

2022

Growing the roots of equity: The TREE model of institutional response to COVID-19

Dessie Clark

University of Massachusetts Amherst

Ethel L. Mickey

University of Massachusetts Amherst

Joya Misra

University of Massachusetts Amherst

Follow this and additional works at: <https://scholarworks.umass.edu/advance-it-pubs>

Recommended Citation

Clark, Dessie; Mickey, Ethel L.; and Misra, Joya, "Growing the roots of equity: The TREE model of institutional response to COVID-19" (2022). Journal of Diversity in Higher Education. 9.
<https://psycnet.apa.org/doi/10.1037/dhe0000392>

This Article is brought to you for free and open access by the ADVANCE-Institutional Transformation at ScholarWorks@UMass Amherst. It has been accepted for inclusion in Publications by an authorized administrator of ScholarWorks@UMass Amherst. For more information, please contact scholarworks@library.umass.edu.

Growing the Roots of Equity: The TREE Model of Institutional Response to COVID-19

Dessie Clark

University of Massachusetts, Amherst

Ethel L. Mickey

University of Massachusetts, Amherst

Joya Misra

University of Massachusetts, Amherst

© 2022, American Psychological Association. This paper is not the copy of record and may not exactly replicate the final, authoritative version of the article. Please do not copy or cite without authors' permission. The final article will be available, upon publication, via its DOI: [10.1037/dhe0000392](https://doi.org/10.1037/dhe0000392)

The authors acknowledge support from NSF ADVANCE grant 1824090. All findings and conclusions are those of the authors and do not necessarily represent the views of the National Science Foundation.

Growing the Roots of Equity: The TREE Model of Institutional Response to COVID-19

Feminist scholars have long documented the complex, multiple ways in which academic institutions reproduce gendered and racialized inequalities (Hunt et al., 2012; Turner, González, & Wong, 2011; Zambrana, 2018). In times of crisis, institutional commitments to diversity, equity, and inclusion may be sidelined (Tulshyan, 2020). While certain higher education institutions have faced crises in the past, such as when the natural disaster Hurricane Katrina closed colleges and universities in New Orleans, COVID-19 is the most widespread and long-lasting crisis the academy has faced in modern history. This crisis has also had particular gendered and racialized impacts. As institutions of higher education navigate the pandemic, there is an urgent need to focus on the long-term equity impacts for faculty women and underrepresented minorities.

As members of a gender equity program focused on STEM faculty support, we suggest that institutional responses to the COVID-19 pandemic in higher education should recognize the pandemic's particular impacts on white women and faculty members of color, who are already disadvantaged in their institutions. This includes ensuring that short-term structural shifts support deeper cultural change, embedding equity into the fabric of institutional norms and values. Change agents must foster buy-in from other community members, including Deans, department chairs, and personnel committees tasked with evaluating faculty, to ensure the effective implementation of policies across organizational levels, such that policy becomes practice. But, how do institutions of higher education support faculty in inclusive and equitable ways when the very nature of faculty work is shifting, and the future of higher education is uncertain? While institutional transformation is complex, we outline a broad model for institutional change – the

TREE model – based on a case study of one university’s response to the pandemic, with the aim of informing diversity efforts in higher education more broadly during crisis.

While efforts to achieve institutional gender equity are often met with deep ambivalence or resistance (Acker, 2000; Austin & Foxcroft, 2010; Hearn, 2000; Stewart & Valian, 2018; van den Brink & Stobbe, 2014), the University of Massachusetts, Amherst, amid an abrupt shift to online operations in March 2020, rapidly responded to faculty concerns with a focus on equity. The large, public, research-intensive university announced a series of policy changes regarding faculty evaluation almost immediately. Yet scholars note that true, lasting institutional transformation necessitates more than policy adjustments, requiring both structural and cultural change: “Understanding, buy-in and support from grassroots organizational members regarding the need for activities of culture change are just as important as strong support from institutional leaders and senior organizational members” (Bilimoria, Joy, & Liang, 2008, p. 436; Bird, 2011; Rosser & Chameau, 2006). Effective institutional transformation projects also require collaboration across organizational levels, combining structural changes from leadership with cultural-change efforts to garner popular support (Acker, 2000; Bilimoria et al., 2008).

A theory of change model involves identifying desired outcomes and mapping out necessary conditions to achieve change (Taplin & Clark, 2012). These conditions are typically linear, causal, and necessarily unique to individual institutions (Taplin & Clark, 2012). Rather than proposing a one-size-fits-all approach, we use our case to propose a broader model of conditions which institutions may consider to inform institutional changes and cultivate faculty diversity during crisis (Larsen, Austin, Soto, & Martinez, 2015). Through our TREE model – centered on the conditions of “Thinking ahead,” “Resource provision,” “Evaluation,” and “Equity,” we argue institutions can adapt to better support diverse faculty, while also addressing

historical inequities exacerbated by the pandemic. We posit that institutions that make decisions rooted with these conditions in mind will be better positioned to respond to the already well-documented impacts of COVID-19 on faculty.

Two central research questions guide our work: (1) What steps have university stakeholders taken to address COVID-19 impacts on faculty careers? (2) How do these steps reflect and support gender and racial equity goals? We find that key to the university's continued response to COVID-19 has been coordination and collaboration across campus units, paired with shared commitment to sustainable equity. After outlining relevant literature on gender equity in higher education, we present our methods and case study, and describe key findings informing the TREE model for cultivating faculty equity in crisis.

Literature Review

Gendered and racialized disparities are well-documented in institutions of higher education (Hunt et al., 2012; Turner, González, & Wong, 2011; Zambrana, 2018). COVID-19 has exacerbated these inequities in ways that could pose lasting impacts on scholars for years to come (Anwer, 2020; Gonzalez & Griffin, 2020; Douglas-Gabriel, 2020; Zahneis, 2020). The following review of literature review synthesizes the existing literature on disparities in and attempts to transform higher education and the emergent literature on the racialized and gendered impacts of COVID-19, to provide context for our case study.

Gender Equity and Institutional Transformation in Higher Education

The underrepresentation of women in STEM across faculty ranks in most disciplines has ignited scholarly and policy interest (for a review, see Blackburn, 2017; also Alegria & Branch, 2015; Stewart & Valian, 2018). For example, while trends approach greater gender parity at lower ranks, men disproportionately earn the rank of full professor as compared to their women

colleagues; racial inequalities mean that these figures are starker for women from underrepresented minority groups (DeBrey et al., 2021). Gendered choices and constraints shape scientific career pathways, and women must navigate unique “potholes” due to the gendered organization of higher education (Branch, 2016). Gender inequalities are embedded in the logic of the university, which fosters a masculine ideal faculty member as fully devoted and unencumbered by outside (familial) obligations (Acker, 1990; Acker, 2006; NAS, 2007; Morimoto & Zajicek, 2014). Similarly, racial inequalities are deeply embedded, with ideal workers not only assumed to be men, but white men (Ray, 2019; Wingfield & Chavez, 2020). Thus, to broaden the participation of women of all races in STEM, universities must transform their policies, practices, and institutional culture to reimagine the ideal worker, and promote equity and inclusion in recruitment, retention, and advancement (Glass & Minnotte, 2010; Hart, 2016; Roos & Gatta, 2009).

A gendered organizations perspective outlines how discrimination against white women and women of color is embedded in institutional structure and culture and often heightened in STEM fields (Acker, 2006; Britton, 2017; Stewart & Valian, 2018). Organizational structure includes the distribution of power and authority through bureaucratic hierarchies and policies that uphold normative practices and cultural values (Acker, 1992; Britton, 2017). Culture includes images, symbols, and ideologies that justify and legitimize how organizations operate (Acker, 1992). Cultural assumptions about the ideal faculty member are embedded into structures of higher education, evidenced by narrow indicators of academic excellence and tenure and promotion policies (Bailyn, 2003; Sonnert & Holton, 1995; Stewart & Valian, 2018).

Faculty evaluation practices may seem gender-neutral but nonetheless depict white, middle-class men as the “neutral and objective standard” (Nentwich, 2006), with gendered and

racialized cultural status beliefs shaping ideas about competence and leadership abilities (Alegria 2019; Faulkner 2009; Ridgeway, 2011). Evaluation criteria disadvantage white women and women of color; women of color are less likely than white women or men of any racial group to be awarded tenure (Leggon, 2006; Lisnic, Zajicek, & Morimoto, 2018). While all academics with families must navigate competing demands of work and care, gendered cultural norms regarding caregiving and the “biological clock” of childbearing make this particularly challenging for women (Ecklund & Lincoln, 2016; Hochschild, 1975; Mason, Wolfinger, & Goulden, 2013). Additionally, faculty mothers often experience “motherhood penalties” including lower perceptions of competence, as well as disadvantages in hiring and pay (Baker, 2012; Lutter & Shroeder, 2020). While some institutions recognize the additional labor of caregiving, providing tenure delays and parental leaves, the systemic nature of gendered care (with women often providing more care than men) typically means that mothers are disadvantaged in academic careers (Mason, Wolfinger, & Goulden, 2013; Misra et al., 2012). Importantly, faculty of color often also have greater caregiving expectations to extended family members (Sarkisian & Gerstel, 2012).

Organizational structures and culture are mutually reinforcing, creating inequitable treatment for women STEM faculty often referred to as a “chilly climate” (Britton, 2017; Hall & Sandler, 1982). The chilly climate is “at best bothersome and at worst hostile and excluding” (Bystydzienski & Bird, 2006, p. 5), including biases in evaluations, as well as inequitable work allocations and policies that penalize women’s greater family responsibilities (Bilimoria & Liang, 2014; Fox, Sonnert, & Nikiforova, 2009). The climate is exacerbated for women who face intersecting systems of oppression including race, ethnicity, sexual orientation, nationality, age, and/or ability (e.g. Armstrong & Jovavonic, 2016; Branch, 2016; Cech & Pham, 2017; Ong,

Smith, & Ko, 2018; Turner, 2002; Turner et al., 2011; Zambrana, 2018). Both white women and women of color faculty are evaluated more harshly by students (Sprague & Massoni, 2005), while also engaging in more formal and informal mentorship and emotional support to students (Gonzales & Griffin, 2020; Turner et al., 2011).

