Institutional Assessment: University of Hawaiʻi Community Colleges, University of Hawaiʻi at Hilo, University of Hawaiʻi at West Oahu*

conducted under the auspices of the:

National Science Foundation (NSF) ADVANCE Partnership: Building Relationships to Increase Diversity and Gender Equity in Hawaii's Two-Year College System

National Science Foundation, No.1725604, $1,250,281

https://www.nsf.gov/awardsearch/showAward?AWD_ID=1725604&HistoricalAwards=false

September 2022

Marina Karides, Principal Investigator and Lead Researcher
University of Hawaiʻi at Mānoa, Geography and Environment

Loke Aloua, Qualitative Researcher
Poʻo, Hui Kaloko Honokohau

Noreen Kohl, Quantitative Researcher
University of Hawaiʻi at Mānoa, Ph.D. Candidate Sociology

Nathalie Rita, Quantative and Qualitative Researcher
University of Hawaiʻi at Mānoa, Ph.D. Candidate Sociology

Table of Contents

List of Tables

I. INTRODUCTION

In this report we examine the conditions of employment and opportunities for advancement based on data collected at the University of Hawai'i Community Colleges (UHCCs), the University of Hawai'i at Hilo (UHH), and the University of Hawai'i at West Oahu (UHWO) with a particular focus on gender and diversity and science, technology, engineering, and math (STEM)[1]. This report provides the institutional assessment of these factors on these campuses which is the research objective specified in our National Science Foundation (NSF) ADVANCE Partnership grant "Building Relationships to Increase Diversity and Gender Equity (BRIDGE)" 2017-2022, No. 1725604.

The goal of the National Science Foundation's (NSF) ADVANCE program is to:

broaden the implementation of evidence-based systemic change strategies that promote equity for STEM[2] faculty in academic workplaces and the academic profession. The NSF ADVANCE program provides grants to enhance the systemic factors that support equity and inclusion and to mitigate the systemic factors that create inequities in the academic profession and workplaces. Systemic (or organizational) inequities may exist in areas such as policy and practice as well as in organizational culture and climate. For example, practices in academic departments that result in the inequitable allocation of service or teaching assignments may impede research productivity, delay advancement, and create a culture of differential treatment and rewards. Similarly, policies and procedures that do not mitigate implicit bias in hiring, tenure, and promotion decisions could lead to women and racial and ethnic minorities being evaluated less favorably, perpetuating historical under-participation in STEM academic careers and contributing to an academic climate that is not inclusive.

Since 2001, the NSF has invested over $270M to support ADVANCE projects at more than one hundred institutions of higher education. For more information on ADVANCE please see

[ADVANCE at Glance](#).

---

[1] Please see [NSF Research Areas](#) and this [list](#) of NSF approved fields of study. In our quantitative analysis we separate the natural and physical sciences from the social sciences in some instances. See also UH's [official definition](#) for identifying STEM majors. In our qualitative data collection we interview faculty from NSF STEM fields.

Our report is based on both qualitative and quantitative research. The qualitative portion of our institutional assessment applies a grounded theory analysis (Charmez 2006; Corbin and Strauss 1990; Glazer and Strauss 1967) on 76 semi-structured, audio-recorded, and transcribed interviews with mostly STEM and women faculty from the above listed campuses. Our quantitative data statistically analyzes digitally completed surveys (N=773) that were sent to all instructional faculty across the nine UH campuses in our study via an email with a secure, anonymous, and confidential link.

Most ADVANCE funded research—and, relatedly, much of the research on women and Black, Indigenous, People of Color (BIPOC) in STEM academic careers—has focused on faculty at research universities, with limited focus on those employed at two- and four-year campuses. This is striking for two reasons. First, community colleges enroll 45% of all undergraduate students attending public institutions (National Center for Education Statistics 2019). Second, the experiences of faculty have been shown to greatly differ based on the type of institution in which they work (Webber 2019; Brown et al. 2016; Levin, Kater, and Wagoner 2006; Vitullo and Spalter-Roth 2013).

Our qualitative and quantitative findings foreground that island geographies shape the academic workplace intersecting with gender, race, ethnicity, indigeneity, migration status, and class to inform the career paths and opportunities of STEM faculty, and faculty in general, at these nine campuses within the UH System. Our findings indicate that Hawai'i's context of occupation, plantation, and tourism and its demographics based on this history impact the faculty workplace climate. We found that a large percentage of faculty survey participants (61%) on these campuses report earning at least one degree within the UH system. We also learned

that 46 percent of faculty respondents from these campuses report being born in Hawaiʻi. For us this demonstrates an attachment to place that is often associated with Indigenous and island societies (Ahia and Johnson 2022; Alexander 2015). Finally, our interviews showcase that UHCCs faculty in particular demonstrate a profound dedication to their students' achievement of their potential.

Our data analyses also reveal that UHCCs, UHH, and UHWO faculty express concern with the sufficiency of their salaries, extensive duties, and contending with the high cost of living associated with Hawaiʻi's tourist economy. We explore the paradox of STEM women faculty's commitment to their work and students, despite reporting limited organizational infrastructure to support their success, and undue challenges in the workplace through an island feminism lens (Karides 2019, 2017a), a perspective that bridges concepts from island studies with intersectionality.

Our research may also have implications for the entire structure of the UH System and other island-based higher educational institutions. Given the large percentage of survey respondents that state receiving at least one degree from the UH System, the career opportunities, salaries, mentorship, support, or lack thereof and challenges of childcare, housing, workloads, bullying and/or harassment are experienced by many UH System alumni.

II. LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

Social Inequalities, Intersectionality, and STEM Faculty

Research on women in academic STEM fields has increased considerably over the last few decades (Whitaker and Grollman 2018; Gutiérrez y Muhs et al. 2012; Carrigan, Quinn, and Riskin 2011; Blackwell, Snyder, and Mavriplis 2009; Jackson 2004). This development in higher

education research began with an increase in members of historically marginalized groups earning doctorates, working in academia, and earning tenure in STEM as well as other fields compared to their counterparts in previous cohorts (Misra et. al. 2011). However, these groups continue to be underrepresented in full-time academic positions, particularly in STEM (Fry, Kennedy, and Funk 2021; Pittman 2010; Turner 2003). Additionally, the literature demonstrates that women and BIPOC faculty experience various hurdles in achieving tenure and promotion, including access to resources, subtle and overt discrimination, larger service obligations, and institutionalized racism and sexism (Fry, Kennedy, and Funk 2021; Flaherty 2017; Guarino and Borden 2017; Misra et al. 2011; Turner, González, and Wong 2011; Pittman 2010; Turner 2003).

These factors impact faculty across academic disciplines, but they remain especially prevalent in the traditionally man-dominated STEM fields (Cimpian, Kim, and McDermott 2021; Kaminski and Geisler 2012; Carrigan et al. 2011; Blackwell et al. 2009; Jackson 2004), which have been particularly opaque in recognizing social scientific evidence of gender bias in their fields (Rhoton 2011; Cech and Blair-Loy 2014; Bagihole 2002). This largely occurs as an ideology of meritocracy continues to pervade the STEM disciplines. In turn, the "invisibility" of both race and gender privilege in STEM fields dissuades administrators and faculty from creating appropriate policies to overcome the inherent bias that presently exists (Fry, Kennedy, and Funk 2021; Hess, Gault, and Youngmin 2013).[2]

Changing deeply rooted bias is complex. For example, the increased presence of women may have changed overt sexual and gender harassment in STEM fields, but many senior women

---

[2] For an excellent source of digitally available and recent writings on gender equity and diversity in higher education and solutions see this list compiled by the Gender, Equality, and Diversity Committee at the University of Hong Kong.

scientists have mirrored the traditional science career paths of their men colleagues to succeed, despite interests in more flexible careers and work-life balance (Rhoton 2011; Benbow 2009). Salary inequities may also limit the advancement and retention of women faculty in STEM fields. While other academic disciplines are closer to parity, a gender gap in pay persists in STEM fields nationally (Fry, Kennedy, and Funk 2021; Cech and Blair-Loy 2014; Curtis 2011). Long-established arguments assuming that salary differences in STEM are primarily due to a "child or marriage" salary penalty have been countered and challenged (Xu 2008). Recent research on STEM careers has take an interest in how regional development may influence STEM careers and salaries. For example, Lysenko and Wang (2020) find that race and gender intersects with place shaping STEM labor markets regionally. These place based approaches hold important implications for considering the relationship between island geographies and the careers of UH STEM faculty.

Another way that gender and racial and ethnic inequalities remain prevalent in academic employment is in the distribution of women and BIPOC faculty across different types of academic institutions and faculty positions (Davis and Fry 2019; Griffin 2019; Pittman 2010). Overall, about three-quarters of all full-time faculty at degree-granting postsecondary institutions are White, while those who identify as Black, Latinx/a/o, and Native American *collectively* represent approximately 11 percent (Davis and Fry 2019; Griffin 2019). Black, Latinx/a/o, and Native American scholars are most underrepresented at research universities (Finkelstein, Conley, and Schuster 2016). Community college faculty, though often more diverse than at other institutions of higher education, are distinctly less diverse than their student bodies (Davis and Fry 2019). Furthermore the increase in diversity across college campuses is due to "hiring increases in the number of faculty from underrepresented

8

backgrounds in non-tenure track and part-time positions" (Finkelstein, Conley, and Schuster 2016). As Griffin (2019) explains, "Increasing faculty diversity in the most vulnerable academic positions does not solve the overall problem; rather, it creates new, pernicious inequities."

National concerns on the precarity of the type of academic positions in which under-represented groups are hired are directly relevant to recent attempts at changing tenure-track categorizations across the UH System. In relation to the UHCCs, in the Fall of 2021 the UH Board of Regents' (BOR) Permitted Interaction Group on Tenure (Task Force) proposed the recategorization of non-instructional faculty at the UHCCs as non-tenured. The attempt to recategorize these positions presents precisely the type of employment precarity Griffin (2019) identifies as more often experienced by groups traditionally under-represented or experience bias in higher education. In the UHCCs women are more likely to be employed in non-instructional tenure track positions. After much opposition through faculty testimony the decision was made to disregard the findings and recommendations of the dissolved Tenure Permitted Interaction Group. SB 3269, and SB 3269, SD1, similarly geared towards removing non-instructional UHCC faculty from the tenure track, failed in Spring 2022. However, the threat of legislative efforts to limit tenure in Hawai'i looms.

These attempts to remove service and student-centered positions from the tenure track arrives at time when some US campuses are reimagining trajectories towards tenure (Besset et. al. 2021; O'Meara 2014). In part, this is due to the growing evidence and recognition that women and under-represented race, ethnic, and Indigenous groups are more likely to be employed in service positions and complete more service work at universities and colleges (Besset et. al. 2021; SSFNRIG 2017; O'Meara 2014). Analyzing the quantitative data we collected

in 2020, we determined that had SB 3269 or SB 3269 SD1 been implemented in 2020, 72% of those impacted at the UHCCs would be women. We also note that in a review of a 2020 report generated by UH's Institutional Research, Analysis, and Planning Office (IRAP) on tenure/tenure-track faculty characteristics women constitute close to 60 percent (59.8%) of "other" or non-instructional tenure/tenure-track faculty. Based on the IRAP table, women make a distinctly larger proportion of non-instructional tenure/tenure-track faculty than of instructional tenure/tenure-track faculty. Native-Hawaiians or part Native-Hawaiians also show a larger representation in the category of "other" tenure/tenure track faculty than in instructional tenure/tenure track faculty. In comparison to the broader Asian/Pacific Islander grouping of faculty who make up 54.6 percent of "other" or non-instructional tenure/tenure track faculty, whites demonstrate a far lesser proportion (37.9%) in this category.[3]

Women and faculty from under-represented groups contribute more to service, for a variety of reasons, such as as their investment in facilitating the growth of a diverse student body and the success of the next generation of under-represented students (SSFNRIG 2017). Recent research has shown that maintaining or increasing faculty diversity has important implications for the success of community college students. Fairlie, Hoffman, and Oreopoulos (2014) found "that performance gaps of minority students can close by 20% to 50% if faculty more closely resemble students." Cross and Carmen (2021) determined that graduation rates improve for racially and ethnically under-represented students when there is an increase in faculty diversity. Unfortunately, our quantitative analysis shows that gender, ethnic, race and Indigenous bias and

---

[3] For further details please see the UH IRAP table here. Throughout the report we select 2020 as our year of comparison to match the timing of our quantitative data collection.

differences in opportunities characterize the experience of UH faculty. Additionally, employment conditions for Black and Latinx/a/o faculty across the campuses we studied are particularly challenging and without being addressed may impede building faculty diversity on UH campuses (see Rita and Karides 2021).

As stated, much of the academic literature on diversity in higher education has solely focused on faculty at elite, research-focused, or majority-white institutions marking a gap in the literature, and this includes ADVANCE research (Griffin 2019; Carrigan et al. 2011; Blackwell et al. 2009). Our NSF ADVANCE grant was the first to be centered on community colleges, and with additional funding, to include UH's four-year campuses. Collecting and analyzing both qualitative and quantitative data, the multi-method approach of our institutional assessment can offer insight into the experiences of underrepresented faculty in STEM (as well as other fields) at UH two-year and four-year campuses. The goal of ADVANCE grants is for research findings, such as those we present in this report, be used to develop, implement, or continue programs and policies that support women and diversity in the academic workplace.

Conceptual Frameworks

The growing recognition that race, ethnicity, and Indigenous status among other factors differentiate our gendered experiences at the workplace has increasingly entered the mainstream and is referred to as intersectionality (see this *New York Times* article for a well articulated elucidation of the concept). However, it was African American women, many who were working academics, who first defined the principles of intersectionality. Legal scholar Kimberly Crenshaw (1991) is credited with coining the term, but scholars and writers such as Frances Beale (1970), June Jordan (1982), Angela Davis (1983), Audrey Lorde (1984), bell hooks

(1987) and Patricia Hill-Collins (1990) inspired a remaking of feminist theorizing to consider intersections of inequalities as mutually reinforcing, shaping life experiences, educational opportunities, and the workplace. As stipulated in our original grant proposal to NSF, our institutional assessment was to embed an intersectional perspective foremost by how we collected interview and survey data and the analytical consideration we gave it.

