Engineering Educators Bringing the World Together
2025 ASEE Annual Conference & Exposition
Palais des congrès de Montréal, Montréal, QC • June 22–25, 2025
Paper ID #45431

Building Community Understanding of Institutional Compensation Systems: An ADVANCE Partnership Mid-Project Update

Prof. Margaret B. Bailey Ph.D., P.E., Rochester Institute of Technology (COE)

Professor Margaret Bailey, Ph.D., P.E. is a professor of mechanical engineering at Rochester Institute of Technology and a professionally registered engineer. She conducts research related to Thermodynamics, engineering education, and gender in engineering and science. She authors an engineering Thermodynamics textbook and recently published a book that highlights the stories and lived experiences of women within Mechanical Engineering.

Dr. Carol Elizabeth Marchetti, Rochester Institute of Technology (COE)

Dr. Carol Marchetti is a Professor of Statistics at Rochester Institute of Technology, where she teaches introductory and advanced undergraduate statistics courses and conducts research in statistics education, deaf education, and online learning. She ser

Dr. Jessica C Bennett, Association of Public and Land-grant Universities

Jessica Bennett, Ph.D., is Assistant Vice President of STEM Education at APLU. She leads a variety of NSF-funded projects focused on enhancing institutional capacity to foster environments that recruit, retain, develop, and compensate a thriving faculty. Her scholarship focuses on organizational environments and faculty pathway experiences. She serves on the editorial board of the Journal of Diversity in Higher Education.

Iris V. Rivero Ph.D., University of Florida

Dr. Iris V. Rivero is the Paul and Heidi Brown Preeminent Chair and Department Chair of Industrial and Systems Engineering at the University of Florida. She received her B.S., M.S., and Ph.D. in Industrial & Manufacturing Engineering from Penn State University. Prior to UF, she served as the Kate Gleason Professor and Department Head of Industrial and Systems Engineering at the Rochester Institute of Technology (RIT). In addition, she was a member of the faculty and Associate Chair in the Department of Industrial and Manufacturing Systems Engineering at Iowa State University. Her research group iMED (Interdisciplinary Manufacturing Engineering and Design) laboratory specializes in research to design scalable hybrid manufacturing techniques of a wide array of material systems ranging from biopolymers, metal alloys, and concrete. Her research expertise is in additive and hybrid manufacturing processes, and biomanufacturing. Applications of her research extend to applications ranging from in-situ nondestructive testing of manufacturing processes to design of Additive Manufacturing alloys for aerospace and biomaterials for tissue engineering. She was a fellow at NASAs Marshall Space Flight Center. She has over 100 peer-reviewed publications and over 100 invited talks and presentations. She is a fellow in the Institute of Industrial and Systems Engineers (IISE).

Gloria L. Blackwell, American Association of University Women (AAUW)

Chief Executive Officer of AAUW, an esteemed nonprofit organization advancing gender equity for women and girls for over a century through research, education and advocacy. AAUW produces critical research around pay equity and provides programming for salary negotiation for students, administrators and faculty.

©American Society for Engineering Education, 2025

Building Community Understanding of Institutional Compensation Systems: An ADVANCE Partnership Mid-Project Update

Abstract

This paper provides an update on an ongoing NSF ADVANCE Partnership Project (2121930, 2021-2026) led by the Rochester Institute of Technology (RIT). The project focuses on improving the understanding of faculty compensation systems at partnering universities by introducing ideas and tools through workshops, coaching sessions, and a support network. Target audiences at each partner university include pay decision makers from the administration and the faculty as well as others who shape and administer the faculty compensation system. The project also highlights the distinct viewpoints on faculty compensation from specific faculty sub-populations by involving the Deaf and Hard of Hearing Women's Council and the Women of Color Council.

