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Keys to Successful Cross-Race Mentoring Relationships: Perspectives from Mentees and Mentors

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Abstract

This research paper explores the keys to successful cross-race mentoring identified by mentees and mentors in the Increasing Minority Presence within Academia through Continuous Training (IMPACT) mentoring program. Two iterations of the IMPACT program paired Black engineering faculty with primarily White male emeriti engineering faculty for career-focused mentorship, networking, and advocacy. A great need exists to better understand that which facilitates successful cross-race mentoring, as it is the standard in the engineering professoriate due to the underrepresentation of senior and emeriti faculty of color in engineering academia. Thus, this intrinsic case study explores the perspectives of 16 mentees and 14 mentors on the keys to successful cross-race mentoring. Participant interviews were analyzed inductively and resulted in three themes: (1) self-awareness and empathy create trusting, honest conversations; (2) mentee career advancement must be core to the relationship; and (3) a history of racial allyship from the mentor is required. These findings reveal the importance of the IMPACT mentoring program creating successful mentoring matches in which mentees and mentors demonstrate self-awareness and empathy, focus on mentee career advancement, and mentors possessing a keen cognizance of the ways in which racism affects the lives and careers of Black faculty.

Introduction

Understanding what which facilitates effective cross-race mentoring in engineering academia may be one of the key aspects to ensuring the retention and advancement of faculty of color. Mentoring plays a vital role in the success of faculty of color, as it provides career support and guidance often not readily accorded by White peers, department chairs, and campus administrators (Buzzannell et al., 2015; Cole et al., 2017; Hyers et al., 2012; Mendez et al., 2023; Randel et al., 2021; Turner, 2002; Villanueva et al., 2019; Yun et al., 2016; Zambrana et al., 2015). Despite decades of efforts to diversify the engineering professoriate, the discipline remains primarily White (64.7%), with only 2.5% of engineering faculty identifying as Black (American Society for Engineering Education [ASEE], 2022). An intrinsic case study design (Stake, 1995) explores the keys to successful cross-race mentoring of mentees and mentors involved in the Increasing Minority Presence within Academia through Continuous Training (IMPACT) mentoring program. The research question guiding this study is: What do IMPACT mentoring program mentors and mentees believe are the keys to successful cross-race mentoring in engineering academia? This study is sponsored by a National Science Foundation Broadening Participation in Engineering Track 3 award.

The IMPACT Mentoring Program

The IMPACT mentoring program was sponsored by an NSF Broadening Participation in Engineering award in 2015 (award #1542524) and an NSF INCLUDES (Inclusion across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science) Design and Developments Launch Pilot award in 2017 (award #1744500). The program

was developed through an extensive literature review with a targeted focus on diverse mentoring relationships in STEM fields (Johnson, 2016; Kram, 1985; Lechuga, 2014). The program intended to serve as an innovative strategy to complement prevailing approaches that support the mentorship, networking, and advocacy of engineering faculty of color by renowned emeriti faculty uniquely positioned to provide these resources. Including emeriti faculty also served as a vehicle for retirees to continue making meaningful contributions to the profession. Research has demonstrated that mentoring provides an important source of identity, recognition, and connection for retirees (Goldberg & Baldwin, 2018; Mendez et al., 2019). Engaging emeriti rather than senior faculty was purposeful for capitalizing on their greater discretionary time while taking advantage of their wealth of experience in academia. The primary goal of the IMPACT program was to match renowned emeriti faculty with Black faculty mentees as they navigated the university promotion and tenure processes and established a greater professional presence in their field. Due to the demographic inertia of the field, the emeriti faculty were primarily White men; only one male of color (South Asian) and one White woman served as mentors.

Mentees were recruited primarily through the Academic and Research Leadership Network, a database of minority STEM faculty, and through engineering disciplinary societies. To participate, the mentees were required to develop a career goal that attends to their career stage and intended career trajectory. Pre-tenure mentee career goals generally centered around tenure and promotion, while post-tenure mentee career goals were more individualized, such as moving into administration. Mentors were identified by the mentees, as well as by project team members. Emeriti faculty were chosen due to their ability to aid in mentee goal achievement, their renowned stature in their field, and their stated commitment to the goal of the IMPACT mentoring program—to assist in the career success of Black engineering faculty. Once the goals were set, project team members met with the mentoring matches for onboarding to set clear expectations of their roles and responsibilities and to co-determine a mentoring plan which included the targeted career goal of the mentee and the planned mode and frequency of communication. In total, 16 mentoring matches were created.