Latinx/a/o scholars, Asian and Asian-American, and Indigenous feminist scholarship have drawn attention to the specific intersections of race, class, and gender and the range of stereotypes associated with women from different racial, ethnic, and Indigenous groups (for more information see this compilation of beginner, intermediate, and advanced books on intersectional feminisms). In particular, Indigenous feminists broadened intersectionality as a framework by addressing indigeneity (Barker 2017, Huhndork and Suzack 2010) and its inherent values of land and place.

Along with taking an intersectional approach, our research and institutional assessment of nine of the ten UH campuses also draws on island studies.[4] By adding "islandness" to categories of intersectional analysis, we recognize the specificities of island campuses and offer a place-based approach that centers the distinct history of Hawai'i. Kanaka ʻŌiwi knowledge systems are recognized as deeply responsive to their island geographies (McGregor 2007). This is evident in their articulations of familial relationship to natural phenomena, care of resources, and the sense of community and responsibility or "island-thinking" (Fisher 2015) it engenders. Islands seem to contain unique opportunities for roots and identities that are shaped by '*shima*,'

---

[4] Of note is the recent reception (2022) of an ADVANCE Catalyst Award by the University of Hawaiʻi at Mānoa and the opportunities it offers for a system-wide understanding of diversity and gender equity for faculty.

a Japanese concept of islandness that considers how island environments and geographies support community-centered societies (Suwa 2007).

As a field, island studies seeks to understand "islands on their own terms" and is devoted to unpacking "islandness" or the distinct experience, quality, and phenomena of islands, despite the diversity among them (Hau'ofa, 1994; McCall, 1994; Baldacchino, 2006). Though island studies brought attention to the specificities of islands, it largely failed to address social inequalities on islands or how gender, race, ethnicity, and migration might be shaped by island geographies (Karides 2017). For example, building a critical mass of historically marginalized faculty members has been shown to improve faculty employment conditions. However, research shows that achieving a critical mass at smaller, geographically isolated campuses poses a unique challenge because numbers of all groups may be numerically small and socially isolated (Taylor et al. 2010). Furthermore, because of the social connectedness that characterizes island societies, those experiencing difficulties such as harrassment at the workplace, or for example, domestic violence, might be less inclined to report on these difficulties.

We therefore apply an "island feminisms" lens to the analysis of our data (Karides 2017a, 2017b). Island feminisms (2017a: 31-39)refers to:

> the intellectual sensibilities of island place and constructs of gender and sexuality as intertwining forces that contour the particular conditions of life – economic, geographical, and ecological – and cultural and political manifestations on islands. . . Adding islandness as a socio-ecological quality that intersects with other social forces creates an opening to evaluate inequity and diversity on and around islands. Island feminism can account for the very different experience of islanders, due to gender,

sexuality, race and/or ethnicity, indigeneity, class, and other intersections, across islands and in a single island place.

Our NSF ADVANCE grant work—from proposal through funding—has been committed to both an appreciation of island geographies and intersectionality. Our research has been able to contribute to the academic literature by bringing attention to places (islands), institutions (community colleges and teaching-oriented institutions), and faculty working in these locations whose experiences have received limited attention in the decades of research on higher education diversity and employment. However, the focus of our intersectional and island centered institutional assessment presented here is to direct attention to supporting the advancement of a more favorable workplace environments at the UHCCs, UHH, and UHWO that lead to an increase in diversity and gender equity. Improving faculty employment conditions is a merit onto itself, especially if it supports the career success of historically marginalized groups and our alumni. In addition, faculty workplace satisfaction and positive employment experiences also contributes to the academic and social advancement of our students.

III. DATA AND METHODS

Our research study gained IRB approval prior to the NSF finalizing the awarding of our grant (IRB protocol number: 2017-00413). With the reception of a supplemental grant, an additional application for IRB approval was granted to include UHH and UHWO in our study.

Qualitative Data

We conducted 50 audio-recorded, semi-structured, in-depth interviews with STEM faculty across the seven community college campuses between January 2018 and May 2018 that were professionally transcribed. After receiving our supplement grant, we conducted 26 interviews

with STEM faculty at the University of Hawaii at West Oahu and the University of Hawaii at Hilo in Spring 2021.

To recruit participants, we collected contact information from campus-based institutional data, course listings, and departmental websites focusing on STEM departments. We then sent emails inviting participation in a study on workplace experiences. All interviews conducted prior to the Covid-19 pandemic were carried out in-person, with the majority of participants selecting to be interviewed in their campus office (n=50). With the onset of the pandemic, we conducted the remaining interviews online via Zoom (n=26). In general, we engaged in snowball sampling (Glaser and Strauss 1967; Charmaz 2006) as faculty recommended colleagues as well as relying on theoretical sampling to advance emergent understandings regarding the intersectional experiences of a diverse group of faculty.

Table 1 presents a general summary of interview participants' demographics. Participants were at various stages of their careers and held different types of instructional positions, including department chair, tenure or tenure-track, and part-time non-tenure track. Participants ranged in age from late-20s to late-60s. We purposefully sought women participants, who made up the majority of our interview participants (n=54). Ethnic and racial identities—ascertained through the self-identification of participants—were White (n=34), Asian or Pacific Islander (n=20), Native Hawaiian (n=9), Latinx/a/o (n=4), Black (n=5), and other (n=4).

Table 1. Interview Participants and Total Faculty by Ethnicity/Race/Indigeneity, Gender, and Campus Type [a]

	Sample [b]	Total [c]
Gender		
Women	71%	49%
Men	29%	51%
Total	100%	100%

Race/Ethnicity		
White	45%	34%
Asian or Pacific Islander [d]	26%	50%
Native Hawaiian	12%	9%
Latina/o/x	5%	2%
Black	7%	2%
Other	5%	3%
Total	100%	100%
Campus Type		
Community College	66%	69%
Four-Year University	34%	31%
Total	100%	100%

a Race/ethnicity, gender, and campus remain disentangled to secure confidentiality.
b Self-Reported data
c Data from the UH Institutional Research and Analysis Office, including fulltime-time instructional faculty for the Fall 2021 Semester.
d Native Hawaiians are reported separately.

Methods and Analysis

Regarding analysis, we utilized grounded theory, a constant comparative method of inquiry, which allows researchers to uncover categorical or qualitative understandings of textual data (Charmez 2006). Transcribed interviews were uploaded to Nvivo, a qualitative analysis software that supports a grounded theory approach, confidentially securing the transcribed texts and supporting the process of analysis.

After coding our data, we compared and condensed them to develop a thematic structure grounded in the stories and statements shared in interviews. Although not a linear process, a grounded theory approach provides a method for the "systematic discovery of theory from the data of social research" (Strauss and Corbin 1990). Guidelines for collecting and analyzing are flexible and offer a set of general principles and "heuristic devices rather than formulaic rules" (Charmaz 2006:2; Atkison, Coffey, and Delamont 2003). It requires researchers

to continuously sort through developing themes, integrate them, abandon them, refer back to data and initial codes, demanding the researcher to be both flexible and reflexive (Glaser and Strauss 1967). Our semi-structured interview guide was designed to elicit in-depth and open-ended responses from participants. This enables the interviewer to follow the respondent's direction rather than vice versa and provides the opportunity for an analysis grounded in the interests of the participants (a sample of our interview guide may be provided by request to the PI).

Quantitative Data

From December 2020 to May 2021, the BRIDGE Research Team sent out biweekly emails to faculty across all departments at the UHCCs, UHH, and UHWO requesting consent prior to completing a survey about their employment experiences, with attention to workplace equity, discrimination, and diversity. We received a total of N = 814 responses.

The full sample (N = 814) included a small number of faculty reporting the University of Hawaii at Mānoa as their home campus who do not currently teach at another campus (n = 5) and four percent of respondents (n = 36) did not report their home campus. Respondents with missing data about their home campus or who selected UH Mānoa as their home campus and do not teach on another UH campus are excluded from the analysis presented in this report (n = 36). This report presents findings of the analytic sample of faculty (N = 773) who selected working at a two- or four-year campus within the UH system between December 2020 and May 2021. The response rate to our survey (46.3%) is considered above average for on-line emailed

surveys and satisfactorily representative our population (Wu, Zhao, and Fils-Aime 2022).[5]

Measures

The quantitative findings presented in this report were analyzed with use of SPSS, a statistical software, and are based on survey questions that asked about demographics, employee rights and institutional resources, professional development and support, work-life balance, bias and discrimination, compensation and economic hardship, Covid-19 pandemic impact, and workload. To code questions that included multiple answer categories, to which respondents were prompted to "select all that apply," discrete, dichotomous variables were created to capture each answer category as a measure in and of itself (i.e., the categories are coded as separate variables). For example, one of the survey questions about employee rights and institutional resources asks, "If you are experiencing difficulties in your work environment, which of the following UH entities have you or would you go to for support?" with the option to select any/all of the following answer categories: "Equal Employment Opportunity (EEO) Office" (coded 1 = yes, 0 = no), "Human Resources" (coded 1 = yes, 0 = no), and "University of Hawaii Professional Assembly (UHPA)" (coded 1 = yes, 0 = no). This coding logic applies to all similarly formatted questions where respondents were prompted to "select all that apply."

Measures of employee rights and institutional resources included questions such as, "Are you aware of federal policies that protect the right to safe, non-discriminatory and non-biased working circumstances and where to request intervention when they are not being met?" and "When you started at your campus, were you thoroughly informed of relevant information about

---

[5] Emails that bounced back were not included in calculating the response rate. Duplicate emails or faculty who identified as working at more than one campus were considered only one time or as one survey response.

rights and benefits (e.g., retirement) by Human Resources?" These questions are captured by dichotomous variables (1 = yes, 0 = no).

Regarding professional support and development, respondents were asked questions including, "Have you been denied tenure or promotion since you have been employed at your current campus?" The survey also asks the following question to which respondents were prompted to "select all that apply," "When you started at your campus, were you thoroughly informed of relevant information about: (1) expectations for tenure and/or promotion; and/or (2) opportunities for professional development?" These questions are coded as dichotomous variables (1 = yes, 0 = no). To capture perceptions of professional support, respondents were asked to indicate the degree to which they agree or disagree with the statement, "I feel professionally supported by my current" regarding their department or division chair and/or (2) administrators (e.g., dean, vice chancellor, chancellor)." These Likert-scale questions are coded so that higher values indicate higher levels of agreement (5 = strongly agree, 4 = agree, 3 = neither agree nor disagree, 2 = disagree, 1 = strongly disagree). All Likert-scale questions described in the remainder of this section follow the same coding logic whereby higher values signify higher levels of agreement. In terms of work-life balance, the survey asked respondents to indicate the degree to which they agree or disagree with the following statements were captured in Likert-scale measures, "My current work schedule provides sufficient flexibility to meet personal needs (e.g., health appointments, community service, personal meetings)" and "I am able to adequately meet my childcare needs."

Regarding bias and discrimination, questions included: "Do you feel in any way that you have been treated unfairly or discriminated against at your campus?" and if they "have

experienced unwanted sexual advances or propositions" at their campus (1 = yes, 0 = no). Additional questions were asked regarding specific contexts and circumstances in which faculty experienced or witnessed bias and discrimination. For example, respondents were asked to indicate "yes" or "no" to the following prompt, "I have heard or witnessed colleagues make inappropriate or offensive comments about someone else's . . ." with the option to select all that apply: "gender," "sexual orientation," "race or ethnicity," and/or "indigenous identity." Regarding bias and discrimination, a Likert-scale variable is also based on the prompt, "I can file a complaint without fear of retaliation at my campus," to which respondents were asked to indicate the degree to which they agree or disagree.

In terms of compensation, we asked faculty Likert-scale questions in which they indicated the degree to which they agree or disagree with the following statements, "My compensation or salary is fair" and "My compensation or salary is comparable to others in my field of expertise." A series of questions ask about economic hardship; for example, "Since you have been employed at your current campus, was there a time when you could not afford your rent or mortgage?" (1 = yes, 0 = no). The same question was asked regarding reliance on public assistance (e.g., food stamps) and housing instability (i.e., not having a place to stay or live). Questions about the impact of the Covid-19 pandemic on employment conditions included, "How has the Covid-19 pandemic affected your ability to fulfill your teaching duties?" with the following mutually exclusive answer categories, "I spend more time on this," "no change in time spent on this," and "I spend less time on this." The same question was asked about the ability to do research and in another question, about the ability to do service work. To capture workload, respondents were asked to report the number of hours they spent teaching, doing service work, and on research in

specific timeframes. For example, respondents were asked, "On average, how many hours do you spend doing research per week?" Continuous variables are created from these questions about workload.

IV. QUANTITATIVE FINDINGS

This section presents the findings of our quantitative analysis of completed surveys (N=773) which is followed by a presentation of our qualitative findings. The results of our quantitative analysis include descriptive statistics and independent samples t-tests, two-tailed, performed comparing the mean responses of respondents. T-tests are based on 2-group comparisons. For example, t-tests examining statistically significant differences by gender compared women (group 1) and men (group 2) or to describe another two-group comparison. For example, t-tests determining statistically significant differences by race and ethnicity compare Native Hawaiian and Pacific Islander (group 1) to all other racial and ethnic groups (group 2).

Statistical significance determines if the results in the data are not explainable by chance alone. In other words, the difference between two groups, for example women and men, have a low probability (usually less than 5 percent for a measure to be considered statistically significant) of occurring by normal random variation. Statistical significance is also indicative of whether the findings found in the subsample (n= 773), can be generalized from the sample to the population they represent. Descriptive statistics provide important insight on the actual data set and allow for their interpretation. They offer information on the trends identified in the sample. In our case, our descriptive statistics help understand the demographic and workplace parameters of faculty respondents. Again, our survey response rate of 46.3 percent suggests

faculty were pulled to complete the survey and that our quantitative analyses including

descriptive statistics may be relevant to the population of faculty the subsample represents.