The project's leadership team collaborates closely with partner universities to achieve the project's goal. In 2021, the first year of this five-year project, three private universities formed the first partner cohort (Drexel, Gallaudet, and Villanova). In March 2024, a second partner cohort of seven public universities was launched. Partner institutions have teams that attend project workshops and coaching sessions and engage in project-related work on their campuses. This paper provides a mid-project update on the series of workshops offered to the initial partner cohort of private universities and modified for use with the second partner cohort of public universities. Formative project assessment based on post-workshop participant feedback and input from members of the Deaf and Hard of Hearing Women's Council and the Women of Color Council is presented and examined.

Background

The Partnership Project builds on over thirty years of institutional efforts to improve the RIT faculty compensation system including targeted efforts funded and motivated through a past NSF ADVANCE Catalyst grant and an NSF ADVANCE Institutional Transformation grant. The RIT Compensation website (https://www.rit.edu/humanresources/compensation) explicitly states the university's commitment to providing competitive salaries for faculty and staff and provides valuable information about pay processes. The journey to this level of transparency began in 1993 when the Compensation Advisory Committee (CAC) was formed to develop the university's first list of benchmark institutions for salary comparison [1, Appendix C]. RIT's NSF ADVANCE IT-Catalyst project (081107, 2008-2011) was a key motivator to further progress. After a 2008 internal climate survey [2] revealed significant differences in perception regarding salary equity by gender, RIT Human Resources (HR) and Institutional Research (IR) launched annual salary equity studies for faculty. After controlling variables such as department, degree earned, years in rank, and terminal degree, gender-based gaps in average salary were found at each faculty rank [3], [4]. Similarly, the American Association of University Professors reports lower salaries for women at every faculty rank, a finding that is persistent over time [5].

RIT investigations into significant differences between actual and predicted salaries followed, and in 2010 salary adjustments began to correct for compression and gender-related gaps [6]. Gender-based gaps in faculty salaries continue to be observed in higher education [7], often explained by rank, itself a problematic variable due to potential bias in promotion processes [8]. Discipline also explains differences in salary, yet women are only 10% of top-earning faculty [9] in large part because 93% of top-earning faculty are in fields that have low representations of women.

In 2012, around the start of RIT's NSF ADVANCE Institutional Transformation project (1209115, 2012-2018), the university hired a third-party consultant to conduct the annual salary equity studies for both faculty and for staff. The NSF project proposal included annual faculty salary studies, with a faculty co-PI on the project collaborating with IR and HR to establish a systematic salary study procedure. Since the newly hired consultant was tasked with conducting the studies, HR, IR, and the faculty co-PI (and statistician) worked closely to review the resulting salary model. This arrangement proved unsatisfactory as questions and defenses arose. It was clear that a mutual understanding of the objectives and expected outcomes of the analysis were needed. Thus, the RIT ADVANCE Resource Allocation Committee (RAC) was created in 2014. This faculty and administrator committee included membership from HR, IR, Academic Affairs, proxies for the president and the provost, and members of the RIT ADVANCE project team. The committee aimed to develop a systematic approach to creating a salary model for RIT and disseminate findings widely to faculty and administration. The RAC evolved over time as trust was built between members, allowing them to express and incorporate multiple and sometimes competing viewpoints [10], [11]. In 2016 the first salary study was completed, and the provost emailed the executive summary [12] to all RIT faculty.

Annual faculty salary-equity studies continued in this manner, and campus leaders became more comfortable with the process and dissemination. This led to a 2019 session for academic leaders during which participants compared salary practices between colleges, and workshop leaders learned more about how pay-decisions for faculty are made and communicated. Prior to this session, RIT released information about salary data and processes on a secure website, and RAC members developed an interactive workshop for faculty. First offered in spring 2018, "Let's Talk Money: Understanding RIT Pay Practices" introduced the term "compa-ratio" (actual salary divided by benchmark salary for discipline and rank), pointed out available salary-related resources, and explored how to shape future thinking and discussions regarding salary. The faculty workshop continues to be offered regularly, co-led by HR and RIT ADVANCE [13].

