

The Undervalued Labor of Black and Hispanic Engineering Faculty

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****This is a Work-In-Progress****

Introduction

As of 2020, there were 1.5 million faculty members in post-secondary institutions, but Black and Hispanic faculty represented only seven and six percent of that number respectively (NCES, 2022). Black and Hispanic faculty are not only underrepresented at selective public universities but especially so in the areas of science and math (Li & Koedel, 2017). Engineering departments often have very few or no underrepresented minority faculty members (Nelson & Brammer, 2010). While some of these problems can be attributed to the challenges of the recruitment of faculty of color, scholars have increasingly pointed to faculty attrition as a core problem (Whitaker et al., 2015). One potential major influence of faculty attrition is the tenure and promotion process. To explore the tenure and promotion process, this research objective explores the major challenges and opportunities for Black and Hispanic engineering faculty (BHEF) as they navigate the tenure process and promotion process.

Faculty Identity Development

To understand the research objective, the conceptual framework the team used is faculty identity development (Laney et al., 2013, Rebold, 2003; Sklar, 2016). Using faculty identity development, this framework allows us to understand the various parts of what makes a faculty member. These parts include but are not limited to teaching, research, and service. For early faculty members, there is a major transition from student to professor that may affect how to view these three major areas. This transition also may be affected by individual intersecting identities (Laney et al., 2013, Sklar, 2016).

Methods

As part of the National Science Foundation (NSF) foundation funded project, this team conducted two methods of data collection, a national cross-sectional survey and a phenomenological longitudinal two-interview series spanning across two years. The survey deemed 1,161 engineering survey respondents. With this study, the team focuses on the Black and Hispanic faculty respondents from this larger sample. In this sub-sample, there were 26 Black Faculty members and 51 Hispanic faculty members.

In addition to this survey, the multi-year two-interview series provided phenomenological qualitative data to further explore the survey information. This interview data includes 14 first interviews and nine second interviews. With the three-participant attrition, the team pushed for new participants during the second interview timeline. We report on the interview preliminary findings in this paper.

Table 1.0

Participant list

Pseudonym	Level of TNP
<i>Alma</i>	TT-Track Non-tenure
<i>Andres</i>	Department Chair
<i>Carlos</i>	TT-Track Non-tenure
<i>Debbie</i>	TT-Track Non-tenure
<i>Denise</i>	TT-Track Non-tenure
<i>Eva</i>	TT-Track Non-tenure
<i>Gia</i>	TT-Track Non-tenure
<i>Jenny</i>	Department Chair
<i>Jesus</i>	Department Chair
<i>Jose</i>	TT-Track Non-tenure
<i>Kara</i>	TT-Track Non-tenure
<i>Marla</i>	Professor
<i>Monica</i>	TT-Track Non-tenure
<i>Robert</i>	TT-Track Non-tenure
<i>Santos</i>	Professor

Data Analysis

From the interviews, researchers utilized open thematic coding to see what themes emerged within the data. Additionally, inductive and deductive coding was utilized to further understand the hypothesis that was developed by researchers to understand the various areas that faculty endure through the tenure process (Saldaña, 2016). Furthermore, researchers triangulated surveys, analytical memos, and interview data to further understand the themes that emerged.

Findings

From the data uncovered three major themes:

1. Service Overload
2. Racial Battle Fatigue, and
3. Cultural Tax

Each of these themes provide the various levels in which the faculty identity development intersects with their Black and Hispanic identities.

Service Overload

The Service Overload theme refers to how BHEF often feels obligated to provide service work even though the institution undervalues it despite its centrality to the mission. This phenomenon was shared by many of our respondents. Andres, a Hispanic faculty said,

I was asked to be the faculty mentor for the Society of Hispanic engineers. And I actually declined...I actually declined just because I just didn't feel I had the time right. So I had not thought about that since then. So yeah, and I think in some cases, sometimes people are afraid to say no to some of those service activities, especially when we thought to assistant faculty members you know.

Andres mentions how there are aspects of the services that get asked to go into these mentorship roles. When they decline like Andres, there is a need to want to give back, but needing to know their boundaries for himself and the work that he needs to accomplish that is valued by his department. Additionally, Robert, a Black faculty member, states,

You know, but honestly, for the longest, she's been, you know, and, that was kind of a frustrating thing, because it's like, she's trying to do all these things, like, has no budget...