Demographics and Approach to Race, Ethnic, and Indigenous Data Categories

Table 2 displays descriptive statistics for the analytic sample (N = 773). The majority, 72% of

respondents report one of the community colleges as their home campus and 13% of faculty

teach at multiple campuses. Almost 19% of respondents report Kapiolani Community College as

their home campus or primary place of employment, 17% report Leeward Community College,

12% are from Maui College, 11% are from Hawaii Community College, 11% are from Honolulu

Community College, 11% are from University of Hawaii Hilo, eight percent are from Windward

Community College, six percent are from Kauai Community College, five percent are from the

University of Hawaii West Oahu, and less than one percent selected University of Hawaiʻi Mānoa

as their home campus (though they teach at one of the two or four year campuses).

Table 2. Descriptive Statistics of Faculty Employed by the UH System (including two- and four-year institutions) (N = 773)

Variable	Variable category description	N	%
Home campus or primary place of employment	University of Hawaiʻi Mānoa	4	0.5
	University of Hawaiʻi Hilo	83	10.7
	University of Hawaiʻi West Oahu	35	4.5
	Maui College	94	12.2
	Kauai Community College	49	6.3
	Hawaiʻi Community College	88	11.4
	Honolulu Community College	86	11.1
	Leeward Community College	131	16.9
	Windward Community College	60	7.8
	Kapiolani Community College	143	18.5
Home campus type	4 - year institution	216	27.9
	2 - year institution	557	72.1

Teach at multiple campuses	Yes	102	13.2
	No	668	86.8
Race and ethnicity[a]			
Ethnicity	Non-Hispanic, Non-Latina/o/x	715	93.6
	Hispanic or Latina/o/x	49	6.4
White	Selected	404	52.3
	Not selected	369	47.7
Black	Selected	19	2.5
	Not selected	754	97.5
American Indian or Alaska Native	Selected	24	3.1
	Not selected	749	96.9
Asian or Asian American	Selected	305	39.5
	Not selected	468	60.5
Native Hawaiian or Pacific Islander	Selected	137	17.7
	Not selected	636	82.3
Gender[b]	Woman	463	60.4
	Man	295	38.5
	Gender non-conforming or other	8	1
Migrant status	Non-US	117	15.2
	US	651	84.8
Parents of Children Under 18	Non-parents and parents of adult children	524	68.1
	Parents of children under 18	246	31.9
Degrees earned within the UH system	Yes	474	61.4
	No	298	38.6

[a] Respondents could identify with more than one racial or ethnic group. Race categories are coded as distinct dummy variables, each developed from one question to which respondents could "select all that apply" and thus race/ethnic categories are not comparable.
[b] No respondents identified as trans.

As shown in Table 2, six percent of respondents identify as Hispanic or Latinx/a/o. Respondents

were asked to select all that apply from multiple racial/ethnic categories and many respondents

identify with more than one racial or ethnic group. Therefore, the proportions of respondents

identifying with each race/ethnicity displayed in Table 2 are not comparable. Nearly half of

respondents identify as White (47%), three percent identify as Black, three percent identify as

American Indian or Alaska Native, 40% identify as Asian or Asian American, and 18% identify as Native Hawaiian or Pacific Islander. Regarding gender, 60% of respondents identify as women, 39% as men, and one percent as gender non-conforming or "other" (no respondents identify as transmen or transwomen). Among respondents, 85% were born in the United States but, as presented earlier, more than half (46%) of them were born in Hawai'i, 32% are parents of children under 18, and 61% earned a degree within the University of Hawaii system. Supplemental analyses (not shown) examine a subsample of faculty who are parents of children under age 18 (N = 246).

Our analyses, including t-tests comparing employment experiences by race and ethnicity as well as an intersectional analysis examining gender differences within racial and ethnic groups, rely on a race variable coded with mutually exclusive racial and ethnic categories for analytic purposes. As such, we constructed a "race" variable with mutually exclusive categories based on the self-identified race and ethnicity variables described above in Table 2. Since many faculty self-identified with multiple racial or ethnic categories and the race/ethnicity measures described in Table 2 are not comparable, we created a coding scheme to construct mutually exclusive categories informed by critical scholarship on structures of racial and ethnic hierarchies and inequalities in Hawai'i (Rita and Karides 2021; Fojas, Guevarra, and Sharma 2018; Okamura 2008).

The socio-historical contexts of colonialism and systemic racism produce racialized social systems in which race, indigeneity, and ethnicity—social categories that can shift by government designations—determine life chances and experiences of entire social groups (Bonilla-Silva 2010; Go 2018). In Hawai'i, racial, ethnic, and/or Indigenous identities are informed by historical and

contemporary global, national, and local conditions (Fojas, Guevarra, and Sharma 2018). The coding scheme used to create mutually exclusive race and ethnic categories is informed by racial, ethnic, and Indigenous demographics in Hawai'i. It takes account of the salience of identity, positionality, and lived experience with respect to race, indigeneity, and ethnicity in Hawai'i.

The mutually exclusive race and ethnic categories are determined according to the relative salience of each category. Indigenous identity exists in combination with other racial and ethnic identities (Ledward 2007). Thus, respondents who identify as Native Hawaiian or Pacific Islander are coded as Native Hawaiian or Pacific Islander (n = 144), regardless of other categories that they selected. Additionally, Latinx/a/o identity can exist with other racial identifications, so respondents identifying as Latinx/a/o (except for those categorized as Indigenous), are coded as Latinx/a/o (n = 40).

Due to the influence of global colorism on local contexts, by which lighter skin tones are privileged and through which people with darker skin are historically negatively racialized, people identifying as Black are often racialized as "Black" regardless of self-identification with other categories (Brunsma and Roquemore 2002).[6] As such, after grouping those who identify as Native Hawaiian or Pacific Islander and Latinx/a/o as just described, respondents who identify as Black, including those who identify with other categories (e.g., Asian or Asian American, White, or other) are coded as Black (n = 18).

Respondents who did not identify with the categories described thus far (e.g., Native Hawaiian or Pacific Islander, Latinx/a/o, or Black) and who identify as Asian or Asian American

---

[6] In particular, our study found that groups that are percieved as East Asian, are often assumed to be "local" in the context of Hawai'i. In other words, they are assumed to be or treated as part of the diaspora from Asian nations who arrived to work on sugar plantations (see Rita and Karides 2021).

are coded as Asian or Asian American (including those who also identify as White or other) (n = 257). Those who identify as American Indian, Alaska Native, or other are included in one category combining these Indigenous or racial/ethnic groups, in part because the sample sizes for these categories are small (n = 29). Finally, respondents who identify as White, not in combination with another category, are coded as White (n = 316). For the purposes of statistically meaningful comparison, when conducting t-tests comparing racial or ethnic groups as described below, we combined Latinx/a/o and Black groups (n = 58) because the individual subsamples are relatively small.

Table 3. Descriptive Statistics of Race and Ethnicity Variables with Mutually Exclusive Categories (n = 804)

Racial or ethnic category	Frequency	Percent
Native Hawaiian or Pacific Islander	144	17.9
Latinx/a/o/a/o	40	5
Black or African American	18	2.2
Asian or Asian American	257	32
American Indian, Alaska Native, or other	29	3.6
White	316	39.3
Total	804	100

Table 4. Descriptive Statistics and T-tests Comparing Faculty at Two-year (n = 517) and Four-year institutions (n = 200)

Home campus	Four year institution	Two year institution
% Earned degrees from the University of Hawaii system	50%***	66%
% With children underage 18	30%	33%

% Reporting unfair treatment or discrimination at their campus	41%	31%
% Reporting sexual harassment at their campus	11%	8%
Mean # of courses taught per semester	4	4
Mean # of hours doing research per week	7***	6
Mean # of hours on departmental committees per week	4	4

Note: Results are based on t-tests comparing respondents at 2-year institutions compared with respondents at 4-year institutions ***$p < .0001$, **$p < .01$, *$p < .05$.

As expected Table 4 shows that time spent researching at the four-year institutions is greater than at the two-year campuses and also significant. An interesting finding is the *statistical significance* of the percent of faculty at the four-year institutions who have earned a degree in the UH system. This suggests that UH degree earners are not hired as faculty at these institutions by chance. A finding that may be explained by attachment to island place.

Demographic Differences Between STEM and Other Disciplines

Table 5. Descriptive Statistics Displaying Academic Field of Respondents' Department

Which of the following categories best describes your department?		
Field	Frequency	Valid Percent
Arts and Humanities (e.g., Visual Arts, English, History)	210	28
Engineering or Computer and information Services	24	3
Education	36	5
Earth or Life Sciences	53	7
Social Sciences (e.g., Anthropology, Demography, Sociology, Economics, Political Science, Psychology)	76	10

Mathematics	43	6
Physical Sciences (e.g., Astronomy, Astrophysics, Chemistry, Physics)	22	3
Business, Social Work, Vocational or Technical (e.g., Construction, Veterinary)	105	14
Other	185	25
Total	754	100

Table 6. Descriptive Statistics Displaying Characteristics of STEM Compared to Other Fields

Race or ethnicity	% Within other fields, including Social Sciences	% Within STEM [a]
Native Hawaiian or Pacific Islander	20.30%	5.00%***
Latinx/a/o	4.20%	5.70%
Black or African American	1.70%	2.90%
Asian or Asian American	31.60%	27.10%
American Indian, Alaska Native, or other	2.80%	5.00%
White	39.40%	54.30%***
Gender		
Women	61.10%	56.10%
Men	38.90%	43.90%

Note: Results are based on t-tests comparing racial and ethnic groups to all others (e.g., Native Hawaiian or Pacific Islander compared to all other categories) and comparing women and men ***$p < .0001$, **$p < .01$, *$p < .05$.
[a] STEM fields in this analysis include engineering or computer and information sciences, earth or life sciences, mathematics, and physical sciences and other fields include arts and humanities, education, social sciences, business, social work, vocational and technical fields.

Tables 5 and 6 display demographic statistics of respondents in STEM and non-STEM fields. As shown in Table 6, results of t-tests indicate that Native Hawaiian or Pacific Islander faculty are *significantly* less likely to be employed in a STEM department compared to other racial and ethnic groups ($p < .001$) while Whites are *significantly* more likely to be employed in STEM fields compared to other racial and ethnic groups ($p < .001$). These findings suggest that one's race, ethnic, or Indigenous status is indicative of employment in STEM fields at seven UH campuses.

To further explore these findings we consulted the databases made available by IRAP. Though race, ethnicity, and indigeneity is not supplied by department or fields of study such as STEM, we did note uneven representation of Native Hawaiians in tenured/tenure-track instructional positions at the UHCCs. We found that 23.5 percent of "not on the tenure track" instructors at the UHCCs are Native Hawaiian or part-Native Hawaiian and that only 10.84 percent were tenure/tenure-track instructional faculty in 2020.[7] Conversely, those who identify as Japanese, a race and ethnic group generationally rooted in Hawai'i, comprise 18.3 percent of tenured/tenure-track faculty and 7.8 percent of "not on the tenure track" instructors at the UHCCs in the same year.

The limited representation of Native Hawaiians in tenure/tenure-track positions combined with finding that Native Hawaiian or Pacific Islander faculty are *significantly* less likely to be employed in a STEM department compared to other racial and ethnic groups is concerning for a few reasons. First, the rootedness of the faculty who teach across the seven UH institutions, as demonstrated by the high percent of faculty survey respondents born in Hawai'i (46%) and earning at least one degree from UH (61%), suggest a gap in representation given the relative large number of Native Hawaiians that attend UH and live in Hawai'i.

Second is the minority serving institution (MSI) designation of the UH system in 2007 under Title III of the Higher Education Act of 1965 due to the proportion of Native Hawaiian students that attend our campuses. Title III designation provides access to federal grants for minority-serving institutions (MSIs) to advance student success (Boland 2018). Research on MSIs

---

[7] For more details the ethnic, Indigenous, and racial breakdown of instructional faculty including by UHCC campus please go to this table for not on the tenure track instructional faculty and this table for tenured/tenure-track instructional faculty at UHCC. These tables and others are available at data.hawaii.edu.

suggests that they succeed when they "embrace" the culture that reflects the community and background it is seeking to serve (Boland 2018, Conrad and Gassman 2015). The UH system has defined itself as an indigenous serving institution with the committment of the Hawai'i Papa O Ke Ao "to increase the number of tenured Hawaiian faculty." All UH campuses have received millions of dollars in Title III funding (Part A and F for Alaska Native and Native Hawaiian serving institutions) to support the endeavors of its MSI designation. Given the overall limited number of Native Hawaiian tenure/tenure-track faculty across UH, and the significance of their under-representation in STEM fields, better strategizing in the use of these funds and the post-award institutionalization of grant funded programming (such as this) seems necessary.

Finally, as discussed at the outset of this report, recent research demonstrates that student success increases with faculty diversity and with faculty of similar backgrounds to students (Cross and Carmen 2021; Fairlie, Hoffman, and Oreopoulos 2014). The Higher Education Act of 1965 and the broadening of higher education institutions that qualify as MSIs seems to be oriented by these principles (Karides and Aloua 2021).

Employee Rights and Institutional Resources

Survey results reveal that many faculty across campuses are uninformed and unaware of relevant information about their employment. In addition, there are gender differences in onboarding experiences within the UH system. Almost a fifth (19%) of faculty agreed that they are not aware of federal policies that protect the right to safe, non-discriminatory and non-biased working circumstances. When asked which of the following UH entities they would contact in the event they experienced difficulties in their work environment (with the option to select all entities that apply to their answer), 60% of respondents selected human resources,

37% selected Equal Employment Opportunity offices, and 61% selected UHPA. Only about half of respondents (56%) report that they were thoroughly informed of relevant information about rights and benefits by Human Resources when they started at their campus.

T-test results indicate that compared to men, women faculty are *significantly* less likely to have been informed about rights and benefits by human resources at their campus when they were hired ($p < .01$). Results show Native Hawaiian and Pacific Islander faculty are *significantly* more likely to report "yes" to the following question, "When you started at your campus, were you thoroughly informed of relevant information about rights and benefits by Human Resources," compared with respondents in other racial and ethnic groups ($p < .05$). Native Hawaiian and Pacific Islander faculty are also *significantly* more likely to say they would contact Human Resources if they faced difficulties in their work environment ($p < .01$). Compared to those at four-year institutions, respondents at the two-year colleges are *signficantly* more likely to report having been informed of relevant information about rights and benefits by Human Resources ($p < .01$). Additionally, faculty in STEM fields are *significantly* more likely to report being informed of relevant information about rights and benefits by Human Resources compared to respondents in non-STEM fields ($p < .05$).