The success of the RAC led to the formation of an ad-hoc faculty governance compensation committee in 2019 - another collaborative faculty/administrator initiative - charged with investigating updates to the list of salary benchmark schools and faculty promotion raises. Changes to both structures were recommended and adopted by the university. In 2024, the benchmark list is undergoing another refinement to better represent the diverse faculty disciplines at RIT. Ongoing work includes yearly updates to salary benchmarking information, bi-annual salary equity studies, and the 2023 launch of the RIT Compensation website. Here, one can find the University's compensation philosophy, information about pay administration and salary structures, and links to elements of total compensation. A growing number of universities

provide this type of information about compensation, including Boise State University [14], Indiana State University [15], University of Iowa [16], and Vanderbilt University [17].

Project Overview

The RIT faculty salary related work is the basis for the NSF ADVANCE project "Let's Talk Money: Building Community Understanding of the Institutional Compensation System (LTM)" (NSF #2121930). Since 2021 the project leadership team has worked to translate learning from RIT's salary transformation journey into a discrete process and approach to support ten partner universities in completing salary-focused institutional transformations of their own, drawing on expertise developed through the Association of Public and Land-grant Universities' (APLU) NSF Eddie Bernice Johnson INCLUDES Aspire Alliance Institutional Change Initiative (NSF #1834518). Lead researchers on the project are from both academe (engineering and statistics) and from cross-disciplinary professional organizations, the Association of Public & Land-Grant Universities (APLU) and the American Association of University Women (AAUW).

The ten partner institutions within the two partner cohorts have teams that attend project workshops and engage in project-related work on their campus. As a partner university, the benefits of joining the project include access to a judgment-free community focused on improving faculty compensation systems and an opportunity to learn through a structured curriculum to build understanding and awareness of potential areas for change, informed by change activities at other universities.

These partner university teams are supported by the project through ideas and tools introduced in cohort workshops, and individual coaching sessions as needed. Workshop themes (see Table I) range from team building to data for salary comparisons to communication of salary-related topics.

Each partner institution creates a core team and an extended team and identifies a Cabinet-Level Sponsoring Officer (CSO) for project engagement. The core team consists of a lead and two additional members who together serve as the primary liaisons with members of the extended team.

Goals of participating in the project include the following:

- Core team members facilitate on-campus convenings, share key information with extended team members and senior institutional leadership.
- The CSO shapes the vision and direction of the project and is positioned to both serve as a champion for the work of the team as well as providing strategic guidance on aligning their work with key cabinet and board priorities.
- The CSO meets with the Core Team at least twice a term to review progress, discuss emerging insights or externalities, and identify strategic connections within other cabinet-level portfolios.
- Each partner team is also encouraged to designate a project manager who supports the organization of, and coordination of, the activities and deliverables produced by the team.

In assembling the extended team, a key goal is to form an effective team that fosters a strong partnership between leaders across academic/faculty affairs, diversity, equity, and inclusion offices, faculty governance, and/or human resources, in addition to ensuring faculty representation. Partner universities have included individuals with the following campus roles and/or functional responsibilities (either as core or extended team members):

- Chief Academic Officer
- Vice Provost for Faculty Affairs
- Chief Diversity Officer
- Chair/Leader of the Faculty Senate
- Deans
- Chief Human Capital Officer or designee
- Institutional Research Leader
- Faculty

TABLE I
LTM WORKSHOP THEMES AND TOPICS

Workshop Theme	Topics
Team Building	● Hopes and fears about addressing salary topics ● Ground rules for engagement
Pay-Decisions: People & Processes	● Who are your pay decision makers and stakeholders? ● Map a pay decision process. Does everyone have the same understanding of the process?
Guiding Principles, Equity Checks & Traps	● Guiding principles at play in salary processes ● Potential equity "traps" in a salary process ● Equity "checks" that could be inserted into the process
Data for Salary Comparisons	● Internal Data - Do salaries reflect performance? Are they equitable? ● External Benchmarking - Are salaries competitive?
Organizational Justice in Pay Processes	● What would a "just" pay system look like in each of the four organizational justice areas (distributive, procedural, informational, and interpersonal)?
Building Knowledge About Faculty Pay	● Developing a professional development program for pay decision-makers ● Address decision-making AND communicating decisions
Communicating Salary-Related Topics	● Engage communication experts ● Consider the audience ● Plan the content ● Anticipate responses in advance

Additional representatives could be from offices of research, finance, strategic planning and initiatives, information technology, communications, and/or the faculty union.

