

The Importance of HOW in Faculty Salary Equity Studies:

**Development and Impact of an ADVANCE Salary Equity Study and Workshop Series to
Promote an Inclusive Academic Environment**

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Abstract

This paper describes the framework and processes of a multi-faceted salary equity initiative in which a team of administrators and faculty developed a process to conduct annual salary equity studies for faculty and disseminate findings to the campus. Program elements include a request for proposals and associated evaluation rubric, executive summaries, campus presentations of salary studies, and workshops for faculty and salary decision-makers to increase understanding of the university's faculty compensation system. As a result of this program university-level salary studies continue, faculty and administrators have embarked on additional collaborations to address faculty salary, and transparency of university pay practices has increased. This paper offers lessons learned and tangible steps for stakeholders at other campuses seeking to implement a salary equity initiative, including organizational documents and guidelines.

Keywords: salary, equity, women faculty, STEM faculty

**The Importance of HOW in Faculty Salary Equity Studies:
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In the United States, women consistently earn less than men. Census Bureau data from 2018 show that, averaging across all races, women earned \$0.82 for every \$1.00 earned by men (U.S. Census Bureau; Bleiweis, 2020). Salary outcomes and pay practices, influenced by institutional structures and systems of power, are closely related to the quality of work life and inform our knowledge of what (and who) is important to the organization (Womble, 2018).

Women consistently earn less than men, even when controlling for a wide range of demographic and background variables (Blau & Kahn, 2017; Booth, 2009; Weichselbaumer & Winter-Ebmer, 2005). This wage gap is even wider for women of color and is not likely to improve soon. The wage gap is also present for people with hearing differences. Schroedel and Geyer (2000) reported that deaf and hard-of-hearing (DHH) individuals also experience a gap in income, and that DHH recipients of postgraduate degrees earned only 75% as much as their hearing peers. The economic toll from the COVID-19 pandemic compounds existing inequities due to the shrinking of industries traditionally dominated by women (e.g., retail and travel) and the continuing burden of domestic responsibilities that fall predominantly on women (American Association of University Women [AAUW], 2020). In higher education, wage gaps persist among faculty, particularly at institutions with the highest levels of research activity and requirements (Zahneis, 2018).

Salaries are embedded within an organization's compensation system. Intended to attract, engage, and retain employees, a comprehensive compensation program is integral to the culture of the organization (Hi Bob, 2022). Compensation strategies such as pay for performance, pay to

market, and pay equity can support effective and high-performance work environments. To support this type of environment, employers should provide reasonable explanations for pay and implement compensation system reforms that establish reasonable pay based on the organization's financial health and development as well as consistent evaluation of positions, employee performance, and markets (Lai, 2011). This type of transparency goes beyond improving employee knowledge. It has been shown that revealing how salaries are set and how pay decisions are made can mitigate the unconscious bias of pay decision-makers (PayScale, 2019).

Within a university, each academic department tends to establish its own norms of appropriate faculty performance in teaching, research, and service. While this allows for appropriate disciplinary differences, it also enables gaps between policies regarding expectations and reward structures at the university and department levels, and between formal policies and practices that follow informal norms. Hence, informal networks, often dominated by men in STEM disciplines, become important sources of information related to advancement. With the over-representation of men among university decision-makers who evaluate faculty and implement policy (Fox and Long, 1995; Long et al., 1993; Martin, 1994), decisions about faculty pay and promotion are often informed by hegemonic masculine ideals that put greater emphasis on enhancing the bottom line of the institution than improving the welfare of faculty or students (Bird, 2011). In addition, individuals who differ from the historical majority (e.g., women, people of color, DHH people) often have the extra burden of developing intercultural competence to negotiate within and through a majority context (Antal & Friedman, 2008). How can women (and other marginalized faculty) navigate this system without access to information about how it works?

Salary equity for women faculty in higher education has been long recognized and written about in terms of legal challenges (Luna, 2006) and statistical methodology (Haigene, 2002; Perna, 2003; Taylor, et. al, 2020). Snyder et al. (1994) address these issues and emphasize the importance of implementation: “Involving and educating key university personnel in the selection of models and strategies is critical to acceptance and validation of the process and to minimizing negative reaction internal or external to the campus” (p. 1).

This paper reports on an ongoing, multi-faceted salary equity initiative implemented as part of an NSF ADVANCE-funded Institutional Transformation project (#1209115). The intervention described here focuses on transparency of faculty pay practices and salary outcomes that can support the retention and recruitment of an inclusive and diverse faculty. It is possible to implement strategies to improve the compensation system that are inclusive of all faculty members, while recognizing unique needs of underrepresented faculty groups.

Background/Evolution of the Salary Study Effort

Rochester Institute of Technology (RIT) strives to compensate faculty appropriately and ensure that salaries are “internally equitable and externally competitive,” employing pay for performance, pay to market, and pay equity strategies (RIT, n.d.b).

Pay for Performance

RIT’s merit increase program for faculty is rooted in governance. Over twenty-five years ago, the Annual Review of Faculty policy was approved, establishing guidelines to evaluate faculty performance against established university criteria (RIT, n.d.a). Performance is evaluated through, among other things, student ratings of teaching, evidence of scholarly achievement and quality, and self-assessment of committee and professional service activities. Each of these can

be affected by bias. Results of the review are used to encourage and foster continued professional development and inform annual merit increments.

Pay to Market

In 1993 the RIT president created the Compensation Advisory Committee to compare and benchmark RIT compensation levels with those of competing universities. This group provided the original list of 29 benchmark schools (Jean-Guy, 2007), which has been revisited a number of times over the years. The current list of benchmark schools for salary (RIT, 2020) was approved in 2021.

Pay Equity

In 2008, RIT received an NSF ADVANCE Institutional Transformation Catalyst award (#0811076). Results of a faculty climate survey (Bailey, et al., 2009) conducted as part of the project, in conjunction with objective data review and benchmarking, led to identification of barriers in the areas of career navigation (including salary), climate, and flexibility in work/life management balance (Bailey, et al., 2011; Bailey, et al., 2012). It was found that with regard to compensation, 62% of female respondents believe that men in their departments receive preferential treatment, while 9% of male respondents believe that women receive preferential treatment. Salary had been examined before, but it wasn't until 2009 that RIT Human Resources (HR) began formally conducting annual salary studies for faculty and staff for internal use. As part of the university's ADVANCE Project, RIT Institutional Research and Policy Studies (IR) conducted a faculty salary study with controls such as department, degree earned, years in rank, terminal degree, and ethnicity. Individuals for whom actual salary differed from predicted salary by more than what would be expected due to normal variation (i.e., outliers in the regression) were identified. Salary adjustments occurred in the fall of 2010 to begin the process of correcting

both compression and gender-related salary issues. As a result, the gap in average salary for female STEM faculty reduced at the assistant and associate ranks (4.86% to 4.14% and 5.99% to 3.17%, respectively), but increased (5.97% to 7.79%) at the full professor rank (Bailey, et al., 2012).

