Findings

Strategies and Tactics for Recruiting to Improve Diversity and Excellence (STRIDE) Task Force

December 15, 2013

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Executive Summary

Faculty diversity offers numerous benefits for higher education. However, research clearly indicates that implicit biases impede the recruitment and selection of women and members of underrepresented racial/ethnic groups (MUREG) and contribute to underrepresentation of women and MUREG among the faculty ranks. Based on an extensive review, the STRIDE Task Force found that, although the overall representation of women and MUREG STEM faculty is comparable to national representation, there is:

1. great variability in representation of women and MUREG faculty across STEM departments at UWF;
2. substantial underrepresentation of non-US citizen MUREG faculty at UWF compared to national STEM doctorate degree recipients awarded to temporary residents; and,
3. dramatic underrepresentation women STEM faculty at the rank of Full Professor at UWF compared to national STEM faculty ranks.

To address these issues, the STRIDE Task Force recommends that faculty search committees:

- Recognize/acknowledge implicit bias as normative and avoid mere suppression efforts.
- Employ a structured, systematic search process.
- Utilize a priori criteria and procedures.
- Ensure diversity within the composition of the search committee.
- Make efforts to reach a diverse pool of applicants.
- Avoid ranking of applicants during the application review and the interview evaluation.
- Avoid numerical ratings of applicant qualifications during the application review and the interview evaluation.
- Be aware of cultural factors that may activate implicit bias during interviews.
- Cultivate sensitivity to within group variation among women and MUREG.
- Develop a departmental diversity hiring plan.

The STRIDE Task Force also recommends that the University:

- Include faculty diversity as a meaningful part of the University plan for diversity and inclusion.
- Include a “state of faculty diversity at UWF” segment in the annual “State of the University Address.”
- Examine and correct any pay and advancement inequities for women and MUREG faculty.
- Hire exceptional women and MUREG STEM faculty candidates into senior rather than junior faculty positions and leadership positions.
- Consider the adoption of a University-wide policy explicitly supporting diversity contributions in faculty advancement opportunities.
- Develop training for fair and effective faculty searches and provide all faculty search committee members with information on hiring for diversity in addition to search committee hiring guidelines and Sunshine Law information.
- Develop and endorse a written policy dispelling any misconceptions about cost-prohibitions for hiring temporary residents and convey this policy to all search committees.
The Strategies and Tactics for Recruiting to Improve Diversity and Excellence (STRIDE) Task Force was established as part of the UWF Faculty ADVANCE Program funded by the National Science Foundation (NSF) ADVANCE initiative. Modeled after STRIDE Task Forces at other institutions of higher education funded by the NSF ADVANCE initiative, the UWF STRIDE Task Force was comprised of two grant co-investigator co-chairs from the School of Psychological and Behavioral Science plus six senior faculty members from different STEM departments (Mathematics and Statistics; Computer Science; Marketing and Economics; Electrical and Computer Engineering; Anthropology; and Justice Studies). Task Force members were nominated for membership by academic peers and supervisors on the basis of their observed commitment to diversity issues. After initial formation of the Task Force during the summer of 2012, the Task Force undertook extensive review of UWF STEM faculty diversity data; national STEM faculty diversity data; existing recruitment and hiring policies and procedures at UWF; scholarly literature on women and members of underrepresented racial/ethnic groups (MUREG) in academia and STEM; and materials produced by STRIDE Task Force groups from other institutions. This report summarizes the findings accumulated over the course of the 2012-13 academic year.

Importance of Diversity in Academia

Diversity considerations in the faculty recruitment process at the University of West Florida are constrained by requirements of federal and state laws as well as the UWF Human Resources (HR) department. With routine training, we may be encouraged to think about how diversity benefits organizations, including universities, leaving us prepared for the challenge of fair and effective hiring.

There are a number of reasons why diversity matters. First and foremost is the issue of fairness. Recruiting for racial, ethnic, and gender diversity is the right thing to do in light of past injustices. Second, diversity makes for a more dynamic intellectual community. This idea is more fully developed by Paige (2008) where theoretical and empirical evidence is provided supporting the relationship between cognitive diversity and problem solving. In fact, Lipson (2008) notes that arguments for enhanced diversity hiring practices have shifted away from the first issue and toward an enhanced learning environment.