Professional Support and Development

Across the UH system campuses we studied, nine percent of faculty report they have been denied tenure or promotion. Findings show highly significant gender differences regarding tenure and promotion. Specifically, women are *significantly* less likely to have been informed of relevant information about expectations for tenure and promotion when they began employment ($p < .001$).

Over a quarter, or 27%, of respondents agreed that they did not know where to go for professional support (e.g., preparing contract and promotion portfolio, how and where to apply for promotion). When asked if they were thoroughly informed of relevant information about professional development when they started at their campus, 44% of respondents replied "no." T-test results indicate gender differences, showing that women are *significantly* more likely to report that they were not thoroughly informed of relevant information about professional development when they started working at their campus (p < .01) Compared to the four-year institutions, respondents at the two-year institutions are *significantly* more likely to report having been informed of relevant information about professional development upon hiring (*p* < .001).

Respondents were asked to indicate the degree to which they agree or disagree with the following statement: "I feel professionally supported by my current: department or division chair." In response, 13% of respondents disagree or strongly disagree, which shows they do not feel professionally supported by their department or division chair. In response to a similar statement regarding feeling supported by their current administrators such as their dean, chancellor, or vice chancellor, 24% disagree or strongly disagree with the statement about feeling supported. In other words, results show that almost a quarter of faculty across campuses do not feel professionally supported by current administrators. Results of t-tests indicate respondents identifying as Native Hawaiian and/or other Pacific Islander report *significantly* lower levels of agreement with the statement, "I feel professionally supported by my current administrators" compared with respondents who do not identify as Native Hawaiian and/or other Pacific Islander groups (*p* < .05). T-tests also show that White respondents indicate

significantly lower levels of agreement with the statement, "I feel professionally supported by my current department or division chair" compared with respondents who identify as other racial/ethnic groups (p < .05). In general, our findings indicate signficance that employment across these campuses differ by race, ethnicity, indigeneity and gender. Addressing these differences seems to depend on a equity based approach to address workplace conditions.

Work-life Balance

The overwhelming majority, or 79% of faculty agree or strongly agree with the following statement: "My current work schedule provides sufficient flexibility to meet personal needs (i.e., health appointments, community service, etc.)." However, analyses reveal differences in work-life balance among parents of children under age 18 compared to faculty with older children and non-parents. Among a subsample of parents of children under age 18 (N = 250), over a fifth of faculty disagree or strongly disagree with the statement, "I am able to adequately meet my childcare needs." Additionally, 12% of faculty among the parent subsample indicate that their schedule does not provide sufficient flexibility to meet personal needs.

Bias and Discrimination

A third of faculty report experiences of unfair treatment or discrimination at their campus. Specifically, when asked, "Do you feel in any way that you have been treated unfairly or discriminated against at your campus?" 34% respondents responded "yes." Results of tests indicate that faculty at the four-year institutions are *significantly* more likely to report they have been treated unfairly or discriminated against at their campus (p < .05), compared to community college faculty.

Respondents were asked to specify if they experienced different forms of bullying and harassment regarding gender, sexual orientation, racial or ethnic identity, and Indigenous identity. Among faculty, eight percent of respondents report they experienced unwanted sexual advances or propositions at their campus. Results of t-tests indicate *significant* gender differences in reporting unwanted sexual advances or propositions at their campus, whereby women are more likely to experience such sexual harassment (p < .01).

When asked if they have been the target of inappropriate or offensive comments, 11% of respondents said "yes" and specified the comments were regarding gender. Three percent of respondents have been the target of inappropriate or offensive comments about their sexual orientation. Regarding being the target of inappropriate or offensive comments about their racial or ethnic identity, 14% of respondents reported experiencing this type of harassment and another four percent of respondents report being the target of inappropriate or offensive comments about their Indigenous identity.

Over half of respondents (54%) report they have heard of or witnessed colleagues humiliating, intimidating, or threatening (i.e., bullying) others. Following the prompt, "I have heard or witnessed colleagues make inappropriate or offensive comments about someone else's:" 22% report "yes" specifying the comments were made about someone else's "gender", 13% report "yes" about "sexual orientation," 25% report "yes" about "racial or ethnic identity," and 17% report "yes" about "Indigenous identity."

When asked to respond to the following statement, "I can file a complaint without fear of retaliation at my campus," 30% of respondents disagree or strongly disagree. Results of t-tests

indicate that women are *signficantly* less likely to perceive they can file a complaint without fear of retaliation (p < .01).

Compensation and Economic Hardship

When asked about compensation, about a third (33%) of faculty disagree or strongly disagree with the statement that their "compensation or salary is fair." Additionally, 37% of respondents disagree or strongly disagree that their compensation or salary is "comparable to others" in their field of expertise. T-test results show that faculty who are parents of children under age 18 are *significantly* less likely to agree that their compensation or salary is fair ($p < .05$). Regarding racial and ethnic differences, on average, Native Hawaiian and Pacific Islander faculty indicate significantly higher levels of agreement with the statements, "My compensation or salary is fair" ($p < .05$) and ""My compensation or salary is comparable to others in my field of expertise" ($p < .05$) compared with respondents who do not identify as Native Hawaiian and/or other Pacific Islander groups. In terms of differences by institution, community college faculty are more likely to report that they agree that their compensation or salary is fair ($p < .001$) and that their compensation or salary compares to others in their field of expertise ($p < .01$), compared with faculty at the four-year institutions. However, this finding does not indicate that UHCC faculty are overall satisified with their compensation, just that they are moreso than faculty at the four year institutions. The qualitative findings we report, in relation to the UHCCs, suggests that many faculty believe their compensation was insufficient to meet the cost of living in Hawaiʻi, the most expensive state in the US (Cohn 2021). In addition, several shared stories of colleagues who were having difficulty finding affordable accommodations. The incongruence of these findings are addressed in the qualitative section of the report.

Since being employed at their current campus, five percent of employees report that there was a time when they did not have a place to stay or live, six percent received public assistance (e.g., food stamps), and twenty-eight percent said there was a time when they could not afford their rent or mortgage payments. Findings of t-tests reveal significant racial differences in economic hardship. Respondents identifying as Black are *significantly* more likely to report that since being employed at their current campus, there was a time when they could not afford rent or mortgage compared to other racial/ethnic groups ($p < .05$). T-test results also show that Asian or Asian American respondents are *significantly* less likely to report economic hardship, on average, compared to other groups. Specifically, Asian or Asian American respondents are *significantly* less likely to report that since being employed at their current campus, there was a time when they could not afford rent or mortgage ($p < .01$), there was a time when they did not have a place to stay or live ($p < .05$), and there was a time when they received public assistance (e.g., food stamps) ($p < .05$). Additionally, t-tests comparing faculty in STEM to other fields show that those in STEM are *significantly* less likely to report difficulty affording rent or mortgage than faculty in non-STEM fields ($p < .05$).

COVID-19 Pandemic Impact

Results demonstrate that the Covid-19 pandemic has impacted the time faculty spend on employment duties including research, service work, and teaching as well as significant differences among the two- and four-year institutions. In terms of time spent on research, 50% of respondents experienced a change, while 64% of faculty report a change in time spent on service work, and 81% report a change in time spent on teaching duties. Regarding teaching

duties, the vast majority of faculty (77%) were spending more time fulfilling teaching duties as a result of the Covid-19 pandemic.

Workload

T-test results show that on average, women faculty spend *significantly* less weekly time on research compared to men ($p < .001$). Respondents identifying as Native Hawaiian and/or other Pacific Islander report lower average numbers of courses taught per semester compared with respondents who do not identify as Native Hawaiian or Pacific Islander ($p < .001$). White faculty report a significantly higher average number of courses taught per semester than respondents who identify as other racial or ethnic groups ($p < .001$). At the UHCCs extra courses are often sought in the interest of gaining additional income. Exploration of who seeks and has the opportunities to teach overloads requires campus level investigation to understand and address the potential influence of race on the decision-making procedures for course overloads.

Intersectional Analyses

To offer insight into the ways race and gender intersect to shape employment experiences, additional t-tests within subgroups were conducted. This section describes significant gender differences revealed by analyses of racial and ethnic group subsamples. In other words, these findings indicate gender differences within racial and ethnic groups. Results are based on independent samples t-tests, two-tailed, performed comparing the mean responses of two gender groups; specifically, women (group 1) and men (group 2) within subsamples restricted to discrete racial or ethnic groupings. The racial or ethnic groupings or "subsamples" are based on mutually exclusive categories of race and ethnicity as displayed in Table 3. For analytic purposes of the t-tests described in this section, the Black and Latinx/a/o subsamples are combined (n =

58). Results of t-tests comparing women and men within subsamples of racial and ethnic groups reveal significant gender differences in workplace experiences among Black and Latinx/a/o, Asian or Asian American, and White subsamples. T-tests did not reveal statistically significant gender differences among a subsample Native Hawaiian or Pacific Islander respondents (n = 144).

Among a subsample including faculty who identify as Black and Latinx/a/o (n = 58), men are *significantly* more likely to indicate higher levels of agreement with the following statement, "I plan to retire from my campus" ($p < .01$). Among a subsample of White respondents (n = 316), t-test results demonstrate *significantly* more adverse workplace experiences reported by women. Compared to White men, White women are *significantly* more likely to report experiencing unwanted sexual advances or propositions at their campus ($p < .05$). White men indicate *significantly* higher levels of agreement with the following statements, "When you started at your campus, were you thoroughly informed of relevant information about opportunities for professional development" ($p < .05$) and "When you started at your campus, were you thoroughly informed of relevant information about expectations for tenure and/or promotion" ($p < .05$).

Results also show several significant gender differences among a subsample of respondents identifying as Asian or Asian American (n = 257). Among Asian or Asian American faculty, men are *significantly* more likely to report higher levels of agreement with the following statements, "When you started at your campus, were you thoroughly informed of relevant information about rights and benefits (e.g., retirement) by Human Resources" ($p < .01$), "When you started at your campus, were you thoroughly informed of relevant information about

expectations for tenure/ and or promotion" ($p < .01$), and "I believe I can attain my career goals at my campus" ($p < .01$).

Among Asian and Asian American faculty, t-test results show that women are *significantly* more likely to experience bias and discrimination and at the same time, less likely to feel comfortable seeking institutional support. Compared to men, Asian and Asian American women are *significantly* more likely to report experiencing unfair treatment or discrimination at their campus ($p < .05$) and unwanted sexual advances or propositions at their campus ($p < .01$). Among the subsample, Asian and Asian American women are *significantly* less likely to agree with the statement, "I can file a complaint without fear of retaliation at my campus" ($p < .01$).

Also, among Asian and Asian American faculty, women also are *significantly* more likely to experience economic hardship, specifically reporting a time when they could not afford rent or mortgage since being employed at their current campus ($p < .05$). While findings based on the full sample show that Asian and Asian American faculty are less likely to experience economic hardship compared to other groups, the subsample analyses demonstrate gender inequity by which Asian and Asian American women respondents fare worse in terms of economic experiences. Our intersectional analysis adds nuance to our understanding of employment conditions as they are differentiated simultaneously by race and gender. It provides a depth of understanding of the gender differences that occur within categories of specific racial, ethnic, or Indigenous groups.

Unfortunately, the small sample of racial, ethnic, and Indigenous groups within a gender hinders an analysis of this data. Because of unknowns small numbers render in terms

proportionality and accurate representation of the populations, we take a conservative approach and do not report these findings as they may not be statistically accurate.

However, our qualitative findings in the next section offer important insights into how gender intersects with other social categories to shape the workplace experiences of faculty. Finally, as a summary, and to provide campus level information that maintains the anonymity of our participants Table 7 below provides descriptive statistics on some of the variables presented in our quantitative report by campus.

Table 7. Descriptive Statistics by Campus

Home campus	% earned any degrees from the University of Hawaii system	% with children under age 18	% report they have been treated unfairly or discriminated against at their campus	% reported unwanted sexual advances or propositions at their campus
University of Hawaii Hilo	42%	28%	56%	13%
University of Hawaii West Oahu	57%	31%	32%	7%
Maui College	52%	33%	30%	9%
Kauai Community College	41%	29%	27%	7%
Hawaiʻi Community College	64%	35%	38%	7%
Honolulu Community College	78%	34%	30%	8%

Leeward Community College	66%	38%	24%	7%
Windward Community College	71%	39%	29%	11%
Kapiolani Community College	66%	25%	36%	10%

V. QUALITATIVE FINDINGS: Faculty Work and Care at the UHCCs

Our qualitative analyses relied on a thematic and grounded theory approach to our transcribed interviews. We conducted these analyses in two clusters and present them as such. The first set of findings presented are based on interviews with faculty at the UHCC campuses. Fifty faculty were interviewed including faculty at satellite campuses. The second set of interviews were conducted in 2021 at UH Hilo and UH West Oahu with 26 faculty members and were analyzed seperately and are presented in the following section of the report.

All interviews were primarily conducted with STEM faculty (see Table 1 in the Methods Section for demographics) which includes by NSF categorization disciplines in the Social Sciences. Grounded theory analysis in general does not require a mininum number of interviews as its goal is to advance concepts or overarching frameworks (Birks and Mills 2015; Urquat 2016). Rather than to test theoretical frames, grounded theory is focused on developing concepts based on the perspectives of individuals immersed in a phenomena, experience, or institution. Though as few as five interview participants may be needed to conduct grounded theory, somewhere between 12-25 interviews is the minimum amount several academic journals have required in recent

years. Our two clusters, analyzed separately, meet this minimum for grounded theory analysis.

To maintain our commitment to our participants' confidentiality, we generally do not identify the

gender, campus, indigeneity, race, ethnicity, or age of faculty quoted as might occur in the

publications of qualitative research. However, the statements included in this section represent

all UHCC campuses and reveal how gender intersects with indigeneity, race, or ethnicity to shape

faculty experiences..

