse, equitable, and inclusive community
	Female		Non-Female	
Mean	2.1	3.4	2.1	3
Stdev	1.0	1.3	0.9	1
count	44.0	33.0	25.0	24.0
P(T<=t) two-tail	2.8E-05		1.2E-04	
	Minority		Non-Minority	
Mean	1.8	3.9	2.3	3
Stdev	0.8	1.4	1.0	1
count	20.0	17.0	49.0	40.0
P(T<=t) two-tail	6.6E-06		1.9E-04	

Supplemental Table 13. Comparison of the scores of suggested language with the feedback of language in Sample Ad #1

	What types of language in the diversity, equity, and inclusion statement encourages you to apply for a position?	Please provide feedback on language and placement of verbiage that would make Sample Ad #1 more appealing to you.	What types of language in the diversity, equity, and inclusion statement encourages you to apply for a position?	Please provide feedback on language and placement of verbiage that would make Sample Ad #1 more appealing to you.
	<i>Female</i>		Non-Female	
Mean	1	0.4	0.5	0.4
Stdev	1	0.9	1.0	0.8
count	51	51	51.0	51.0
P(T<=t) two-tail	0.1		0.4	
	<i>Minority</i>		Non-Minority	
Mean	0.91	0.87	0.6	0.3
Stdev	1.20	1.32	1.2	0.7
count	23.00	23.00	66.0	56.0
P(T<=t) two-tail	0.91		0.1	

Supplemental Table 14. Summary of participant ratings as to how likely they are apply to sample ad #2 based on the included diverse, equitable, and inclusive environment language.

(Likert scale: 1- very likely, 5- very unlikely)

	Female	Non-Female	Minority	Non-Minority
Mean	1.9	2.5	2.13	2.11
Stdev	0.7	1.2	0.99	0.98
count	31.0	20.0	15.00	36.00
P(T<=t) two-tail		4.26E-02		9.4E-01

Supplemental Table 15. Summary of participant ratings as to how likely they are to view language of sample ad #2 as the institution desiring to be a diverse, equitable, and inclusive educational environment.

(Likert scale: 1- very likely, 5- very unlikely)

	Female	Non-Female	Minority	Non-Minority
Mean	1.7	2.3	2.27	1.78
Stdev	0.9	1.3	1.10	1.02
count	31.0	20.0	15.00	36.00
P(T<=t) two-tail		0.1		1.5E-01

Supplemental Table 16. Summary of participant ratings as to how likely they are to view language of sample ad #2 as the institution desiring to be a diverse, equitable, and inclusive faculty constituency.

(Likert scale: 1- very likely, 5- very unlikely)

	Female	Non-Female	Minority	Non-Minority
Mean	1.8	2.6	2.40	1.97
Stdev	0.8	1.2	1.06	1.03
count	31	20	15.00	36.00
P(T<=t) two-tail		0.02		2.0E-01

Supplemental Table 17. Summary of responses to Sample Ad #2 DEI language.

(Likert scale: 1- strongly agree, 5- strongly disagree)

	Sample Ad #2: The language of this job posting shows that the institution desires to be a diverse, equitable, and inclusive educational environment.		Sample Ad #2: The language of this job posting shows that the institution desires to be a diverse, equitable, and inclusive educational environment.	
	Female		Non-Female	
Mean	2.1	1.7	2.1	2
Stdev	1.0	0.9	0.9	1
count	44.0	31.0	25.0	20.0
P(T<=t) two-tail	0.05		0.7	
	Minority		Non-Minority	
Mean	1.8	2.3	2.3	2
Stdev	0.8	1.1	1.0	1
count	20.0	15.0	49.0	36.0
P(T<=t) two-tail	0.13		2.4E-02	

Supplemental Table 18. Comparison of the scores of suggested language with the feedback of language in Sample Ad #2