The third and related benefit of a diverse academic workforce is that such a workforce provides modeling for a diverse student population as well as preparation for a diverse society. Research suggests that diversity is important to the ability of students to grasp the full range of career opportunities available to them. As part of a global community, students are expected to navigate an environment where people have multiple cognitive styles and intellectual outlooks (Paige, 2008). Turner, Gonzalez, and Wood (2008) note that, in an environment of increasing diversity of the student body, there is evidence that faculty diversity contributes to the engagement of new scholarship and teaching approaches and is important to student success, including recruitment, retention, and preparation for participation in a diverse workforce. In fact, Wolfe and Fletcher (2013) found a positive effect of campus diversity on a student’s future income. With these very important points in mind, we propose that recruiting for diversity is absolutely essential for achieving excellence in the 21st Century.
A richly diversified faculty, involving parity, inclusion, and representation by women and MUREG “may lead to a synergy that supports retention and development of both” students and faculty (Turner, Gonzalez, & Wood, 2008, p. 151). Faculty diversity is good for higher education.

STEM Faculty Diversity at UWF

Despite the value of faculty diversity in academia, STEM faculty diversity is limited at UWF and across the US. Overall, UWF STEM departments’ representation of women (Figure 1) and MUREG (Figure 2) in tenure track faculty positions are comparable to their distribution of faculty in the US (NSF, 2006).

Women

Although women STEM faculty are well represented in the Assistant (56.3%) and Associate (45.0%) Professor ranks at UWF (somewhat higher than the national rates of 43.0% of Assistant Professors and 34.2% of Associate Professors), women STEM faculty are greatly underrepresented in the rank of Full Professor at UWF (Figure 1). A notable “glass ceiling” effect is in evidence for women STEM faculty at UWF. Nationally, only one in five Full Professors in STEM are women (19.1%); at UWF only one in 15 Full Professors in STEM are women (6.1%). Although the percentage of female Assistant Professors in STEM at UWF (56.3%) exceeds the percentage of STEM doctoral degrees awarded to women nationally (43.0%; NSF, 2009-2010), this pattern of increasing attrition at each and every step of the STEM advancement ladder from primary education to advance professional ranks has been referred to as “the leaky pipeline,” a problem evident at the national level and certainly pronounced at the upper ranks of tenure-track STEM faculty at UWF.

Figure 1: Rank of employed women doctoral scientists and engineers in 4-year educational institutions in the US and at UWF

Source: US data from National Science Foundation Survey of Doctorate Recipients, 2006

Note: The NSF Survey of Doctorate Recipients is conducted on a biennial basis with a time lag in reporting of results. The 2006 survey report represents the most recent, comprehensive data available.
Members of Underrepresented Racial/Ethnic Groups (MUREG)

For MUREG STEM faculty, representation across faculty ranks was comparable to national rates of US citizen and permanent resident MUREG faculty (NSF, 2011). The small number of observations at UWF precludes stronger conclusions regarding whether the slightly higher representation of MUREG faculty observed at UWF represents significantly greater representation at UWF. Nationally, the percentage of MUREG faculty declines as rank increases (with 26.5%, 19.9%, and 15.4% of MUREG Assistant, Associate, and Full Professors, respectively). At UWF, approximately 25% of STEM faculty at each rank are MUREG, suggesting no substantial attrition at the Full Professor rank (Figure 2).

Figure 2: Rank of employed MUREG doctoral scientists and engineers in 4-year educational institutions in the US and at UWF

<table>
<thead>
<tr>
<th>Rank</th>
<th>Assistant professor</th>
<th>Associate professor</th>
<th>Full professor</th>
<th>All ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>% MUREG US</td>
<td>26.5%</td>
<td>19.8%</td>
<td>15.4%</td>
<td>22.5%</td>
</tr>
<tr>
<td>% MUREG UWF</td>
<td>28.1%</td>
<td>22.5%</td>
<td>24.2%</td>
<td>24.8%</td>
</tr>
</tbody>
</table>

Source: US data from National Science Foundation Survey of Doctorate Recipients, 2006
Note: The NSF Survey of Doctorate Recipients is conducted on a biennial basis with a time lag in reporting of results. The 2006 survey report represents the most recent, comprehensive data available.

It is questionable whether comparability with national levels of representation of women and MUREG STEM faculty in the US is a sufficient standard, given that lack of diversity and underrepresentation are the national norm within the ranks of academia. National levels of representation of women (32.6%) and MUREG (22.1%) STEM faculty in all ranks (NSF, 2006) fall below rates of STEM doctoral degree completion by women and MUREG. According to the NSF Survey of Earned Doctorates, women earned 40.9% of STEM doctoral degrees in 2010 (NSF, 2009-10) and MUREG earned 55.6% of STEM doctoral degrees in 2011, including 33.6% of doctoral degrees awarded to temporary residents (NSF, 2011). Among US citizens and permanent residents only, MUREG earned 26.4% of doctoral degrees in 2011 (NSF, 2011).