The understanding that chilly climates exist and need to be thawed informs efforts to promote gender equity in STEM higher education (Armstrong & Jovanovic, 2016; Britton, 2017; Stewart & Valian, 2018). Achieving women's full participation in academia requires an institutional perspective, one critically aimed at revising multiple levels of practices, cultural norms, and underlying structures, rather than focusing on the individual competencies or choices of women (Ely & Meyerson, 2000; Rosser, 2004; Glass & Minnotte, 2010). Improving women's representation is insufficient; institutions must also upend gender and racial hierarchies for women to feel fully included and supported, creating equal opportunities for them to achieve on par with men (Branch, 2016; Fox, 2001; Stewart & Valian, 2018; Turner et al., 2011).

Despite shifts towards institutional solutions, gender equity projects face challenges due to the unique structure and culture of academia, as such programs can provoke resistance as well as transformation (Clark, Bauchspies, & Nawyn, 2019). Universities are bureaucratic organizations with fragmented authority structures, a combination making institutional change difficult to achieve (Bird, 2011; Ely & Meyerson, 2000; Valian, 1998; Sturm, 2006; Austin & Laursen, 2015). People may view gender and racial equity programs with ambivalence or as a threat to their careers, potentially perceiving other groups' advancement as undermining their relative advantages in power, pay, or status (Acker, 2000; Cockburn, 1991; van den Brink & Stobbe, 2014). Gender inequality may also be misperceived as a thing of the past (van den Brink & Stobbe, 2014).

In response to documented challenges to institutional equity, the U.S. National Science Foundation has funded the ADVANCE program since 2001 to increase the participation and advancement of women and underrepresented minorities in academic science and engineering careers. ADVANCE Institutional Transformation grants fund institutional solutions to empower women STEM faculty through the development, implementation, and evaluation of innovative systemic change strategies within higher education institutions. (Stewart, Malley, & LaVaque-Manty, 2007; Rosser, 2004). While ADVANCE-awarded institutions have not been uniformly successful, many ADVANCE awards have contributed to concrete changes to advance women in science (Bilimoria et al., 2008; Morimoto & Zajicek, 2014; Zippel & Ferree, 2019).

A continual tension for ADVANCE is pairing support for individual faculty with interventions targeting institutional mechanisms reproducing inequalities (Morimoto et al., 2013; Nelson & Zippel, 2021). Additionally, while ADVANCE recently made dismantling *intersecting* systems of oppression a central focus, the program historically privileged gender, centering the experiences of white, middle- and upper-class women scientists (Hunt et al., 2012). An intersectional approach to policy and institutional change instead focuses on the mutually constitutive effects of multiple, subordinated identities, explicitly recognizing the “labyrinth of structurally specific hurdles and disadvantages” for STEM women from underrepresented racial minority groups (Armstrong & Jovanovic, 2016, p. 217; see also Turner, 2002; Turner et al., 2011). Evidence suggests that intentional strategizing around gender, race, and institutional structures allow for clearer understandings of organizational power dynamics, illustrating new pathways for effective interventions (Cantor et al., 2014; Turner, 2002; Turner et al., 2011).

The Disparate Impacts of COVID-19: Early Evidence

COVID-19 has amplified many pre-existing inequities in academia, creating distinct challenges for differently situated faculty members (Anwer, 2020; Gonzalez & Griffin, 2020; Douglas-Gabriel, 2020; Zahneis, 2020). Past crises shaping academia, such as when Hurricane Katrina shut down universities in New Orleans, indicate disparate negative impacts on racial minorities (Gabe, Falk, & McCarty, 2005). While early work on COVID-19 highlights parallel patterns of inequality, the pandemic represents an unprecedented crisis in higher education, one of global magnitude. In spring 2020, as nearly every academic institution in the United States shut down or moved operations online to slow the spread of COVID-19, the subsequent transitions to virtual work and shifts in childcare, eldercare, and household labor impacted nearly all faculty, but placed particular burdens on women (Minello, 2020).

Women faculty experienced greater caregiving demands and were responsible for larger shares of household labor prior to the pandemic, which were further exacerbated by COVID-19 (Alon et al., 2019; Goodwin & Mitchneck, 2020; Malisch et al., 2020; Minello, 2020). Additionally, with COVID-19 taking disproportionate health and financial tolls on racial minority and immigrant communities in the US, faculty of color - especially Black faculty and Black women - are more likely to be coping with family illness, unemployment, or the loss of loved ones (Gould & Wilson, 2020; Eligon et al., 2020). The pandemic has also coincided with waves of police violence against Black people, as well as racial justice movement responses. Black workers in the US face two of the most lethal preexisting conditions for COVID-19 – racism and economic inequality (Gould & Wilson, 2020). At the same time xenophobia and anti-Asian racism linked to COVID-19, have impact Asian and Asian-American faculty (Zhang et al., 2020). COVID-19, coupled with the rise of racial injustice and anti-Black and anti-Asian racism,

have created disruptive distress for faculty of color (Cui, Ding, & Zhu, 2020; Gould & Wilson, 2020).

Early evidence suggests that much research has been disrupted by COVID-19, with women faculty, particularly women with young children, seeing increased barriers to scholarly productivity (Cui, Ding, & Zhu 2020; Collins et al., 2021; Fazackerley, 2020; Kitchener, 2020; Myers et al., 2020; Squazzoni et al., 2020; Wachorn & Heckendorf, 2020). Women scientists with young children have experienced the greatest decrease in time for research and writing (Collins et al., 2021; Myers et al., 2020). Women have submitted fewer journal articles during the pandemic compared to previous years (Kitchener, 2020; Squazzoni et al., 2020), while submissions by men have increased (Cui, Ding, & Zhu, 2020; Fazackerley, 2020). Women also tend to carry disproportionately higher teaching and service loads (Gibney, 2017; Misra et al., 2011), which has intensified during the pandemic, as online teaching, for example, requires faculty to adapt courses and develop new pedagogies while providing additional emotional support to struggling students. The gender and racial biases in teaching evaluations, with students evaluating white women and women of color more harshly than men (Sprague & Massoni, 2005), may be exacerbated amid COVID-19 (Goodwin & Mitchneck, 2020). Since research productivity and teaching evaluations are central components of faculty evaluation for promotion and tenure, COVID-19 has the potential of perpetuating disadvantage for white women and women of color for years to come.

Given the disparate impacts of the pandemic on faculty by gender, race, and caregiver status, it is critical for universities to reconsider faculty assessment. Without policies aimed at rectifying the unequal effects of the pandemic, universities may indeed become less diverse. In this paper, we describe how the pandemic led an ADVANCE-IT program focused on developing

intentional strategies to address intersectional inequalities among faculty to formulate equitable approaches to evaluation issues. We suggest that successfully implementing change requires broad institutional commitment to intersectional approaches to equity and inclusion (Bilimoria et al., 2008; Hardcastle et al., 2019).

As COVID-19 disrupted the campus community, UMass ADVANCE focused on ensuring faculty equity and inclusion in institutional responses.¹ We first discuss how taken together, the initial, policy adjustments and structural changes made by campus administrators reflect and highlight ADVANCE's priorities. This centering of gender and racial equity reflects the active presence of an ADVANCE-IT program on campus for almost two years, including regular meetings with the Provost and STEM Deans, as well as the initial proposal that reflects the investments of institutional stakeholders (Morimoto et al., 2013). In our case, ADVANCE had a number of partners committed to addressing equity issues, including top university leaders and the faculty union, an essential conduit between faculty and the administration allowing faculty voice in the implementation of interventions. Our efforts continue to prod daily campus operations and leadership approaches towards equity, by repeatedly emphasizing equity concerns in meetings with leaders (Fox, 2008). In many ways, the fragmented university authority structure worked in our favor, with various campus units partnering to quickly enact policies. Institutional change is incremental, occurring in “fits and starts,” and relying on intersecting and mutually supportive activities (Hardcastle et al., 2019). Nonetheless, we conclude by addressing lingering tensions while navigating the impact of COVID-19 on faculty.

A key component of ADVANCE's strategy broadly is to mobilize systemic change by serving as “organizational catalysts,” leveraging knowledge, strategic relationships, and

¹ While other campus units importantly addressed student learning and wellbeing, ADVANCE concentrates on supporting faculty.

accountability across domains and levels (Sturm, 2006). A crucial role of organizational catalysts is to keep the pressure on, maintaining the institution's focus on gender and racial as part of its core mission. Catalysts also serve as bridge builders to leverage change, and members of the ADVANCE team often operate at the convergence of different domains and levels at the institution, allowing them to emphasize equity in working with other units to support faculty, including the faculty union, Massachusetts Society of Professors (MSP), the Office on Faculty Development, and the Faculty Senate. Fostering buy-in from other community members, including department chairs and committees tasked with evaluating faculty, ensures the effective implementation of policies across organizational levels so that policy can become practice. ADVANCE infuses legitimacy and resources into intersectional equity efforts. Yet organizational catalysts are not unique to ADVANCE, and we hope the best practices outlined here can be implemented in many settings. The need to foster faculty inclusion, equity, and success remains urgent given the COVID-19 pandemic.