The findings are organized thematically. In other words, after interviews were coded, and

these codes were compared and contrasted with each other and to the interview texts, the

following themes emerged to capture qualities of the workplace experiences of primarily STEM

faculty across the UHCCs. These themes include: Islands: Committing to Community and Care;

the Insufficiency of Island Salaries; Overloaded; and Mentorship and Onboarding Wanted.

Islands: Committing to Community and Care at the UHCCs

The value of collective well-being, that has been used to describe island soceities (Suwa 2007) is

evident in how STEM UHCC faculty approach their students and careers. These faculty show a

deep responsibility and care for their students, their communities, and Hawai'i regardless of

whether they are from the islands or have relocated to them. For example, a faculty in computer

science states:

> I did come up through the community college, so it feels very comfortable to me, and I
>
> understand where the students are coming from.

A faculty member in agriculture explains:

> The students, after about two weeks you know them all, at least by name. That's nice
>
> being in a small program as well. You feel like you are getting feedback, and you

definitely make a connection with them . . . I just got a text from a past student who

started her own business, but she wanted me to know, which was really nice.

A faculty in math offered, "I care about my students that much that I'd rather see them every

day and put my energy there." Another faculty shared, "Here, people are overextended but also

more rooted in the student's experience."

And a tenured faculty stated:

> I think at this campus we have a tendency to work ourselves to death. Some of that's a
>
> little self-fulfilling prophecy. If you're interested in maintaining student quality and
>
> student success, that means you're talking to your students. Then when you talk to your
>
> students, they want to do things like come talk to you and work on projects with you and
>
> ask you for letters and other support.

While this ethic of care may characterize faculty across a range of campus type and regions, the

likelihood that students will remain part of the community and connected to faculty and their

campus is also a trait of islands and the types of relationships that develop on them (Suwa 2007;

Hau'ofa 1994; Mcall 1994). Furthermore, that islandness shapes the careers of faculty is

demonstrated by faculty choosing and seeking to remain in Hawai'i for personal and familial

reasons. For example, many interview respondents with children, both men and women,

decided that relocating from Hawai'i's distinct social and environmental context would be a

burden for their families, particularly their children. Given the geographical isolation of Hawai'i,

those with family ties to the island were also less likely to leave Hawai'i to pursue other career

opportunities. The representative statements provided below were made by STEM faculty at the

UHCCs:

- [my] boys were growing. I had two little boys then, when we came here, and to uproot them, at that age, and bring them back home was going to be very difficult.

- I had my children. They were small yet. They were young, three, four. By the time I graduated they were both seven, eight. It's not like I could just up and leave the island. Right? So, I accepted a job here.

- I decided to have [my] kids grow up in Hawaiʻi. I saw all the prejudice and stuff between different races and went to the big city once or twice. I don't want my kid growing up in that kind of an environment.

- Probably his [spouse] family. He has got a great family, and they would be devastated if we took the kids and moved to the mainland. That's a big one.

- We were kind of looking at Seattle. Because our family is here, we just ended up staying here.

- Always wanted to come back and be with my family. I wanted to start a family of my own. I just wanted to do it here. I know eventually I wanted to come home. I think it just happened sooner.

Along with familial ties and societal aspects that attract and hold faculty in Hawaiʻi are the opportunities for connectedness:

- It's a very small island I've discovered. I feel in some ways it just feels like you're living in a small tire. Because it doesn't take long to drive once around the island, and you have an idea of where everything is. The more things you do and get involved in, the more connections, and you suddenly discover, oh, I know so and so who knows so and so. That's nice.

Yet a challenge for island dwelling faculty is often the limits to work opportunities, making the precarious careers of non-tenured instructors even more precarious. As one faculty describes:

- If I lost my job here, there's not another job on the island. It would mean moving. It wouldn't mean driving for an hour until something opens up. If your spouse loses their job, and they can't find another one, it means moving. I think that is a big thing.

The Insufficiency of Island Salaries

Given the multiple avenues that tie faculty to Hawai'i nei or a specific island, including degree and birth, the concerns in regards to salaries and the cost of living in Hawai'i as reported in faculty interviews is worthy of address. Our quantitative data suggests that UHCC faculty perceive their salaries to be fair as compared to faculty at UHH and UHWO. However, our qualitative findings regarding compensation suggest that many UHCC STEM faculty find their salaries inadequate for making ends meet, particularly in the early stages of their career. With the exception of faculty's perception of their salaries, our qualitative analyses are consistent with our quantitative findings, demonstrating the robustness of our institutional assessment through triangulation. Triangulation in research includes the application of multiple methods, datasets, and concepts to further substantiate and validate findings. Triangulation also assists in identifying gaps or differences sometimes found in multi-method analyses which then demand further inquiry.

In an effort to unpack this seeming inconsistencies between our qualitative and quantitative findings on UHCC faculty perceptions of the sufficiency of their salaries, we draw attention to the range of salary within a rank (Instructor, Assistant Professor, Associate Professor, Professor). We compare the highest and lowest salaries within each rank at the UHCCs

to discern the percent of the highest faculty salary earned by the lowest paid faculty. We also

compare the UHCCs full-time faculty salary ranges at each rank to the full-time faculty salary

ranges in California and New York community colleges. As California and New York are the

second two most expensive states (Cohn 2021) after Hawaiʻi, they are good comparisons for

salary compensation. In addition, all three states have relatively favorable labor laws as

compared to many other US states.

Table 8. Lowest and Highest Salaries and Differences for Community Colleges in Hawaiʻi (2022), California (2022), and New York City (2021)

University System	Salary Category	Professor	Associate Professor	Assistant Professor	Instructor
University of Hawaiʻi Community Colleges[a]	Lowest Highest	91296 146580	73923 132828	66528 123036	56496 102588
	Difference	55284	58905	56508	46092
		MA/20 yrs. exp.[d]	MA/10 yrs. exp.	MA/5 yrs. exp.	MA/no-exp.
California Community Colleges[b]	Lowest Highest	96,652 146,200	73,999 122,571	96,958 55,065	42,122 77,278
	Difference	49548	48,572	41893	35156
City University of New York, Community Colleges[c]	Lowest Highest	83878 141858	67784 117805	52267 99532	48031 79566
	Difference	57980	50021	47265	31535

[a]https://www.uhpa.org/salary-research/faculty-consolidated-salaries/
[b]https://www.cft.org/sites/main/files/file-attachments/cft_full-time-cc-faculty-salary-comparison-2019-20.pdf?1623731829
[c]https://psc-cuny.org/content/salary-schedules-full-time-faculty-and-research-series/
[d]Degree and years of experience is how the California community colleges determine levels of compensation.

The data for the three states presented in Table 8 is drawn from union or professional assembly websites (upha.org, cft.org, and psc-cuny.org) that provide community college faculty salaries by rank and reflect the most recent year of salary data available. The salary data for the UHCCs aggregates all seven campuses by rank. Rather than providing salary data by rank, California seems to be the most specific in terms of combining degree and years of experience to determine levels of compensation which we interpolate to traditional faculty ranks. Not included in the California data is a 5th category of highest salary with doctorate. Unlike the UHCCs, a PhD increases the level of compensation for California community college faculty. Finally, the Professor category for New York full-time community college faculty includes Distinguished Professors, who are provided an additional $28,594 to their base salaries.

The difference between the highest and lowest salaries at each rank at the UHCCs as compared to New York and California is notable. One potential explanation for the differentiation between our qualitative and quantitative findings on UHCCs faculty's perception regarding their salaries may be due to the very wide range of compensation that exists at most ranks in the UHCCs. This is particularly true for early-career salaries. For example, the lowest paid Instructors earn approximately 55 percent of the highest paid instructor across the UHCCs. This figure deserves further investigation given that it is an entry level position and that many women faculty state having been discouraged from negotiating for a higher starting salary (see also Appendix. B). The difference in compensation among Associate and Assistant level UHCC faculty is fairly similar, with the lowest paid Assistant Professors earning about 57% of what their highest paid colleagues earn and the lowest paid Associate Professors earning 55.7% of the top salary at their level. Our finding confirms the general understanding that salary upon entry holds a great

deal of impact on earnings over the course of academic careers (especially those sustained within the same university system). The gap between the lowest and highest salaries at the Professor level at the UHCCs shrinks, where the lowest paid faculty earns about 65 percent of the highest paid Professor.

We also consider whether the difference between the top and lowest earners is similar in the two highest cost of living states after Hawaiʻi. We find that at the Instructor level at the UHCCs, the gap in earning is approximately 31 percent wider than in California and 46 percent wider than in New York. At the Assistant Professor level (or MA+5 years experience in California), the UHCCs hold a 35 percent higher difference between the highest and lowest salary than California and 20 percent more than in New York. At the Associate Professor level, the gap between the highest and lowest salaries within this rank (MA+10 years) is higher than California's by about 21% and New York's by 18%. Finally, at the Professor level, the salary range in Hawaiʻi is 12 percent higher than in California, but 5 percent less than in New York. However, the percent difference between New York and Hawaiʻi may reflect the additional $28,954 Distinguished Professors are provided in New York.

The faculty below assert concerns about their salaries and those of their colleagues, especially in early stages of academic careers at the UHCCs. Early career seems also to be the level at which salary ranges between the highest and lowest are the greatest. This may indicate that faculty concerned with compensation in the interviews below may fall on the low side of the wide distribution of salary compensation at different ranks and especially at entry level positions. As stipulated in our original grant, our qualitative interviews were centered on the experiences of women in STEM departments at the UHCCs from an intersectional perspective. The Office of

the Vice President of Community Colleges (OVPCC) as well as UHPA and the UH Committee on the Status of Women (CSW) might consider reviewing for gender discrepancy across salaries by rank, given that concerns over compensation was thematic in our interviews with UHCC participants. National research on STEM faculty salaries indicate that there is a "sizable" gender gap in pay, women earning less than men, which is also substantially impacted by race and ethnicity (Fry, Kennedy, and Funk 2021). UHCC administrators and relevant offices might review whether reducing the range in salaries within a rank, potentially by leveling up the lowest salaries, might be an avenue for reducing the financial strain on UHCC faculty as they describe below.

Unlike rural regions, where the cost of living is typically low, the impact of tourism and especially high-end tourism has caused extraordinarily high housing costs on all Hawai'i islands. In the US, salaries at rural community colleges are low, especially in Georgia, Alabama, and Kansas, but these states also hold some of the lowest costs of living. The incongruence of community college faculty salaries and Hawai'i's cost of living is salient. Ultimately, that islands are costlier to live on, as they often require more expenditure than continents for travel, food, and fuel, might be planned for by the BOR in salary decisions and with the advocacy of UHPA. Below is a series of representative statements mady UHCC STEM faculty across campuses on salaries and costs:

- There is no help for those who are new . . . no connections to real estate. Folks know it would be expensive but didn't know how expensive. Four faculty members have been homeless - living in office space- nowhere to go - can't afford living in Hawai'i - PhDs should not be homeless.

- Every time we have a new person, that's what I hear. 'I knew it would be expensive. I didn't think it would be this expensive,' or 'I didn't know I would not be able to find a place to rent.' I mean, I think actually I've known of three faculty members, all of them were male, but—oh, and a female. Okay, four faculty members over the last five years that at some point have been homeless…Staying in their office. It wasn't condoned. I don't think admin knows.

- There is no way people can afford anything alone being able to buy a nice house for themselves or even just to afford the rent of a one-bedroom apartment. Seriously. Then let alone have kids and be prosperous and just have that work-life balance. That's not an option, because most people here have to have two to three jobs.

- We were extremely poor. My husband had a pretty good job, too, but he was actually working on Oahu. He was coming back and forth, which of course added hugely to our costs. He couldn't find anything here that was comparable.

Overloaded

Many UHCC faculty, which includes our alumni, reported on the challenges to meet the cost of living in island tourist geographies. Our qualitative analysis demonstrates that faculty on the UHCC campuses also feel overloaded with demands. This includes service work and meeting the requirements of increased bureacracy. Others carry course overloads to meet their financial demands or the needs of the department. Faculty took particular issue with their service component and the extensive hours they worked to meet them. Faculty from outer islands mentioned required travel to Oahu that took up personal time without compensation, though

Covid-19 may have altered this demand. Provided below are representative quotes from faculty at four different campuses:

- People are all overworked, I think, everybody, including the admin.

- People are confused, they're overworked, they're over initiatives, they've got initiative fatigue.

- I really need another faculty member. Yeah, I been kind of overworked. I will say that. . . I've taught up to 14 different preps in 2 years, and they're really different.

- I was up to my eyeballs. They're like, we want you to come spend three hours in a seminar on work-life balance. I was like, you know what would give me work/life balance—sitting home and grading those papers that now I'm going to have to grade on a Saturday because you want me to go to this seminar all day on Friday. It's like the work you have doesn't necessarily stop because you've gone to a seminar on work-life balance. Those papers still need to be graded. I think sometimes there's a lot of disconnect. They love to talk about it; they don't like to do what everybody knows would make work-life balance which is reduce the amount of credits we expect faculty to teach to realistic workloads. That is the easy solution; we don't like to do that here.

Being overworked with an increasing number of campus or UHCC system initiatives was a central theme in our interviews. Our interview guide had not included questions on bureacratic demands or excessive workloads. These issues developed organically through the semi-structured interview process. Neither were concerns related to a lack or loss of housing included in our questionnaire. Both these matters became thematic because of their centrality to the interview participants as was made evident in the transcribed manuscripts we analyzed.

Mentorship and Support Wanted

Our qualitative interviews also indicate that many faculty felt uninformed and insufficiently supported which is reflected in our quantitative findings. For example, one faculty member explains:

> There is no real formal support. It's like I got to go out there and find somebody. Some things, I still don't know who I'm supposed to ask what I have to do. It's like—I go to the department secretary. Now, who do I ask to do this, kind of thing. Nobody ever told me how to do things.

A woman faculty in the physical sciences and on the tenure track explained:

> I feel sometimes, people don't know where you're coming from, and they tend to set it up like it's an even playing field. I would like somebody to at least have the idea that it's not an even playing field, and to help you jump through those hoops in an easier way. I don't think it's peoples' fault that they don't understand that.