Literature Review

Cross-race mentoring is the standard in the engineering professoriate due to the underrepresentation of senior and emeriti faculty of color in the discipline (ASEE, 2022). This reality results in primarily White men mentoring traditionally defined “underrepresented” populations, such as faculty of color and White women (Thorne et al., 2021). Mentoring from White men offers the unique opportunity for underrepresented individuals to gain career insights and resources; social, professional, and institutional sponsorship; increased feelings of belonging and engagement; and the development of a network of advocates and allies to whom they may not otherwise have access (Cole et al., 2017; Mendez et al., 2023; Randel et al., 2021; Thorne et al., 2021; Villanueva et al., 2019). For faculty of color in particular, additional support often is needed to address issues of racism, tokenism, and hostile campus environments (Stanley, 2006), which may manifest in experiences of isolation, questioning of qualifications from colleagues and students, invalidation of research, and disproportionately high service expectations (Cole et al., 2017; Davis et al., 2021; Diggs et al., 2009).

Faculty of color experience more barriers to mentoring, are less likely to receive sponsorship, and report lower quality and negative mentoring experiences (Buzzanell et al., 2015; Davis et al., 2021; Turner, 2002). Zambrana et al. (2015) found that although faculty of color recognize the importance of mentorship, their negative experiences with paternalistic attitudes, unsupportive behavior, and the devaluation of their research lead to apprehension or complete dismissal of mentorship. This lack of appropriate mentoring is one of several challenges that undermine the successful recruitment and retention of faculty of color and can lead to many adverse work outcomes, including lower perceptions of support, decreased job satisfaction, negative workplace attitudes, higher turnover intentions, and greater psychological distress (Cole et al., 2017; Davis et al., 2021; Diggs et al., 2009). Even when faculty of color find adequate support and connections in same-race mentoring relationships, mentors and mentees share these relationships can be fraught with tension as others may perceive them as engaging in an improper alliance, which further constrains positive views of mentoring (Davis et al., 2021).

Dowdy et al. (2000) found that when faculty of color experience negative mentoring, it causes escalating feelings of isolation. For instance, when faculty of color share that when they express a problem or issue in a department meeting and it goes unheard if that experience is discounted as "being too sensitive," it leads them to separate from their mentor. These negative mentoring experiences wear down faculty of color's sense of efficacy and motivation to persist in their field (Lent et al., 2000) and reveal how systems of power and inequality are evident in the experiences of faculty of color (Davis et al., 2021; Thorne et al., 2021). When considering the intersection of race and gender specifically, women of color report more limited exposure to mentorship and insufficient care from mentors than their peers (Buzzanell et al., 2015; Davis et al., 2021; Turner, 2002). Traditional mentoring methods, such as one-on-one mentoring, assume a male pattern of emotional support and career progression, which is not always relevant to a women's experience or mentoring needs (McCormack & West, 2006; Turner, 2002).

Randel et al. (2021) noted cross-race mentoring relationships that focus on career goals and sponsorship are strongly related to career successes for Black faculty, such as increased compensation and promotions, to a larger extent than relationships concentrated solely on the psychosocial components of mentoring. However, the authors noted that mentors who take an interest in their mentee's identity and perspective in a meaningful way are better able to advise and sponsor the mentee's career advancement because the mentor can identify and endorse specific career opportunities that more accurately align with the mentee's interests, goals, and abilities. Mentors who understand or even attempt to understand the intersecting elements of their cross-race mentoring relationships and their mentees' career goals nurture a more trusting and compassionate environment for their mentees (Guramatunhu-Mudiwa & Angel, 2017; Petersen et al., 2020).

Considering the career and psychosocial components of mentoring, cross-race mentors must develop skills that engender more self-awareness of their positionality and interpersonal skills to ensure they offer appropriate support to mentees whose identities and experiences do not mirror their own (Guramatunhu-Mudiwa & Angel, 2017; Thorne et al., 2021; Womack et al., 2020). If the mentoring pairings are conducted effectively, "a sincere commitment to growing one's cultural competence, mindfulness, and understanding" will be necessary (Mendez et al., 2023, p. 318). These qualities will advance effective and inclusive cross-race mentoring practices and

reduce barriers resulting from racial inequities that hinder faculty of color from advancing in their careers (Buzzanell et al., 2015; Diggs et al., 2009; Guramatunhu-Mudiwa & Angel, 2017; Randel et al., 2021; Thorne et al., 2021; Womack et al., 2020; Zambrana et al., 2015).