Methods

A case study approach allows for thick description and in-depth analysis of the institutional context in which change occurred (Yin, 2013). We focus on the case of University of Massachusetts, Amherst because of the opportunity we were afforded, as members of the UMass ADVANCE team, to engage in, inform, and observe the swiftly moving changes in university policy and practice in response to the pandemic. We focus on two major research questions, 1) What steps have university stakeholders taken to address COVID-19 impacts on faculty careers? (2) How do these steps reflect and support gender and racial equity goals? These questions allow us to examine both successfully implemented practices, as well as explore the silences and contestations around these institutional shifts.

Data Collection

Our data derive from a variety of sources, including participation in relevant campus events and workshops, official university memos and online communications, informational interviews, and both formal meetings and informal conversations with campus stakeholders. We combine these data to understand our case through triangulation, systematically examining and comparing the case from a variety of angles and viewpoints to create a fuller picture (Karsten & Jehn, 2009).

Central to this project is our participant observation in relevant campus meetings, workshops, and events. The authors attended most events as observer-participants, but we also consistently organized and led workshops through our role with ADVANCE. Our team has led fourteen events since March 2020 specifically focused on the university's pandemic response, and we have further organized or co-sponsored fourteen workshops and events during which discussions of equity and the pandemic occurred. We organized a May 2020 workshop on mentoring faculty during COVID-19, followed by a June 2020 Town Hall on pandemic impacts on faculty evaluation with the Provost and two Deans. In the Fall of 2020, we hosted a session with university leaders on documenting pandemic impacts in September, followed by two trainings in October with administrators and faculty members on biases in evaluating faculty colleagues. Finally, our ADVANCE Annual Lecture, featured Dr. Shirley Malcolm of AAAS, speaking on, "Science in the Time of COVID and America's Reckoning with Race" in March 2021. These sessions were generally very well attended with over 100 registrants each, with many top administrators in attendance. We complemented this programming with a tool on "Documenting Pandemic Impacts," which we rolled out in conjunction with the Provost's announcement of implementing pandemic impact statements in July 2020. In Fall 2021, we

created a supplementary “Pandemic Impact Statement Template” for faculty, and a second tool on “Equitable Evaluation During COVID” for department chairs and personnel committee members.

We further hosted thirteen ADVANCE workshops and events on faculty equity and inclusion in the 2020-21 academic year, during which discussions the pandemic were often central. We also co-sponsored and participated in five additional sessions run by other offices on campus, and attended meetings of other units, including MSP (the faculty union),² the Faculty Senate Committee for the Status of Women, and the Office of Faculty Development. More information deriving from discussions with leaders of these units and others in the Provost’s office, were central to our thinking; the third author’s long-term relationships with many leaders helped provide critical access to information as well as opportunity to provide feedback.

Our data also include various organizational documents related to the pandemic, primarily memos and statements to campus produced by the Chancellor, Provost’s office, and the faculty union, including contracts that were bargained; these include both revisions of existing practices, and new processes meant to address the dislocations of the pandemic. These are listed in Table One. We further draw on emails and documents produced by the Office of Faculty Development, as well as the Office of the Associate Provost for Equity and Inclusion. Official documents allow us to triangulate from our observations, allowing us to explore both the practices and policies that were put into place, as well as the cultural framings that leaders used in responding to the pandemic.

Table 1: List of Institutional Documents

Date	Description and Link
------	----------------------

² MSP represents librarians, tenure track faculty, lecturers, extension faculty, clinical faculty, and research faculty.

March 19, 2020	Provost McCarthy Memo 1: A Message to the Faculty from the Provost , sharing resources and immediate policy changes in consultation with MSP.
June 29, 2020	Final Agreement between MSP and University Administration , allowing credits for teaching online courses toward continuing appointment (NTT faculty) or toward sabbatical or teaching release (TT faculty)
June 29, 2020	A Message to the Faculty from the Provost about Fall 2020 Reopening , emphasizing support for faculty working remote.
July 7, 2020	Provost McCarthy Memo 2: AFR Announcement for Faculty , with guidance on annual faculty reviews for the 2019-2020 academic year, including the optional Pandemic Impact Statement.
July 17, 2020	MSP Workload Adjustments FAQ
July 23, 2020	UMass ADVANCE Tool : Documenting and Evaluating Pandemic Impact Statements
July 27, 2020	Emergency Technology Assistance Fund: Invitation to Apply
August 8, 2020	Memorandum of Agreement with MSP about Reopening
April 19, 2021	MSP Bargaining Update on Spring 2021 Student Evaluations
April 23, 2021	MSP Bargaining Update on Fall 2021 Reopening
May 21, 2021	Memorandum of Agreement Misc. COVID-related Matters between MSP and UMass administration, expanding childcare funds to include eldercare and extending the one-year automatic tenure delay to faculty hired after May 1, 2020
June 21, 2021	Provost McCarthy Memo 3: A Message from Provost McCarthy, Annual Tenure and Promotion Memo
October 8, 2021	UMass ADVANCE Tool : Pandemic Impact Statement Template
November 5, 2021	UMass ADVANCE Tool : Equitable Evaluation During COVID

In addition, we directly discussed pandemic changes with campus leaders at three meetings of the ADVANCE Internal Advisory Board, which includes the Provost and STEM Deans, as well as other university leaders (June 2020, January 2021, June 2021). Here we also presented our research and data-driven recommendations for how to best support faculty equity and inclusion. Finally, we conducted three interviews with central actors who played a part in the

university response: the Vice Provost for Faculty Development, Michelle Budig, the Associate Provost for Equity and Inclusion, Amel Ahmed, and the MSP President, Eve Weinbaum. These interviews provided insight on how the Provost's decisions and the union's contract negotiations reflected input from various stakeholders, including ADVANCE. Interview questions centered around topics of priorities for the administration in terms of pandemic response, the various actors involved, and the process around the Provost's approaches to evaluating and supporting faculty.

Data Analysis

Both our research questions and the constantly unfolding nature of the pandemic required us to take a multistage approach to data analysis. Using a grounded theory approach, we engaged in thematic coding to identify the central themes in how the university responded inductively (Strauss & Corbin, 1997; Charmaz, 2014). We used our field notes from observations at events, workshops, and meetings to initially sketch the outlines and timeline of the steps taken by university leaders to address pandemic impacts. At the next stage, we engaged in deeper reading and analysis of the documents we had collected, with an aim to understanding any missing pieces. At the final stage, we incorporated insights from the interviews, to provide clearer statements about how these changes were made or bargained, and who was involved in the process. Because there was considerable congruence between documents and interviews, we engaged in selective coding of this data (Strauss & Corbin, 1997). We met and discussed emergent themes regularly, refining our thinking as we drafted and wrote memos, tools, and public outreach materials, also based on our reading of the existing literature. Our collaborative analysis centered on an “insider-outsider” approach (Bayard de Volo & Hall, 2015). The third author is a senior faculty member and longtime employee of the university, and provided critical

insider information, institutional histories, and connections, while the first two authors, very recently hired junior scholars, provided “necessary distance” from the case to “question and encourage clarification,” allowing us to conceptualize institutions in crisis more broadly (Blum & Mickey 2018, p. 180). This collaborative data analysis process led us to derive the TREE model, which we present below.

The content of the data was analyzed to parse out information specific to UMass’s response to COVID-19. This included policy and procedural changes, new funds and initiatives, and information on the processes through which these responses were being formulated. In the sections that follow, we also detail at length what has emerged from our experiences, observations, team meetings, and conversations with community members since March 2020. As members of the ADVANCE team, we are primarily interested in how university responses to COVID-19 reflect or conflict with institutional commitments to equity and inclusion for women and faculty from underrepresented racial minority groups. We recognize that the sources we draw upon and our own experiences are situated in a particular time and place, as well as our own positionalities, reflecting the socially constructed nature of knowledge production (Harding 2016; Stoetzler & Yuval Davis, 2002). While UMass has its own distinct organizational structure, history, and culture, the case study approach allows for insights on the relationship between equity and institutional crisis in ways that can be considered “analytically generalizable,” informing other institutions (Hesse-Biber & Leavy, 2011).

Next, we describe our case, and then move to various components of the institutional response, describing how several initiatives fit together in a complex whole (Hardcastle et al., 2019). We outline activities in a chronological linear fashion, but also recognize that institutional change requires mutually supportive initiatives that often interact in a dynamic and unpredictable

way (Ibid). In the remainder of our paper, we describe key components of the university's response to COVID-19, describing how each step contributed to the TREE model.

Our Case: UMass ADVANCE and COVID-19

UMass is a large research-intensive, doctoral-granting public university. Women comprise approximately 40% of all department chairs and Deans, comparable to other land grant universities. The Deans of both the College of Natural Sciences and the College of Information and Computer Science are women, although women make up a smaller proportion of Chairs in STEM departments. The Dean of Engineering is an Asian American man. Among tenure-line faculty members, men and women faculty typically have similar chances of earning tenure and promotion to Associate Professor, but women are less likely to be promoted to Professor than men, and achieve promotion to Professor more slowly than men (Misra et al., 2011).

As described above, UMass ADVANCE maintains a visible presence on-campus through faculty workshops, collaborating with Deans and department chairs to develop best practices, and regularly interacting with university offices, including the Provost's Office and the Office of Faculty Development, and the faculty union, MSP, to make policy and procedure recommendations. The ADVANCE team meets regularly with its Internal Advisory Board, and ADVANCE Principal Investigators meet monthly with the Provost to discuss priorities, including opportunities to collaborate on initiatives, including during the pandemic.

UMass ADVANCE faced novel circumstances when on March 11, 2020, midway through the second year of a five-year Institutional Transformation award, the university shifted all operations online in response to COVID-19. While many ADVANCE programs have historically found it difficult to embed structural change due to the lack of leadership buy-in (Bilimoria et al., 2008; Rosser & Chameau, 2006), UMass leaders did not hesitate to alter policy

and procedure in response to COVID-19 in ways that reflected ADVANCE's commitment to gender and racial equity. The Provost quickly issued a formal structural response after consultation with senior administrators and faculty liaisons, most notably MSP. The university response centered on three central premises: (1) changes to tenure, promotion, and personnel review policies; (2) adapting teaching expectations and evaluations; and (3) formally recognizing intensified caregiving demands. Nonetheless, key challenges remained regarding implementation of these policies, especially as pandemic disruptions persisted.