The rate of women STEM Assistant Professors at UWF (56.3%) exceeds the national representation of women STEM Assistant Professors (43.0%) and women STEM doctorate recipients (40.9%; NSF 2009-2010) and the rate of MUREG Assistant Professors at UWF (28.1%) compares well with the rate of doctoral degrees awarded to MUREG who are US citizens or permanent residents (26.4%; NSF, 2011).
However, the substantially lower percentage of MUREG Assistant Professors at UWF (28.1%) compared to the national percentage of STEM doctoral degrees awarded to MUREG including US citizens, permanent residents, and temporary residents (55.6%; NSF, 2011) provides evidence that UWF is not hiring entry level MUREG STEM faculty into tenure track positions at the same rate as MUREG are earning STEM doctoral degrees. Much of this discrepancy is attributable to the fact that one third of STEM doctorate recipients in 2011 were temporary visa holders rather than US citizens or permanent residents (NSF, 2011). An unknown but potentially large portion of these temporary visa holders may be foreign students who earn doctorates in the US without any desire or intention to stay in the US. Similarly, an unknown percentage of these temporary visa holders enter into applicant pools for positions at US universities. Those temporary visa holders hired into tenure-track faculty positions transition into permanent resident status and become counted among the (much lower) numbers of US citizen and permanent resident MUREG in STEM faculty ranks. These figures highlight the reality that the US is losing many talented US-trained STEM doctorates to other countries, resulting in a decrease in STEM competitiveness. With UWF hiring MUREG STEM Assistant Professors at only half the rate of recent doctoral recipients, UWF is missing the opportunity to bring in talented new STEM doctorate degree holders who are temporary residents with the potential for permanent residency. It is apparent that efforts to recruit and hire talented US citizens and non-US citizens into the Assistant Professor ranks would help build a “world” class faculty.

Variability Across Departments and Disciplines
It must be noted that there is much variability in representation of women (Table 1) and MUREG (Table 2) faculty among the 13 departments that collectively comprise the combined STEM faculty at UWF. The questionable validity of use of national representation rates of tenure-track faculty as a standard notwithstanding, the variability among STEM departments at UWF (and among STEM disciplines across the US) is obscured by use of “overall” representation rates (combined across 13 STEM departments) and indicates substantial underrepresentation of women in some departments and substantial underrepresentation of MUREG in others, often in different departments. For example, the fact that UWF psychology faculty include 56.3% women and only 6.3% MUREG faculty is offset by the fact that UWF mathematics faculty include 53.8% MUREG and only 23.1% women faculty, resulting in overall representation rates that appear less extreme. Furthermore, two UWF STEM departments had no female faculty members at all and another two UWF STEM departments had no MUREG faculty members at all. This suggests room for improvement in representation of women and/or MUREG faculty at the department level in UWF STEM departments.
Table 1: Representation of Women Faculty at Assistant, Associate, and Full Professor Rank in Each of 13 STEM Departments (Fall, 2012)

<table>
<thead>
<tr>
<th>STEM Department</th>
<th>Total # of tenure track faculty</th>
<th>Tenure-Track Women Faculty</th>
<th>% of faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Assistant Professors</td>
<td>Associate Professors</td>
</tr>
<tr>
<td>Justice Studies</td>
<td>8</td>
<td>2/2</td>
<td>3/4</td>
</tr>
<tr>
<td>Applied Science and Technology</td>
<td>3</td>
<td>1/1</td>
<td>1/2</td>
</tr>
<tr>
<td>SPBS/Psychology</td>
<td>16</td>
<td>6/6</td>
<td>3/5</td>
</tr>
<tr>
<td>Government/Political Science</td>
<td>5</td>
<td>0/1</td>
<td>2/3</td>
</tr>
<tr>
<td>Biology/SAHLS/CEDB</td>
<td>19</td>
<td>4/7</td>
<td>2/4</td>
</tr>
<tr>
<td>Chemistry</td>
<td>6</td>
<td>1/2</td>
<td>1/1</td>
</tr>
<tr>
<td>Computer Science</td>
<td>9</td>
<td>0/4</td>
<td>3/3</td>
</tr>
<tr>
<td>Electrical and Computer Eng.</td>
<td>6</td>
<td>2/3</td>
<td>0/2</td>
</tr>
<tr>
<td>Anthropology</td>
<td>7</td>
<td>1/3</td>
<td>1/4</td>
</tr>
<tr>
<td>Mathematics and Statistics</td>
<td>13</td>
<td>1/2</td>
<td>2/4</td>
</tr>
<tr>
<td>Economics</td>
<td>4</td>
<td>0/0</td>
<td>0/3</td>
</tr>
<tr>
<td>Environmental Studies</td>
<td>6</td>
<td>0/1</td>
<td>0/3</td>
</tr>
<tr>
<td>Physics</td>
<td>3</td>
<td>0/1</td>
<td>0/2</td>
</tr>
<tr>
<td>Total</td>
<td>105</td>
<td>18/32</td>
<td>56.3%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data were compiled by members of the STRIDE Task Force by polling individual department chairs and faculty during the Fall semester, 2012. Data include department chairs and associate/assistant deans but exclude deans, emeritus faculty, and non-tenure track faculty (visiting, instructors/lecturers, and adjunct faculty). Values are subject to change as a result of hiring and separation of faculty.