At RIT, the past NSF ADVANCE funded efforts (described previously in this paper) incorporated the unique perspectives and lived experiences of faculty who are women of color and women who are deaf or hard of hearing. The current project continues to highlight the distinct viewpoints on faculty compensation from specific faculty sub-populations by involving the Deaf and Hard of Hearing Women's Council and the Women of Color Council.

Impact

The impact of participating in cohort workshops may be best assessed from a high-level perspective. The original partner cohort of three private institutions has been engaged in the project for a longer period, with more touchpoints, and assessment. So, did participation in the project influence salary-equity work at these first three partner institutions?

Following each workshop (see topics in Table I), participants have an opportunity to complete a confidential survey administered by the project's evaluation team. In this section, the impacts associated with three different sessions held in May 2022, February 2024, and April 2024 are examined. The focuses of these three workshops are communications and collaboration (March 2022); a working session for campus teams and opportunity to share updates on ongoing salary work on their respective campuses (February 2024); and organizational change theory and campus progress (April 2024).

In looking at the impact of the structure of the team engaged in refining faculty salary practices and processes, the May 2022 workshop was created to explore the importance of collaboration between faculty and administrators in this work. Among the 21 workshop participants from the original partner cohort, twelve answered the questions in a post-workshop survey regarding faculty-administrator collaborations. Below are the results and participants reported agreement that they have a better understanding in the following areas because of what they learned in the workshop (responses not reported are "neither agree nor disagree"; no one disagreed on these items).

- 92% agreed or strongly agreed (67% strongly agreed) that the workshop improved their understanding of the importance of trust in faculty-administrator initiatives.
- 83% agreed or strongly agreed (50% strongly agreed) that the workshop improved their understanding of the value of collaborations between administrators and faculty regarding compensation.
- 83% agreed or strongly agreed (33% strongly agreed) that they had an increased understanding of how to frame communication about this work at their institution.

To further inform the impact associated with clear communications regarding faculty salary, the input from the project's Deaf and Hard of Hearing Women's Council and the Women of Color Council reveals a need to focus even more on this area. Negotiation is part of most compensation processes, and the councils noted that an individual's professional and personal networks often inform one's knowledge about negotiation in general, and academic negotiation in particular. Yet women faculty [18], faculty of color [19], and deaf and hard-of-hearing faculty (and those with disabilities, in general) [20] are often at a disadvantage in negotiations. This led to questions

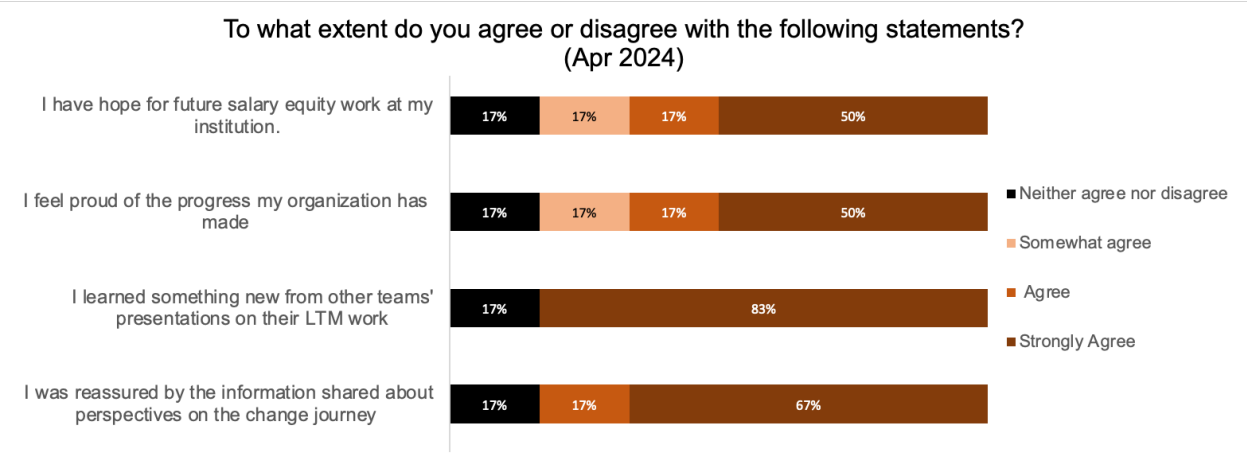
about how institutions can level the playing field regarding negotiation and prompted project leaders to gather additional input from the councils with the goal of creating resources to inform institutional communication around compensation topics. The project team is creating a communication tipsheet to capture this information.