	What types of language in the diversity, equity, and inclusion statement encourages you to apply for a position?	Please provide feedback on language and placement of verbiage that would make Sample Ad #2 more appealing to you.	What types of language in the diversity, equity, and inclusion statement encourages you to apply for a position?	Please provide feedback on language and placement of verbiage that would make Sample Ad #2 more appealing to you.
	<i>Female</i>		Non-Female	
Mean	1	0.3	0.5	0.3
Stdev	1	0.9	1.0	0.7
count	51	51	51.0	51.0
P(T<=t) two-tail	0.07		0.2	
	Minority		Non-Minority	
Mean	0.91	0.52	0.6	0.4
Stdev	1.20	0.99	1.2	0.8
count	23.00	23.00	66.0	56.0
P(T<=t) two-tail	0.24		0.1	

Supplemental Table 19. Comparison of the scores of suggested language with the feedback of language in Sample Ad #3

	What types of language in the diversity, equity, and inclusion statement encourages you to apply for a position?	Please provide feedback on language and placement of verbiage that would make Sample Ad #3 more appealing to you.	What types of language in the diversity, equity, and inclusion statement encourages you to apply for a position?	Please provide feedback on language and placement of verbiage that would make Sample Ad #3 more appealing to you.
	<i>Female</i>		Non-Female	
Mean	1	0.2	0.5	0.3
Stdev	1	0.6	1.0	0.7
count	51	51.00	51.0	51.0
P(T<=t) two-tail	0.01		0.2	
	Minority		Non-Minority	
Mean	0.91	0.26	0.6	0.3
Stdev	1.20	0.62	1.2	0.8
count	23.00	23.00	66.0	56.0
P(T<=t) two-tail	0.03		0.1	

Supplemental Table 20. Summary of participant ratings as to how likely they are apply to sample ad #3 based on the included diverse, equitable, and inclusive environment language.

(Likert scale: 1- very likely, 5- very unlikely)

	Female	Non-Female	Minority	Non-Minority
Mean	1.90	2.35	2.07	2.08
Stdev	0.83	1.09	0.88	1.00
count	31.00	20.00	15.00	36.00

P(T<=t) two-tail

0.13

0.95

Supplemental Table 21. Summary of participant ratings as to how likely they are to view language of sample ad #3 as the institution desiring to be a diverse, equitable, and inclusive educational environment.

(Likert scale: 1- very likely, 5- very unlikely)

	Female	Non-Female	Minority	Non-Minority
Mean	1.77	2.25	2.20	1.86
Stdev	0.88	1.21	1.01	1.05
count	31.00	20.00	15.00	36.00
P(T<=t) two-tail		0.14		0.29

Supplemental Table 22. Summary of participant ratings as to how likely they are to view language of sample ad #3 as the institution desiring to be a diverse, equitable, and inclusive faculty constituency.

(Likert scale: 1- very likely, 5- very unlikely)

	Female	Non-Female	Minority	Non-Minority
Mean	1.77	2.25	2.20	1.78
Stdev	0.88	1.21	1.01	0.96
count	31.00	20.00	15.00	36.00
P(T<=t) two-tail		0.19		0.18

Rubric for Inclusive job advertisement for a chemistry faculty position

Criterion	Specific Language Standards	Examples of language
Gender-neutral language	<p>Dispense with gendered pronouns altogether</p> <p>Use inclusive pronouns if needed</p>	<p>“a chemist,” “scientist,” “person”</p> <p>“they/them,” “you” are the most inclusive</p>
Inclusive language	<p>Use feminine language that attracts more gender diversity</p>	<p>“collaboration,” “passion,” “project based,” “dedication”</p>
Institutional commitment to Diversity, Equity, Inclusion and Respect	<p>Emphasize your college/universities commitment to Diversity and Inclusion – provide URL</p> <p>Encourage candidates to apply with demonstrated experience in building strong relationships in diverse communities</p> <p>Emphasize commitment to creating a workplace of belonging</p> <p>Encourage individuals that identify as women, minorities, veterans, disabled, and LGBTQ+ to apply</p> <p>Identify associations of under-represented groups for advertisement placement beyond standard discipline-wide job listings</p> <p>Mention campus groups that support faculty members different identities</p>	<p>[College Name] has a strong commitment to inclusive excellence in our community and to supporting a healthy work-life balance for our faculty of teacher-scholars. [College Name] has been recognized as one of the “Great Colleges to Work For [YEAR]” by <i>The Chronicle of Higher Education</i>. [College Name]’s [Diversity Office, web address to office], houses several faculty and staff affinity groups including the Minority Executive Council, Women’s Professional Network, Parenting Network, LGBTQ+ Pride, and Multicultural Greek Affinity Group.</p> <p>[College Name] is the proud recipient of an [Grant name] from the [Funding Agency], which supports work to provide access and foster success for all students studying science and math, especially those traditionally underserved by STEM and higher education. [College Name] has also been a recipient of a [Funding Agency] [Grant Name], which has worked to support the careers of women faculty members in STEM</p>

