RESEARCH, INNOVATION, AND TALENT

WORKING GROUP DELIVERABLE

The **Research, Innovation, and Talent Working Group** will focus on creating stronger ties between businesses and higher education by promoting industry-academic partnerships, experiential learning opportunities, and programs to meet market needs. In particular, the group will be charged with:

→ Identifying strategies and best practices to increase research, development, and commercialization activities by our state's research universities.

→ Developing effective industry-academic research and workforce development partnerships that lead to more research and employment opportunities for students.

→ Highlighting successful practices that expand the number of students, especially women and underrepresented minorities, who participate in research and obtain STEM degrees.

→ Determining effective methods for attracting and supporting diverse faculty and staff.

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OVERVIEW

The state plan for higher education, **Where Opportunity Meets Innovation**, emphasizes the importance of cultivating research, innovation, and talent to deepen and recapture our role as a leader in the innovation economy and effectively prepare students for success after college. This is described in more detail in the plan within a vision for a student bill of rights. The fourth element states, "Every student in New Jersey should have the opportunity to work with an employer, conduct meaningful research supervised by a faculty member, or access some other form of experiential learning before graduation." The eighth element states, "Every student in New Jersey should have high-quality , career-relevant academic programs that will prepare them to succeed in the global economy." The plan further argues that Colleges and Universities drive innovation, they are centers of research and development for new industry clusters, birthplaces for new ideas and companies, and provide rich environments for start-ups and creativity. "Knowledge creation is a fundamental aspect of colleges and university activity that supports commercialization, drives innovation, and ultimately strengthens the state's economy as a whole."

In furtherance of making this vision a reality, the **Research, Innovation, and Talent Working Group** was charged creating stronger ties between businesses and higher education by promoting industry-academic partnerships, experiential learning opportunities, and programs to meet market needs. In particular, the group will be charged with:

1. Identifying strategies and best practices to increase research, development, and commercialization activities by our state's research universities.
2. Developing effective industry-academic research and workforce development partnerships that lead to more research and employment opportunities for students.
3. Highlighting successful practices that expand the number of students, especially women and underrepresented minorities, who participate in research and obtain STEM degrees.
4. Determining effective methods for attracting and supporting diverse faculty and staff.

The group met six times in person from June 2019 through November 2019, where each meeting lasted for two hours each. Two chairs were appointed by Governor Phil Murphy to lead the working group, and they met regularly with OSHE and EDA staff in between meetings to further the work of the group. The larger working group broke up into four subgroups organized around each of the four charges stated above. Each subgroup met via conference call, in-person, and/or on-line meeting to further the work in between each of the plenary full working group sessions. Each subgroup first identified its final deliverable and created an action plan to reach that deliverable. The group was originally provided with an opening Power Point presentation provided by OSHE staff that provided a set of data/facts around each of the four charges in addition to handing out a full copy of the State Plan document to each member so that all members could have an initial starting point for discussion and deliberation around answering the charges. Each subgroup approached their work slightly differently but all ended up completing narrative deliverables that attempt to provide a resource for institutions and the State on how to further research, innovation, and talent development in the State of New Jersey and more specifically at its colleges and universities

Attracting and Supporting Diverse Faculty and Staff

Introduction

Diversity is an essential component of any organization, whether it be higher education, industry, or government. Its benefits are multifold. When individuals with diverse backgrounds and varying points of view work together, creativity, problem solving, and innovation are significantly enhanced. Diversity enriches engagement and productivity in the working environment. Those in higher education are particularly aware of the importance of diversity because it influences the most critical factor of our mission: student success.

The importance of diversity is reflected in New Jersey's State Higher Education Plan—*Where Opportunity Meets Innovation, A Student-Centered Vision for New Jersey Higher Education*—which was released by Governor Murphy and Secretary of Higher Education of New Jersey, Zakiya Smith Ellis in 2019. The Plan outlines a student Bill of Rights for New Jersey's 78 institutions of higher education. It explicitly articulates the need for students to be educated from a set of faculty whose diversity is reflective of the students they teach. "College leaders across the state must increase their efforts to diversify faculty and staff to ensure these critical teachers are available for student access and support," the Plan states. It also outlines the disparity between New Jersey student and faculty demographics.