Design Influences for the Salary Study Effort

Our salary-related activities often use four dimensions of justice – distributive, procedural, interpersonal, and informational – to better understand the value of the various aspects of this salary work. Distributive justice frames the question “are salaries fair and equitable, on average?” In our context, distributive justice is achieved when salary is allocated according to the principle that people consider appropriate for the situation (Deutsch, 1975; Fiske, 1992). In our past and ongoing work, this principle is equity. Procedural justice examines if the process used in determining salary is fair. Procedural justice is achieved when the processes that determine salary outcomes are unbiased over time and independent of the person doing the determination, and when the processes are created and revised through democratic discourse (Hegtvedt, 2006). The perception of fairness in pay has been shown to be more important than the amount of pay and constitutes a major factor in faculty job satisfaction and intent to leave (Kim & Rehg, 2018; Bozeman & Gaughan, 2011). Interpersonal justice (also referred to as interactional justice) is achieved when people feel trusted and respected, rather than neglected and disrespected. Informational justice is obtained when communications are clear, thorough (include pertinent info), and timely (Greenberg, 1993). In salary-related workshops, we use the justice dimensions to explain the significance and implications of aspects of the work. For example, adding greater transparency within the compensation system for faculty increases trust between pay decision-makers and their direct reports, increases levels of

organizational commitment and accountability, and strengthens perceptions of an organization's procedural and distributive justice. The salary equity study annual email communication with executive summary attachment from the provost to faculty strengthens all aspects of justice, especially the interpersonal (due to the carefully crafted email from the provost) and the informational (due to the clarity and conciseness of the executive summary).

While the dimensions of justice increased our understanding of the value of the salary work, the Bolman and Deal four frames approach (1991; 2017) further supports the overall institutional transformation strategy. The frames are lenses through which individuals experience and view their organization, and can inform strategic approaches to change the organization (Austin et al., 2011). The project team incorporated results from RIT's self-study into a multi-frame organizational analysis approach to institutional transformation that aimed to reframe and improve understanding of the organization and create a portfolio of interventions to support transformation efforts. RIT's NSF ADVANCE Institutional Transformation project, awarded in 2012, aimed to increase representation, retention, and career advancement of women faculty while examining the unique challenges experienced by women faculty of color and deaf and hard-of-hearing women faculty and refining interventions to address the needs of these key sub-populations (Mason, et al., 2014a; Dell, et al., 2017.) During the funded grant period, the Bolman and Deal approach supported evaluation activities and strategy execution.

The proposal for the university's ADVANCE IT grant included annual faculty salary studies, in which a faculty co-PI on the grant would collaborate with IR and HR to establish a systematic procedure for conducting annual faculty salary studies by gender, college, department, rank, and race/ethnicity. Around the time of the grant award, the upper administration, which included new leadership within HR, moved to hire a third-party to conduct

the annual salary equity studies. A faculty member from statistics, who was also a co-PI on the AdvanceRIT IT effort, began working closely with HR and IR on review of the third party's salary equity model and results. Clearly, there were people in place with the expertise to conduct an analysis; however, this arrangement was fraught with difficulties. Questions arose that could cause defensiveness and possibly derail the efforts. What type of data validation or cleaning was conducted? Why did the model include multiple inputs that were likely to be closely associated? A common understanding of the objectives and expected outcomes was needed.

In developing a solution, we leaned on the design of RIT's Institutional Transformation project, which addressed the four Bolman and Deal frames to maximize the influence of long-term changes intended to transform the culture, promote inclusion, and expand the representation of women faculty and leaders (Mason, et al., 2014a). Each frame and its associated objective within the institutional transformation effort is described in Table 1.

By using this multi-frame approach, the project team's understanding of the organization increased, enabling development of interventions that arose from contemplation of all four of the cognitive lenses. The team was able to implement innovative initiatives while improving their ability to identify and successfully navigate challenges during the transformation process. For example, the team found that carrying out the salary equity study was challenging due to its financial and legal implications to the university. The team recognized that the salary equity activity aligned strongly with the Bolman and Deal political lens of an organization and that change activities that are political in nature are often met with resistance as described in Table 1.

Opportunities for reflection and adjustment, provided by Bolman and Deal's reframing and analysis approach, increased the impact of the project. The salary equity study and workshop series provide an example of this approach.

Table 1

Project Objectives, Barriers to Change, and Essential Strategies (Adapted from Bolman and Deal, 2017)

Lens	Project Objective	Barriers to Change	Essential Strategies
Human Resource	Improve the quality of women faculty work life, professional development, and reward structures	People feel anxious and uncertain	Inclusion (participation and involvement) Professional development
Structural	Refine and strengthen targeted institutional structures, and install practices promoting representation and advancement of women faculty	People may be confused, sensing a lack of clarity and instability	Changes to formal policies and practices should be communicated, realigned, and renegotiated
Political	Align administrative and informal systems of power and resources to support and sustain progress by shaping the political frameworks that impact the representation and advancement of women	People who benefit from the current system can feel disempowered Conflict may arise between perceived “winners” and “losers”	Provide opportunities for discussion and renegotiation of changes, along with the formation of new partnerships
Symbolic	Enhance the working environment and support career development for women faculty using symbolic measures that emphasize issues of meaning within the organization	People may grieve the old ways and possibly feel a loss of purpose	Have a formal transition in which the past is acknowledged and the future is celebrated

Methods and Outcomes

This section includes discussions on both methods (interventions) and associated outcomes. The methods employed in this work support the premise that the process or “how” these methods were rolled out was significant and impactful, as this paper’s title conveys. The

outcomes are products, practices, and policies that exist today as a result (directly or indirectly) of the methods used. The team integrated the Bolman and Deal approach with Kurt Lewin's (1947) three-step change model to gain insights into how the desired transformation would occur over time. Table 2 demonstrates how the change process was implemented using the Political Frame at the university level and through the salary equity study activity. Table 2 highlights how each method or activity progressed through the unfreeze, move, and refreeze phases of the Lewin change model; in the final refreeze phase, the methods became outcomes.

Use of Lewin's (1947) three-step change model offers insights into the distinction between "methods" and "outcomes." Our methods were introduced during the "unfreeze" and "move" phases, and the outcomes are now established as the system's "refreeze." Table 2 lists each method and outcome within Lewin's phases. In the next section, each of the methods listed in Table 2 is described in detail, and in the Discussion Section, the Bolman and Deal frames and components of justice associated with each method and outcome are discussed.