Additionally, successful cross-race mentoring is dependent upon open discussions about racism and the ways in which racism manifests in the academy, which results in the mentor and mentee understanding one another more deeply (Guramatunhu-Mudiwa & Angel, 2017; Thorne et al., 2021). As the relationship deepens, mutual respect, trust, and connectedness lead to open and honest dialogue on racism (Guramatunhu-Mudiwa & Angel, 2017; Womack et al., 2020). This often occurs when mentees experience a sense of genuine concern for their well-being and professional development and growth from their mentors (Womack et al., 2020). These relationships are further improved when the struggles common to faculty of color are acknowledged, such as a devaluing of their research and contributions to the academy, and when their capabilities and qualifications are promoted (Randel et al., 2021; Zambrana et al., 2015)

Although the practice of White faculty mentoring faculty of color has been criticized due to the complex issues of race and power and privilege that inevitably influence mentoring relationships (Cole et al., 2017; Diggs et al., 2009; Guramatunhu-Mudiwa & Angel, 2017), research has found this mentoring arrangement to be advantageous for both mentors and mentees (Cole et al., 2017; Guramatunhu-Mudiwa & Angel, 2017; Mendez et al., 2023; Randel et al., 2021; Thorne et al., 2021; Villanueva et al., 2019). Therefore, these pairings should not be avoided, as faculty of color benefit from the access afforded by White faculty, and it is a demographic reality of engineering academia. In fact, research has indicated that mentoring practices that account for the complex intersections of race and other forms of demographic difference are critical to retaining and honoring the differential experiences of faculty of color (Buzzanell et al., 2015; Davis et al., 2021; Guramatunhu-Mudiwa & Angel, 2107; Randel et al., 2021; Thorne et al., 2021; Womack et al., 2020). When conducted properly, mentoring can be an important intervention that offsets the negative experiences of faculty of color in the academy. However, much more research is needed to understand the key aspects constituting successful cross-race mentoring relationships.

Methodology

Research Design. An intrinsic case study design (Stake, 1995) was utilized to explore that which IMPACT mentoring program mentees and mentors believed were the keys to successful cross-race mentoring relationships. Intrinsic case studies are valuable when the case itself is unique and occurs within an authentic, contemporary setting. Cases can be bound to an individual, a group of people, or an organization, as well as to a process, project, or relationship (Creswell & Poth, 2018). Thus, the case study, in this instance, is bound by a group of people and a relationship. The research question that guided this study was: What do IMPACT mentoring program mentors and mentees believe are the keys to successful cross-race mentoring in engineering academia?

Participants. All IMPACT mentoring program mentors and mentees were invited to participate in this study. In total, 16 Black engineering faculty and 14 emeriti faculty were included (two emeriti faculty mentored two mentees). All the matches hailed from different institutions. Six

mentees identified as women and 10 as men. All held tenured/tenure-track engineering faculty positions at various institutional types, such as doctoral-granting universities, minority-serving institutions, and baccalaureate colleges. Emeriti faculty were chosen as mentors due to their renowned stature in their field, collective expertise, continued engagement in academia during retirement, and commitment to advancing the careers of Black faculty. Mentors taught courses, maintained scholarship activity, and held administrative posts in academia and engineering professional societies. Only one of the emeriti faculty identified as a woman; all were White except one, who identified as South Asian. All retired from doctoral-granting universities with very high research activity representing primarily engineering disciplines, while one was in urban geography.

Data Collection. Per Institutional Review Board approval, all participants were provided with a consent form detailing the purpose of the study, the interview procedures, and the safeguards in place to protect their anonymity. The researchers administered three interviews via a one-on-one process through web conferencing or by phone; interviews were digitally recorded and averaged 45 minutes in length. The use of multiple interviews allowed for member checks to occur naturally during data collection, which provided a successively deeper understanding of the mentoring relationships. The following is a sample of interview questions specific to this study.