Almost all institutions of higher education list diversity as a core value of their mission. Colleges and universities recognize that the goal of preparing students for a global and pluralistic world can only be accomplished in a diverse and inclusive environment. Yet the faculty and staff of New Jersey's institutions have yet to mirror those of its students. Building a diverse community across students, staff, and faculty takes commitment and effort. It can only be accomplished *intentionally*.

Many tools and resources are available to help in this endeavor. The following provides *some* strategies and resources to help accomplish the goal of diversifying faculty and staff. Multiple campuses across the nation are struggling with these issues and most have developed plans unique to their campus. The examples presented here, while meant to be neither representative nor comprehensive, are presented as a toolkit from which institutions might chose to adopt appropriate strategies for their campus.

REPORT
- *Where Opportunity Meets Innovation: A Student-Centered Vision for New Jersey Higher Education.* State of New Jersey, Office of the Secretary of Higher Education. February 2019

1.   New Jersey IHE Diversity Profiles

New Jersey is a diverse, ethnically rich state. Notably, it is home to the second largest Jewish (after New York), Muslim (after Michigan), and Cuban (after Florida) populations in the country. Among its richness, New Jersey is home to significant Peruvian, Portuguese, Brazilian American, Hispanic, Arab, African-American, Chinese and Italian American populations. New Jersey's students are equally diverse. Among its half-million college students, 56% identify as a racial or ethnic minority.

How do New Jersey institutions of higher education reflect this diversity? Whereas the student enrollment and, to a lesser degree, staff demographics are becoming accurate reflections of the state, faculty at these same institutions are less diverse than the state demographics and these figures have been more challenging to change.

	State of NJ Demographics	NJ Student Demographics	NJ Staff Demographics	NJ Faculty Demographics
White	55%	44%	54%	63%
Black/ African American	13%	13%	16%	7%
Hispanic or Latinx	20%	19%	11%	5%
Asian	10%	9%	7%	11%
Other	2%	15%	12%	14%
Source	US Census Bureau, American Communities Survey (ACS) 5-year estimates, 2017	IPEDS Fall Enrollment Survey 2008-2017	IPEDS HR Staff Survey 2017	IPEDS HR Staff Survey 2017

Changing the makeup of the professoriate and the staff remains one of the most pressing challenges in higher education. But doing so is critical because it influences the success of our students. When classroom faculty mirror classroom students, better outcomes—student engagement, retention, and completion—result. Change in the makeup of faculty will not occur spontaneously; universities and colleges are designed for incremental, deliberative change. Change will require intentional and continuous effort.

Several tools are available, almost exclusively for faculty diversity. However, while tools specifically for staff diversity are rarely mentioned, the general principles apply. Here we will look at pipelines to increase the diversity pool, recruitment and search practices, and retention practices.

1.1. Resources

DATA
- IPEDS AND CENSUS DATA (complied by OSHE).

2.   Pipelines Strategies for Diversification of Faculty & Staff

Many institutions of higher education have adopted pipeline strategies to diversify their students, staff, and faculty. Pipelines act as conduits; they seek to funnel individuals into training programs that lead to degrees and careers. In higher education, pipeline programs are often created to enhance these conduits and may intervene at any point in the educational path. Programs might connect students from desired high schools to enroll as undergraduates; they might move post-docs into faculty positions.

Pipeline programs recognize that diversity in any particular discipline exists and seeks to channel that diversity to career outcomes (e.g., STEM careers or the professoriate). Pipeline programs recognize the ways that we, on the other hand, unintentionally filter out this diversity by inappropriate use of selection criteria and the influence of implicit biases. For example, traditional methods of evaluating intellectual potential, such as standardized testing, fail to provide parity to all who are being evaluated.