Resource Allocation Committee (RAC) Formation

It takes more than convening the right stakeholders to conduct a meaningful salary equity analysis. After much discussion, the AdvanceRIT team proposed the creation of a faculty-administrative committee to include membership from HR, IR, Academic Affairs, the offices of the president and the provost, and the AdvanceRIT team. The committee's aim would be the creation of a systematic approach to the salary equity model's creation with the intent that findings would be disseminated to faculty and administration. With expertise in statistical analysis, faculty hiring and evaluation processes, institutional data, and equity, the RAC designed a process for a salary-equity study aimed at instilling stakeholders with a high level of confidence in the results.

Table 2

Methods and Outcomes of the Collaborative Salary Equity Study Process Reframed Using the “Political Frame” and Lewin’s Change Model

Unfreeze METHODS	Move METHODS	Refreeze OUTCOMES
<ul style="list-style-type: none"> ● Engage administrative units on the Resource Allocation Committee (RAC) ● University top leadership endorse and support creation of the RAC and its work conducting a salary equity study 	<ul style="list-style-type: none"> ● Process of RAC creating a Request for Proposal (RFP) and rubric for scoring received proposals ● RAC hires a consultant to conduct the salary equity study ● Ongoing communication between consultant and key stakeholders ● RAC creates Executive Summary of equity model findings ● Dissemination planning by RAC ● Process of RAC creating workshops for academic leaders and faculty 	<ul style="list-style-type: none"> ● RFP and rubric tools ● Executive Summary document ● Dissemination of Executive Summary to faculty ● Data and process information available on the HR website ● Continuing salary equity studies ● Identification of salary inequities ● Process to address salary inequities ● Workshops for academic leaders ● Workshops for faculty ● Faculty Governance Compensation Committee ● Targeted goal within Strategic Plan

The RAC was appointed and convened in early 2014 by the university president and provost. Membership of the RAC included seven women and three men. Faculty were represented by two members of the Advance PI team who had expertise in equity and statistics. Pay decision-makers were represented by a department head and a college VP. Statistics and institutional data expertise came from two institutional research administrators. Expert knowledge of faculty compensation, hiring, and evaluation was provided by a VP of HR and a

director of compensation. Two members were upper-level administrators and proxies for the president and the provost.

RAC Activities

The AdvanceRIT Faculty Equity Salary Study process was designed to instill stakeholders with a high-level of confidence in the results. As the RAC began to form and shape itself, its members sought a safe place to collaboratively refine existing salary-equity practices at the university based on input from faculty and administrators with multiple and sometimes competing viewpoints, objectives and goals (Marchetti & Bailey, 2016, 2019). This collaborative committee ultimately formed an inclusive framework for faculty and administrators which motivated internal dissemination of the methodology used and results observed.

Creation of the Request for Proposal (RFP) and Evaluation Rubric. Conflicted viewpoints first occurred on the RAC in determining who should conduct the salary study and the goals of study. HR preferred to continue using their current third-party analyst, while others wanted to engage a consultant without prior ties to the university. Some members preferred to hand off the analysis to the consultant and wait for a report, while others considered it important to engage regularly with the consultant to provide guidance on our data and institutional context. In response, the RAC worked closely with a representative from the university's Purchasing and Acquisition Department (Purchasing) to create a request for proposal (RFP) for the salary equity study. The RAC completed the RFP collaboratively during meetings using a template provided by Purchasing which laid out requirements and supplied boilerplate language. Figure 1 includes the RFP table of contents. Once the completed RFP was vetted through the offices of the president, provost, and general counsel, the RAC worked with Purchasing to assemble a list of outside firms who might be interested in submitting a proposal in response to the RFP.

Purchasing contacted these firms and announced the opportunity. The full RFP, in redacted form, is available upon request.

Several bid packages were received through this process. However, before Purchasing sent the RFP out for bids, the RAC was required to create an evaluation rubric. RAC members collaboratively reviewed and revised the rubric which was developed by an internal evaluation expert. The tool stipulates the evaluation criteria in depth for each rating.

Figure 1

Table of Contents from the Request for Proposal

Request for Proposal for <University> External Contract Consultant	
Table of Contents	
1.	INTRODUCTION
2.	BACKGROUND INFORMATION
3.	PROJECT SCHEDULE
4.	CONTRACT AWARD IN BEST INTEREST
5.	NON-DISCRIMINATION COMPLIANCE
6.	CONFIDENTIALITY
7.	INSTRUCTIONS FOR SUBMITTAL
8.	EVALUATION CRITERIA: SEE DETAIL FOR DESCRIPTION – SECTIONS A-F
Section A of the Evaluation Criteria: Pricing	
Section B of the Evaluation Criteria: Operating Requirements	
Section C of the Evaluation Criteria: Quality Metric/Performance Metrics	
Section D of the Evaluation Criteria: Evidence of Business Performance	
Section E of the Evaluation Criteria: Sustainability (Green Strategy)	
Section F of Evaluation Criteria: Terms and Conditions	
9.	GLOSSARY OF TERMS
10.	ATTACHMENTS

This document culminated in an overall proposal rating based on each criterion and weighting information as shown in Figure 2. The “Ratings (1-5)” column in Figure 2 contained the ratings from 1-5 for each criterion (5 being the most significant). Each reviewer completed their individual ratings before coming together and collaboratively completing ratings with the

RAC. For the excerpt shown here, a value of “1” is shown for each criterion, though in reality these ratings varied greatly. The full evaluation rubric is available upon request, in redacted form.

Hiring a Consultant to Conduct the Salary Equity Study. Purchasing served a key role in the development of the RFP, its dissemination, bid evaluation, and awarding of the contract. The RFP was sent directly to the identified consultants and posted publicly on Purchasing’s website. During the bid period for the RFP (time between RFP dissemination and the submission of bids), Purchasing arranged a phone conference for any interested bidder to speak directly with members of the RAC and the Purchasing representative (to answer questions, clarify, etc.). Once the submission deadline had passed, proposals were distributed to RAC members for review. RAC members completed a rubric for each submitted bid (see an excerpt of this form in Figure 2) which framed the dialogue around hiring a consultant in a conducive manner.

Figure 2

Overall Proposal Rating Table Completed for Each Reviewed Bid

Section	Section Weight	Criteria	Rating (1-5)	Item Weight
A	15%	Pricing Breakdown	1	5%
		Proposed Pricing	1	10%
B	25%	Process Requirements	1	5%
		Analysis Requirements	1	15%
		Reporting Requirements	1	5%
C	20%	Timeline	1	7%
		Deliverables	1	7%
		Evaluation Plan	1	6%
D	25%	Expertise - Analysis	1	15%
		Expertise - Communication	1	5%
		Expertise - Context	1	5%
		References	1	5%
E	5%	Sustainability	1	5%
F	5%	Terms and Conditions	1	5%
		TOTALS:	n/a	100%

During these sometimes intense deliberations, the evaluation rubric served a key role. A consensus was reached on the winning proposal and Purchasing led the process of entering into a contract with the chosen consultant.