1. What components are needed in a successful mentoring relationship? Does that change when considering same-race versus cross-race mentoring pairs?
2. Have there been any cultural gaps in your mentoring match? If so, how did you bridge the gap?
3. How would the mentoring relationship be different if the mentoring match was based on same-race pairings?
4. What role did race play in your mentoring relationship?
5. Does it concern you that the IMPACT mentoring program relies on cross-race mentoring pairs? Why or why not?

Great effort was made to build rapport with the participants and to ensure they felt heard and respected. While the interview questions were carefully worded and specified in a particular order, the interviews were conducted in an unstructured manner to create a natural, free-flowing dialogue in which the researchers were active listeners during the interview. Upon completing the interviews, the recordings were transcribed by a third-party transcription service or through an automated service; all recordings were permanently deleted once the transcripts were reviewed and cleaned for errors.

Reflexivity and Positionality. Prior to data analysis, the researchers engaged in reflexivity. Reflexivity is integral in qualitative inquiry, as it forces the consideration and exposure of researcher bias in the data analysis process through analytical memoing and dialogue. A discussion was held on the experiences, beliefs, and values of the benefits, challenges, and realities of cross-race mentoring in engineering academia. Per the guidance of Lincoln and Guba (1985), the positionality of the researchers must be clarified because it directly influences how a study is conducted, as well as the findings and interpretations. The research team included a demographically diverse group of faculty, administrators, and one doctoral student, all with disciplinary homes in educational leadership or engineering. The research team has benefited from formal and informal mentoring, particularly from White men who championed the mentees

as students and faculty and pointed to tangible and intangible benefits from these relationships. The different vantage points allowed for rich dialogue and debate about the researchers' cross-race mentoring experiences. Reflexivity and positionality were purposefully embedded in the research design to ensure emphasis on the participants' rather than the researchers' experiences.

Data Analysis. Inductive data analysis strategies were utilized to explore the perspectives of IMPACT mentoring program mentees and mentors on the keys to successful cross-race mentoring. Silverman's (1993) inductive thematic content analysis technique was employed to search for themes related to the research question. The transcripts were coded individually through three review rounds, leading to 28 unique codes. Next, the researchers collectively cross-referenced the codes and identified five initial themes through consensus. Following consensus-building, the themes were refined for parsimony and to ensure the themes captured the entirety of the data and could be applied broadly. This refinement led to three final themes: (1) self-awareness and empathy create trusting, honest conversations; (2) mentee career advancement must be core to the relationship; and (3) a history of racial allyship from the mentor is required. This method allowed for flexibility and a successfully deeper understanding of what constitutes successful cross-race mentoring relationships when approaching research patterns in inductive ways (Silverman, 1993).

Trustworthiness. Multiple verification strategies ensured the findings were trustworthy (Lincoln & Guba, 1985). To address credibility and confirmability, the researchers diligently followed the analytical method of Silverman (1993) to ensure the integrity of the inductive data analysis process (Patton, 2015). To safeguard transferability, thick, rich descriptions with participant direct quotes were incorporated into the findings (Patton, 2015). Dependability was addressed by evaluating how the themes represented the whole text, as negative confirming evidence was included in the findings (Lincoln & Guba, 1985). Dependability also was achieved by involving several researchers in discerning and evaluating the identified themes through employing multiple feedback loops during the data analysis process and by engaging in reflexivity throughout the data collection and analysis processes.

Limitations. While the study's design attends to uncovering researcher bias through reflexivity, the researchers cannot absolve themselves from confirmation bias potentially affecting the findings and interpretations. We believe strongly in the need to better understand the ways in which to ensure successful cross-race mentoring relationships and their promise for advancing the careers of Black engineering faculty, which could have clouded the researchers' ability to remain open to the possibility that cross-race mentoring is an ineffective mentoring arrangement. All interviewees participated in the IMPACT mentoring program, which may limit the transferability of their experiences to others in different mentoring programs and contexts.