As we discuss in the findings, one important moment in our university's response to the pandemic was when ADVANCE invited administrators to participate in a virtual panel on faculty evaluation in response to COVID-19. This "town hall," attended by over one hundred faculty members, led to a sustained discussion of the documentation of pandemic impacts as a central faculty concern. Documentation was later discussed at length at an ADVANCE meeting with university leaders, and the Provost and the faculty union immediately moved to bargain the addition of an optional Pandemic Impact Statement for faculty to include in their annual reviews and tenure and promotion dossiers. Based on the discussion at the Town Hall, ADVANCE also developed a best practice tool outlining how to document pandemic impacts and evaluate faculty equitably during the pandemic, and organized trainings on equitable faculty evaluation for faculty members, personnel committee members, and department chairs in Fall 2020. As the pandemic continued, ADVANCE collaborated with partners on additional changes, that reflected the ongoing impact of the pandemic on faculty members.

ADVANCE continues to collaborate with campus units, to facilitate follow-up implementation and circulate best practices. Through this work, we have derived our TREE model, which centers equity, as well as relies on data collection to understand faculty

experiences, resources for faculty to navigate short-term disruptions, as well as changes to evaluation systems to address long-term impacts on faculty careers. Our goals are to create transparency and implement practices that ensure equitable structures and an inclusive campus culture, recognizing the gendered and racialized impacts of the pandemic. We use our institution as a case study to outline strategies for institutional responses to COVID-19, as well as challenges and future directions for our program.

Findings

On March 19, 2020, eight days after faculty were informed that they must move all operations online, Provost John McCarthy emailed all faculty identifying a number of key concerns resulting from discussions with faculty union leadership. The faculty union, MSP, had conveyed to the Provost's office the immediate needs of the faculty as they moved online, as well as concerns about how the disruptions might affect how they are evaluated, emphasizing the importance of thinking ahead. Following this email, McCarthy released a memo with a series of concrete resources and policy changes developed in consultation with MSP. This memo addressed both the need for short-term resources to address the immediate impacts, and more long-term issues such as how and when faculty members are evaluated, with direct connections to equity concerns.

The timing of the memo's release was key to addressing faculty questions promptly, and its content began to alleviate the most pressing faculty concerns about how administration would consider the impact of COVID-19 in future evaluations. In informational interviews, campus leaders consistently acknowledge that the initial Provost's memo involved a collaborative effort involving many stakeholders including the Provost's Office, MSP, the Office on Faculty Development, and the Faculty Senate. This joint effort represents an important strategy for other

universities, as top leadership buy-in ensures structural changes, and transparent communication and trust across units maximizes input from diverse voices.

Next, we draw on the Provost's memo to outline three key aspects of the university's response with regard to faculty. These policy changes happened quickly, and some policies have since been revised, but we suggest that each aspect of the administration's initial response signals awareness of relevant gender and racial equity issues. This awareness has endured as the pandemic response evolves. Our continued role with ADVANCE has been to center equity in the ongoing response and implementation of policy adjustments, providing venues, trainings, and specific strategies. Implementation often occurs at the local level, and our programming is typically aimed at college and department leaders, although we consistently engage with and inform leaders at the higher levels in order to help shape their responses. We are focused on long-term institutional transformation, recognizing that changes addressing the racialized and gendered impacts of the pandemic on faculty careers can be institutionalized in ways that reinforce the importance of addressing broader equity issues and goals. While the pandemic has been enormously destructive and tragic, we believe it critical to take the lessons of the pandemic to reshape academia in ways that make it more equitable to all faculty.

Changes to Tenure, Promotion, and Review

The Provost's first action item in his March 2020 memo immediately changed the timing of decisions on tenure, reappointment (usually pre-tenure), or continuing appointment (non-tenure-track faculty and librarians). The Provost recognized the enormous number of new and unexpected tasks of faculty, stating, "It is unreasonable to expect that normal progress can be made in all areas of faculty activity: research, teaching, and service." The statement explicated how research productivity might be impacted, including reduced access to labs, travel

cancellations, and suspension of research with human subjects. With research productivity crucial to faculty evaluation at research-intensive universities like UMass, the decision to delay tenure was meant to mitigate the negative effects exacerbated by COVID-19 on women and faculty of color, promoting greater equity.

The announced tenure delay was an automatic one-year delay for all pre-tenure faculty members, meaning faculty members had to affirmatively *ask* to be reviewed on schedule. Thus, faculty members can request to be reviewed at the normal time. Automatic delays of this sort have an equalizing effect, wherein it is outside of the norm to be reviewed on schedule, rather than the opposite, and faculty do not have to make a special request for or justify the delay (Williams, Joan, & Norton, 2008; Williams & Norton, 2008). The Provost went on to make an unusual addendum to this; once a faculty member is tenured, the promotion salary increment would be made retroactive to when would have originally received tenure, thus ensuring they do not face an economic disadvantage from their tenure delay, again centering equity. In May 2021, the Provost made the same automatic one-year delay available to new faculty who were pre-tenure and needed to be reappointed through the tenure-decision year.

Non-tenure-track faculty and librarians who were up for continuing appointment or promotion, and associate professors up for promotion, were granted the option to delay their continuing appointment review. However, this option did not come with the same automatic timing based on the assumption that these groups' career progression might be less disrupted or less time-sensitive. For non-tenure-track faculty and librarians, the semester still counted for their progress toward promotion in rank, allowing them to receive additional job security and salary increases, ensuring vital economic resources for faculty.

Finally, the Provost noted he would issue forthcoming guidance about the potential adverse effects of the semester in research, teaching, and service to departmental and college personnel committees who review tenure, promotion, and reappointment or continuing appointment cases. The guidance would not only point to the disruptions to faculty work, but would also recognize special contributions made by faculty to support the campus community during the pandemic, including advancing online teaching or additional service. Michelle Budig, Vice Provost for Faculty Development, described this as “rewarding faculty for things they did outside of the box” during the Spring 2020 semester. The Office of Academic Planning and Assessment (OAPA) also collected data related to faculty experiences with research, teaching, and service to gather information about key concerns that faculty were experiencing. The Provost emphasized that the unexpected and very intense work faculty were doing would be recognized in assessing annual faculty reviews, as well as personnel decisions such as promotion, tenure, or continuing appointment. The Provost further mentioned he would develop relevant language for letters soliciting external reviews, which he did in the summer of 2020. As we describe below, how these policies are *implemented* in practice remains an ongoing, key priority for ADVANCE.

Changes to Teaching

Next, the Provost’s memo announced the suspension of standardized student teaching evaluations. Eve Weinbaum, President of MSP, noted that the union and other campus administrators had recognized the biases built into student teaching evaluations well before the onset of COVID-19. When COVID-19 hit during contract negotiations, Weinbaum says “the discussions kind of became wrapped together” around teaching evaluations. As described above, students already evaluate women more harshly than men (Sprague & Massoni, 2005) and, given the abrupt shift to online learning, the Provost did not want negative evaluations to impact

faculty progression. He noted that ad hoc evaluations could occur through the Center for Teaching and Learning or the Office of Academic Planning and Assessment, but would be given to the faculty member, not kept by the university to be used in assessment. This allows faculty to benefit from student feedback, without worrying the semester's disruption would negatively impact their personnel decisions.

Along with this, the Center for Teaching and Learning created a number of teaching resources and opportunities for faculty members to get support with online teaching. In addition, the Provost changed Pass/Fail grading, in conjunction with the Rules Committee of the Faculty Senate, to allow students to decide whether to retroactively be graded pass/fail or not. Only grades benefiting students' GPA would be counted toward their GPA for the semester, further reducing the likelihood of negative teaching evaluations from students struggling to complete the semester. Overall, the Provost's message reflected the concerns brought to MSP and ADVANCE by many individual faculty members, and committees and working groups, and recognized faculty concerns as based on real teaching disruptions. His adjustment to how faculty teaching is evaluated, which was extended to Fall 2020, may lead to long-term cultural change towards more holistic teaching evaluations.³ Once again, these changes to evaluation were rooted in concerns about equity, given broader recognition that teaching evaluations tend to be biased against women and people of color.

Recognition of Intensified Caregiving Demands

Finally, the Provost's memo directly recognized family and caregiving demands, which may exacerbate pandemic impacts on faculty work, particularly for caregivers, highlighting

³ UMass Amherst is the lead institution on a 5-university National Science Foundation grant to expand and redefine measures of teaching effectiveness: Transforming the Evaluation of Teaching: A Study of Institutional Change (TEval).

equity as a goal. The Provost noted, “Even high achievers, such as our UMass Amherst faculty, have limits, as they balance exceptional demands at work and home, particularly with schools closed.” By declaring faculty members “high achievers” while also acknowledging their increased demands due to school and childcare center closings, the Provost effectively avoided any impression that faculty facing caregiving demands should be seen as less excellent or successful than their colleagues. Increased demands at home may also come in the form of intensified community engagement, particularly for faculty of color and Black faculty, as COVID-19 has disproportionately affected their families and communities (Weissman, 2020).