Creating the Model through Ongoing Communication between Consultant and Key Stakeholders. Communication was key to ensuring that key stakeholders were confident in each step of the salary equity study. The consultant held a conference call every other week with key stakeholders, including HR, university IR, IR from one of the university's colleges, AdvanceRIT, and university legal counsel. Together, this group identified a data transfer protocol to maintain data confidentiality. Once the consultant received the data, the process of data validation began. Discussion topics included coding schemes, data entry errors, and outliers. Due to the nature of the equity study, it was clear that the statistical models developed would include input variables for gender and race/ethnicity but not for hearing status, as this data is not collected at the university level. In addition, the faculty data system allows users to self-select "gender" from only two options, female and male. Then began the discussion of possible models, including appropriate input variables, model complexity, and the implications of multi-collinearity and over-specification of the model. The discussion was enriched by the participation of multiple statisticians (from AdvanceRIT, university IR, and IR from one of the university's colleges) along with non-statisticians. This provided multiple expert viewpoints of statistical modeling and required clear explanation and rationale for those less familiar with the terminology.

Incorporating faculty discipline and rank into the model was implemented in two ways for comparison purposes. The first model used a two-digit Classification of Instructional Program (CIP) code to represent discipline and rank (assistant, associate, full professor). The second model used benchmark salary for each discipline/rank combination, computed from

College and University Professional Association (CUPA) data. The two models produced very similar results.

Inclusion of faculty performance ratings in the model was the subject of numerous discussions. At RIT, each faculty member receives an overall performance appraisal rating, from Unsatisfactory (coded as 1) to Outstanding (coded as 5). From HR and management perspectives, performance should align with salary. Yet many types of bias can affect the performance appraisal process (Kromrei, 2015). While the evaluation processes at RIT were not (and still are not) perfect, they have been slowly evolving, as have our regression models. In the second iteration of the salary study, three models were analyzed, each with a different approach to performance rating: 1) no performance data, 2) three-year average of numerical ratings, and 3) the most recent year's rating category. The three models provided similar results.

Once consensus was reached, the result was models built from a common understanding that incorporated multiple perspectives, including statistical and subject matter expertise. The models developed did not examine interaction between input variables which include gender and race/ethnicity, in part to keep the model from being over-specified, and because many subgroups have very little data. It is not surprising that the statistical models consistently found differences in salary by college. This can be attributed to the different disciplines taught in those colleges as well as historical salary practices. It should be noted that the college where almost all of the DHH faculty teach had lower salaries. This college considers all faculty to be under one discipline - Deaf Education. These faculty encompass a wide range of disciplines teaching primarily at a community college level. As educators of the Deaf, they are expected to be (or become) fluent in American Sign Language. There is some dissatisfaction with this approach to discipline, and it remains a topic of discussion amongst faculty in this college.

Executive Summary

The Executive Summary of the Faculty Salary Equity Study was written collaboratively by the consultant and the members of the RAC. Again, there were differing opinions and perspectives on how much and what type of information to include, as well as the specific language to interpret statistical results and put them in context. Should we provide the values of the coefficients? Do we provide R-squared only for the final model? How does one explain a negative, statistically insignificant coefficient for gender (female) and AALANA status, in a model that uses the entire population of pre-tenure and tenured faculty? It took multiple sessions where concerns were aired, suggestions were put forth, and compromises were made until all RAC members felt comfortable and confident in the wording and information. We decided not to provide the coefficient values, but we would describe the effect (positive or negative) of significant predictors. We would provide R-squared for the simplest model and for the final model. We agreed upon the phrasing “the gender (female flag) and AALANA status variables, while negative, were not statistically significant from zero in any of the models, indicating that the observed average RIT salary difference by gender or AALANA status could be attributed to chance in a broader population, as opposed to some systemic source.” Figure 3 provides an excerpt of the Executive Summary with the main headings. A redacted version of the full 2018 Executive Summary (AdvanceRIT RAC, 2018) is available upon request.

Dissemination Planning

The Executive Summary was developed with broad dissemination to the campus in mind. In creating a communication plan to implement the dissemination, the RAC engaged in key discussions about the desired nature of communications around the Executive Summary and the appropriate messengers to deliver them. The proxies on the RAC for the president and provost

briefed their respective administrative leaders on the contents of the Executive Summary and the draft communication plan. Their input and feedback were crucial to building trust in the dissemination process.

Figure 3

Excerpt from Executive Summary Highlighting Section Headings

<University> Faculty Salary Equity Study

Background

<The University> annually conducts analyses of faculty and staff salaries. Originally managed internally, beginning in 2012 external, independent consultants have been hired to design and conduct these studies. More recently, Human Resources and the Resource Allocation Committee (RAC) have collaborated....

Executive Summary

The dataset used for the 2018 study consists of information from a total of <#> tenured and pre-tenured <University> faculty. (Deans, faculty in endowed chairs, and working retirees were not included).

The dependent variable used throughout this study was the natural logarithm of the annualized....

Methodology

To understand differences in salary, we estimated three regression models that iteratively introduced controls for measureable factors that should legitimately affect pay. The hierarchical approach.....

Findings

As expected, benchmark, years in rank, management position, rank, and performance rating were significant predictors of salary with positive coefficients. According to <the external consultant>....

Recommendation

For the 2018 faculty salary equity study, the RAC worked collaboratively with <University> Human Resources to set specifications and hire <the external consultant> to conduct the analysis....|

The resulting communication plan included a detailed dean discussion followed by a “beta-test” presentation during a faculty meeting at one of the university’s colleges. Shortly thereafter, the provost would send a faculty-wide email message, with the Executive Summary as an attachment, to introduce the salary study activity, briefly describe the results, and inform the faculty about an upcoming open forum for those interested in learning more.

Dean Discussions of Executive Summary

In 2016, a presentation by the RAC to the Deans' Council informed senior leadership and fielded questions that further refined the document. Each subsequent year, the Executive Summary was presented to the Deans' Council. As the members of this group became more familiar with the statistical analysis, their questions and the resulting discussion became more nuanced and specific. For example, after the first salary equity study the university elected to have a different third-party consultant conduct the analysis according to the specifications laid out by the RAC. In the second year of this arrangement, the third party changed the datum assignments (for college, rank, gender). The deans recognized that direct comparisons to model coefficients from prior studies would not be possible and questioned why the changes were implemented. Subsequent communications between HR and the third-party established requirements for continuity of datum assignments in the future.