Among the 22 participants at the February 2024 cohort workshop (a working session for campus teams and opportunity to share updates across universities), eleven answered the questions in a post-workshop survey about the impact of the project. Among the respondents, 81% agreed or strongly agreed that the project has informed the salary equity work underway on their campuses (45% strongly agreed and 36% agreed). This workshop included a breakout session in which institutions worked on plans for a campus visit from the project leadership team, and 82% agreed or strongly agreed that the partner team made use of prior project learning in the breakout room discussion (55% strongly agreed and 18% agreed).

During the April 2024 cohort workshop organizational change was explored and afterwards, each partner team presented their progress. In the post-survey, session specific questions are asked based on the session's unique content. Figure I shows the percentage of those in agreement with four session-specific statements. Among the thirteen workshop participants, six responded to the post- survey and below are the results.

- 67% of respondents agreed or strongly agreed that they had hope for future salary equity work at their institution.
- 67% of respondents agreed or strongly agreed they felt proud of the progress their organization has made.
- 83% of respondents strongly agreed that they learned something new from other teams' presentations on their salary-related project (referred to as LTM in Figure I) work and the remaining 17% neither agreed nor disagreed with this statement.
- 83% of respondents agreed or strongly agreed that they were reassured by the information shared about perspectives on the change journey.

FIGURE I
SURVEY RESPONDENTS' PERCENT AGREEMENT WITH SESSION SPECIFIC SURVEY QUESTIONS AFTER THE APRIL 2024 WORKSHOP.



Because the expanded partner cohort of public institutions began several years into the project, the workshop post-survey data from this newer cohort is limited and evaluation results will be reported in future publications where impact of both cohorts will be examined.

Future Considerations

The project has made a positive impact on improving understanding of the faculty salary system by key university personnel. This knowledge over time can be sustained, enhanced, disseminated, and transferred during professional work related to faculty compensation. In addition, the project offers an opportunity for universities to infuse equity-related practices and ideas within the operation of its compensation system.

Through project evaluation, the project researchers learn from partner teams regarding future considerations to consider; examples include challenges faced by pay-decision makers regarding market inflation, determination of pay, communication about faculty pay, faculty retention, funding, and resources to support equity salary increases, and unionizing.

Acknowledgements

Support for this research was provided by the National Science Foundation ADVANCE Program through Partnership Award No. 2121930 and INCLUDES Program Award No. 1834518. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

References

[1] J.-G. Naud, "A history of benchmarking faculty salaries at RIT," Rochester Institute of Technology, Rochester, NY, USA, May 2007. [Online]. Available: https://drive.google.com/file/d/19TsA1nrYIY6rVwVgQeLGCPSLqmZEFm6T/view

[2] M. Bailey, S. Baum, S. Mason, J. Mozrall, and M. Valentine, "RIT EFFORT career life survey. Establishing the foundation for future organizational reform and transformation: ADVANCE EFFORT@RIT," Rochester Institute of Technology, Rochester, NY, USA, October 2009. [Online]. Available: https://drive.google.com/file/d/1hkB_UDG8qwMb3Vd97e4ScU-A5KADtZ5n/view?usp=drive_link

[3] M. Bailey, et al., "Establishing the foundation for future organizational reform and transformation: Status of women faculty at RIT regarding recruitment, representation, and advancement final outcomes report," National Science Foundation, ADVANCE Institutional Transformation – CATALYST Program, Alexandria, VA, USA, NSF # 0811076, 2011.