Looking beyond criteria such as GPAs or GRE scores, pipeline programs recognize potential along multiple dimensions. They value criteria such as grit and determination.

The pipeline analogy is apropos because, like literal pipelines, they may serve as a bridge, they might spring a leak, or they may simply be broken. Pipelines should be appropriately analyzed. For example, the STEM pipeline is leaky. While equal percentages of underrepresented minorities (URM) and non-URM undergraduates declare themselves as STEM majors, disparity exists with career outcomes. While 24% of STEM undergraduates are composed of underrepresented minorities, only 10% of doctoral degree holders have STEM careers (academic or industrial). As a result, pipeline programs are created to 'plug the leaks.' Bridge programs (e.g., to the Doctorate or to the Professoriate) are common. Typically, these programs provide intensive hands-on mentoring, curricular remediation, professional development, and personal coaching (on topics such as imposter syndrome) as required program components for their participants to obtain their goal. However, if these components are not leading to their expected goals, leaders should examine the program for leaks or breaks.

Pipelines do not exist in isolation of other diversity efforts. While other methods are helpful and needed—for example, providing fellowships to diverse graduate students—these methods reach students who have already succeeded overcoming the hurdle of graduate school admission. Pipelines can help bring more students to the admission pool. Pipeline programs not only prepare individuals for the next step, (e.g., graduate school), but the programs keep the long-term goal (e.g., professoriate) front and center.

2.1. Resources

HANDBOOKS & DOCUMENTS
- President's Diversity Pipeline Initiative. 2017 – 2018 Summary Report. University of California

ARTICLES
- University pipeline programs offer viable approach to faculty recruitment. Kelley Taylor. INSIGHT into Diversity, October 25, 2017
- Building a Diverse pipeline for future faculty. ACM – Associated Colleges of the Midwest, November 2018

3.   Recruitment / Searches

Decades of national, state, and institutional initiatives to promote diversification of faculty and staff at colleges and universities have produced, at best, limited progress. Most institutions have focused on faculty and developed their own approach towards solving this critical problem. These approaches typically rely on a set of standard tools, none of which is more important than the will and effort to create real change. Best practices in recruiting diverse faculty and staff involve the committed effort of participants to ensure a broad outreach to potential applicants, a fair evaluation of the candidates, and accurate presentation of the position and climate for the candidate's assessment.

3.1. Forming a diverse search committee

Both the composition of the search committee and its charge will influence the outcome of the search. Best practices encourage these factors to be considered deliberately and early. Ideally, the committee is diverse itself; it should be composed of individuals diverse along gender, ethnic, and disciplinary expertise lines, producing a committee with individuals who can bring unique points of view to the task. The committee should be charged with creating a diverse applicant pool, with employing equitable search practices, and with explicitly identifying outstanding women and underrepresented minority candidates. Diverse candidates should be given the opportunity to impress faculty with face to face (*e.g.*, Skype) interviews, and research has demonstrated that implicit bias is reduced when more than one female or minority candidate is interviewed.

The committee should use criteria-based evaluation methods to equitably assess candidates. The committee should come to consensus about the criteria (e.g., five to ten explicitly identified criteria) prior to evaluating applicants. Interview questions should be standardized prior to the search.

3.2. Implicit Bias Training

A challenge any university or college faces in attempting to diversify its faculty is that of educating its existing faculty and staff that diversity is an essential component of advancing the institution and that it enhances its academic mission. Recognizing how implicit biases impede the goal of diversification is key to producing equitable search practices.

Implicit bias refers to the attitudes or stereotypes that affect our understanding, actions, and decisions in an unconscious manner. When our implicit biases are recognized, we can make better, more informed decisions. Faculty are often more receptive to these lessons if they come from respected senior colleagues. They could otherwise dismiss or be unreceptive to such training as an unnecessary administrative mandate. Empirical evidence of implicit bias and effective examples of training at other institutions are helpful. Ample examples of practical tips on evaluating letters of recommendation or interviewing applicants are available.