Robert shares that there is a lot of work that needs to be done without a budget and how that works in DEI initiatives. Wanting to continue and to contribute to DEI work, Robert shares the frustration on the lack of prioritizing and providing funding for DEI work. This is also seen in how individuals experience racial battle fatigue.

Racial Battle Fatigue

Participants also detailed how various racial and professional pressures tax and overwhelm BHEF. There is a tax that faculty must pay when they are Black or Hispanic, especially when providing support. Marla's, Hispanic faculty member, experience,

I had this minority tax right where you'll have to do because you're minority you have more work to do. I think it is for me, it's played out too well, but, I wasn't interested. So I didn't have to do this tenure track thing when I was young, so it's a little different... So I'm often reminded people of that because I am in a position to say that would be very hard for the assistant professors who are female or Hispanic to say no to be on that committee.

In Marla's experience, she mentioned the extra work that comes from the tenure process, especially being a Woman of Color. Debbie, a Black faculty, also felt this sentiment as she was providing her services at panels.

I would be going sit on these panels at the grad school and I'd go do this and that and the other and I'd be running from one event to the next, and I can't honestly say I've ever seen. Another none black, non black faculty from my department doing this. I mean if

you're bringing in girls for late young ladies for preview weekend all female faculty can share something you do I invite everybody, you know, all of us can share something about being a woman in engineering, it doesn't have to be the two black ones.

Debbie explicitly sees how her Blackness and Womanhood is used through the departments. This is further seen in the cultural tax.

Cultural Tax

Lastly, participants further encompassed how their identities added that extra level of responsibility to support Students of Color and be present at event that center their experiences. This extra tax is underlying through the work they do as well as wanting to give back through the service and self-need to be present. In Marla's, Hispanic faculty member, experience, she shares,

So now this person has all kinds of application records. Not one department committee, one university committee. This person has a no university committee, no university service. Nobody cares about it... I felt like I did a lot of service. I felt that was not a whole lot. I felt like I visited a lot of high schools. I was pulled into a lot of stuff that had no impact at all. But I'm glad I did those things. You know, it's part of my not just giving back to the university but giving back to people who poured into my life.

Marla mentions how the service is not valued as other aspects in the tenure process. She mentions how service is something that she enjoyed doing but the university does not value that work. It is an added tax that she pays as she navigates her career.

Conclusion

From these findings, it is important for engineering departments to understand how Black and Hispanic faculty navigate the tenure and promotion process. With faculty identity development, there are nuances in everyone's path, but the overall importance is understanding how these faculty members can prioritize the tenure and promotion process while limiting other requirements. As we see with other literature, an implication is to hire more diverse tenure-track faculty, but also to remind departments of the importance of retention efforts with diverse tenure-track faculty members who may already be in the departments as well. It is crucial not only to attract BHEF, but it is also important to create an intentional community to heal the various extra tasks they take on through their tenure and promotion process.

References

- [1] Laney, E. K., Carruthers, L., Hall, M. E. L., & Anderson, T. (2014). Expanding the self: Motherhood and identity development in faculty women. *Journal of Family Issues*, 35(9), 1227-1251.
- [2] Li, D., & Koedel, C. (2017). Representation and salary gaps by race-ethnicity and gender at selective public universities. *Educational researcher*, 46(7), 343-354.

[3] National Center for Education Statistics. (2022). Characteristics of Postsecondary Faculty. Condition of Education. U.S. Department of Education, Institute of Education Sciences. Retrieved May 31, 2022, from <https://nces.ed.gov/programs/coe/indicator/csc>.

[4] Nelson, D. J., & Brammer, C. N. (2010). A national analysis of minorities in science and engineering faculties at research universities (2nd ed.). Unpublished policy report.

[5] Reybold, L. E. (2003). Pathways to the professorate: The development of faculty identity in education. *Innovative Higher Education*, 27, 235-252.

[6] Sklar, D. P. (2016). Moving from faculty development to faculty identity, growth, and empowerment. *Academic Medicine*, 91(12), 1585-1587.

[7] Whittaker, J. A., Montgomery, B. L., & Acosta, V. G. M. (2015). Retention of underrepresented minority faculty: strategic initiatives for institutional value proposition based on perspectives from a range of academic institutions. *Journal of Undergraduate Neuroscience Education*, 13(3), A136.

[8] Saldaña, J. (2016). *The coding manual for qualitative researchers* (3rd ed.). SAGE.