		disciplines by developing systemic approaches to increase the representation and advancement of women. The Chemistry Department has received multiple [Funding agency] [Grant Name] that have improved the attitudes, success, and outcomes of marginalized student populations and have catalyzed faculty transformation towards inclusive excellence.
Position summary & responsibilities	<p>Summarize job responsibilities in detail</p> <p>For example, the responsibilities for this position will include some or all of the following: teaching, student advising and mentoring, research, ability to secure external funding, service learning and administrative responsibilities</p>	<p>We seek a broadly trained chemist who has the potential to establish a highly visible research program and will be passionate about teaching chemistry at every level of the curriculum. The successful candidate's training should qualify them to teach chemistry courses in the [specify teaching needs] curriculum and develop innovative, [upper-level/graduate] courses that complement and diversify the department's offerings. Teaching responsibilities will also include rotation through the [service course] curriculum. We are especially interested in candidates whose research and pedagogy have the potential to collaboratively contribute to interdisciplinary curricular and scholarly efforts within [College Name]. The successful candidate will also demonstrate dedication to inclusive excellence in STEM and higher education. We welcome candidates in all areas of research specialization, especially those that complement and diversify the department's existing strengths.</p>
Qualifications	Make clear the minimum qualifications required for the job	An earned doctorate in chemistry, or a closely related field, is required. Although post-doctoral experience is preferred, other backgrounds will be considered; ABDs will only be

		considered if the degree will be completed prior to the start date.
Salary range	Indicate a salary range that builds trust for prospective candidate	
Institutional commitment to new hires	<p>Tone is positive, respectful, inviting, and directly addresses environmental standards for the long-term success of new faculty</p> <p>Describe the potential value of the new faculty in building the program/department in a clear and dynamic way</p> <p>Highlight programs that communicate investment towards faculty success</p>	<p>Teaching and research are mutually supported activities at [College Name]. Candidates should be strongly committed to the teacher-scholar model, to maintaining both high-quality teaching and an active and productive research program involving highly motivated students, and to seeking external funding consistent with this mission. Our tenure-track faculty are active in mentoring, writing, and obtaining nationally competitive research, equipment, and pedagogical grants to accomplish departmental goals. Faculty members also serve as academic advisors and have service responsibilities within the Department, School, and College. A dedicated research laboratory and competitive start-up funds will be provided.</p> <p>To enrich education through diversity, [College Name] is an Equal Opportunity Employer. The College has a strong commitment to inclusive excellence and to achieving diversity among faculty and staff. The Chemistry Department strongly encourages applications from diverse, intersectional populations and cultures including, but not limited to, identities based on race, ethnicity, gender, gender expression, sexual orientation, disability, national origin, and veteran status. We also encourage applications from candidates with a wide range of professional and personal paths. Each candidate is</p>