Table 2: Representation of Faculty from Underrepresented Racial/Ethnic Groups at Assistant, Associate, and Full Professor Rank in Each of 13 STEM Departments (Fall, 2012)

<table>
<thead>
<tr>
<th>STEM Department</th>
<th>Total # of tenure track faculty</th>
<th>Tenure-Track Faculty from Underrepresented Racial/Ethnic Groups</th>
<th>% of faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Assistant Professors</td>
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<td>1/2</td>
<td>1/4</td>
</tr>
<tr>
<td>Applied Science and Technology</td>
<td>3</td>
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<td>9</td>
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<td>Physics</td>
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</tr>
<tr>
<td>Economics</td>
<td>4</td>
<td>0/0</td>
<td>1/3</td>
</tr>
<tr>
<td>Government/Political Science</td>
<td>5</td>
<td>0/1</td>
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<td>Chemistry</td>
<td>6</td>
<td>0/2</td>
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<td>8</td>
<td>0/2</td>
<td>0/4</td>
</tr>
<tr>
<td>Total</td>
<td>105</td>
<td>9/32</td>
<td>9/40</td>
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Data were compiled by members of the STRIDE Task Force by polling individual department chairs and faculty during the Fall semester, 2012. Data include department chairs and associate/assistant deans but exclude deans, emeritus faculty, and non-tenure track faculty (visiting, instructors/lecturers, and adjunct faculty). Values are subject to change as a result of hiring and separation of faculty.

Faculty members from underrepresented racial/ethnic groups (MUREG) include all faculty who report race/ethnicity as something other than U.S. born, non-Hispanic White persons.
**Summary and Goals for Women and MUREG STEM Faculty Representation at UWF**

In summary, it appears that UWF compares to national rates of representation of women and MUREG tenure-track STEM faculty overall. However, given that the national rates constitute underrepresentation of women and MUREG (particularly non US citizen MUREG) in STEM tenure-track lines and that there is great variability in representation of women and MUREG faculty among STEM departments at UWF, higher aspirations for faculty diversity and inclusion are warranted in order for UWF to reap the many benefits offered by a richly diverse faculty body. We should not strive towards mediocrity but rather set aspirational goals to achieve excellence. It is recommended that UWF aspire toward rates of representation of women and MUREG STEM faculty that meet or exceed the rates of new STEM doctoral recipients. Although even these rates include attrition of women and MUREG from earlier levels of educational participation in STEM, they represent the best picture of the actual pool of qualified applicants for tenure-track STEM faculty positions. As rates of representation of women and MUREG doctoral recipients vary from discipline to discipline, UWF STEM departments are encouraged to identify these rates for their respective discipline and strive to meet or exceed these rates of representation. In addition, it is recommended that serious consideration be given to obstacles in the advancement to Full Professor ranks by women STEM faculty at UWF and that efforts to recruit MUREG expand beyond those with US citizenship or permanent residency.

**Understanding Low Rates of Representation of Women and MUREG in STEM Faculty**

The problem of low rates of representation by women and MUREG in tenure-track faculty lines has its roots much earlier in the US educational system. Despite comparable interest and achievement in the early years of primary education, increasing attrition of girls/women and members of underrepresented racial/ethnic groups at virtually every stage of STEM education from primary education through secondary education to post-graduate education and continuing into the professional STEM workforce, including academia. This is commonly referred to as the “leaky pipeline.” A number of explanations for the increasing attrition at each stage of advancement in the STEM pipeline have been offered, including differential access to resources, lack of role models, lack of encouragement, active discouragement, social pressures, racial/ethnic and gender stereotypes, pay inequities, and inequities in advancement opportunity, among others (Congressional Commission on the Advancement of Women and Minorities in Science, Engineering and Technology Development, 2000).

The entrance of women and MUREG into STEM tenure-track faculty lines is set within the context of underrepresentation accumulated from earlier periods in the STEM pipeline. When combined with bias in the recruitment and hiring process, The low existing representation of women and MUREG among the STEM faculty ranks contributes to bias in the recruitment and selection of women and MUREG STEM doctorate degreeholders into the faculty ranks and this bias inhibits the recruitment of new women and MUREG STEM faculty, furthering the pattern of increasing attrition and maintaining the status quo of low representation. Breaking this cycle requires the reduction of bias inhibiting entry into the tenure track.