The university provided resources in the form of emergency funds for faculty caregiving assistance, including both eldercare and childcare. This was over and above existing paid care leave (for partners, parents, siblings, and children) offered through the existing union contract. Weinbaum said the union immediately negotiated around emergency childcare costs, under the assumption that childcare centers would remain open and be an option for faculty working at home. MSP had been working towards a pool for eldercare funds for over twenty years, and the crisis finally allowed such a fund to be agreed upon. Often the burden of addressing work-life balance falls on individual faculty members; the pandemic may further the neoliberal ethic of “individualizing” people’s work and life experiences (Anwer, 2020). Addressing caregiving, and allocating resources to alleviate this burden, shifts some of this burden to the institution and makes what is often “invisible” labor part of the conversation.

The MSP Emergency Relief Fund also included resources in the form of technology funds to support remote teaching or research including buying equipment like modems and routers, web cameras, new course software, or special programs for remote teaching. These funds remain available as part of the new one-year contract that began on July 1, 2021. Both

caregiving and technology assistance funds address equity issues, ensuring that faculty have access to at least some of the resources necessary to do their jobs.

UMass ADVANCE: Continued Dialogue and Looking Forward

In the weeks following the Provost’s memo release, UMass ADVANCE principal investigators met regularly with campus administrators, including the Provost, Associate Provost for Equity and Inclusion, Vice Provost for Faculty Development, and various College Deans, to discuss ways to support faculty, especially diverse faculty. Various campus units noted the need to support individual faculty navigating deep disruptions to their work and the new organizational structures implemented by the Provost. Amel Ahmed, the Associate Provost for Equity and Inclusion, said her immediate concern in the spring was faculty isolation, and she prioritized building community, “both just for the sake of connection but also to figure out what [faculty] need.” Ahmed began hosting virtual activities centered on “connecting people around different areas of research and talking about challenges related to conducting research during the pandemic,” including writing groups for faculty of color.

Ahmed and Budig expanded this programming, hosting sessions in May and June under the series title of “Supporting Faculty Resilience.” ADVANCE participated in the series by hosting a town hall for faculty to convey their concerns about COVID-19 impacts on their careers to the Provost, as well as the Deans of Natural Science and Engineering. By this time, it had become apparent that the pandemic would not last weeks, as initially hoped, but that long-term impacts of the pandemic would necessitate larger changes to higher education, including systems of faculty evaluation. ADVANCE shared its concerns (also held by Associate Provost for Equity and Inclusion, Amel Ahmed) that the university would not remember the impact of COVID-19 when assessing and evaluating faculty beyond the 2020-2021 academic year, and

emphasized documentation, such as pandemic impact statements, as an urgent policy change. Ahmed noted that the pandemic would have “really important and lasting consequences” and conversations with ADVANCE team members solidified the need for institutional action around documentation:

I am always afraid that people will fall through the cracks. I have seen how easy it is for that to happen and how short our institutional memories are... My concern coming out of my focus on more vulnerable groups among our faculty was making sure that these things are visible and people can see them and refer back to them for years to come

The ADVANCE virtual Town Hall titled, “Recognizing the Impact of COVID-19 in Evaluating Faculty,” occurred on June 4, 2020. The Provost and two Deans provided faculty with more information about how evaluation of their work would operate. The ADVANCE team also hoped to illustrate to the three administrators the anxiety felt by faculty members. With a total of 134 registrations, with 104 of those registrants from STEM colleges and departments, many faculty submitted anonymous questions ahead of time for the panelists as part of the registration process. We compiled and summarized questions to the panel beforehand. Key themes among faculty questions included anxiety about assessment and how COVID-19 might increase inequality. For example, caregiving parents expressed concern that people less responsible for caregiving might increase their productivity while caregivers’ productivity was lowered. Questions also included what guidance would be given to personnel committees around tenure and promotion, and how disparities between women and people of color might be taken into account in personnel cases. Equity was clearly on everyone’s minds.

Faculty attending the session also wanted to know how to document the impact of COVID-19 on their careers. A key question asked of the panel was: What kind of documentation

should faculty keep that can be part of their personnel record to track ongoing impediments to their research and teaching programs, or the added expectations for their mentoring and service work? The session included explicit discussion of a separate COVID-19 impact statement for personnel reviews, including annual faculty reviews, for which the faculty in the session expressed support. The primary concern was that tenure delays, including additional delays beyond the initial automatic one-year delay, would be implemented fairly, and reflect a flexible understanding of how the pandemic might have variable effects on faculty careers. The ADVANCE team followed up a week after the panel at our Internal Advisory Board meeting, and the Deans of STEM colleges expressed support in implementing an impact statement to help ensure this flexibility.

While we came to shared agreement that recording impediments to faculty work is critical, establishing procedures around an impact statement, including its implementation, took time and collaboration. We communicated ideas to the Provost's Office about how impact statements might appear, sharing resources from the national ADVANCE network, as well as conveying faculty concerns that had been shared with our team. On July 7, 2020, the Provost's Office released a second memo (see Table 1) with guidance on annual faculty reviews for the 2019-2020 academic year; these changes had been bargained with the faculty union. The memo again reiterated how COVID-19 disrupted faculty research, teaching, and service, acknowledged the intensification of care work, and invited faculty to submit an optional Pandemic Impact Statement with their annual review due this fall, "describing the adjustments you have made, how your work in particular has been impacted by the health crisis, and your contributions to the University's transition to remote work." The online review form specifically included a section for the impact statement and the Provost encouraged individual faculty members to consult with

their department chair or head and department personnel committees regarding what specifically to document. ADVANCE's efforts put documentation front and center on the Provost's agenda.

While inclusion of an impact statement is an important, initial structural change, ADVANCE has continued working to put policy into practice and establish cultural norms around acknowledging impacts. To this end, we circulated in July 2020 a best practice tool with specific steps for faculty to document the impacts of COVID-19 on their annual faculty review and as a separate statement included in tenure and promotion materials. This tool specifies a wide variety of impacts that should be documented, including new teaching, advising, and service responsibilities, changes and unexpected challenges in research and creative activities, as well as (where faculty feel comfortable documenting them) health challenges, additional caregiving, and other unforeseeable situations due to the pandemic (see Table 1). We have since followed up with templates to facilitate faculty in writing pandemic impact statements.

On June 29th, 2020, UMass released a plan for reopening in Fall 2020. Shortly after the release of this plan, the Provost sent an email to the faculty reiterating his support for faculty as the campus reopens. He noted that no faculty member would be forced to teach face-to-face, and that most courses would be taught online, given the continuing risk of COVID-19. This was a relief to many faculty members, who had concerns about how to teach in-person classes without opening themselves to the risk of illness. With many schools in the area providing only virtual or hybrid in-person attendance, faculty still had to find ways to care for children at home while also teaching online courses. In this correspondence, he addressed essential face-to-face and remote course designations, academic calendar and class day/time matrix, and faculty assistance and support with fully remote instruction. Another resource negotiated through MSP was compensation for the time faculty were spending on developing online courses. While a previous

union contract had provided faculty with monetary compensation for creating online courses, this was not feasible given the number of courses forced online by the pandemic. Thus, MSP bargained that faculty who were not on tenure-line could receive additional credit toward “continuing appointment” at the university, while those on tenure-line could receive additional credit toward sabbatical or a teaching release (see Table 1). These changes recognize the additional work faculty carried out, providing them with more research time in the future.

An urgent, remaining concern is specifying how impact statements will be evaluated in tenure, promotion, and reappointment or continuing appointment cases, including guidance for external reviewers of personnel cases. Given that women and faculty of color have been hit relatively hard by the pandemic, there are clear equity issues related to recognizing the impact of the pandemic. ADVANCE presented at regular trainings of personnel committees in Fall 2020 and Fall 2021, led by MSP and the Provost’s Office. Additionally, ADVANCE hosted Dr. Beth Mitchneck, an expert on faculty evaluation and bias, to specifically address evaluating faculty fairly in the context of COVID-19 at two separate trainings on evaluating faculty fairly, one to Deans, Associate Deans, and department Chairs, and another to members of Personnel Committees, and provided two additional trainings in Fall 2021 aimed at department chairs and members of Personnel Committees. We supplemented these trainings with a second tool on equitable evaluations providing guidance on how to read and evaluate pandemic statements (see Table 1).

Key to this was training evaluators to consider each person’s specific working conditions in evaluating their productivity, as specified through the pandemic impact statement, rather than comparing across faculty with different working conditions (for example, a theorist whose research has continued smoothly, versus a lab scientist who has been locked out of their lab;

someone with no care responsibilities versus someone caring for a parent with COVID-19).

Additionally, the trainings emphasized that faculty with tenure delays must not be held to higher standards; this requirement was bargained with the union, and included previously in the contract regarding caregiving delays. These sessions also incorporated strategies from the ADVANCE COVID-19 tool. The team also developed a third tool aimed at clarifying how departmental evaluation committees could document the impact of the pandemic on their field, which could be included in all evaluations (Smith-Doerr et al., 2020). This addresses the challenge that in some departments, faculty members did not include information about pandemic impacts, which means that this information will not be available at later stages in their careers. However, our goal has been to train campus leaders and faculty to prevent COVID-19 from exacerbating inequities among faculty. This goal contributes to the mission of creating long-term cultural changes in the organization, and we will offer these trainings again in the 2021-2022 academic year.