		invited to discuss their unique pathway in their application materials.
Information on methodology and deadline to apply	<p>Provide a link for applicants to visit and apply for the position.</p> <p>Specific list of materials with page limits and any necessary guidelines to submit</p> <p>Articulate logically sequenced schedule of the search committee schedule for reviewing applications.</p>	<p>To Apply:</p> <p>Compile and submit a single PDF file containing the following items:</p> <p>[Web link]</p> <ul style="list-style-type: none"> ● Letter of application stating specific interest in the position ● Curriculum vitae ● Statement of teaching philosophy (3 pages maximum) ● Description of future research goals and plans, including the role of undergraduates (3 pages maximum) ● A table of major equipment and instrumentation required to accomplish research goals ● Statement of commitment to equity, inclusivity, and diversity that reflects upon [School Name]'s core values and mission (3 pages maximum) ● Unofficial copies of all undergraduate and graduate transcripts ● Names, addresses, telephone numbers, and email addresses of three references who will be asked to submit confidential recommendation letters (one reference must comment on teaching effectiveness)

		<p>Review of applications will begin by [Soft Cut-off Date]. The review will continue until the position is filled. Final offer of employment will be contingent upon successful completion of a background investigation.</p>
--	--	--

An example of inclusive search process developed through best hiring practices at:

Building the pool of diverse candidates

Developing an inclusive advertisement is only the first step of the recruiting process. Where and how the search committee recruits candidates was critical to the search. TCNJ has several standard places to advertise including Inside Higher Education, HigherEd Jobs, The Chronicle of Higher Education, Higher Education Recruitment Consortium (HERC), and Lat Pro Diversity Sites. The department spends additional funding to advertise with ACS, SACNAS, AAAS, and NOBCChE and directly contacted @chemjobber (Twitter) to ensure the posting was accurate on their open spreadsheet. In previous years, these efforts have had minimal noticeable effects in our candidate pools. In the most recent search, we broadened our recruitment efforts. TCNJ used social media retweeting with @chemjobber and all members of the search committee and department chair posted on Twitter using the hashtags #blackinstem, #latinxchem, #blackinchem, #blackinanalytical, #blackinbiochem, #outinstem, #queerinchem, #chemjobs, and #chemtwitter each week until the application window closed. In addition, the search committee sent targeted letters to minority serving institutions including HSIs, HBCUs, and ACS bridge program institutions.

Many institutions have more regional or local recognition, particularly small institutions, state schools (like TCNJ), and smaller graduate programs. If candidates come to the institution's website, they may not see all the activities that enhance our diversity and inclusion and therefore may not apply. In our most recent search, the TCNJ search chair hosted information sessions for our candidates using <https://gather.town>. The teleconferencing software allows a more interactive and anonymous way of interacting with the search committee through an 8-bit video game virtual space. The search committee members and department chair each took turns discussing the ad, application process, and teaching needs. The group also discussed research infrastructure, expectations for tenure, work-life balance, the teaching culture, and the preparation of students. The forum allowed the institution to demonstrate that the DEI efforts are not just performative, but highly active and assessment oriented by sharing the results of the department's campus equity projects.

Part of this process can also be driven by monitoring the diversity of the pool as a formative process and reporting back to the search committee. At the University of New Hampshire, this information is now being made available early in the process as formative review of search pool diversity to encourage search committees and Deans to focus efforts to increase that diversity before semi-finalist screening occurs.

Strategic discussion of diversity and inclusion and bias in the department

Strategic maps at the institution can help support diverse candidates during the search process and when they arrive on campus. For example, diversity and inclusion is often in strategic maps and vision statements at institutions and so the department can develop different strategies to implement the institution's DEI goals to create a more inclusive environment but also a more equitable faculty search process. These administrative directives can change how we conduct our everyday business to make inclusive decisions.

All search committees receive mandatory human resource training on equal employment opportunity policies (EEO) and the training can be enhanced by identifying diversity advocates serving as full members on their search committee. The job of the diversity advocate is to facilitate deeper discussions on diversity with the search committee and more broadly within the department to ensure

the group has done a successful job at implementing the unit's diversity goals. The roles can be both internal and external to the department; some institutions hire an external firm to serve as the role.