Faculty may assume that the best and brightest will naturally rise to the top, a "we only hire the best" outlook. This strategy inherently neglects that we are not innately equipped to evaluate those different from ourselves. Our default is to use our internal standards as the standard of excellence, not recognizing that our standard may be skewed by our own internal bias, misconceptions, and invalid assumptions.

3.3. Crafting the position description

An effective tool that can assist in creating the most diverse pool of applicants is to define the job position in the widest and most inclusive terms possible. The committee should decide by consensus specific requirements of the position; however, overly specific disciplinary requirements in the job ad will be counterproductive to attracting a culturally and academically diverse faculty. Beyond emphasizing a department's strengths in scholarship and teaching, the ad should provide assurance of the institution's and the unit's commitment to diversity and inclusion. A prosaic reliance on an institution's templated equal opportunity statement accomplishes little.

3.4. The Campus visit

Ideally, the campus visit demonstrates to the candidate a welcoming climate and provides assurance that the institution and the department provide an inclusive environment where the candidate could thrive. Committee members should be prepared to answer candidate questions about climate and institutional values. Resources for new faculty may be emphasized. As well, an opportunity for candidates to interact with individuals who do not have input in the hiring decision may provide the candidate the freedom to ask sensitive questions, such as work/life balance.

3.5. Avoiding Backfire

The committee should remember that candidates wish to be evaluated on the basis on their scholarly and academic credentials. It is not only counterproductive but also ill-mannered to provide a candidate from a traditionally underrepresented group with any references, sublet or overt, that they are being valued over other candidates because of characteristics such as their gender or ethnicity. Candidates are aware of who they are. Committee members should focus comments on scholarship, contribution, and potential.

3.6. Resources

HANDBOOKS & DOCUMENTS
- Best Practices in Recruiting and Retaining Under-represented U.S. Minority Faculty. A Handbook. University of Minnesota.
- Strategies for Successfully Recruiting a Diverse Faculty, Virginia Commonwealth University.
- Handbook for Faculty Searches and Hiring. Advance. University of Michigan
- Faculty Search and Selection Guidelines, Hiring for Inclusive Excellence. New Jersey Institute of Technology. 2016.
- Instilling Equity and Inclusion in Departmental Practices. Guiding Faculty Recruitment and Retention. Educational Advisory Board. 2017.
- Best Practices for Faculty searches. University of Washington. Feb 2016.
- Best Practices: Recruiting & Retaining Faculty and Staff of Color, Western Washington University
- Fixing hiring practices to increase faculty diversity. Closing the gap in diversity between an institution's student body and its faculty. The Hechinger Report. June 2019.

ARTICLES
- Advice to deans, department heads and search committees for recruiting diverse faculty. *Inside Higher Ed* July 19, 2018

- Inclusive Excellence Toolkit. Jesús Treviño, Thomas Walker, Johanna Leyba. www.du.edu/cme March 2009.

TOOLKITS
- STEM Diversity and Broadening Participation Resources for Faculty. www.pathwaytoscience.org 2018.
- Diversifying the Faculty: A Guidebook for Search Committees. Checklist of Best Practices. University of Washington.

4.   Retention

It is imperative that after the effort of recruiting faculty from traditionally underrepresented groups to an institution, these individuals are not lost. Retention is an institutional responsibility that requires continuous and vigorous effort. Losing a faculty member to misunderstanding, to an undesirable campus climate, or to unfair evaluation is avoidable. Candidates are recruited to lift the university; not realizing the full potential of that individual's contribution to a preventable reason is a sadly missed opportunity.

4.1. Mentoring

Mentoring is important for development of all junior faculty, but no more so than for faculty who face additional hurdles predisposed by their gender or ethnicity. Holistic, salutary mentoring is essential for improving retention rates of women and underrepresented minorities and for reinforcing a respectful, positive work environment. At best, mentoring programs help to provide junior faculty members with direction, purpose, and confidence. These programs serve to integrate new faculty into their new department; the programs provide transparency for their path forward.