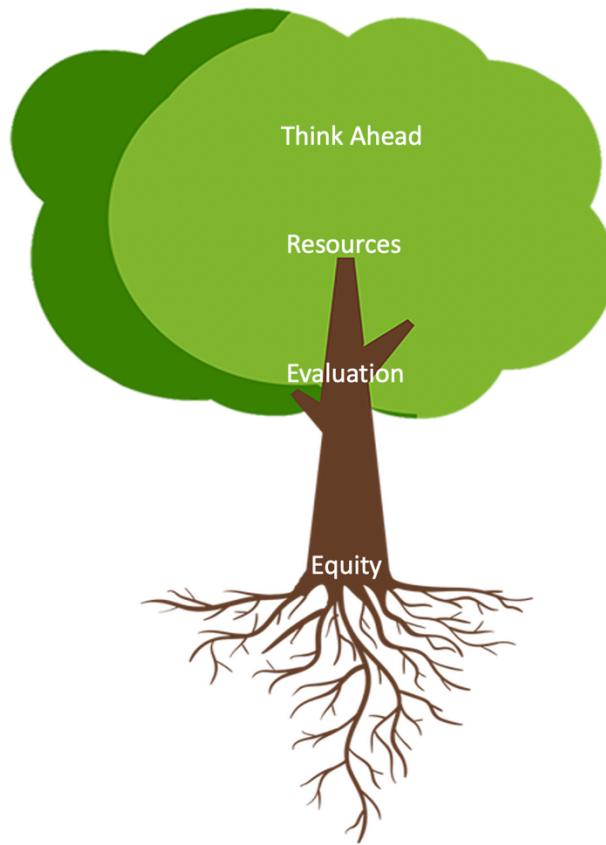
As COVID-19 remains a fluid situation, ADVANCE continues to follow up and meet with administrators, and partner with campus offices to ensure an ongoing institutional commitment to faculty inclusion and equity. Increasingly, colleges and schools within the university adopted additional approaches, as on February 9, 2021, when Jennifer Lundquist, Associate Dean for Research in the College of Social and Behavioral Sciences, announced internal funding for small research grants for faculty members “whose research has been most impacted by the ongoing pandemic,” allowing faculty to indicate the pandemic’s *specific effects* on their research, including submitting the pandemic statement they included in their “annual review” materials.

On April 19, 2021 an update from MSP was released regarding student evaluations for spring 2021. This update stated that departments could choose which of two forms of student evaluations they wanted to use, that the evaluations would not be compared with any past or present evaluations, and faculty cannot be harmed by these evaluations through adverse personnel actions (see Table 1). The following month, on May 21, 2021, a memo of agreement on COVID-19 was released on behalf of UMass and MSP. This memo featured the expansion of a childcare assistance fund, extension for start-up funds, extension of automatic tenure delays, additional compensation for lecturers in lieu of a course release, and protections for NTT faculty toward continuous appointment (see Table 1). In June 2021, the Provost's Office released a memo reiterating the importance of impact statement and continuing the use of these statements into the 2021-2022 AY (see Table 1). As evidenced by UMass, universities must continually adapt and respond to the evolving needs of faculty, as further disruptions may require additional accommodations for immediate needs and long-term concerns related to tenure and promotion.

TREE Model

Based on our ongoing analysis of the case of UMass, we developed the TREE model of institutional response to COVID-19 as an approach to clarifying the key elements needed for institutions to help maintain and increase faculty diversity, despite the racialized and gendered impact of the pandemic. The four components of this model are Think ahead, Resource provision, Evaluation, and Equity (see Figure 1). Each component of the model has “branches” or concrete actions that universities can take to meet that specific need.

Figure 1. TREE Model



This model was developed inductively as a response to the data collected through our case study, as the four pillars repeatedly emerged as central themes in our observations and conversations, as well as in official university communications. The TREE model suggests that universities should *think ahead* beyond the short-term to consider long-term impacts of the pandemic on faculty. Branches of this component should include collecting data to understand the effects on faculty workload, while also making plans and provisions to address continuing career impacts, including on scholarly productivity, teaching, and service. Thinking ahead in this sense is evidenced by the university surveying faculty, as well as emphasizing documentation, and the inclusion of pandemic impact statements in annual faculty reviews and personnel reviews. The Provost has repeatedly noted that the pandemic will have lasting impacts on faculty, including current graduate students likely being impacted until they are promoted to Professor.

Additionally, universities should provide faculty with *resources* to help navigate the short-term and medium-term impacts of the pandemic. For example, branches in our case included providing funds for new technology or equipment needed to teach online, caregiver accommodations, as well as reserving limited research funds for faculty whose research has been most impacted by the pandemic gives those faculty an opportunity to restart their research. This may be particularly true for faculty with caregiving needs who may need additional supports to deal with the impacts of the pandemic. The university providing emergency funds for childcare and eldercare, above existing paid leave, was another example of re-budgeting to fund areas of greatest faculty need. Universities should be adaptive in ensuring faculty members have the resources they need to carry out their jobs.

Evaluations should be adjusted to recognize the impacts of the pandemic on faculty workload and productivity. Faculty evaluation has been a central topic of concern, and both structural and cultural shifts continue to be made to faculty evaluations of research and teaching. For example, one branch may be in rethinking how teaching evaluations are conducted; another branch may be in recognizing the additional teaching and service work that the pandemic demanded of faculty members; another branch may focus on how recognize the research limitations the pandemic imposed on many faculty members; while another branch may rely on trainings of evaluators to evaluate colleagues in fair ways, avoiding any biases. While critical, as we reference above, for faculty members to document the impacts of COVID-19, universities must also ensure that evaluations recognize both unexpected contributions and barriers, evaluating faculty based on their work context, rather than assuming that they have carried out their work under normal conditions. Particularly, evaluations should avoid penalizing faculty

who have experienced pandemic-related impediments to research and teaching, alongside increased teaching, advising, and service loads.

Finally, *equity* should be a guiding principle, the trunk of the tree, throughout responding to the pandemic. Rather than equity being sidelined, policy and procedure should be rooted in equity, particularly keeping women and underrepresented minorities in mind. Institutional transformation towards equity is challenging and, especially given the myriad crises facing university administration related to the pandemic, at times the institutional commitment to faculty equity stalled. The June 2020 Town Hall served as one particular moment for faculty to signal their concerns to administrators, which in turn pushed leaders to go further to adjust their policies and account for equity. Being intentional and transparent in strategizing around gender, race, and institutional structures allow for clearer understandings of organizational power dynamics, opening new pathways for effective interventions (Cantor et al., 2014; Turner, 2002; Turner et al., 2011). Through this approach, we believe that universities can mitigate some of the inequities exacerbated by the pandemic.

Given our mission, UMass ADVANCE has been closely following the university response to COVID-19 for faculty concerns. We suggest that a critical aspect of UMass's response has been structural changes in policy and procedure reflective of a culture that recognizes how pandemic challenges may impact equity. Addressing structure and culture simultaneously is key to enacting institutional transformation. The COVID-19 crisis has been fluid, with new and occasionally contradictory information changing the situation. As such, our case study represents the landscape as understood as of July, 2021. We expect that the response to COVID-19 will continue to evolve. We hope that our case, while unique to our context, provides insight into ways administrative responses to the pandemic can attend to equity.

Policy Implications

While important policy adjustments have been made, how organizational members react, implement, and support these changes at local university levels remain to be seen. Changing policy and procedures can impact and improve climate outlasting the lifespan of those who inhabit the university (Hardcastle, 2018). Policies, particularly those involved in supporting and evaluating faculty, require attention to equity (Gonzalez & Griffin, 2020; NASEM, 2021). Yet, implementing policies fairly, and changing institutional cultures, takes greater effort.

The COVID-19 response at UMass also has implications for university policy, broadly. All colleges and universities should adopt policies, such as those referenced above, with an eye toward equity. While research-intensive universities like UMass may have greater resources than some others, all institutions can center equity in their policy responses. Documenting the impacts of COVID-19 on faculty is of particular importance to ensuring that time does not erase recognition of pandemic impacts on faculty research, teaching, and service, as well as increased caregiving, which will reverberate for years to come. These systems of documentation are not expensive, and can be widely adopted. Insofar that faculty systems of evaluation are comparative, expecting faculty in the same unit or even the same discipline to be similarly productive, the pandemic could help shift systems of faculty evaluation to make them fairer. Caregivers never were on the same “level playing field” as colleagues who were not caregivers (Misra et al., 2012). Yet, without access to childcare, these impacts have become inescapably visible.

Rethinking systems of evaluation to recognize the variations in working conditions, and focusing on the quality of intellectual labor more than abstract notions of quantity, could have positive impacts on gender and racial equity in academic positions. For example, adjustments

made for COVID-19, such as holistic approaches to teaching evaluations, could have long-term impacts that promote better gender and racial equity. Pandemic impact statements are merely a starting point in reimagining the ways in which we evaluate faculty. While this conversation has been budding for quite some time, COVID-19 has forced these practices to the forefront. Universities differ, so there is no “one size fits all” approach to documentation. For example, UMass has certain advantages as a flagship, research intensive university with a strong union presence. Not all universities may have had the resources to put into technology adaptations and caregiving supports. However, the guidance provided above, particularly the TREE model, serves as a starting point which can be adjusted based on faculty needs and institutional responses.

Next Steps

The crisis of COVID-19 has provided an opportunity for higher education institutions to shift policy and procedure to address gendered and racialized inequities. Many institutions have adopted tenure and promotion delays, adjustments to teaching evaluations, and pandemic impact statements. We believe that these are important steps, though how they are implemented matters to ensure that equity is centered. Institutions should focus on effective and clear communication, offer resources to support faculty, adjust evaluation with equity in mind, and emphasize training those involved in evaluation to minimize racialized and gendered bias. How changes to policy and procedure are implemented matters. The pandemic continues to evolve, and responses must follow suit. UMass has continued to expand and extend responses to COVID-19 recognizing the duration of the pandemic and its impacts. Universities broadly should remember that post-pandemic refers to a world changed by COVID-19 rather than a return to pre-pandemic times.

Conclusion

The impacts of COVID-19 will be long-lasting, but colleges and universities need to develop mechanisms to ensure that institutional memory regarding these effects also lasts. In terms of addressing pandemic equity issues, any institutional short-term memory loss will only further marginalize and hinder the careers of women faculty and faculty from underrepresented racial minority groups - potentially reversing progress made in recent years.