Dissemination of Executive Summary to Faculty

After the initial discussion with the deans, the salary study methods and results were presented during a faculty meeting in one of the university's colleges. Members of the RAC representing HR and Advance worked collaboratively to prepare slides and to address this group. As the presenters fielded questions from the audience, they recognized the value of this team approach in building confidence among the faculty in the salary study process. Faculty appreciated the breadth and depth of expertise on the team, as well as the inclusion of faculty representatives in the process from start to finish. Shortly after the college presentation, the provost introduced the Executive Summary in a faculty-wide email, and announced an upcoming open forum for those interested in learning more. To address the resulting questions from the

campus, the RAC presentation team joined together for an additional presentation during a college-wide meeting as well as the planned campus open forum.

Human Resources Practice Refinement

Continuing Salary Equity Studies

Annual faculty salary-equity studies continued, following the same collaborative process. In following years, efforts were made to increase reliability of the data and to further refine the model, while maintaining enough similarities (e.g., datum assignments) for comparisons from year to year. The gender salary gap is consistently below 2%, which is considered the threshold for practical significance by university HR (and in alignment with the Office of Federal Contract Compliance Programs (U.S. Department of Labor, 2021). The gap also decreased slightly over time, but cannot be attributed to any particular cause, and may be due to the changes in the model. The models have produced varying coefficients for AALANA (African American, Latin American, and Native American) status, sometimes positive and sometimes negative, due to the small number of faculty of color and challenges in retention. As these studies continue, it will be important to note changes in the data, the model, and university policies and practices.

Data and Process Information

Over time, as campus leaders became increasingly comfortable with the salary study process and dissemination, compensation process documents and faculty salary benchmark data, by discipline and rank, were released on a secure website. This resulted in more information, and more questions, from faculty and academic leaders.

Salary Inequities

This model, while constructed to yield a systematic view of compensation, also provided a vehicle to identify individual salaries that did not conform to the model (also known as

outliers). The university committed to investigate these salaries. The Executive Summary emailed to all faculty by the provost stated, “In cases where individual salaries are considerably lower than expected, Human Resources will follow up with associated leadership as appropriate based on results of the analysis.” During the initial years of the salary equity studies, “considerably lower than expected” was determined solely by outliers in the regression analysis. Over time, HR introduced a measure of individual salaries relative to the benchmark salary determined by discipline and rank, called “compa-ratio.” Identification of salary inequities also became linked to low compa-ratios.

Workshops

Workshops for Academic Leaders

Members of the RAC developed workshops on understanding university pay practices for faculty and academic leaders. In the early spring of 2019, HR and AdvanceRIT team members offered an interactive workshop for a group of invited associate deans and department heads from across the university (n=9). The workshop provided an opportunity to better understand which topics should be included in a workshop for department heads/chairs and associate deans on the topic of faculty compensation. We began with the slides which would be presented to faculty at our compensation workshop to be held the next month. We used the slides as a starting point for our discussion and framed the discussion with questions. Would this info also be helpful for department heads? Is there other material that would be helpful? As session facilitators, we noted several takeaways from the workshop:

- It is valuable for department managers to compare differences in practice between colleges. For example, in two colleges the department heads meet to calibrate faculty

ratings across the college to increase uniformity in the application of rating categories (e.g., outstanding).

- It would be helpful for department managers to learn more about how levers for salary adjustment such as “market” and “exceptional performance” are implemented within their college. Some department managers are questioned by faculty members regarding these topics and may not know the answers.
- Session participants appreciated the materials from the upcoming faculty compensation workshop, as well as the opportunity to compare compensation approaches across colleges.
- The university database system plays an important role in compensation processes, but is not used effectively. Department managers would benefit from assistance in using the system, and it would be helpful for department managers to inform faculty of the data assigned to them (such as “discipline”) within the database.
- HR has a key role in the university’s complex compensation system. As one participant stated, “The discussion was very helpful in that it explained all of the factors that go into faculty compensation. It really is a complicated system and HR shows a level of competency that is quite reassuring.”

Workshops for Faculty

In late spring 2019, a subset of RAC members from HR and the AdvanceRIT team jointly conducted an interactive workshop for full-time RIT faculty titled “Let’s Talk Money: Understanding RIT Pay Practices.” This workshop aimed to improve faculty understanding of the university’s compensation philosophy and salary practices. Participants were shown available salary-related resources and explored how to shape future thinking and discussions regarding

salary. Topics included factors that affect faculty salary, how RIT measures salary position to market, and processes for moving pay to market. Learning objectives included understanding the term “compa-ratio,” locating personal salary-related information in the employee database, and finding salary-related documentation on the HR website. Comments from attendees included that, as a result of participation, they would “approach department chair or/and dean to discuss salary” and “look at my annual increases more critically and ask questions” (Marchetti & Bailey, 2019).

Aligned Outcomes

Faculty Governance Compensation Committee

In fall 2019 a faculty governance compensation committee was formed. Membership included a member of the Academic Senate Executive Committee, two faculty, the HR Director of Compensation, the VP of Finance and Administration, the Associate Provost for Faculty Affairs, and a college dean. These individuals brought expertise and perspectives in compensation, salary analysis, budget and resource allocation, and pay decision-making. In its first year this collaborative faculty-administrator initiative was charged with investigating updates to the list of salary benchmark schools and faculty promotion raises. The committee’s recommendations were shared with Academic Senate and forwarded to the university’s president, provost and Board of Trustees, resulting in revised promotion raises for faculty (to be phased-in) and a new set of schools for salary benchmarks that better reflect the university’s strategic direction.

Strategic Plan

An indirect outcome of this work occurred in 2019 when our new strategic plan was adopted. It includes a goal related to attracting and retaining world-class faculty. One of the

metrics used to track progress towards this goal is faculty salary relative to market as defined by our benchmark schools. The provost is responsible for tracking progress on this goal and the vice provost who supports the provost on this activity was a key member of the RAC while serving as the provost's proxy. The latest version of the compensation workshops include mention of this goal and metric as it directly aligns with the topics covered.

Discussion

Prior to creation of the RAC, salary analyses conducted by the university did not include faculty collaboration or input and used a different approach to statistical methodology. Neither the process nor the results of the analyses were shared widely with faculty. The RAC was intended to build transparency into the process and facilitate a deep understanding of the statistical study among a collaborative group of faculty and administrators who would subsequently have a high-level of confidence in the study's outcomes. The committee framework and its collaborative process brought about many positive outcomes: a completed faculty salary equity study analysis and report; increased trust in the process and outcomes as a result of the checks and balances of working together in a larger group; and reduction in the perceived risk for individuals due to involvement in a sensitive initiative such as this.

Our reflections on the salary equity related work described in this paper have been informed significantly by thinking about how the work relates to the various justice components and where the various activities fall within the four Bolman and Deal frames. We strive to ensure that the combined activities address each of the justice components described within this paper in order to move the faculty compensation system closer toward greater equity. Table 3 lists the justice components that map to the activities conducted. Note that each of the justice components (interpersonal, informational, distributive, and procedural) is listed more than once.