The role of the search chair is extremely strategic to set the tone of the search and the outcome. By identifying and selecting a chair who is strongly invested in DEI initiatives, conversations and discussions can be guided to achieve these outcomes. Discussions of bias in the search process must occur at the search committee and department level. The chair should evaluate past searches to try to uncover the biases that have occurred so the biases can be confronted in subsequent searches. These discussions may not be easy and may benefit from a third party (diversity advocate) leading the discussions to have a successful outcome. The rich discussions can lead to departmental understanding of the collective vision and who the department aspires to be.

At TCNJ, the Dean of the School of Science calls a formal meeting of all the search chairs along with the previous year's search chairs, one of whom serves as the diversity leader for the discussion. The goal of the meeting is to discuss best practices to conduct searches and get a collective vision of the DEI goals that are being achieved by the collective searches. The main topics that are discussed are how to address bias in the evaluation of the applicant materials. Many searches discuss the concept of "the fit" when choosing their candidate pools. Conversation about "the fit" can be used in strong ways to increase the diversity of the department as well as inform the department about the dangers of only evaluating the same kinds of candidates that are already in the department. Discussions about "the fit" across the departments helps to create a strong sense of the values and goals the group is trying to reach.

In a collaboration with the department chair, the search committee conducted department-wide and committee discussions on how social privilege plays a role in the outcomes described within a candidate's application materials. By no means do the reviewers believe that the candidates did not work hard for their publications, presentations, grades, or awards, but understanding that barriers created by society may appear to reduce some of these measurable outcomes. To address this in the review process, the committee recognized that these constraints may be out of the candidate's control and could influence traditional review criteria found in the application materials. The committee then can begin to rate our candidates with less bias. The social privilege discussions are grounded in the literature (Collins, P.; Bilge, S. *Intersectionality*; Polity Press: Cambridge, 2020; and McGee, E.O.; Stoval, D.O. *Black, Brown, Bruised: How Racialized STEM Education Stifles Innovation*; Harvard Education Press, Cambridge, 2021) and are a direct reflection of the research TCNJ have conducted on our students (Chan, B.C.; Baker, J.L.; Bunagan, M.R.; Ekanger, L.A.; Gazley, J.L.; Hunter, R.A.; O'Connor, A.R.; Traino, R.M., *J. Chem. Ed.* 2020, 97, 2788-2792; Ekanger, L.A.; Chan, B.C.; Gazley, J.L.; O'Connor, A.R. Promoting Inclusive Excellence in the Inorganic Chemistry Curriculum through Faculty Culture Shift. in *Advances in Teaching Inorganic Chemistry, Volume 1: Classroom Innovations and Faculty Development*; Jones, R.M., Ed.; American Chemical Society: Washington, DC, 2020; pp 97-116; and Chan, B.C.; Gazley, J.L.; O'Connor, A.R.; Hunt, D.A. A STEM Identity Approach to Frame and Reinvent the Student Chemists Association at The College of New Jersey. in *Building and Maintaining Award-Winning ACS Student Member Chapters Volume 1: Holistic Viewpoints*; Mio, M.J.; Benvenuto, M.A., Eds.; American Chemical Society: Washington, DC, 2016; pp 103-122).

. Some scenarios the department discussed include:

- 1) Institution/research group biases: A candidate that comes from a well-funded research group at an institution with strong research infrastructure may have a very different productivity level than a candidate who must teach during all their years of graduate school and requires external collaborations to conduct their work. Discussions on institution pedigree shows how prestige bias, grant funding (the need to teach), and institutional support can create differences in outcomes. In a traditional context, the "best" candidate often carries social privilege that leads to high levels of productivity and

these discussions allow us to confront the faculty that possess a close-minded view on the “best” candidate. The “best” candidate is more nuanced and complex when we account for multiple societal factors that affect the perception of success.