In our case, a formal structural response to faculty concerns around evaluation came quickly in the form of official policy changes by the Provost. While administrators on other campuses have resisted ADVANCE programs and other equity projects (see for example, Morimoto et al., 2013; Rosser & Chameau, 2006), UMass leadership partnered with units across campus to adjust resources and evaluation in ways that prioritize equity. Through our case, the TREE model emerged. Thinking ahead led administrators to consider short- and long-term impacts for faculty and to initiate changes to attend to these concerns. At the same time, resources were provided to assist faculty members with care giving and the transition to online learning. The changes in learning also led to changes in faculty evaluation, in teaching evaluations, through tenure year delays and pandemic impact statements, and anti-bias trainings for evaluators. All of these decisions were rooted in considerations of equity.

What does this work suggest about how other university administrators should respond to crisis more broadly? We believe the TREE model is a critical starting point. Administrators must think ahead to both immediate needs and the long-term impacts of any given crisis. For example, while many universities worked to initially address acute concerns, such as online learning or COVID-19 testing, fewer have considered the long-term effects for faculty careers. It is also critical for universities determine what faculty need, being innovative in allocating limited financial resources to help faculty through challenges. It is equally important for universities to

be flexible in their evaluation of faculty members during crisis, being open to systemic, long-term changes. The COVID-19 pandemic has exacerbated existing inequities in faculty experiences, particularly given the collapse of existing systems of childcare and schooling (Prados & Zamarro, 2020). In addition, faculty members who go up for tenure in 2023 will look different from those who went up in 2019. Our TREE model encourages university leaders to prioritize equity in crisis, by identifying how faculty members, who vary by gender, caregiving status, race, rank, field, and even method of scholarship, have been differentially affected by the pandemic. Taken together, these conditions will allow universities to better maintain and increase diverse faculty, fostering inclusive academic settings in which all faculty members can grow into the future.

References

- Acker, J. (2006). Inequality regimes: Gender, class, and race in Organizations.” *Gender & Society*, 20(4), 441–64.
- Acker, J. (1992). From sex roles to gendered institutions. *Contemporary Sociology*, 21(5), 565–69.
- Acker, J. (2000). Gendered contradictions in organizational equity projects. *Organization*, 7, 625–32.
- Alegria, S.N., & Branch, E.H. (2015). Causes and consequences of inequality in STEM: Diversity and its discontents.” *International Journal of Gender, Science and Technology* 7(3): 321-342.
- Alon, Titan, Matthias Doepke, Jane Olmstead-Rumsey, and Michèle Tertilt. 2019. “The Impact of Covid-19 on Gender Equality.” *Journal of Chemical Information and Modeling* 53(9):1689–99.
- Anwer, M. (2019). Work-life balance in the neoliberal university. *Susan Bulkeley Butler Center for Leadership Excellence and ADVANCE Working Paper Series*, 2(2), 52- 56.
- Anwer, M. (2020). Academic labor and the global pandemic: Revisiting life-work balance under COVID-19. *Susan Bulkeley Butler Center for Leadership Excellence and ADVANCE Working Paper Series*, 3(1), 27-36.
- Armstrong, Mary A., and Jasna Jovanovic. (2015). Starting at the crossroads: Intersectional approaches to institutionally supporting underrepresented minority women STEM faculty. *Journal of Women and Minorities in Science and Engineering* 21(2): 141-157.
- Austin, A. E., & Foxcroft, C. (2010). Fostering organizational change and individual

- learning through 'ground-up' inter-institutional cross-border collaboration. In *Cross-border Partnerships in Higher Education: Strategies and Issues*, ed. R. Sakamoto and D. W. Chapman, 115–32. New York: Routledge.
- Austin, A. E. & Laursen, S.L. (2015). Organizational Change Strategies in ADVANCE Institutional Transformation Projects: Synthesis of a Working Meeting (Online). Retrieved June 1, 2020 (www.strategictoolkit.org).
- Bagilhole, B. & 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), 161–80.
- Bailyn, L. (2003). Academic careers and gender equity: Lessons learned from MIT. *Gender, Work & Organization* 10(2), 137–53.
- Baker, M. (2012). Gendered families, academic work and the 'motherhood penalty'. *Women's Studies Journal*, 26(1).
- Bayard de Volo, L., & Hall, L.K. (2015). 'I Wish All the Ladies Were Holes in the Road': The US Air Force Academy and the Gendered Continuum of Violence. *Signs: Journal of Women in Culture and Society* 40(4), 865–89. doi: [10.1086/680328](https://doi.org/10.1086/680328).
- Bilimoria, D., Joy, S., & Liang, X. (2008). Breaking barriers and creating inclusiveness: Lessons of organizational transformation to advance women faculty in academic science and engineering. *Human Resource Management*, 47(3), 423–41.
- Bilimoria, D. & Liang, X. (2014). Effective practices to increase women's participation, advancement and leadership in US academic STEM. In *Women in STEM Careers*, ed. D. Bilimoria and L. Lord, 146–65. Cheltenham, UK: Edward Elgar.
- Bird, S R. (2011). Unsettling universities' incongruous, gendered bureaucratic structures:

- A case-study approach. *Gender, Work and Organization*, 18(2), 202–30.
- Blackburn, H. (2017) The status of women in STEM in higher education: A review of the literature 2007–2017. *Science & Technology Libraries* 36(3): 235–273.
- Blum, L. M., & Mickey, E.L. (2018). Women organized against sexual harassment: A Grassroots struggle for title IX enforcement, 1978–1980. *Feminist Formations* 30(2), 175–201. doi: [10.1353/ff.2018.0023](https://doi.org/10.1353/ff.2018.0023).
- Branch, E.H. (2016). *Pathways, Potholes, and the Persistence of Women in Science: Reconsidering the Pipeline*. Lanham, MD: Lexington Books.
- Britton, D.M. (2017). Beyond the chilly climate: The salience of gender in women's academic careers. *Gender & Society*, 31(1), 5–27.
- Bystydzienski, J.M., & Bird, S.R. (2006). *Removing Barriers: Women in Academic Science, Technology, Engineering, and Mathematics*. Bloomington, IN: Indiana University Press.
- Cech, E. & Pham, M. (2017). Queer in STEM organizations: Workplace disadvantages for LGBT employees in STEM related federal agencies. *Social Sciences*, 6(1), 12.
- Charmaz, K. (2014). *Constructing Grounded Theory*. Thousand Oaks, CA: Sage Publications.
- Clark, D., Bauchspies, W., & Nawyn, S. (2019). Transformative feminist leadership from inside the university. *Bulletin of the British Psychological Society*, 2(2), 44–52.
- Cockburn, C. (1991). *In the Way of Women: Men's Resistance to Sex Equality*. New York: Cornell University Press.

Collins, Caitlyn, et al. (2021) COVID-19 and the gender gap in work hours. *Gender, Work & Organization* 28(S1): 101-112.

Cui, R., Ding, H., & Zhu, F. (2020). Gender inequality in research productivity during the COVID-19 pandemic. *SSRN Electronic Journal*.

De Brey, C., Snyder, T.D., Zhang, A., & Dillow, S.A. (2021). *Digest of Education Statistics 2019* (NCES 2021-009). Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education..

Douglas-Gabriel, D. (2020). With spotty sick leave and health care, adjunct professors worry about the spread of coronavirus. *The Washington Post*, March 17.

Eligon, J., Burch, A., Searcey, D., & Oppel Jr, R. (2020). Black Americans face alarming rates of coronavirus infection in some states. *New York Times*, April 7.

Ecklund, E., & Lincoln, A. E. (2016). *Failing families, failing science: Work-family conflict in academic science*. NYU Press.

Ely, R.J. & Meyerson, D.E. (2000). Theories of gender in organizations: A new approach to organizational analysis and change. *Research in Organizational Behavior*, 22, 103–51.

Fazackerley, A. (2020). Women's research plummets during lockdown - but articles from men increase.” *The Guardian*, May 12.

Fox, M.F. (2001). Women, science, and academia: Graduate education and careers. *Gender & Society*, 15(5), 654–66.

Fox, M.F. (2008). Collaboration between science and social science: Issues, challenges,

- and opportunities. in *Research in Social Problems and Public Policy*, ed. W. R. Freudenburg and T. I. K. Youn, 17–30. Bingley, UK: Emerald Group Publishing.
- Fox, M.F., Sonnert, G., and Nikiforova, I. (2009). Successful programs for undergraduate women in science and engineering: Adapting versus adopting the institutional environment. *Research in Higher Education*, 50(4), 333–53.
- Gabe, T., Falk, G., McCarty, M., & Mason, V.W. (2005). *Hurricane Katrina: Social-Demographic Characteristics of Impacted Areas*. CRS Report for Congress.
<http://gnocdc.s3.amazonaws.com/reports/crsrept.pdf>
- Gonzalez, L.D. & Griffin, K.A. (2020). *Supporting Faculty During & After COVID-19: Don't Let Go of Equity*. Washington DC: Aspire Alliance.
- Goodwin, S.A. & Mitchneck, B. (2020). STEM equity and inclusion (un)interrupted?" *Inside Higher Ed*, May13.
- Gould, E. & Wilson, V. (2020). *Black Workers Face Two of the Most Lethal Preexisting Conditions for Coronavirus—Racism and Economic Inequality*. Washington DC: Economic Policy Institute.
- Hall, R.M. & Sandler, B.R. (1982). *The Classroom Climate: A Chilly One for Women?* Washington, DC: Project on the Status and Education of Women.
- Hardcastle, V.G., Furst-Holloway, S., Kallen, R., & Jacquez, F. (2019). It's complicated: A multi-method approach to broadening participation in STEM. *Equality, Diversity and Inclusion*, 38(3), 349–61.
- Harding, Sandra. (2016). *Whose science? Whose knowledge?* Ithaca, NY: Cornell University Press.
- Hearn, J. (2000). On the complexity of feminist intervention in organizations. *Organization*,

7(4), 609–24.