Many were particularly eager for support through the promotion process:

> I struggled a lot with my first contract renewal. I would've benefited if somebody had said, 'Okay. I'm your mentor. I am going to help you find peer evaluations for your class, because we need to have that.

Previous literature has shown that having support systems, mentors and sponsors can aid an employees' career progression, job satisfaction and engagement. This is especially important for women and under-represented groups in higher education. Our mentorship and coaching program, the second objective of our NSF ADVANCE grant after the institutional assessment, has had some success in building these systems of support (please see Appendix B: Mentors,

Coaches, Mentees for our external evaluators discussion of our program). Our hope is that administrators across the nine campuses and the OVPCC, through which our grant funds were received, will institutionalize the BRIDGE mentorship and coaching program, including the modules available on Laulima and that workshops and trainings continue. Presently, one faculty member per campus, who partook in the BRIDGE mentorship and coaching training program, acquired additional training and volunteered to take a leadership role in maintaining cross-campus systems of support.

VI. QUALITATIVE FINDINGS: Workplace Experiences at the Four Year Campuses

Our analyses of the interview data gathered at UHH and UHWO followed the same process of grounded theory analysis as was completed for the UHCCs. As a reminder, analyses were supported by the use of Nvivo qualitative software. Interviews were anonymized, professionally transcribed, and entered into the program. The analysis was conducted by members of the research team, not the software, which only facilitates the organization of data, codes, and themes. Our grounded theory analysis UHH and UHWO STEM faculty produced three themes: Bullying and Abuse in the Workplace; Increasing Demands on Faculty; and Filling the Gap: Informal Support Structures.

Bullying and Bias in the Workplace

Our analysis of twenty-six interviews rendered a challenging workplace culture at UH four year institutions. The theme captures a range of hostile or hurtful actions including bullying, discrimination around gender, race, and pregnancy, gatekeeping by prohibiting or deterring access to advancement, harassment and intimidation, prohibited student-faculty intimate relations, and tokenization based on race, indigeneity, or gender. Many faculty problematized

the normalization of these behaviors in faculty campus culture. In other words, both faculty who experienced these negative behaviors and those who engaged in them assume the existence and continuation of what one participant described as a "culture of abuse." We hope with the issuing and publicizing this report, the institutionalization of the BRIDGE mentorship and coaching program, the individual and informal faculty efforts to thwart workplace hostility, and the many other measures being taken up on UH campuses, that the NSF ADVANCE program's goal of shifting academic work cultures towards one that supports women and diversity will eventually be achieved. Below are a series of representative statements made by eight different STEM faculty from diverse backgrounds at UHH and UHWO that reflect the bullying and bias experienced on campus:

- I took a break to breast-feed, and there was a meeting starting in 20 minutes. And I said, "Please go ahead and start the meeting without me, and I'll come in the back door." And so, when I went into the meeting, this person stopped the whole meeting and called me out. And was like, "Do you think you're so important with your baby that you have to make all of us wait for you?" And basically, embarrassed me, ripped into me for about 20 minutes in front of this whole meeting.

- I've seen bullying of women faculty by male faculty. Um, I know that happens. Um, inappropriate jokes and comments have been made at times. That's spanning a 10-year period.

- . . . if students get injured or have a disability, or have to fly home to help their families, they're just screwed. We could just plan to record classes, you know. Just making a suggestion like that, the response is like, you don't know anything. What are you

thinking? That's ridiculous, just for like raising an idea, it's like an immediate, like you're out of place. You shouldn't talk about stuff. You don't know. You know, it's like you haven't been around long enough. You can't possibly know anything.

- But I guess about five years ago, as I was coming into the second floor where-where my office is here, he was exiting. And when he exited, he said, after he was out of my reach, "When was the last time you got arrested?"

- We've had problems with, um, faculty having inappropriate relationships with students . . . so you get stuck with that bad apple, you know, once their tenured—you're stuck with it and you hope they don't do the same thing again. I'm like [to chair], "You know, this is not okay. What, what can we do about it?" "Oh, well, this person has really important specialties that we don't want to get rid of, so I'll just talk to them." And I was like, "Well, no, if someone's a predator, we don't just look the other way because they have a specialty, and we might not be able to re-hire because we might not get another position number."

- I mean, in order to survive, I'm going stick it out till — till I retire, which is about another four years. You know, I - I do feel hopeful that, you know, by the time I retire may be the time that we recover, but—because it takes a while to recover.

- Research is great on its own, but the—it's really working with the students and seeing their engagement that is really awesome. It's such a strong motivator. The hurdles, I think, is just being here, sometimes feeling minoritized. Honestly, I think it's—that's probably been the most difficult thing. Like, tokenized. Yeah, I think, for me, that's been a big thing, just trying to understand how to fit into a department where you're the only

local—or you're one of the only local people, and how do you navigate that in a way that doesn't— [long pause] - make you vulnerable to being tokenized, if that makes any sense.

- One semester I did have a student that was a kind of a perfect-storm student. And I had to - I had to get help from the union. Yeah. Because she didn't—this student didn't go through the channels. You know, according to the way things work, she's supposed to come to me, and then if she can't get an appropriate response from me, she's supposed to go to my department chair. If she can't get satisfaction from the department chair, she's supposed to go to the division. You know, she's supposed to go up the ladder. Well, she never came to me. So, she wrote a complaint about me. Oh, things like I taught homosexuality, you know, in my women's studies course. This is a women's studies course. And if I had known that there was some disconnect between what I was teaching and what she was hearing, I could've dealt with it. Yeah? That guy—that man was known for, um—for, uh—in fact, I think he'd - he'd been written up for sexist practices. So, he made it very difficult for me. Luckily, my department supported me, and we were able to submit all of my evaluations, and they were—that class was particularly good.

Increasing Demands on Faculty

The increased auditing and demands of faculty identified on the four year campuses aligns with the neoliberal shift at US colleges and universities that began in the late 1990s and early 2000s (Giroux 2019, Vasquez and Levine 2022). Neoliberalism is an economic orientation towards the pursuit of wealth and profit-making at all costs including the environment, social welfare, and employment conditions, and salaries and wages. Neo-liberalism has infiltrated the logic US universities including public-serving institutions such as UH. Universities now seek to mimic

business or corporate models of organization oriented towards cutting cost. Though higher

education is or should be a public good, the neoliberal ethos has increasingly influenced

administrative decisions (Giroux 2019). As an approach, neo-liberalism reduces investments in

public infrastructure which is evident in the decrease of state expenditures in higher education

and the increasing cost of college tuition. Under the neo-liberal veil, administrators, politicians

and board of regents lose sight of the ultimate goals and purpose of public higher education

which includes offering an affordable and high quality education with a wide range of subjects.

Administators and politicians, including university system sgoverning bodies, are incentivized to

focus on cost, commodifying education. Many are competing to maintain or improve their

positions by reducing costs, losing sight of the creative and responsive administrative work

necessary for successful higher education that expands minds (Slaughter and Rhoades 2000). For

instance, the demand to attract students increasingly falls on faculty and departments, yet

departments are provided less and less resources while faculty input on the larger university

system seems to be decreasing. Recent research on the academic workplace demonstrates that

faculty work conditions have deteriorated with the continued incursion of neo-liberal logics in

the organization of colleges and universities (Maisuria and Helmes 2019) and that work-life

balance for women, especially BIPOC women, is a struggle. The following extended statements

made by STEM faculty at UH's four year campuses are reflective of these changes and support an

intersectional understanding:

- One of the things you want to do is be able to take students out and take them on field

  trips. And, you know, when you go to the website, you see scuba diving pictures right at

  the top, for what they show. It's-it's our students that are out there doing this work, but,

you know, we have vehicles that are falling apart. And so, we don't have the—we're not being given the resources to do these types of activities that the university wants to promote. And it feels like we're being blamed for having a small—not my program, but other departments in the college, were being blamed for having small programs.

- The biggest strain [during the pandemic], at least for faculty in my position right now, is that our workload has not decreased. In fact, it's increased, and yet they have not done anything to address changes to promotion and tenure. So, I think that that's a huge part of it. It would—and obviously, it would be really difficult for them to offer child support right now because it's not safe for people to be together. But what they could do is address the issue by addressing what our requirements are now, by adjusting requirements for promotion and tenure, so that we can support our students and ourselves and our families without having to worry about not having a job next year because the restrictions are—or the requirements are just as difficult. So, I think that is what I see as the biggest issue, and what I worry about, is that the only thing that they have done—and they haven't even extended this through this year, but the one thing that they did before was to say that faculty didn't have to include student evaluations from last spring in promotion cases for this fall. That's it. That's all they did. But a big concern moving forward is, if we can't do the research that we're required to do, if we can't do the service we're required to do, but yet you don't change those requirements, we're going to have a really hard time getting tenure, the people who are coming in now who are early career.

- I think one issue, we touched on it a little bit, is workplace balance, trying to balance not only being a professor, but being a wife and a daughter and a granddaughter and an aunty. I'm not a mother yet. Also, being a native Hawaiian is a lot. There's so much kuleana. Even my talking with some of my non-Hawaiian friends, they don't have all the family—their parents are in their 70s or 80s, but their parents are still super healthy. I'm trying to deal with all those things and family responsibilities. My cousin's got some domestic violence issues she's dealing with this weekend. My mom's calling everybody, "Can you take the kids? Can you take the kids? What are we going do?" Trying to figure that out. None of my non-Hawaiian friends, they don't have any of this. A Hawaiian colleague had to take care of her father. How many of my Japanese friends have to deal with this? Their great-grandparents are still alive. Their parents are super healthy. It's a whole added layer of being a Hawaiian professor. It's a lot. Then also being a woman and feeling like I have to be the caregiver in my family.

Filling the Gap: Informal Support Structures

Fortunately, an informal culture of support pervaded the campuses we studied, though our focus here is on the analysis of UHH and UHWO STEM faculty. Although offers of support reflect positively on faculty, making them a permanent part of the professional environment would assure that all faculty would have regular and equal access to guidance and information, or childcare, and other resources rather than relying on random acts of support. This is especially important for faculty from under-represented groups, those new to the islands, and others who might hesitate to reach out for assistance informally.

Institutionalizing our BRIDGE mentorship and coaching program, with its focus on intersectionality, provides one such avenue. However, a broad increase in funding to Diversity, Equity, and Inclusion (DEI) work is essential. With the influence of neo-liberalism, direct expenditure by many universities on DEI has fallen by the wayside and is often voluntarily carried out by under-represented groups and those most susceptible to gendered and racialized bias (SSFNIRG 2017). The many recent reports on this subject argue that voluntary DEI work, though important, can limit the time women and under-represented groups in higher education spend on other aspects of their careers such as research and reduces their personal time. Unmanage hostility on campus ,due to a lack of funding or a lack of intervention by administration, becomes a double edged sword for women and under-represented faculty, as they are more likely to experience it and attempt to deter it.

Onboarding, the process of integrating new employees into an organization, which includes welcoming new hires, role-specific training, and instruction or guidance on institutional structures is an opportunity to build positive workplaces that support women and diversity. Onboarding is lacking across all campuses included in this study. Without a well-defined and a progressive system of onboarding that occurs from the time of faculty hire through at least the first year, undue pressure is created at the start of an academic career. New hires attempt to figure out the ropes independently. Additionally, they sometimes inherit problematic orientations embedded in a campus culture. As provided by a variety of STEM faculty on the four-year campuses, the following statements represent varied but a systemic absence of support needed for early career faculty:

- And then I also had to do-do teaching, and I just basically had to dive in and develop the classes that I was teaching from scratch. I got a little help from some colleagues, but it's not that much help.

- I feel that there is a built-in system of unrealistic expectation for newer employees. We are put on committees which we know nothing about and are expected to make a difference and contribute. There is no preparation or education for these committees. This leads to many of the meetings being ineffective and the committee rarely makes any real progress. I think it is unfair to everyone involved.

- I entered into a department. They were all very nice, but I didn't feel that I was being supported. And I said, "Okay. Well, I got to do what I got to do," and I was actually looking at my peers from other universities as to how do you write a dossier. How do you put this dossier together? And, one person, from a different university said, "You know, this is sort of what I have, and you can look at it." I'm like, "This is fantastic." And so, I worked it out, and I made my own concoction, but it was really because of my other community.

- Things just—you get really thrown into the deep end, in terms of learning how the grant process works [laughter] and stuff like that, where the experience, I think, with R1 institutions, having been at Mānoa, where there was more of that departmental support and staff. It just makes it so much easier.

In the cases above, these recent hires would have profited from being provided a mentor or involvement in a coaching network with similar affinities. Affinity groups are developing across universities and colleges to link facuty with a common purpose, experience, or interest and can

also provide a a collective voice to help ensure an inclusive environment. Resources and the organizational structure for affinity groups are funded by the university or college, but the groups are led by faculty or staff. (see this plan and explanation of Affinity Groups at the [University of Pittsburgh](#)).

The following representative statements showcase how faculty fill the gaps for their colleagues when institutional guidance and information is lacking. They also demonstrate the need for a more systemized and continous approach towards orienting faculty, potentially through mentorship and coaching networks based in an intersectional understanding of the workplace:

- The more senior faculty, in my department and my division has also been really great with that. She's been very available and open with her time helping me learn the ropes. it's still pretty recent for her, too, learning everything about the university and going through these stages. So that's been really helpful to have, have her help.

- A colleague of mine moved here for her program. Her division, up until that point, was all men, and so she was the first woman. And nowhere was there discussion like, hey, "childcare's going be next to impossible." And she had to bring her son to campus for several weeks because she couldn't find childcare. There was no guidance on where and how to get that. And then I finally met her, and I was like, "Oh my gosh, why didn't you tell me?" No information was really provided because it was assumed it wasn't needed or necessary.

Finally, the following quote (provided by our external evaluators, Pacific Research & Evaluation) arrives from a faculty after participating in the BRIDGE mentorship and coaching training:

- A colleague of mine was denied promotion last year and found out it was being granted this year. I used some of the concepts about how leadership might look different for different people and how to communicate more clearly about that. She revised her tenure application and spoke more clearly about leadership. I think she would agree that helped her.