- 2) Social identity biases: The concepts of intersectionality and how social identity affects our perception of candidate strengths are discussed. The data is clear that Black, Latinx, LGBTQ+, women, religious minority, and disabled (visible and invisible) candidates may have to deal with daily societal barriers that can affect their documented productivity. In some cases, these groups may receive less mentoring because they may not feel supported by their research groups and PIs. Discussions include how candidates that have multiple marginalized identities may have many barriers which make navigating the rigors of graduate and postdoctoral positions exponentially (not additively) more challenging. From there the discussion evolved to include how these marginalized identities lead to concepts such as imposter syndrome and lower confidence which can lower productivity. Additionally, marginalized students may opt to go to programs or geographic regions where they feel safer instead of the program with better prestige, which compounds institutional biases in the search.
- 3) Student needs: Minority students at predominantly white institutions widely comment that the faculty are not very diverse. At TCNJ, we conducted a department-wide discussion on the identities we bring to the department and what identities our students want to see in the faculty. The discussion allowed our department as a whole to understand the role of the search committee and share the vision of creating a diverse faculty.

Reviewing the Applicant pool

Many institutions now require a statement of commitment to diversity and inclusion. These can stand alone or be embedded in more traditional research and teaching statements. At TCNJ, the use of a stand-alone statement on diversity and inclusion was piloted in the Biology Department and then subsequently implemented by all School of Science searches. The practice is now institutionalized for all faculty searches. The statement provides space for the candidate to describe their plans to support, train, and teach a diverse group of students. The searches can use this statement to evaluate whether the candidate’s vision aligns with departmental diversity priorities. Within searches at TCNJ, it has been found that candidates self-disclose personal identities that provide a more holistic view on the diversity of the pool beyond just race and gender. The search committee can then evaluate how the candidates may add different elements of diversity to the department and how the candidate will champion diversity and inclusion efforts.

To help counter the biases as the committee reviews candidates, the rubric can change upon reflection of the diversity of the applicant pool and biases that are inevitably revealed during group discussion of the candidates. This flexibility allows the search committee to re-review candidates and perhaps give them additional support if the candidate adds to the diversity of the finalist pool. Critically, the rubrics rate the potential of candidates and whether the candidate will be successful at our institution as opposed to past accomplishments. As the list is narrowed, second tier candidates are reexamined and carefully assessed for potential that may have been missed. The first screen, typically a zoom or phone interview, can be used to ask candidates about their situations that will help to demonstrate potential. For example, a candidate without post doctoral experience and only one or two publications, but with excellent teaching and research statements may be given a chance to explain more about the impact of those papers (to assess quality), the unpublished projects that could not be published, their dedication to the institution, and other situations that may affect the number of publications.

Longer term strategic approaches for future searches

At TCNJ, we are notified that a search is approved towards the end of a fiscal year, which gives little pre-planning time. A longer term, strategic plan has been discussed with the administration for future hires. A campus-wide plan is being developed to build relationships with local HSI and HBCU that produce PhDs by visiting their schools and giving research talks, current work in DEI, and career development workshops on academic careers. For chemistry specific approaches, we propose to visit the ACS bridge programs and other PhD programs that produce many PhDs from underrepresented groups as venues to talk about our institutions. In addition, we have identified that regular attendance at SACNAS and NOBCChE conferences would allow us to build longer term relationships with those communities, demonstrate our commitment to DEI activities, and identify talented graduate students and postdoctoral candidates for future faculty hires. Building of relationships to demonstrate an institution is committed to equity and inclusion is critical to the recruitment of marginalized candidates.

The benefits of a diverse candidate can be captured into promotions and tenure documents. At TCNJ, the scholarship standards for promotion and tenure are very transparent to candidates, which is particularly important for our tenure track faculty that are facing challenges at work for a variety of personal reasons. Diverse candidates may face biases when they raise issues about equity and inclusion, so transparent achievements help to remove the biases in tenure decisions. The teaching and service standards value inclusive teaching styles and experimenting with one's pedagogy. The student feedback is feedback, not reviews, that a candidate should respond to improve teaching. The institution recognizes the biased nature of using these instruments that are known to adversely affect minority, women, and lgbtq+ faculty (Peterson, D.A.M.; Biederman, L.A.; Andersen, D.; Ditonto T.M.; Roe, K. *PLoS One*, 2019, **14**, e0216241).