Hesse-Biber, Sharlene Nagy, and Patricia Leavy. (2011). *The Practice of Qualitative Research*.

Thousand Oaks, CA: Sage.

Hochschild, A. (1975). Inside the clockwork of male careers. In *Women and the Power to Change*, ed. F. Howe, 47–80. Berkeley: The Carnegie Foundation for the Advancement of Teaching.

Hunt, V.H., Morimoto, S., Zajicek, A., and Lisnic, R. (2012). Intersectionality and dismantling institutional privilege: The case of the NSF ADVANCE program. *Race, Gender & Class*, 19(1/2), 266–90.

Karsten, J. & Jehn, K. (2009). Using triangulation to validate themes in qualitative studies. *Qualitative Research in Organizations and Management: An International Journal*.

Kitchener, C. (2020). Women academics submitting fewer papers to journals during coronavirus. *The Lily*, April 24.

Lamont, M. (2009). *How Professors Think: Inside the Curious World of Academic Judgment*. Cambridge, MA: Harvard University Press.

Laurencin, Cato T., and Joanne M. Walker. "A Pandemic on a Pandemic: Racism and COVID-19 in Blacks." *Cell systems* 11.1 (2020): 9-10.

Laursen, S.L., Austin, A E., Soto, M., & Martinez, D. (2015). ADVANCing the agenda for gender equity. *Change: The Magazine of Higher Learning*, 47(4), 16-24.

Leggon, C.B. (2006). Women in science: Racial and ethnic differences and the differences they make. *Journal of Technology Transfer*, 31(3), 325–33.

Lisnic, R., Zajicek, A., & Morimoto, S. (2018). Gender and race differences in

- faculty assessment of tenure clarity: The influence of departmental relationships and practices. *Sociology of Race and Ethnicity*, 5(2), 244–60.
- Lutter, M., & Schröder, M. (2020). Is There a Motherhood Penalty in Academia? The Gendered Effect of Children on Academic Publications in German Sociology. *European Sociological Review*, 36(3), 442-459.
- Malisch, Jessica L., Breanna N. Harris, Shanen M. Sherrer, Kristy A. Lewis, Stephanie L. Shepherd, Pumtiwitt C. McCarthy, Jessica L. Spott, Elizabeth P. Karam, Naima Moustaid-Moussa, Jessica McCrory Calarco, Latha Ramalingam, Amelia E. Talley, Jaclyn E. Cañas-Carrell, Karin Ardon-Dryer, Dana A. Weiser, Ximena E. Bernal, and Jennifer Deitloff. 2020. “Opinion: In the Wake of COVID-19, Academia Needs New Solutions to Ensure Gender Equity.” *Proceedings of the National Academy of Sciences* 202010636. doi: [10.1073/pnas.2010636117](https://doi.org/10.1073/pnas.2010636117).
- Mason, M. A., Wolfinger, N. H., & Goulden, M. (2013). *Do babies matter?: Gender and family in the ivory tower*. Rutgers University Press.
- McIlwee, J.S. & Robinson, J.G. (1992). *Women in Engineering: Gender, Power, and Workplace Culture*. Albany, NY: State University of New York Press.
- Minello, A. (2020). The pandemic and the female academic. *Nature*, April 17.
- Misra, J. 2020. *Documenting COVID- 19 Impacts: Best Practices*. University of Massachusetts ADVANCE Program.
- Misra, J., Lundquist, J.H., Holmes, E., & Agiomavritis, S. (2011). The ivory ceiling of service work. *Academe*, 97(1), 22-26.
- Misra, J., Lundquist, J.H., & Templer, A. (2012). Gender, work time, and care responsibilities among faculty. *Sociological Forum*, 27(2), 300-323.

Misra, K., Mickey, E., & Clark, D. (2021, May 27).

“[Implementing Pandemic Equity Measures for Faculty](#).” Inside Higher Education.

Morimoto, S.A. & Anna Zajicek, A. (2014). Dismantling the ‘master’s house’: Feminist reflections on institutional transformation. *Critical Sociology*, 40(1), 135–50.

Morimoto, S.A., Zajicek, A.M., Hunt, V.H., & Lisnic, R. (2013). Beyond binders full of women: NSF ADVANCE and initiatives for institutional transformation. *Sociological Spectrum*, 33(5), 397–415.

National Academy of Sciences, National Academy of Engineering, and Institute of Medicine.

2007. *Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering*. Washington, D.C.: Committee on Maximizing the Potential of Women in Academic Science and Engineering.

National Academies of Sciences, Engineering, and Medicine. 2021. *The Impact of COVID-19 on the Careers of Women in Academic Sciences, Engineering, and Medicine*. Washington DC.

Nelson, L. K., & Zippel, K. (2021). From Theory to Practice and Back: How the Concept of Implicit Bias was Implemented in Academe, and What this Means for Gender Theories of Organizational Change. *Gender & Society*, 35(3), 330–357.

<https://doi.org/10.1177/08912432211000335>

Nentwich, J.C. (2006). Changing gender: The discursive construction of equal opportunities. *Gender, Work and Organization*, 13(6), 499–521.

Ong, M., Smith, J.M., & Ko, L.T. (2018). Counterspaces for women of color in STEM higher education: Marginal and central spaces for persistence and success. *Journal of Research in Science Teaching*, 55(2), 206–45.

- Prados, M. & Zamarro, G. (2020). Gender differences in couples' division of childcare, work and mental health during COVID-19. *CESR-Schaeffer Working Paper*, 003.
- Ridgeway, C. (2011). *Framed by Gender: How Gender Inequality Persists in the Modern World*. New York: Oxford University Press.
- Rosser, S.V. (2004). Using POWRE to ADVANCE: Institutional barriers identified by women scientists and engineers. *NWSA Journal*, 16, 50–78.
- Rosser, S.V. & Chameau, J. (2006). Institutionalization, sustainability, and repeatability of ADVANCE for institutional transformation. *The Journal of Technology Transfer*, 31(3), 335–44.
- Sarkisian, Natalia, and Naomi Gerstel. (2012). *Nuclear family values, extended family lives: The power of race, class, and gender*. New York: Routledge.
- Smith-Doerr, L., Gupta, S., Pachucki, M., Sharone, O., & Thayer, M. (2020). Department Personnel Committee Statement on Impact of Covid-19 on Sociology Faculty Careers. University of Massachusetts Amherst Sociology, Department of Sociology.
- Sonnert, G. & Holton, G.J. (1995). *Who Succeeds in Science? The Gender Dimension*. New Brunswick, NJ: Rutgers University Press.
- Sprague, J. & Massoni, K. (2005). Student evaluations and gendered expectations: What we can't count can hurt us. *Sex Roles* 53(11–12), 779–93.
- Stewart, A.J., Malley, J.E., & LaVaque-Manty, D. (2007). *Transforming Science and Engineering: Advancing Academic Women*. Ann Arbor: University of Michigan Press.
- Stewart, A.J. & Valian, V. (2018). *An Inclusive Academy: Achieving Diversity and Excellence*. Cambridge, MA: MIT Press.

- Stoetzler, M., & Yuval-Davis, N. (2002) Standpoint theory, situated knowledge and the situated imagination." *Feminist Theory* 3(3): 315-333.
- Strauss, A., & Corbin, J. (1997) *Grounded theory in practice*. Thousand Oaks, CA: Sage Publications.
- Sturm, S. (2006). The architecture of inclusion: Advancing workplace equity in higher education. *Harvard Journal of Law & Gender* 29(No. 2), 247–334.
- Taplin, D. and Clark, H. (2012) Theory of Change Basics: A Primer on Theory of Change. New York: Actknowledge
- Tulshyan, R. (2020). How to be an inclusive leader through a crisis. *Harvard Business Review*, April 10.
- Turner, C.S.V. (2002). Women of color in academe: Living with multiple marginality. *The Journal of Higher Education*, 73(1), 74–93.
- Turner, C. S. V., González, J. C., & Wong(Lau), K. (2011). Faculty women of color: The critical nexus of race and gender. *Journal of Diversity in Higher Education*, 4(4), 199.
- Valian, V. (1998). *Why so Slow?: The Advancement of Women*. Cambridge, MA: MIT Press.
- van den Brink, M. & Stobbe, L. (2014). The support paradox: Overcoming dilemmas in gender equality programs. *Scandinavian Journal of Management*, 30(2), 163–74.
- Wachorn, D., & Heckendorf, E. (2020, June 17). We Asked 3000+ Academic How They're Coping With COVID-19: This is What We Found. De Gruyter.
<https://blog.degruyter.com/we-asked-3000-academics-how-theyre-coping-with-covid-19-this-is-what-we-found/>

- Williams, J. C., & Norton, D. L. (2008). Building academic excellence through gender equity. *American Academic*, 4(1), 185-208.
- Yin, Robert K. (2017). *Case Study Research and Applications: Design and Methods*. Thousand Oaks, CA: Sage Publications.
- Zahneis, M. 2020. Covid-19 crisis widens divide between secure and insecure instructors. *The Chronicle of Higher Education*, March 18.
- Zambrana, R.E. (2018). *Toxic Ivory Towers: The Consequences of Work Stress on Underrepresented Minority Faculty*. New Brunswick, NJ: Rutgers University Press.
- Zhang, B., Bow, C.O., Bow, J.M. (2020). The Intersection of Racism and Xenophobia on the Rise Amid COVID-19 Pandemic. *Revista Argentina de Clínica Psicológica*, 29(5), 1156.
- Zippel, K. & Ferree, M.M. (2019). Organizational interventions and the creation of gendered knowledge: US universities and NSF ADVANCE. *Gender, Work & Organization*, 26(6), 805–21.