Findings

Theme 1: Self-Awareness and Empathy Create Trusting, Honest Conversations. Both mentees and mentors discussed the importance of trusting, honest conversations as critical to facilitating successful cross-race mentoring relationships. Mentees felt this occurred through self-awareness, and mentors described mentee self-awareness as engendering empathy from the mentors. One mentee indicated, "I think what's key is for the mentee to do their own inventory

of themselves and be honest when communicating with a mentor about the challenges they face." He added, "[my mentor] was a great listener and who helped me think about all the different scenarios going on around me. He was objective, played devil's advocate, but also validated my feelings and experiences." The mentee believed his mentor would not have responded that way if he had not been honest with himself about his challenges and insecurities. Another mentee said it was difficult to initially share his racially charged experiences with colleagues. He quickly learned he would not have received the support he desired had he not spoken his truth:

> The mentee needs to be prepared to speak their truth and share what they've experienced like they talk down to me in meetings, they don't value my opinion, or I say something and they say, "that's wrong," but when someone else says that same thing, "it's brilliant."

Mentees across faculty ranks discussed these experiences as being all too common. When sharing this with their mentors, they felt it was therapeutic to receive acknowledgment and support surrounding these occurrences.

The ability of mentors to own and manage their power in the mentoring relationship was described as a byproduct of mentor self-awareness. A mentee noted,

> I would also love for the mentors to have an understanding and appreciation for the power dynamic. As a mentee, I may have been hesitant to be too frank about my experience, but [my mentor] came with some understanding, so that helped ease our power dynamic. [My mentor] has a lot of power, so it was important that he sought to balance the relationship from the start.

Another mentee indicated her expectation that her mentor is aware she may not desire the same career path as her mentor and would expect advice appropriate to her life context. She said, "I want my mentor to give me advice that applies to me and not advice that helped them get successful. It's really important for mentors to recognize the difference between their path and the mentee's path." Mentees across faculty ranks displayed a strong cognizance that mentors must be aware of these factors. Mentors did not speak of the inherent power dynamic, but they were aware of supporting their mentees in reaching their goals rather than superimposing the mentor's personal goals on the mentee.

Mentors indicated that mentees should be self-aware and share their backgrounds and challenges in order to approach the relationship empathetically. One mentor stated:

> You can empathize with people when you know where they came from and what they've had to go through to get to where they are . . . you don't see color once you see people as people, and their families, what they're struggling through, the work becomes personal.

Similarly, a mentor noted that "an attitude of empathy and sensitivity" is critical to facilitating successful cross-race mentoring. Another indicated mentors must "be open, have conversations. They're our brothers and sisters, and we are their brothers and sisters. It's common sense, just basic humanity. Just be a nice person and listen." All mentors shared that the mentoring relationships helped them learn more about how faculty of color, specifically Black faculty, contend with more than the typical politics of higher education. This growing awareness led them to realize that enhancing the academy's diversity benefits individuals and the engineering field at large.

Theme 2: Mentee Career Advancement Must be Core to the Relationship. Both mentees and mentors shared that mentee career advancement must be core to a successful cross-race mentoring relationship. They acknowledged mentors could support navigating the racial politics of higher education, although emeriti faculty were best positioned to support the mentees' career advancement. One mentee noted, "The emeriti faculty bring a unique perspective to the mentee that often they do not have access to, and they have more discretionary time than senior faculty." Another indicated, "What I've found most helpful is having a mentor who offers wisdom about how to navigate academia and get insider knowledge on how academia really works." Likewise, one mentee said, "[my mentor] told me some secrets and gave me the cheat codes for how to successfully navigate the academy and build a strong career. They know a lot of the backroom deals that can direct someone properly through the academic path." While another shared:

> My mentor helped me with the day-to-day things and built my network with different groups of people by inviting me to events. He even nominated me for an award. Those kinds of networks are hard to break into without a mentor who is well-connected.

Mentees across faculty ranks displayed great appreciation for the ways in which their mentors grew their professional networks and demystified aspects of higher education, particularly regarding tenure and promotion processes.

One mentee indicated that having an external mentor was helpful. She shared, "Talking to someone that is not connected to my university, has no personal bias related to my department, and can clearly give me insight and feedback into what steps I should take has been helpful." Another mentee echoed the value of having an external mentor when she indicated she first shared with her mentor her desire to move into administration and her concern regarding how faculty at her university would view that aspiration. She said, "He really drove it in that I needed to earn full professor status first. I opened up to him because he was outside my university. It was helpful having his feedback, and now I know my next step." All mentees agreed that a retired mentor external to their institutions alleviated the common challenge in mentoring, in which senior faculty must navigate the complex role of mentoring and evaluating.