Table 3

Barriers and Strategies: Components of Justice and Bolman and Deal Frames Associated with Salary Equity Study Methods and Outcomes

Method (M) / Outcome (O)	Justice Components	Bolman and Deal Frames
Barrier: Resistance to changing how analysis was conducted		
Strategy: Resource Allocation Committee (RAC) Formation		
Formation of the RAC (M)	Procedural	Structural
Engagement of administrative units on the RAC (M)	Procedural	Political
Endorsement/support of university top leadership in creating the RAC and conducting a salary equity study (M)	Distributive	Symbolic
Barrier: Disagreements on methods and personnel for the salary study		
Strategy: RAC Activities		
Process to create Request Proposal (RFP) and rubric (M)	Interpersonal	Human Resource
RFP and rubric tools (O)	Procedural Informational	Structural
Hiring consultant to conduct the salary equity study (M)	Procedural	Political
Ongoing communication between consultant and key stakeholders (M)	Procedural	Human Resource Symbolic
Barrier: Concerns about dissemination		
Strategy: Executive Summary		
RFP scope includes third-party consultant support to create communication plan/write Executive Summary (M)	Informational Procedural	Political Structural
Process of creating Executive Summary (M)	Interpersonal	Political
Dissemination planning (M)	Procedural	Political
Dean discussion of Executive Summary draft (M)	Interpersonal	Political Human Resource
Executive Summary document (O)	Informational Procedural	Structural
Provost dissemination of Executive Summary to faculty (O)	Interpersonal	Political Symbolic
Barrier: Negative faculty perceptions about salary resources on campus		
Strategy: Human Resources Practice Refinement		
Continuing salary equity studies (O)	Procedural	Structural
Data/process information available on the HR website (O)	Procedural	Symbolic Human Resource
Identification of salary inequities (O)	Distributive	Human Resource
Process to address salary inequities (O)	Procedural	Structural
Barrier: Lack of knowledge about salary processes and outcomes		
Strategy: Workshop Creation		

Process of creating workshops for academic leaders and faculty (M)	Interpersonal	Political Human Resource
Workshops for academic leaders (O)	Informational Procedural Interpersonal	Structural
Workshops for faculty (O)	Informational Procedural Interpersonal	Symbolic Human Resource
Barrier: Salary policies/practices outdated and not aligned with institution's goals/vision		
Strategy: Update and Align Outcomes		
Faculty Governance Compensation Committee (O)	Procedural	Structural
Targeted goal within Strategic Plan (O)	Procedural	Political Human Resource Symbolic

By examining the work of the RAC in relation to the justice components, we can begin to better understand how this committee's work helped address equity issues within the faculty compensation system. Reaching consensus among RAC members required discussion of differences of opinion. Many questions were asked and answered, allowing for a better understanding of the broad perspectives of committee members which informed the processes. Ample discussion often occurred over breakfast and lunch meetings where food was provided and time allocated for full, unrushed discussion. As it became clear over time that people sitting around the table wanted to work together effectively, levels of respect and trust began to emerge (interpersonal justice). This opened the process to examination, increasing transparency, building collective knowledge of salary equity and compensation practices, increasing confidence in the process (procedural justice), and improving confidence in and understanding of the study's outcomes (distributive justice). In particular, the RAC was able to endorse and fully understand the validity of the salary equity study results and conduct meaningful dissemination (informational justice).

We relied on the Bolman and Deal frames while conducting salary-related activities and during reflection. Table 3 lists the frames that map to the activities. Because of the nature, complexity, and breadth of the activities, our work touched upon each of the four frames. As an illustration, certain activities motivated high confidence in the study's results. From the beginning, this entire effort was political from the standpoint of every stakeholder involved. Activities that are heavily political are more likely to involve conflict, distrust, and strong reluctance to change. We needed to deliberately address and understand these realities and the barriers that were presented. In Table 3, before each grouping of activities, we note the barrier faced and the strategy developed which led to the development of each set of activities. Trying to better understand opposing viewpoints was crucial, as was gaining understanding of the compensation process and practices at our university. There were many meetings where we learned and discussed the practice of faculty compensation and its language and meanings. These are examples of building skills and knowledge within people which aligns with the human resources frame. The formation of the RAC was both political and symbolic, especially due to its strong endorsement from the president and provost, and head of HR. The RAC's intent to carefully disseminate the findings of the equity study was also symbolic and greatly appreciated by many faculty. The human resource function within a university is a crucial structure and through the work of the RAC, the salary equity processes within HR improved. There were significant structural changes to how this work is accomplished within the university. Salary equity studies and related activities as we've described in this paper are not easy or quick. Using the Bolman and Deal frames helped us to better understand why the challenges existed and to not take them personally. Using the justice components helped us to understand why we needed to be

deliberate and thoughtful about what we were trying to do. Both approaches helped tremendously.

Implications

A salary equity study at an institution of higher learning can shed light on its pay structure. Undertaking and completing such a study shows that academic leaders are attentive to possible inequities in pay. But how these studies are conducted and discussed is just as important as the study itself and may ultimately have a bigger impact on the university.

We believe a number of guiding questions can help to frame the salary equity study processes.

1. What are your recognized core institutional values? Among institutions on the 2019 Honor Roll of Great Colleges to Work For (ModernThink, 2019), the following are commonly stated institutional values: Learning/Academics/Education (59%), Inclusion (51%), Excellence (41%), Integrity (35%), Innovation/Creativity (32%), Service (24%), and Respect (24%).
2. Does your university have a pay philosophy that supports your institutional values?
3. How do your institutional values inform the structure and practices surrounding faculty salary?
4. What is your campus dialogue like regarding salary equity? Faculty say... Administrators say... Human Resources (HR) representatives say...
5. Are the salary processes on your campus transparent? Do faculty know how salary is determined and how adjustments are made (at hire, annual merit increases, promotion increases, and special assignments for additional pay)?
6. Should your university conduct a faculty salary equity study? Is it ready to do so?

Additional questions can assist in planning the salary equity study.

7. What roles and responsibilities could administrators and faculty have in a salary equity study? Consider how you could engage appropriate administrative units (HR, Institutional Research, Diversity and Inclusion, Legal, and Academic Affairs) in a highly collaborative relationship to conduct your salary equity study with the endorsement and support of university top leadership.
8. In what ways could a salary equity study improve institutional understanding and influence actions regarding pay equity? Consider how a broader understanding of the compensation structures of the institution might refine and strengthen structures and compensation practices to promote an inclusive academic work environment.
9. Could an understanding of the results of the salary equity study enhance pay decision-makers' understanding of and basis for pay decisions, and their ability to communicate to individuals how their pay is determined?
10. How could dissemination of results of the salary equity study increase faculty knowledge of institutional pay practices while emphasizing the importance of inclusion and institutional values?