All first-year faculty should be provided with a mentor committee. Providing a team of mentors, rather than the traditional senior-junior pairing, better establishes the faculty member with a balanced, informed network. Mentors, which may be junior faculty, senior faculty, and/or administrators, should be selected for their areas of guidance and be provided with defined mentoring roles outlining specific goals. These charges can mitigate reliance on personality fit. Both mentors and the mentee should understand their responsibilities.

4.2. Reappointment, tenure, and promotion

The Reappointment, Tenure, and Promotion process must be transparent to both junior faculty and to those who will evaluate them. Universities and colleges typically communicate formal requirements in written departmental or college documents. However, faculty know there are both written and unwritten expectations. Junior faculty may not understand institutional, college, and departmental standards or expectations for tenure, nor should they be expected to.

Junior faculty must then be provided with the opportunities to achieve these expectations. Examples might include seed funding grants, professional development opportunities such as writing, teamwork, or communication skills, or leadership opportunities, such as important university committees. Finally, those who evaluate progress towards tenure should be made aware of their own implicit biases or unrealistic expectations. The university or college as well can attempt to identify its own blind spots by collecting data on the institution's disparities in tenure rates across gender or ethnicity.

4.3. Cultural climate

An institution's cultural climate, the space in which all faculty live on a daily basis, cannot be underestimated as a key component of retention. Building an inclusive environment in which all individuals feel accepted, safe, and comfortable is essential to retaining faculty from traditionally underrepresented groups. Climate assessment is a first step that any unit can use to evaluate the "inclusiveness" of their environment. Multiple climate assessment instruments are available (refer to Safe and Inclusive Learning Environment Working Groups Climate Survey's deliverable for more resoruces). Focus groups may also be helpful in identifying strengths and weaknesses. Additionally, campus-wide diversity initiatives, such as cultural competency or implicit bias training not only help towards creating an inclusive environment but, when paired with an institutional diversity statement, documents the institution's commitment to all faculty, staff, and students.

4.4. Exit survey

Lastly, if faculty are lost, it is important to assess why. A voluntary exit survey can help to capture valuable information related to climate and diversity services that can help to direct the institution's ongoing efforts.

4.5. Resources

HANDBOOKS & DOCUMENTS
- Best Practices in Recruiting and Retaining Under-represented U.S. Minority Faculty. A Handbook. University of Minnesota.
- Best Practices: Recruiting & Retaining Faculty and Staff of Color, Western Washington University
- Guide to Best Practices in Faculty Retention. Columbia University, Office of the Provost. November 2018
- Instilling Equity and Inclusion in Departmental Practices. Guiding Faculty Recruitment and Retention. Educational Advisory Board. 2017

5. Other Resources

5.1. New Jersey Educational Opportunity Fund

A major component of creating pipelines in the state of New Jersey will capitalize on the New Jersey Educational Opportunity Fund (EOF). EOF provides financial assistance and support services (e.g. counseling, tutoring, and developmental course work) to students from educationally and economically disadvantaged backgrounds who attend participating institutions of higher education in the State of New Jersey.

EOF is a campus-based program. A majority of New Jersey's Colleges and Universities participate in the Fund. Each campus program is responsible for student recruitment, selection, program services, and its own specific criteria for EOF admission and program participation.

5.2. Professional organizations for Diversity Officers

National Association of Diversity Officers in Higher Education (NADOHE). The NADOHE describes its mission as "the preeminent voice for diversity officers in higher education by supporting our collective efforts to lead our institutions toward the attainment of the following goals:

- Produce and disseminate empirical evidence through research to inform diversity initiatives
- Identify and circulate exemplary practices
- Provide professional development for current and aspiring diversity officers
- Inform and influence national and local policies
- Create and foster networking opportunities"

NADOHE website: https://www.nadohe.org/

Liberal Arts Diversity Officers (LADO) consortium. The Liberal Arts Diversity Officers (LADO) consortium describes its mission as "promotes best practices and innovative strategies in the areas of diversity, equity and inclusion in higher education."

LADO website: http://liberalartsdiversity.org/