Mentors believed they were well-positioned to offer career advancement advice, as most had served as department chairs, provosts, and even university presidents during their careers. One mentor noted:

> Being a past department chair, I can share a lot of knowledge from that perspective and not stay in guardrails . . . the university and administration have a lot of protocols to follow, things have gotten very legalistic. I don't have to stay in those guardrails . . . I think it's important that [my mentee] hears that other perspective. So having the perspective of department chairs and deans, in particular, can be very helpful.

Similarly, another remarked, "I play the card of supporting him and, at the same time, helping him to understand the university's position too. I think this a very, very important aspect." The mentors added that they offer a different perspective than senior faculty, which they believed was valuable to the mentees. For instance, one mentor said, "A full professor might have different answers on how to get ahead than I would. I take a more philosophical point of view than somebody having to struggle to get grants and deal with the politics in their department." Mentors expressed their pleasure in offering advice to their mentees from their retiree vantage point, as many described it simply "felt good to give back" through mentoring.

The mentors understood their role of supporting their mentee's career goals and listening rather than directing their mentee's career. One mentor noted:

> I focus on listening to my mentee and asking the right questions instead of giving him advice. In other words, I say if you want to do this, these are the things you need to think about because, ultimately, the mentee needs to decide what is best for them and what are the most important things to tackle. An honest dialogue on what the mentee is hoping to accomplish is what should center the mentoring relationship. So as a mentor, I see my role as asking the right questions. Have you thought about this? And what do you think your next steps are? Things like that. To do this well, you have to genuinely be interested in what your mentee is hoping to accomplish.

Nearly all mentors discussed the importance of their mentees deciding their own course of action in advancing their careers, as indicated by one mentor: "The mentee needs to sift through the advice given and figure out what really applies to them." The mentees appeared to recognize this approach and appreciated the autonomy and freedom to chart their own careers rather than feeling imposed upon.

Theme 3: A History of Racial Allyship from the Mentor is Required. All mentees were adamant that successful cross-race mentoring relationships depend upon mentors possessing a history of racial allyship. One mentee noted:

> Certainly, having a history of championing and advocating for students and faculty of color aids in a successful relationship . . . having an advocate for underrepresented, marginalized groups has to be there . . . I would never have been comfortable working with someone who did not have a track record, history, or prior experience advocating for people of color.

Extending this assertion, another mentee indicated, "Mentors must believe the academy needs to change and that there need to be more diverse people in the academy. If the mentor doesn't necessarily believe that, then how are they going to effectively help?" Several mentees indicated that the mentors must understand racism and how it manifests in higher education. As shared by one mentee, "If a mentor isn't understanding their mentee's experience with racism or how they get judged because of their braids, their hair, or just the way they look, that could affect the relationship." Mentees across faculty ranks discussed the importance of the mentors "walking the walk, and not just talking the talk." They felt they could let their guard down when their mentors had been a part of change efforts at their own institutions.

With all but one of the mentors being White, most were keenly aware that their background and history in working with and advocating for students and faculty of color affected their ability to be an effective cross-race mentor. One mentor shared:

> Over my years as a faculty member and department chair, I took it as a responsibility and privilege to support both students and faculty of color in reaching their educational and career goals. I did that through mentorship but also by changing policies and practices that ultimately limited their entrance into our programs and even changed some of our hiring norms that privileged prioritizing those from institutions like ours.

The mentor, who was the only woman, relied on her own gendered experience in her disciplinary field to consider how racism affects her mentee's career:

> I'm very conscious of racism because of the sexism I experienced in being the first woman as a student in my department and later as an assistant professor. And yes, I can

> tell stories. Sexism was and is still very, very alive and well and affected lots of people, just as racism has and continues to do so.

Additionally, some mentors indicated they did not believe same-race pairings would yield more fruitful mentoring relationships than cross-race pairings. For instance, one mentor shared, "Somebody who comes from a different background may not fully appreciate some of the stresses someone else has to endure or overcome, but I don't think that appreciation is necessarily easier if you are of the same race." In this regard, mentors also shared a sense of duty to mentor faculty of color. They found it unreasonable to expect only senior faculty of color to mentor due to their low numbers and the fact that too much mentoring could interfere with their career trajectories.