Improving workplace conditions, particularly for under-represented groups, can be advanced through active institutional systems of support including those that are faculty led (and university funded) whether through mentorship, coaching, or affinity groups. Childcare, prior to and during the pandemic, is a central issue in US workplaces, which generally fail, contrary to other developed nations, to provide free or affordable childcare facilities. UH campuses have been particularly remiss on this matter which impacts women faculty to a greater degree than men faculty. In many states (Massachusetts, New York, California) universities and colleges provide various forms of support to faculty with children including paid leave at the onset of parenthood and childcare facilities or vouchers. In several instances unions have included childcare as part of their collective bargaining agreement, though this is not the case with UHPA, which has failed to make gender equity and childcare a union issue.

VII. RECOMMENDATIONS FOR INCREASING DIVERSITY AND EQUITY IN STEM

To conclude, UH faculty (UHCCs, UHH, UHWO) across the Hawai'i islands contend with "traditional" challenges faced by women academic faculty including: weak administrative intervention in relationship to bullying and harassment and cultural and structural systems of bias. Uniquely, more than forty percent of faculty participants in the BRIDGE survey employed

across these campuses have earned degrees within the UH system and the majority are born in

Hawaiʻi. Island driven employment preferences, rather than economically driven interests, may

be exploited by island institutions including UH. Additionally, parents make up one third of our

survey participants employed across the UHCCs, UHH, and UHWO. Yet a system-wide policy

regarding paid family leave or childcare facilities, stipends, or subsidies does not exist.

Importantly, based on our analyses of surveys, Covid-19 increased faculty workload, at the very

least by 33% if not more. Finally, race, ethnicity, gender, indigeneity and their intersections hold

a variety of statistically significant impacts on the careers of faculty.

The following reccommendations, some of which have been discussed throughout this

report, were presented at our stakeholder and advisory board meetings. They are based on our

findings and geared towards increasing diversity and gender equity in STEM fields and beyond at

the nine UH Campuses (UHCCs, UHH, UHWO) engaged in this institutional assessment. They also

draw from best practices in the literature and the NSF ADVANCE network:

- Year-long onboarding supported by diversity, equity, and inclusion training.
- Institutionalize the BRIDGE mentorship and coaching training and networks.
- Develop a system for cross-campus affinity groups.
- Administrative trainings on intervention, implicit bias, diversity, equity, and inclusion.
- Include diversity and gender equity statements in mission statements, strategic plans, and campus discourse that is supported with funding.
- Drop off and flexible childcare, parental leave, and tenure clock policies.
- Support of educational programming and research rather than focus on auditing and cost-cutting measures that add to faculty workloads.
- Address the under-representation of Native-Hawaiians and Pacific Islanders in STEM.
- Create opportunities for women to confidently and confidentially report negative experiences.
- Examine the distribution of salaries particularly the range within individual ranks.

A particularly central resource that has streamlined the findings of NSF ADVANCE grants and

other research on equity in STEM academic fields and higher education generally is the ARC

[Network: A STEM Equity Brain Trust](#). We encourage faculty and administration to join the community, regardless of discipline, and explore the resources available to determine which approaches make the most sense for making structural change and cultural shifts on their campuses. The ARC Network along with a growing body of organizations and knowledge is available to support women and diversity on UH campuses and to temper if not thwart workplace conditions such as bullying, bias, limited or lacking childcare, uneven workloads, and underpayment that interfere with the progress, workplace satisfisfaction, and livelihoods of UH faculty.

VIII. REFERENCES

Alexander, Rosie. "Career Decision Making in Island Communities: Applying the Concept of Aquepelago to the Shetland and Orkney Islands" *Shima: The International Journal of Research Into Island Cultures* 9(1) 38-52.

Bagilhole, B. and Goode, J. 2001. The Contradiction of the Myth of Individual Merit, and the Reality of a Patriarchal Support System in Academic Careers: A Feminist Investigation. *European Journal of Women's Studies* 8(2), pp. 161–180.

Baldacchino, G. and Farrugia, C. J., eds., 2002. *Educational Planning and Management in Small States: Concepts and Experiences*. London, UK: Commonwealth Secretariat.

Joanne Barker, 2017, "Introduction: Critically Sovereign" in *Critically Sovereign: Indigenous, Gender, Sexuality, and Feminist Studies,* Duke University Press

Beale, Francis. 1970. "Black Women's Manifesto, Double Jeopardy: To Be Black and Female. *Sisterhood is Powerful*. Vintage Books.

Benbow, C., Ferriman, K., and D. Lubinski (2009). "Work preferences, life values, and personal views of top math/science graduate students and the profoundly gifted: Developmental changes and gender differences during emerging adulthood and parenthood." *Journal of Personality and Social Psychology*, 97(3), 517-532.

Birks, Melanie, and Jane Mills. 2011. *Grounded Theory*. Los Angeles, CA: Sage.

Boland, William Casey. 2018. "The Higher Education Act and Minority Serving Institutions: Towards a Typology of Title III and V Funded Programs" *Educational Sciences* 8(33): 1-19.

Bonilla-Silva, E. (2010). Racism without Racists. Color-Blind Racism & Racial Inequality in Contemporary America (3rd ed.). New York: Rowman & Littlefield.

Blackwell, Lauren V., Lori Anderson Snyder, and Catherine Mavriplis. 2009. "Diverse Faculty in STEM Fields: Attitudes, Performance, and Fair Treatment." *Journal of Diversity in Higher Education* 2(4):195–205.

Brown, Sonia, Stacye Blount, Charles A. Dickinson, Alison Better, Margaret Weigers Vitullo, Deidre Tyler, and Michael Kisielewski. 2016. "Teaching for Social Justice: Motivations of Community College Faculty in Sociology." *Teaching Sociology* 44(4):244–55.

Brunsma, David L and Kerry Anne Rocquemore. 2002. "What Does 'Black' Mean? Exploring the Epistemological Stranglehold of Racial Categorization." *Critical Sociology* 28 (1-2) 101-121.

Carrigan, Coleen, Kate Quinn, and Eve A. Riskin. 2011. "The Gendered Division of Labor Among STEM Faculty and the Effects of Critical Mass." *Journal of Diversity in Higher Education* 4(3):131–46.

Cech, E.A. and Blair-Loy, M. 2014. Consequences of Flexibility Stigma Among Academic Scientists and Engineers. *Work and Occupations,* 41(1), pp. 86–110.

Charmaz, Kathy. 2006. *Qualitative Analysis*. London, UK: SAGE.

Cimpian, Joseph, Kim, Taek, Zachary McDermott. 2020. "Understanding Persistent Gender Gaps in STEM." *Science* 368 (6497) https://www.science.org/doi/10.1126/science.aba7377

Cohn, Scott. 2021. https://www.cnbc.com/2021/07/15/these-are-americas-most-expensive-states-to-live-in.html

Corbin, Juliet M., and Anselm Strauss. 1990. "Grounded Theory Research: Procedures, Canons, and Evaluative Criteria." *Qualitative Sociology* 13 (1): 3–21.

Crenshaw, Kimberle. 1991. "Mapping the Margins: Intersectionality, Identity Politics, and Violence Against Women of Color." *Stanford Law Review* 43:6:1241-1299.

Cross, James David and Carol A. Carman (2021) "The Relationship between Faculty Diversity and Student Success in Public Community Colleges." *Community College Journal of Research and Practice*, DOI: 10.1080/10668926.2021.1910595

Curtis, John W. 2011. *Persistent Inequity: Gender and Academic Employment*. American Association of University Professors.

Davis, Angela. 1987. *Women, Race, & Class*. Knopf Doubleday Publishing Group.

Davis, Leslie and Richard Fry. 2019. "College Faculty Have Become More Racially and Ethnically Diverse, But Remain Fall Less So Than Students." *Pews Research Center*, https://www.pewresearch.org/fact-tank/2019/07/31/us-college-faculty-student-diversity/

Finkelstein, Martin, Conley, Valerie, Jack Schuster. 2016. *The Faculty Factor: Reassessing the American Academy in a Turbulent Era.* John Hopkins University Press.

Flaherty, C., 2017. Relying on Women, Not Rewarding Them. *Inside Higher Ed*, [online], Available at: < https://www.insidehighered.com/news/2017/04/12/study-finds-female-professors-outperform-men-service-their-possible-professional#.WO31WVrvAQs.gmail> [Accessed July 20, 2019]

Fojas, Camilla, Rudy P. Guevarra, Jr., and Nitasha Tamar Sharma, eds. 2018. *Beyond Ethnicity: New Politics of Race in Hawai'i*. Honolulu, HI: University of Hawai'i Press.

Fry, Richard, Kennedy, Brian, and Cary Funk. 2021. STEM Jobs See Uneven Progress Increasing Gender, Racial, and Ethnic Diversity. Pew Research Center, https://www.pewresearch.org/science/2021/04/01/stem-jobs-see-uneven-progress-in-increasing-gender-racial-and-ethnic-diversity/

Giroux, Henry. 2014. *Neoliberalisms War on Higher Education.* Haymarket Books.

Glaser, Barney, and A. L. Strauss. 1967. *The Discovery of Grounded Theory*. Chicago, IL: Aldine.

Griffin, Kimberley. 2020. *Institutional Barriers, Strategies, and Benefits to Increasing the Representation of Women and Men of Color in the Professoriate*. https://diversity.ucdavis.edu/sites/g/files/dgvnsk731/files/inline-files/InstitutionalBarriersStrategies2020.pdf

_____. 2019. "Redoubling Our Efforts: How Institutions Can Affect Faculty Diversity." American Council on Education, https://www.equityinhighered.org/resources/ideas-and-insights/redoubling-our-efforts-how-institutions-can-affect-faculty-diversity/

Guarino, C.M. and Borden, V.M.H., 2017. Faculty Service Loads and Gender: Are Women Taking Care of the Academic Family? *Research in Higher Education,* 58(6), pp. 672–694.

Gutiérrez y Muhs, Gabriella, Yolanda Flores Niemann, Carmen G. González, and Angela P. Harris, eds. 2012. *Presumed Incompetent: The Intersections of Race and Class for Women in Academia*. Boulder, CO: University Press of Colorado.

Hess, Cynthia, Gault, Barbara, and Youngmin Yi. 2013. "Accelerating Change for Women Faculty of Color in STEM: Policy, Action, and Collaboration." Institute for Women's Policy Research, https://files.eric.ed.gov/fulltext/ED556719.pdf

Hau'ofa, E., 1994. Our Sea of Islands. *The Contemporary Pacific,* 6(1), pp. 148–161.

Hill-Collins, Patricia. 1991. *Black Feminist Thought: Knowledge, Consciousness, and the Politics of Empowerment.* Routledge.

hooks, bell. 1987. *Ain't I A Woman?* Pluto Press.

Shari M. Huhndorf and Cheryl Suzack, 2010, "Indigenous Feminism: Theorizing the Issues" in *Indigenous Women and Feminism: Politics, Activism, Culture*. University of British Columbia Press

Jackson, Judy. 2004. "The Story Is Not in the Numbers: Academic Socialization and Diversifying the Faculty." *NWSA Journal* 16(1):172–85.

Ahia, Mahealani and Kahala Johnson. 2021. "A Breath of Ea: Submergent Strategies for Deppening the Hawaiian Diaspora." Shima 16 (1): 143-159.

Jordan, June. 1982. 2003. "Report from the Bahamas, 1982. *Meridians* 3(2) 6-16.

Kaminski, Deborah, and Cheryl Geisler. 2012. "Survival Analysis of Faculty Retention in Science and Engineering by Gender." *Science* 335:864–66.

Karides, Marina. 2017. "Why Island Feminism?" *Shima: The International Journal of Research into Island Cultures* 11(1). doi: 10.21463/shima.11.1.06.

Karides, Marina, Nathalie Rita, Ruth Aloua, and Jennifer Stotter. 2020. "An Island and Intersectional Analysis of STEM Faculty Careers in Hawaii." in *Gender and Island Communities*, *Gender in a Global/Local World*, edited by F. Gaini and H. P. Nielson. Routledge.

Karides, Marina and Loke Aloua. 2021. Paper presented at the Special Session on Indigenous Movements and Sovereignty: Voices from Four Directions, American Sociological Association, (virtual) August.

Lorde, Audre. "Age, Race, Class, and Sex: Women Redefining Difference." *Sister Outsider: Essays and Speeches,* Crossing Press, 1984, pp. 114-123.

Ledward, Brandon C. 2007. "On Being Hawaiian Enough: Contesting American Racialization with Native Hybridity." *Hūlili: Multidisciplinary Research on Hawaiian Well-Being* 4(1):107–43.

Levin, J. S., S. Kater, and R. Wagoner. 2006. *Community College Faculty: At Work in the New Economy*. Basingstoke: Palgrave MacMillan.Lysenko, Tetiana and Qingfang Wang.(2020). Race/Ethnicity, Gender, and Earning of Early Career STEM Graduates in the US. Geographical Review, DOI:10.1080/00167428.2019.170874

Maisuria, Alpesh., & Helms, Svenja. (2020). Life for the academic in the neoliberal university. Abingdon, UK: Routledge.

McCall, G. 1994. Nissology: The Study of Islands. *Journal of the Pacific Society,* 17(2), pp. 1–14.

McGregor, Daviana. 2007. *Nā Kuaʻāina: Living Hawaiian Culture.* University of Hawaiʻi Press.

Misra, Joya, Jennifer Hickes Lundquist, Elissa Holmes, and Stephanie Agiomavritis. 2011. *The Ivory Ceiling of Service Work*. American Association of University Professors.

National Center for Education Statistics. 2019. "The Condition of Education." Retrieved January 20, 2020 (https://nces.ed.gov/programs/coe/indicator_cha.asp).

Okamura, Jonathan Y. 2008. *Ethnicity and Inequality in Hawaiʻi*. Temple University Press.

O'Meara K., Lennarz C., Kuvaeva, A., Jaeger, A. and J. Misra. 2019. "Department Conditions and Practices Associated with Faculty Workload Satisfaction and Perceptions of Equity". *Journal of Higher Education*. 90(5): 744-772.

Pittman, Chavella T. 2010. "Race and Gender Oppression in the Classroom: The Experiences of Women Faculty of Color with White Male Students." *Teaching Sociology* 38(3):183–96.