Bias is the rule rather than the exception. Even, and possibly especially, among persons embracing egalitarian and objectivity values common to academia and to STEM, implicit bias in evaluation and
hiring has been well-documented in the empirical literature (e.g., Fine & Handelsman, 2012; Perry, Davis-Blake, & Kulick, 1994). Human decision-makers are “imperfect evaluators who render social judgments about job applicants,” using mental models or cognitive schemas that organize accumulated information, knowledge, and experience about jobholders of different types, such as “professor” or “scientist.” Such schemas develop from direct observation of jobholders or implicit or explicit lessons about jobholders (Perry, Davis-Blake, & Kulick, 1994) and exposure to these influences is pervasive. The effects appear to be insidious. When most jobholders of a particular type share a particular characteristic, this can influence one’s schema about that type of jobholder. As a result, people with different characteristics may fail to fit the schema held for the job despite a strong fit with the qualifications for the job. The reality that the majority of “professor” and “scientist” jobholders (and applicants and doctorate degreeholders) are male and White influences the schema for these jobs in a manner that can introduce bias into the evaluation of qualified candidates who do not share these features with the majority of faculty and STEM jobholders, such as women and MUREG. Although this bias represents systematic errors in evaluation that disadvantage women and MUREG, it is a natural part of imperfect human information processing, and therefore, ubiquitous. No one is immune to bias.

Examinations of evaluations of job and promotion candidates holding qualifications constant reveal that both men and women tend to rate men more favorably than women, despite equal qualifications. Similarly, White candidates are typically rated more favorably than MUREG candidates, despite equal qualifications. Furthermore, mothers tend to be rated less favorably than non-mothers while fathers tend to be rated more favorably than non-fathers, posing a motherhood penalty and a fatherhood advantage that has been observed in faculty advancement (Fine & Handelsman, 2012). With evidence that referee letters for women tend to include more equivocal ratings than letters for men and student ratings of the quality of an academic article varying as a function of the sex of the author (Fine & Handelsman, 2012), it is not hard to envision how such bias can accumulate over time to produce weaker evaluations of female than male tenure and promotion candidates, even with equivalent and sometimes superior qualifications.

Since these implicit biases are naturally-occurring and ubiquitous phenomena maintained, at least in part, by underrepresentation of women and MUREG in STEM, it is important to acknowledge the existence of bias and the conditions under which it may be more pronounced. In fact, given that all human social judgment is vulnerable to bias, it is more helpful to understand the conditions under which bias may be more pronounced than to engage in a discussion of who is more or less likely to engage in bias. Perry, Davis-Blake, & Kulick (1994) identify a number of conditions under which jobholder schemas may be influenced or activated in a manner that introduces bias, including when:

- the position occurs within a larger organization with many job titles
- the position is part of a formal job ladder with highly structured advancement rungs
- representation within the position is skewed (e.g., occupied primarily by men or Whites)
- representation within the applicant pool is skewed (e.g., comprised primarily of men or Whites)
- representation among key leadership is skewed (e.g., leaders primarily men or primarily Whites)
Conversely, when leaders explicitly endorse equitable consideration, monitor/review the selection process, and reward equitable considerations/sanction inequity, jobholder schemas that introduce bias are less likely to be enacted in the decision-making process. Given that UWF is a large organization with many job titles and faculty positions have formal job ladders, combined with the underrepresentation of women and MUREG in STEM faculty positions and applicant pools as well as administrative leadership roles at UWF, the conditions are ripe for the activation of schemas that introduce bias in the selection process.

**Faculty Recruitment, Selection, and Hiring at UWF**

Faculty recruitment, selection, and hiring are complex and time consuming activities with high stakes for all involved. The University, individual departments, search committee members, and applicants alike invest a great deal of time, energy, and money into the identification of and selection from among the best candidates during a national or international search process. Faculty hiring is a long-term and far-reaching investment in the University and it is important that the search process is performed in such a manner as to achieve a fair and equitable review of the best qualified candidates available. Search processes and procedures are designed to facilitate an effective search. The search process is not a simple task, however. It involves many players during many stages and steps that may be subject to errors that can result in a less-than-optimal outcome.

From the HR perspective there is not much difference between procedures for faculty hires vs. University Work Force employees regarding technical procedures and software. HR provides training on the recruitment and selection process, but this training focuses on general hiring procedures and is not specifically designed for faculty searches. Florida Sunshine laws apply to all searches. Searches held in the Sunshine permit search committees to rank and vote on candidates (although these also require public noticing of all search committee meetings and discussions) but searches held outside of the Sunshine limit search committees to listing strengths and weaknesses of candidates and may be held using “closed” meetings.