[4] M. Bailey, et al., "Establishing the foundation for future organizational reform and transformation at a large private university to expand the representation of women faculty," in *American Society of Engineering Education Proceedings*, Vancouver, BC, Canada, June 2011

[5] American Association of University Professors, "The Annual Report on the Economic Status of the Profession, 2023–24." *AAUP*, 2024. [Online.] Available: https://www.aaup.org/file/ARES_2023-24.pdf

[6] M. Bailey, et al., "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," Rochester Institute of Technology, Rochester, NY, USA, May 2012. [Online]. Available: https://drive.google.com/file/d/1yKrHVJXxXtzYaSgL7snkHI_TZsrgkmR6/view?usp=drive_link

[7] University of California Berkeley "UC Berkeley Faculty Salary Equity Study, Annual Update, 2020". 2020. [Online]. Available: https://vpf.berkeley.edu/sites/default/files/uc_berkeley_faculty_salary_equity_study_spring_2020.pdf

[8] University of California Berkeley "Report on the UC Berkeley Faculty Salary Equity Study." 2015. [Online]. Available: http://vpf.berkeley.edu/sites/default/files/Equity%20Study%20Report%20final%201-26-15%20--revised.pdf

[9] A. Silbert & C.M. Dubé "The power gap among top earners at America's elite universities." *Eos Foundation*, 2021. [Online]. Available: https://www.womenspowergap.org/wp-content/uploads/2021/02/WPG-Power-Gap-at-Elite-Universities-2021-Study-2.pdf

[10] C. Marchetti and M. Bailey, "Into the light: Diffusing controversy and increasing transparency in the AdvanceRIT salary equity study process," in *American Society of Engineering Education Proceedings*, New Orleans, LA, USA, June 2016.

[11] C. Marchetti, M. Bailey, "The importance of 'how' in faculty salary equity studies," presented at the *Leadership in Higher Education Conference*, St. Louis, Missouri, USA, October 3-5, 2019.

[12] Center for Higher Education, Ohio University and AdvanceRIT/HR Resource Allocation Committee, "Salary-equity study for the Rochester Institute of Technology," Internal Report, Rochester Institute of Technology, Rochester, NY, USA, April 2016, unpublished.

[13] C. Marchetti and M. Bailey, "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," *ADVANCE Journal*, vol. 3, no. 2, Oct. 2022, doi: 10.5399/osu/ADVJRNL.3.2.5.

[14] "Compensation Philosophy and Definitions." Boise State University. Accessed April 17, 2025. [Online.] Available: https://www.boisestate.edu/hr/compensation-philosophy-and-definitions/

[15] "Compensation." Indiana State University. Accessed April 17, 2025. [Online.] Available: https://indianastate.edu/administration/finance-admin/human-resources/compensation

[16] "Compensation Philosophy." University of Iowa. Accessed April 17, 2025. [Online.] Available: https://hr.uiowa.edu/pay/compensation-classification/professional-scientific-compensation/philosophy

[17] "Philosophy and Principles." Vanderbilt University. Accessed April 17, 2025. [Online.] Available: https://hr.vanderbilt.edu/compensation/Compphilosophyandprin.php

[18] Hannah Riley Bowles, Linda Babcock, Lei Lai. "Social incentives for gender differences in the propensity to initiate negotiations: Sometimes it does hurt to ask." 2007.

Organizational Behavior and Human Decision Processes, 103(1), 84-103. https://doi.org/10.1016/j.obhdp.2006.09.001

[19] PayScale. *Raise Anatomy: How to ask for a raise and get it*. PayScale. 2018, June 5. [Online.] Accessed April 18, 2025. https://www.payscale.com/research-and-insights/how-to-ask-for-a-raise/

[20] MEP Speech, KL Badura and TC Blum. "Everything is negotiable, but not for everyone: The role of disability in compensation." *Journal of Applied Psychology*. 2023 Apr;108(4):571-594. doi: 10.1037/apl0001039