Rita, Nathalie P., and Marina Karides. 2022. "'I Have an Accent, so People Know I'm Not from Here': A Racial and Ethnic Analysis of International STEM Faculty in Hawai'i." *Ethnic and Racial Studies* 1–23. doi: 10.1080/01419870.2021.1981965.

Rhoton, Laura A. 2011. "Distancing as a Gendered Barrier: Understanding Women Scientists' Gender Practices." *Gender & Society* 25(6):696–716.

Slaughter, Sheila and Gary Rhoades. 2000. "The Neoliberal University" *New Labor Forum*, 6, Summer 73-79).

Social Sciences Feminist Network Research Interest Group. (2017). The Burden of Invisible Work in Academia: Social Inequalities and Time Use in Five University Departments. *Humboldt Journal of Social Relations*, *39*, 228–245. http://www.jstor.org/stable/90007882

Suwa, Juni.2007. "The Space of Shima." *Shima: The International Journal of Research into Island Cultures,* 1(1), pp. 6–14.

Taylor, O., Apprey, C. B., Hill, G., McGrann, L., and J. Wang (2010). "Diversifying the faculty." Peer Review 12(3). Association of American Colleges & Universities. Available at: https://www.aacu.org/publications-research/periodicals/diversifying-faculty

Tugend, Alina. 2018. "The Effect of Intersectionality in the Workplace." *New York Times*, September 30, 2018

Turner, Caroline, Juan González, and Kathleen Wong. 2011. *Faculty Women of Color: The Critical Nexus of Race and Gender*. Vol. 4. Diversity in Higher Education.

Turner, Caroline S. 2003. "Incorporation and Marginalization in the Academy: From Border Toward Center for Faculty of Color?" *Journal of Black Studies* 34(1):112–25.

Urquhart, C. 2013. Grounded Theory for Qualitative Research. Thousand Oaks, CA: Sage.

Valentino, L., Moller, S., Stearns, E., and Mickelson, R., 2016. Perceptions of Future Career Family Flexibility as a Deterrent from Majoring in STEM. *Social Currents,* 3(3), pp. 273–292.

Vasques, Evelyn M. and John S. Levin. 2018. "The Tyranny of Neoliberalism in the American Academic Profession." American Association of University Professors, https://www.aaup.org/article/tyranny-neoliberalism-american-academic-profession#.YxddXR3MLDE

Vitullo, Margaret Weigers, and Roberta Spalter-Roth. 2013. "Contests for Professional Status: Community College Faculty in Sociology." *The American Sociologist* 44(4):349–65.

Webber, Karen L. 2019. "Does the Environment Matter? Faculty Satisfaction at 4-Year Colleges and Universities in the USA." *Higher Education* 78 (2): 323–43. https://doi.org/10.1007/s10734-018-0345-z.

Whitaker, Manya, and Eric Anthony Grollman, eds. 2018. *Counternarratives from Women of Color Academics: Bravery, Vulnerability, and Resistance*. Routledge.

Wu, Meng-Jia, Kelly Zhao, and Francesca Fils-Aime. 2022. "Response Rates of On-line Surveys in Published Research: A Meta-Analysis."*Computers in Human Behavior Reports* 7:1-11.

Xu, Y.J. 2008. Gender Disparity in STEM Disciplines: A Study of Faculty Attrition and Turnover Intentions. *Res High Educ,* 49, pp. 607–624.

Appendix A. A Compendium of Statistically Significant Findings (N=773)*

Demographic Differences Between STEM
- Native Hawaiian or Pacific Islander faculty are *significantly* less likely to be employed in a STEM department compared to other racial and ethnic groups (p < .001).
- Whites are *significantly* more likely to be employed in STEM fields compared to other racial and ethnic groups (p < .001).

Employee Rights and Institutional Resources
- Women faculty are *significantly* less likely to report having been informed about rights and benefits by human resources at their campus when they were hired (p < .01).
- Native Hawaiian and Pacific Islander faculty are *significantly* more likely to report "yes" to the following question, "When you started at your campus, were you thoroughly informed of relevant information about rights and benefits by Human Resources," compared with respondents in other racial and ethnic groups (p < .05).
- Native Hawaiian and Pacific Islander faculty are also *significantly* more likely to say they would contact Human Resources if they faced difficulties in their work environment (p < .01).
- Compared to those at four-year institutions, respondents at the two-year colleges are *signficantly* more likely to report having been informed of relevant information about rights and benefits by human resources (p < .01).
- Faculty in STEM fields are *significantly* more likely to report being informed of relevant information about rights and benefits by Human Resources compared to respondents in non-STEM fields ($p < .05$).

Professional Support and Development
- Women are *significantly* less likely to report having been informed of relevant information about expectations for tenure and promotion when they began employment (p < .001).
- Women are *significantly* more likely to report that they were not thoroughly informed of relevant information about professional development when they started working at their campus (p < .01)
- Compared to the four-year institutions, respondents at the two-year institutions are *significantly* more likely to report having been informed of relevant information about professional development upon hiring ($p < .001$).
- Native Hawaiian and/or other Pacific Islander report *significantly* lower levels of agreement with the statement, "I feel professionally supported by my current administrators" compared with respondents who do not identify as Native Hawaiian and/or other Pacific Islander groups ($p < .05$).
- White respondents indicate *significantly* lower levels of agreement with the statement, "I feel professionally supported by my current department or division chair" compared with respondents who identify as other racial/ethnic groups ($p < .05$).

Bias and Discrimination
- Faculty at the four-year institutions are *significantly* more likely to report they have been treated unfairly or discriminated against at their campus (p < .05), compared to community college faculty.
- Women are *significantly* more likely to report unwanted sexual advances or propositions at their campus (p < .01).
- Women are less likely to perceive they can file a complaint without fear of retaliation (p < .01).

Compensation and Economic Hardship
- Faculty who are parents of children under age 18 are *significantly* less likely to agree that their compensation or salary is fair ($p < .05$).
- Native Hawaiian and Pacific Islander faculty indicate *significantly* higher levels of agreement with the statements, "My compensation or salary is fair" ($p < .05$) and "My compensation or salary is comparable to others in my field of expertise" ($p < .05$).
- Community college faculty are more likely to report that they agree that their compensation or salary is fair ($p < .001$) and that their compensation or salary compares to others in their field of expertise ($p < .01$), compared with faculty at the four-year institutions. However, this finding does not indicate that UHCC faculty are overall satisified with their compensation, just that they are moreso than at the four year institutions.
- Respondents identifying as Black are *significantly* more likely to report that since being employed at their current campus, there was a time when they could not afford rent or mortgage compared to other racial/ethnic groups ($p < .05$).
- Asian or Asian American respondents are *significantly* less likely to report that since being employed at their current campus, there was a time when they could not afford rent or mortgage ($p < .01$), there was a time when they did not have a place to stay or live ($p < .05$), and there was a time when they received public assistance (e.g., food stamps) ($p < .05$).
- Respondents in STEM disciplines are *significantly* less likely to report difficulty affording rent or mortgage than faculty in non-STEM fields ($p < .05$).

Workload
- Women faculty spend *significantly* less weekly time on research compared to men ($p < .001$).
- Respondents identifying as Native Hawaiian and/or other Pacific Islander report *significantly* lower average number of courses taught per semester compared with respondents who do not identify as Native Hawaiian or Pacific Islander ($p < .001$).

Intersectional Analyses
- Among a subsample including faculty who identify as Black and Latinx/a/o (n = 58), men are more likely to indicate higher levels of agreement with the following statement, "I plan to retire from my campus" ($p < .01$).

- Among a subsample of White respondents (n = 316), t-test results demonstrate *significantly* more adverse workplace experiences reported by women.
- Compared to White men, White women are *significantly* more likely to report experiencing unwanted sexual advances or propositions at their campus ($p < .05$).
- White men indicate *significantly* higher levels of agreement than White women with the following statements, "When you started at your campus, were you thoroughly informed of relevant information about opportunities for professional development" ($p < .05$) and "When you started at your campus, were you thoroughly informed of relevant information about expectations for tenure and/or promotion" ($p < .05$).
- Among Asian or Asian American faculty, men are *significantly* more likely to report higher levels of agreement with the following statements, "When you started at your campus, were you thoroughly informed of relevant information about rights and benefits (e.g., retirement) by Human Resources" ($p < .01$), "When you started at your campus, were you thoroughly informed of relevant information about expectations for tenure/ and or promotion" ($p < .01$), and "I believe I can attain my career goals at my campus" ($p < .01$).
- Asian and Asian American women are *significantly* more likely to report experiencing unfair treatment or discrimination at their campus ($p < .05$) and unwanted sexual advances or propositions at their campus ($p < .01$).
- Asian and Asian American women are less likely to agree with the statement, "I can file a complaint without fear of retaliation at my campus" ($p < .01$).
- Among Asian and Asian American faculty, women are *significantly* more likely to experience economic hardship, specifically reporting a time when they could not afford rent or mortgage since being employed at their current campus ($p < .05$).

* Statistical significance determines if the results in the data are not explainable by chance alone. In other words, the difference between two groups, for example women and men, have a low probability (usually less than 5 percent for a measure to be considered statistically significant) of occurring by normal random variation. Statistical significance is also indicative of whether the findings found in the subsample (n= 773) can be generalized from the samples to the populations they represent (n= 1104). This includes instructional and non-instructional faculty at UHH (192), UHWO (103), and UHCCs (809) for Fall 2020 from the databases provided by the Institutional Research, Analysis & Planning (IRAP) Office. Descriptive statistics provide important insight on the actual data set and allow for their interpretation. They provide information on the trends identified in the sample. In our case, our descriptive statistics help understand the demographic and workplace parameters of faculty respondents. Our response rate of 70% is considered excellent by social science standards, likely indicating a high interest to complete the study and that our quantitative analyses have relevance for the population of faculty they represent.

Appendix B. Pacific Research & Evaluation Report, Interviews with UHCC BRIDGE Trained Mentors, Coaches, and Mentees

Through the course of conversations, the interviewees spoke about obstacles they face while working in the UHCC system. Although these types of data were collected previously through the institutional assessment, barriers faculty face came up during these interviews as well. The barriers faculty described included navigating the tenure process, including as it pertains to family planning and family leave. Faculty also described obstacles related to childcare such as a lack of affordable childcare options, a decrease in campus daycare hours, maternity leave only available for tenured faculty and FMLA or sick leave in lieu of maternity leave for those not tenured, difficulties involving returning to the workforce after a break from raising children, balancing childbearing with tenure and promotions, and the need for helpful telework policies to support parents. Interviewees reported inconsistent policies for parental leave and tenure promotion across the campuses. The women faculty interviewed also expressed concerns that they faced income disparities in comparison to their male colleagues and have been unsuccessful when negotiating for raises by being told they cannot negotiate. Additionally, an interviewee confirmed findings revealed in the institutional assessment by noting experiences of harassment. Faculty also described obstacles that they face that impact male faculty as well, including difficulties navigating the college as a recent immigrant to the United States, a heavier workload than at four-year institutions, and disparities in support and benefits for instructional versus non-instructional faculty.

Interview participants had mostly positive experiences participating in the BRIDGE intervention and described several strengths of the program. Several interviewees noted that the program allowed them to feel validated in their experiences and "not alone" when sharing

concerns. Interviewees also said that the program went beyond just sharing experiences by taking action to address issues. In particular, several parents formed a Parenting in Academia group to address obstacles parents face as faculty members. Other examples of actionable efforts were creating a group across the community colleges to provide support to faculty who were new to the United States and BRIDGE participants providing strategic planning on one of the campuses. Another strength of the program was that it encouraged intersectionality by exploring leadership through Native Hawaiian ideas of leadership rather than a western, male dominated perspective, as well as made mentors aware of other cultures when mentoring. This encouragement of intersectionality aligns with one of the grant objectives. With many faculty interviewees noting the barriers they face obtaining tenure, it was a benefit of the program that it connected them with support in navigating the tenure process. Further, even during the Covid-19 pandemic, interviewees credited the program for providing a sense of community and allowing participants to develop relationships across disciplines, campuses, and islands. Other strengths of the program cited by interviewees included the training opportunities, the supportive and helpful BRIDGE project team, information provided for navigating difficult situations such as harassment, the safe space for asking questions, the opportunity to learn about experiences and policies on other campuses, and the stipend for involvement as a mentor/coach. Interviewees added that there was a need for this type of program on their campuses.

Mentor, coach, and mentee interview participants shared successes that resulted from participation in the BRIDGE program. Of note, they reported receiving or providing support through the tenure process. Other examples of successes included continuing mentor/coach-

mentee relationships and seeking out new relationships, advocating for the rights of pregnant students under Title IX, learning to advocate for colleagues and speaking out when witnessing micro and overt aggressions, receiving specific suggestions for improving instruction that lead to improved student feedback, supporting adjustment to the UH system as an immigrant, and nominating a colleague for an award to get them recognition for their work.

The BRIDGE training was a strength of the program. Interviewees highlighted unconscious bias training (i.e., PowerPlay/Incluxion Works). They also appreciated the trainings' focus on a Native Hawaiian perspective on leadership, as well as intergenerational and intergender bias training. Other strengths of the training cited by interviewees included the focus on the needs and challenges of women faculty and how to address difficult issues and the safe space provided for facilitating conversations. Interviewees requested future training in power structure to understand who to go to at the colleges for specific requests, more solution focused training, and strategies for requesting a raise or promotion. They noted that it may be beneficial to have administrators and HR participate in the training.

Mentor, coach, and mentee interview participants were hopeful that UHCC would institutionalize aspects of the BRIDGE program. They highlighted the three modules for mentor training, the campus-wide mentoring program, the benefits of a point person to coordinate the mentor program, the discussions around supporting parents, and discussions around microaggressions, overt aggression, intersectionality, and racism. The interviewees underscored other needs for supporting women faculty. This included a flexible work schedule and work from home opportunities, salary studies done for multiple measures—not just gender, more participation in these efforts from administrators and HR, outreach to female faculty at all levels,

and support for parents such as daycare for those working on campus and daycare stipends.

They believe campus administrators need to have an understanding of the issues women face, a

willingness to discuss salary requests, provide outreach to women faculty at all levels, influence

other administrators, and set metrics for the college to work toward.