UWF is an Affirmative Action (AA) and Equal Employment Opportunity (EEO) institution and must develop AA/EEO plans and take proactive steps to include women and minorities in the search process. An AA/EEO plan must be completed but need not be submitted to any federal or state agency. Although there is no routine review for compliance, the US Department of Labor can audit these practices at any time. HR works to ensure compliance with AA/EEO regulations through examination of position postings and certification of applicant pools. HR is involved in initial phases of the search process. HR reviews faculty position posting locations to determine whether the position was widely advertised and postings were provided in locations that include representation by women and minorities who may be potential applicants. HR reviews applicant pools to ensure that sufficient representation of women and minority applicants has been achieved in each individual search pool obtained. HR can also advise on where to advertise to reach diverse candidates.

Based on census data on educational attainment sufficient to teach at any post-secondary level in any field, a single target of 46% for women and a single target of 20% for minorities should be reached for
certification of the applicant pool by HR (keeping in mind that these are targets and applicant reporting of sex and race/ethnicity is optional, HR strives for a pool that closely approximates or exceeds these targets). These figures do not vary by discipline or differentiate among various subgroups of minority applicants. HR is less involved in the search and selection process after the certification of the applicant pool. Upon certification of the applicant pool, search committees may begin the review of applicants. HR does provide guidance on conducting various steps of the search committee process (Appendix A).

A faculty search committee must include a minimum of three people, with five to seven recommended. At a minimum, the search committee should include representation by at least one man, one woman, and one minority (although one member can count in more than one of these categories). Search committees perform their review of applications and conduct phone, videoconferencing, or live interviews with applicants in order to make recommendations consistent with Sunshine regulations to the hiring official.

Although the college dean serves as the hiring official, department chairs sometimes operate in a similar role. As a result of variability across departments regarding the role of the department chair in the hiring and negotiation process, department chairs may be eligible for inclusion on the search committee if not operating in some capacity as a hiring official (or excluded from service on a search committee if operating in some capacity as a hiring official).

The search committee review of applications, delineation of a “short-list” of candidates, interviews of “finalists,” and determination of recommendations for the hiring official may be subject to great variability across departments. This variability may contribute to search processes that influence the power that implicit bias may have in the selection and hiring of new faculty. Search committees that are well-versed in search processes and strategies to avoid bias can maximize the return on the investment in the search process and secure the best candidates for hire.

Avoiding Bias and Promoting Diversity in Recruitment and Selection of STEM Faculty

As noted in the previous section, the University and HR direct the beginning phases (e.g., approval to search, receipt of applicant materials, and compliance with AA/EEO and Sunshine laws) and latter stages (e.g., final selection and offer negotiation by hiring official) of the search and hiring process but faculty search committees direct the middle stages of the search process (e.g., review of applicant credentials and qualifications, winnowing to “short-list” of candidates, and interview and review of finalists). It is this middle portion of the process during which the most “evaluative” functions occur. Search committee chairs and members have an obligation to be familiar with the general parameters of the search process to ensure a fair and equitable review of the applicant pool. Search committee chairs and members should also strive to ensure that implicit bias is minimized in the search process in order to recruit and select the best candidates in the best interest of the department and the University and the students we serve. Numerous recommendations for avoiding bias during the search process have been made by other STRIDE Task Forces (e.g., University of Michigan, Northeastern University, University of Missouri-Columbia, Rutgers University, University of Rhode Island; links to web pages available in Appendix B). There is substantial overlap in these recommendations and the UWF STRIDE Task Force
endorses the following recommendations for search committee members (see Fine & Handelsman, 2012):

- **Recognize/acknowledge implicit bias as normative and avoid mere suppression efforts.** Acknowledging that bias is normative and confronting/challenging it rather than trying to deny or squelch it can minimize its impact. Efforts to suppress implicit bias can backfire into an unwillingness to critically examine schemas, expectations, and evaluations.

- **Employ a structured, systematic search process.** Follow the general procedures designed to minimize error and mishaps and provide a consistent approach to all candidates. Search committee chairs and members should be familiar with the general guidelines from HR for conducting a search.

- **Utilize a priori criteria and procedures.** Explicit criteria for job performance requirements for the position, stated clearly in advance, help to focus on relevant characteristics of applications and minimize the intrusion of information pertaining to characteristics irrelevant to performance, such as sex, race/ethnicity, or citizenship.