Working through these questions takes more effort than conducting a study that merely checks the boxes. But in our experience, a salary equity study that is implemented through an intentional collaboration between faculty and administrators with deliberate transparency and dissemination can have a significant impact on recruitment and retention of faculty.

Future Work

Annual salary equity studies for faculty continue to be conducted at RIT, with further refinements to the process each year. As the results of the equity study have stabilized, questions

regarding faculty compensation are directed towards the governance committee. For example, the salary studies used base 9-month pay as the response variable, which did not include forms of supplemental pay, such as summer pay (for teaching, research, or service) or additional academic year pay for overload teaching or special service assignments. This group recently began examining the various forms in which faculty receive extra pay in an effort to better define these opportunities and ensure that they are accessible to all faculty on a nondiscriminatory basis.

Efforts are also underway to draw upon experiences gained through our ongoing, multi-faceted salary equity initiative and to guide a cohort of partner institutions in a similar initiative, with the goal of empowering stakeholders to effect systemic change within the faculty compensation system. A key objective is to improve institutional understanding and influence actions regarding pay equity through broader understanding of the compensation structures of the institution. The group defined four initial partner institution goals.

1. Promote an inclusive academic work environment and an informed faculty community that understands its financial model in regards to compensation including how each person fits into this model and contributes to the institution's well-being. These conditions will attract and retain women faculty in STEM and beyond while improving levels of satisfaction with compensation and career.
2. Align university resources with institutional values, resulting in enhanced equity for STEM faculty.
3. Support systemic, sustainable change through institutionalization of compensation interventions.

4. Adapt and implement evidence-based systemic change strategy to expand equity efforts across the academic profession and beyond, through collaboration with national organizations.

Ideally a salary equity study is part of a larger initiative to support systemic, sustainable change through institutionalization of compensation interventions. We hope to continue work with multiple institutions to adapt and implement evidence-based systemic change strategies that will expand equity efforts across the academic profession and beyond. It is possible to implement strategies to improve the compensation system that are inclusive of all faculty members, while recognizing unique needs of underrepresented faculty groups. The critical insights that can be gained will guide compensation practices to support equity and inclusion and mitigate systemic factors that create inequities in the academic workplace as well as industrial, government, and non-profit work settings.

Conclusion

By using a cross-functional model, the RAC was able to increase communication, trust, knowledge, understanding, and effective collaboration among different units across campus (External Evaluators, 2017). Collaboration has long been used as a strategy to reduce risk for individuals (“strength in numbers”). Through collaborative efforts such as the RAC, the perceived and actual risks associated with studying and talking about salary can be mitigated, ultimately opening the door for enhancements to strengthen an institution’s compensation system while improving the community’s understanding of it. Due to its broad success, the collaborative process for faculty salary related topics served as a model for formation of the governance committee described earlier in this paper. Dissemination continues through presentations and

reports to academic governance and sessions for academic leaders as the university strives for a more inclusive campus environment.

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References

American Association of University Women. (2020). The simple truth about the gender pay gap: 2020 update. https://www.aauw.org/app/uploads/2020/12/SimpleTruth_2.1.pdf.

Antal, A. B., & Friedman, V. J. (2008). Learning to negotiate reality: A strategy for teaching intercultural competencies. *Journal of Management Education*, 32(3), 363-386. <https://doi.org/10.1177/1052562907308794>

Austin, A., Laursen, S., Hunter, A., & Soto, M. (2011, April). *Organizational change strategies to support the success of women scholars in Science, Technology, Engineering, and Mathematics (STEM) fields: Categories, variations, and issues* [Paper presentation]. Proc. Annual Conference of the American Educational Research Association, New Orleans, LA, United States.

Bailey, M., Baum, S., Mason, S., Mozrall, J., & Valentine, M. (2009, October). RIT EFFORT_Career_Life_Survey. Establishing the Foundation for Future Organizational Reform and Transformation: ADVANCE EFFORT@RIT. <https://www.rit.edu/nsfadvance/sites/rit.edu.nsfadvance/files/docs/faculty%20career%20life%20survey.pdf>

Bailey, M., Baum, S., Mason, S., Mozrall, J., Valentine, M., Marchetti, C., Williams, G., DeBartolo, E., & LaLonde, S. (2012, May). Establishing the foundation for future organizational reform and transformation at a large private university to expand the representation of women faculty: Report to the Rochester Institute of Technology Community. https://www.rit.edu/advance/sites/rit.edu.advance/files/docs/EFFORT%20FInal%20Report%20Package%20204May2012_0.pdf

Bailey, M., Marchetti, C., Mason, S., Dell, E., & Valentine, M. (2015, June). *Institutional transformation guided by a multi-frame organizational analysis approach* [Paper presentation]. ASEE 2015 Annual Conference & Exposition, Seattle, WA.

Bird, S. R. (2011). Unsettling universities' incongruous, gendered bureaucratic structures: A case-study approach. *Gender, Work & Organization, 18*(2), 202-230.

Blau, F.D., & Kahn, L.M. (2017). The gender wage gap: extent, trends, and explanations. *Journal of Economic Literature, 55*(3), 789–865. <https://doi.org/10.1257/jel.20160995>

Bleiweis, R. (2020, March 24). Quick facts about the gender wage gap. Center for American Progress.
<https://www.americanprogress.org/issues/women/reports/2020/03/24/482141/quick-facts-gender-wage-gap/>

Bolman, L. & Deal, T. (1991/2017). *Reframing organizations: Artistry, choice, and leadership* (6th ed.). NJ John Wiley & Sons.

Booth, A.L. (2009). Gender and competition. *Labor Economics, 16*(6), 599–606.
<https://doi.org/10.1016/j.labeco.2009.08.002>

Bozeman B. & Gaughan, M. (2011). Job satisfaction among university faculty: Individual, work, and institutional determinants. *The Journal of Higher Education, 82*, 154–186.

Dell, E., Marchetti, C., Crawford, K., Bailey, M., Valentine, M., & Mason, S. (2017, June). *Career navigation initiatives for women stem faculty in support of institutional transformation* [Paper presentation]. ASEE 2017 Annual Conference & Exposition, Columbus, OH.

External Evaluators. (2017). *Rochester Institute of Technology ADVANCE External Evaluator Final Report* [Unpublished internal report]. Rochester Institute of Technology.

Jean-Guy, N. (2007). *A History of Benchmarking Faculty Salaries at Rochester Institute of Technology*. https://www.rit.edu/affiliate/aaup/history/salary_benchmarking_jgn.pdf

Fox, M. F. & Long, J. S. (1995) Scientific careers: Universalism and particularism. *Annual Review of Sociology*, 21, 45–71.