Discussion

The purpose of this intrinsic case study (Stake, 1995) was to explore the keys to successful cross-race mentoring identified by IMPACT mentoring program mentees and mentors. A great need exists to better understand that which facilitates successful cross-race mentoring (Thorne et al., 2021; Womack et al., 2020), as it is the standard in the engineering professoriate because of the underrepresentation of senior and emeriti faculty of color in engineering academia. Findings indicate self-awareness and empathy create trusting, honest conversations; mentee career advancement must be core to the relationship; and a history of racial allyship from the mentor is required. These findings reveal the importance of the IMPACT mentoring program creating successful mentoring matches in which both sides demonstrate self-awareness and empathy, focus on mentee career advancement, and mentors possess a keen cognizance of the way in which racism can affect the lives and careers of Black faculty. The findings coincide with and extend the sparse literature on this topic (Davis et al., 2001: Guramatunhu-Mudiwa & Angel, 2017; Mendez et al., 2023; Randel et al., 2021; Thorne et al., 2021; Womack et al., 2020; Zambrana et al., 2015).

The themes provide distinct viewpoints of mentees and mentors engaged in cross-race mentoring relationships. Trusting, honest conversations are known to facilitate successful mentoring relationships (Diggs et al., 2009; Guramatunhu-Mudiwa & Angel, 2017; Petersen et al., 2020; Womack et al., 2020), although less is established on the way in which self-awareness and empathy are critical to efficacious cross-race mentoring relationships (Thorne et al., 2021). When mentee career advancement was the focus, both mentees and mentors felt the relationship was most successful. Research is emerging in this area as to how White males offer unique opportunities for faculty of color to receive career advice and sponsorship to which they likely would not have ready access (Buzzanell et al., 2015; Guramatunhu-Mudiwa & Angel, 2017; Randel et al., 2021; Thorne et al., 2021; Womack et al., 2020; Zambrana et al., 2015). Moreover, little research is explicit on the role of a history of racial allyship from the mentor, which, from this study, is critical to successful cross-race mentoring relationships. Racism can have detrimental career and personal impacts on faculty of color, as well documented in the literature (Cole et al., 2017; Davis et al., 2021; Diggs et al., 2009; Guramatunhu-Mudiwa & Angel, 2017; Randel et al., 2021; Stanley, 2006; Thorne et al., 2021; Zambrana et al., 2015). Therefore, having mentors who understand how racism manifests in the academy structurally and interpersonally is crucial. When mentoring programs are responsive to these realities, cross-race mentoring can be beneficial.

Implications. Implications from this study abound for cross-race mentoring program designers. First, facilitating purposeful and intentional ways for mentees and mentors to develop a greater sense of self-awareness and empathy is critical to yielding trusting, honest conversations. This can occur through training programs that identify career goals, as well as career successes and challenges, and incorporate case studies and experts on the ways racism affects the careers of faculty of color. In addition, goals must be explicit, and a structure must be in place to ensure progress is made on achieving the stated goals, as mentee career advancement is an essential element of any mentoring program. Finally, as is true in any mentoring program, mentor selection and matching are critical to success. In this case, an effective strategy was the recruitment of emeriti faculty who were external to the mentee's institution and had a history of racial allyship.

Future Research. An area for future research and exploration could involve studying if the keys to successful cross-race mentoring relationships identified in this study are specific and unique to the IMPACT mentoring program participants or whether they are transferable to other mentoring programs and relationships. Also, while race and disciplinary background were held constant in this qualitative inquiry, no substantive differences were noted relative to gender or faculty rank in the keys identified. This would be a rich area for deeper exploration into these findings (see McCormack & West, 2006). In addition, exploring differences by other demographic indicators could be of value. Finally, future research should focus on engaging emeriti faculty in the formal mentoring of Black faculty and other faculty of color while increasing their ability to do so with cultural competence and humility.

Conclusion

This intrinsic case study (Stake, 1995) provides a deeper understanding of the keys to successful cross-race mentoring from Black mentees and primarily White male mentors involved in the IMPACT mentoring program. A case study approach was appropriate given the value of generating a better understanding of successful cross-race mentoring relationships in engineering academia, as this will be the likely mentoring arrangement for the near future. The findings indicate self-awareness and empathy create trusting, honest conversations; mentee career advancement must be core to the relationship; and a history of racial allyship from the mentor is required. The importance of being conscious of these factors in the development of future cross-race mentoring programs is critical to ensure efficacious mentoring relationships that provide tangible benefits for the primary benefactor, the mentee.

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