- **Ensure diversity within the composition of the search committee.** Although everyone is vulnerable to implicit bias, representation of women and MUREG on faculty search committees can help to shine a light on implicit bias and minimize its effects. Note that UWF policies require search committee composition include representation by at least one man, one woman, and one minority member. These are minimums for composition of the search committee. It is notable that it can be difficult to achieve these minimums when departments face significant underrepresentation by one or more of these demographics. Include search committee members from outside of the department, outside of academic affairs, or even student members to enhance the diversity of the composition of the search committee. Consider using a larger search committee and include members of departments that have been successful in recruiting underrepresented faculty.

- **Make efforts to reach a diverse pool of applicants.** Remember that women and MUREG are underrepresented and seek venues for advertising that actually reach diverse audiences or specialized audiences. Develop connections and networks with institutions, associations, organizations, and even individuals that reach qualified candidates from groups that are underrepresented within the discipline for which you are hiring. Remember that HR requirements for broad dissemination of job announcements and certification of the applicant pool are generic and may not be sufficient for every discipline. Know the level of representation of women and MUREG doctorate degree recipients for your discipline and strive to obtain an applicant pool that achieves a similar or better level of representation.

- **Avoid ranking of applicants during the application review and the interview evaluation.** Forced ranking of applicants can suggest greater distance between applicants than actually exists. For example, ranking two very close competitors as first and second based on only a small competitive difference with a more distant third candidate can make the first choice appear more desirable than the second by virtue of ranking (and consider the possibility that there may be some implicit bias that favors one or the other of two close competitors ranked in such a fashion). (This recommendation is consistent with the conduct of searches outside of the Sunshine).

- **Avoid numerical ratings of applicant qualifications during the application review and the interview evaluation.** The impact of even slight implicit bias in subordinate ratings can become cumulative.
across multiple areas and result in a substantially biased overall rating. (This recommendation is consistent with the conduct of searches outside of the Sunshine).

- **Be aware of cultural factors that may activate implicit bias during interviews.** Telephone and videoconferencing interviews are commonly performed to identify finalists from a short list of preferred candidates. Be careful to avoid making assumptions about qualifications and performance that may stem from an interaction of technology-facilitated interviews and cultural practices. For example, softer speech volume and accented language may appear as “weaknesses” over the phone but may offer no such disadvantage to teaching or research effectiveness in person. Pay careful attention to a priori criteria and be purposeful in the effort to limit negative judgments on the basis of behaviors that may be poor indicators of actual performance on the job.

- **Cultivate sensitivity to within group variation among women and MUREG.** Recognize that there is great variability rather than homogeneity among women and MUREG. Women come from all different backgrounds and MUREG represent a broad range of racial, ethnic, and nationality groups. There is no prototypical woman or minority just as there is no prototypical faculty member or scientist. Variety is the spice of life and diversity within our disciplines and departments provides valuable enrichment opportunity for our discipline and our students.

- **Develop a departmental diversity hiring plan.** Based on the general HR guidelines for searches, the findings in this report, and the specific diversity representation and needs of your department and discipline, examine the department’s current status and future goals for hiring for diversity. Identify approaches and strategies to pursue this plan, such as goals for hiring women and MUREG consistent with representation of women and MUREG doctorate recipients in the discipline and venues and contacts for advertising for new position openings. Be prepared with the plan in advance, so that the next search opportunity can focus on the work of searching rather than planning.

Accomplishment of the goal of recruiting to improve diversity and excellent in STEM tenure-track faculty lines does not rest solely in the hands of search committees or HR. The University has an important role in facilitating this goal. In addition to recommendations for search committee chairs and members, the UWF STRIDE Task Force endorses the following recommendations for the University:

- **Include faculty diversity as a meaningful part of the University plan for diversity and inclusion.** The arguments for faculty diversity are compelling; the benefits of faculty diversity accrue to students, faculty, departments, colleges, and the University as a whole; and the goal is consistent with the University’s stated mission, values, and vision for the future.

- **Include a “state of faculty diversity at UWF” segment in the annual “State of the University Address.”** Faculty are routinely warned that goals that are not assessed or measured are not met. To achieve a goal, progress must be monitored, measured, and evaluated. Transparency on progress toward goals leads to accountability. The University should monitor, measure, assess, evaluate, and report on progress toward stated goals related to faculty enhancement and diversity and inclusion.

- **Examine and correct any pay and advancement inequities for women and MUREG faculty.** Pay and advancement inequities are simply unjust and can perpetuate the status quo of underrepresentation by devaluing the contribution of existing women and MUREG faculty by
hindering efforts to bring women and MUREG into a system that fails to recognize and reward real merit in favor of bias. A clear imbalance in advancement to Full Professor ranks by women STEM faculty should be examined carefully, with an eye toward nurturing and supporting the promotion of qualified women STEM Associate Professors.