Greenberg, J. (1993). The social side of fairness: Interpersonal and informational classes of organizational justice. In R. Cropanzano (Ed.), *Series in applied psychology. Justice in the workplace: Approaching fairness in human resource management*, 79–103. Lawrence Erlbaum Associates.

Haignere, L. (2002). Paychecks: A guide to conducting salary-equity studies for higher education faculty. *American Association of University Professors*.
<https://eric.ed.gov/?id=ED476226>

Hegtvedt, K. A. (2006). *Justice frameworks*. In P. J. Burke (Ed.), *Contemporary social psychological theories* (p. 46–69). Stanford University Press.

Hi Bob, Inc. (2022). *What are the objectives of compensation management?* bob.
<https://www.hibob.com/hr-glossary/compensation-management-objectives/#:~:text=The%20objectives%20of%20compensation%20management%20are%20to%20attract%2C%20engage%2C%20and,%2Dmarket%2C%20and%20government%20regulations>

Kim, H., & Rehg, M. (2018). Faculty performance and morale in higher education: A systems approach. *Systems Research and Behavioral Science*, 35(3), 308-323.

Kromrei, H. (2015). Enhancing the annual performance appraisal process: Reducing biases and engaging employees through self-assessment. *Performance Improvement Quarterly*, 28(2), 53-64.

Lai, H. H. (2011). The influence of compensation system design on employee satisfaction. *African Journal of Business Management*, 5(26), 10718-10723.
<https://academicjournals.org/journal/AJBM/article-full-text-pdf/AD5204615873>

Lewin, K. (1947). Frontiers in group dynamics: Concept, method and reality in social science; equilibrium and social change. *Human Relations* 1(1): 5–41.

Long, J. S., Allison, P. D. & McGinnis, R. (1993). Rank advancement in academic careers: sex differences and the effects of productivity. *American Sociological Review*, 58(5), 703–22.

Luna, A. L. (2006). Faculty salary equity cases: Combining statistics with the law. *The Journal of Higher Education*, 77(2), 193-224.

Marchetti, C. & Bailey, M. (2016, June). *Into the light: Diffusing controversy and increasing transparency in the AdvanceRIT salary equity study process*. [Paper presentation]. ASEE 2016 Annual Conference & Exposition, New Orleans, LA, United States.

Marchetti, C. & Bailey, M. (2019, October). *The importance of “how” in faculty salary equity studies* [Conference presentation]. 2019 Leadership in Higher Education Conference, St. Louis, MO, United States.

Marchetti, C., Mason, S., Valentine, M., Dell, E., & M. Bailey (2015, October). *Collaboration: The key to leading institutional transformation*. [Paper presentation]. 2015 ACM & Anita Borg Grace Hopper Celebration of Women in Computing Conference Proceedings, Houston, TX, United States.

Marchetti, C., Valentine, M., Mason, S., Bailey, M., & Dell, E. (2017, June). *No more duct tape! Institutionalization of ADVANCE initiatives*. [Paper presentation]. ASEE 2017 Annual Conference & Exposition, Columbus, OH, United States.

Martin, J. (1994). The organization of exclusion: Institutionalization of sex inequality: Gendered faculty jobs and gendered knowledge in organization theory and research. *Organization*, 1(2), 401–32.

Mason, S., Marchetti, C., & Bailey, M. (2014a, October). *AdvanceRIT: An institutional transformation approach to improve issues of recruitment, retention and career advancement for women faculty in STEM* [Paper presentation]. 2014 Anita Borg Institution Grace Hopper Celebration of Women in Computing, Phoenix, AZ, United States.

Mason, S., Marchetti, C., Bailey, M., Crawford, D. K., Foster, S., Dell, E., Clayton, L., Baum, S., & Valentine, M. (2014b, October). *Institutional transformation at a large private technical university: Reporting on the accomplishments of a combined data driven top down and bottom up approach*. [Paper presentation]. 2014 IEEE Frontiers in Education Conference (FIE) Proceedings, Madrid, Spain. doi:10.1109/FIE.2014.7044116

ModernThink. (2019). *Great colleges to work for 2019 workplace recognition: 12th annual survey*. <https://greatcollegesprogram.com/list/archive/2019-college-archive/>

PayScale. (2019). *The state of the gender pay gap*. <https://www.payscale.com/data/gender-pay-gap>

Perna, L. W. (2003). Studying faculty salary equity: A review of theoretical and methodological approaches. *Higher education: Handbook of theory and research*, (pp. 323-388).

Rochester Institute of Technology. (n.d.a) *Annual review of faculty, RIT policies*.

<https://www.rit.edu/academicaffairs/policiesmanual/e070>

Rochester Institute of Technology. (n.d.b) *General salary and wage administration principles*.
<https://www.rit.edu/fa/humanresources/content/compensation>

Rochester Institute of Technology AdvanceRAC (2018). *Salary-equity study for Rochester Institute of Technology* [Unpublished internal report]. Rochester Institute of Technology.

Rochester Institute of Technology Human Resources (2020). *Benchmark schools, approved 2012*. <https://www.rit.edu/fa/humanresources/content/benchmark-schools>

Schroedel, J. G., & Geyer, P. D. (2000). Long-term career attainments of deaf and hard of hearing college graduates: Results from a 15-year follow-up study. *American Annals of the Deaf*, 145(4), 303–313.

Snyder, J.K., Hyer, P.B. & McLaughlin, G.W. (1994). Faculty salary equity: Issues and options. *Research in Higher Education*, 35, 1–19. <https://doi.org/10.1007/BF02496659>

Taylor, L. L., Lahey, J. N., Beck, M. I., & Froyd, J. E. (2020). How to do a salary equity study: With an illustrative example from higher education. *Public Personnel Management* 49(1), 57-82.

U.S. Census Bureau. (2018). *PINC-05. Work experience - People 15 years old and over, by total money earnings, age, race, Hispanic origin, sex, and disability status*. <https://www.census.gov/data/tables/time-series/demo/income-poverty/cps-pinc/pinc-05.html>

U.S. Department of Labor. (2021, January 15). Practical significance in EEO analysis frequently asked questions. <https://www.dol.gov/agencies/ofccp/faqs/practical-significance>

Weichselbaumer, D., & Winter-Ebmer, R. (2005). A meta-analysis of the international gender wage gap. *Journal of Economic Surveys*, 19(3), 479–511. <https://doi.org/10.1111/j.0950-0804.2005.00256.x>

Womble, C. C. (2018). Faculty salary (in)equity: A review of the literature. *Trends in Diversity*, 1(1), 1-29. <https://oaks.kent.edu/td/vol1/iss1/1>

Zahneis, M. (2018, June 11). Women of color in academe make 67 cents for every dollar paid to white men. *The Chronicle of Higher Education*. <https://www.chronicle.com/article/women-of-color-in-academe-make-67-cents-for-every-dollar-paid-to-white-men/>