- **Hire exceptional women and MUREG STEM faculty candidates into senior rather than junior faculty positions and leadership positions.** These senior faculty can function as examples of inclusion at all levels for future applicant pools as well as role models for junior faculty and students.

- **Consider the adoption of a University-wide policy explicitly supporting diversity contributions in faculty advancement opportunities.** The University of California system adopted Academic Personnel Policy #210 in 2004, explicitly stating that “teaching, research, professional and public service contributions that promote diversity and equal opportunity are to be encouraged and given recognition in the evaluation of the candidate’s qualifications” in appointments and promotions.

- **Develop training for fair and effective faculty searches and provide all faculty search committee members with information on hiring for diversity in addition to search committee hiring guidelines and Sunshine Law information.** The UWF Faculty ADVANCE Report on the 2012 Faculty Culture Survey revealed that 63% of faculty agreed or strongly agreed that faculty diversity is an important strategic goal for the University; however, fewer than 30% agreed or strongly agreed that recruitment of women and MUREG faculty is a top priority at UWF. Furthermore, fewer than half reported that they had received guidance/training on procedures for fair faculty searches.

- **Develop and endorse a written policy dispelling any misconceptions about cost-prohibitions for hiring temporary residents and convey this policy to all search committees.** The STRIDE Task Force encountered several anecdotal reports that faculty search committees frequently maintain a perception that the hiring of non US citizens is discouraged or even prohibited because it is cost-prohibitive to secure the necessary legal residency permits. Regardless of the actual cost, the perception that this is discouraged may contribute to the inappropriate elimination of potentially large numbers of STEM faculty applicants from further consideration in applicant pools, especially in disciplines where more degrees are awarded to temporary residents than US citizens or permanent residents. In fact, UWF must pay a base fee of $825 to sponsor a new faculty member for an H1B visa but additional fees of approximately $2,000 may be paid by the employer or the employee. Given the cost of a national search and all that goes into it, these fees are relatively small and certainly worthwhile for hiring the best candidate.

**Conclusions and Future Directions**

The STRIDE Task Force undertook an extensive review of STEM faculty recruitment and hiring at UWF. Three major observations were made by the STRIDE Task Force during the process of this review and report. Each of the findings below requires further attention and appropriate action. There is:

1. great variability in representation of women and MUREG faculty across STEM departments at UWF;
2. substantial underrepresentation of non-US citizen MUREG faculty at UWF compared to national STEM doctorate degree recipients awarded to temporary residents; and,
3. dramatic underrepresentation women STEM faculty at the rank of Full Professor at UWF compared to national STEM faculty ranks.

Although the search and hiring processes outlined by the UWF HR department ensure compliance with state and federal laws, these neither guarantee representation by members of underrepresented groups of women and MUREG candidates in applicant pools nor eliminate bias in the selection process. The STRIDE Task Force recommends that the University and individual STEM department strive to increase the representation of women and MUREG in the tenure-track, aiming to reach levels of representation consistent with new doctoral recipients in STEM disciplines. Even this level of representation would not achieve the level of diversity represented by the student body at UWF, however. This means that some departments should actively seek to recruit and hire more women faculty while other departments should actively seek to hire more MUREG faculty, including non-US citizens, African Americans, and Hispanic Americans, all of whom are underrepresented among UWF STEM faculty ranks, a fact which is obscured by the practice of grouping members of various underrepresented groups into one. The variability in representation of women and MUREG faculty across STEM departments at UWF likely reflects, at least in part, the influence of implicit bias in recruitment and hiring practices that may be addressed with recommendations made in this report. Similarly, the underrepresentation of non-US citizen MUREG faculty may be attributable, at least in part, to misperceptions about costs of hiring non-US citizen faculty candidate that may be addressed by the development and dissemination of a clear policy statement dispelling misperceptions about costs. The underrepresentation of women STEM faculty at the rank of Full Professor appears to be more strongly related to promotion and advancement practices than recruitment practices. The STRIDE Task Force did not conduct a systematic review of promotion and advancement practices, and as such, cannot do more than speculate as to the factors underlying the finding of underrepresentation of female Full Professors in STEM. This latter finding warrants further examination and represents the next phase of investigation for the STRIDE Task Force.
References

Congressional Commission on the Advancement of Women and Minorities in Science, Engineering and Technology Development (2000). *Land of plenty: Diversity as America’s competitive edge in science, engineering and technology.*


Appendices
Key Recruitment and Selection Materials from UWF Human Resources

http://uwf.edu/ohr/Employment/RecrSeleAppt.cfm

UWF Recruitment Checklist:
http://uwf.edu/ohr/internal/forms/formsbySection/Employment/Recruitment/Recruitment%20Checklist.pdf

Search Committee, Chairperson, Hiring Official Guidelines:
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