The Chronicle of Mentoring & Coaching,
2024, Vol. 8, No. 1
doi: 10.62935/ri4880

The Chronicle of Mentoring & Coaching

# Transforming Science Research Through Liberatory Race-conscious Mentorship: The BUILD PODER Professional Development Modules

**Jose H. Vargas, José M. Paez, Will Garrow, & Carrie L. Saetermoe**
California State University–Northridge

BUILD is a NIH initiative designed to retain underrepresented undergraduates in biomedicine. Of the 10 BUILD sites, BUILD PODER is the only space-and-place that approaches this initiative through the framework of critical race theory (CRT). A feature of BUILD PODER's path to student empowerment is *liberatory race-conscious mentorship*. Researchers developed, implemented, and evaluated a quintipartite CRT-based antiracist-anticolonial online training program for biomedical educators nationwide. We review the social scientific and historical knowledge used to create these novel mentorship training modules. We describe the modular content and activities. We also report evaluation data obtained during beta-testing and outline how this information helped finalize the product. Discussed are the individual- and institutional-level implications of modularizing the developmental process of liberatory race consciousness.

*Keywords:* critical race theory, liberation psychology, mentorship, pushout problem, race/racism

Acknowledgement: This work is supported by NIH BUILD PODER (Building Infrastructure Leading to Diversity: Promoting Opportunities for Diversity in Education and Research), at California State University, Northridge, RL5GM118975, UL1GM118976 and TL4GM118977.

## Introduction

> Supporting social justice can occur on different levels—from supporting a particular project, to being committed to dismantling a specific form of oppression, to working to change the structures and values which underlie all systems of domination and subordination.
>
> —Diane J. Goodman, 2011, p. 121

Biomedical health science education and practice remain plagued by racism. Several factors contribute to the presence of scientific racism within these spaces. Contemporary peer-reviewed scientific studies bolster the false notion that race is a biological construct capable of explaining ethnic/racial disparities in the manifestation of disease and response to medical interventions (Perez-Rodriguez & de la Fuente, 2017). Knowledge rooted in biological racism influences today's medical education and clinical practices (Tsai et al., 2021). Traditional forms of mentorship play a significant role in the transmission of this invalid knowledge by failing to challenge the dominant ideologies (e.g., race dysconsciousness) that permeate throughout higher education (see Vargas et al., 2024). Traditional mentorship is uncritical and contributes to the *pushout problem*, whereby potential-laden students deidentify from STEM or academia (Vargas et al., 2021). Critical alternatives to the traditional mentorship paradigm, in conjunction with diverse healthcare workforces, are needed to eradicate racism in biomedicine (Saetermoe et al., 2017). Moreover, because racism intersects with other forms of oppression (see *intersectionality*; Crenshaw, 1989, 1991), critical alternatives must be intersectional. Student of color pushout leads to racial and intersectional inequities in the administration of biomedical health science education, which then produce institutional and structural inequities in health science and in the delivery of healthcare to marginalized communities. Regrettably, most institutions of biomedical health science education are unequipped to operate campus cultures wherein students of color can access a culturally-congruent education experience.

Cultural discontinuities between students of color and a *predominantly white* field such as biomedical health science increase the chances of pushout (Vargas et al., 2024; Vasquez-Salgado et al., 2021). This is because educational racisms manifest as recursive institutional-, interpersonal-, and individual-level social phenomena (see Vargas & Saetermoe, 2023). Relationships between educators and students suffer due to race-dysconscious interpersonal transactions nested within larger systems of racial inequity (see Vargas et al., 2021). Liberational and race-conscious styles of mentorship acknowledge the multiple levels of racism that create barriers for students while simultaneously elevating students' experiential knowledge and critical consciousness (see Saetermoe et al., 2017). This article discusses the production of antiracist-anticolonial professional development modules (PDMs) intended to educate mentors in liberatory race-conscious mentorship (LRCM). We describe LRCM and its

origins in the NIH initiative, *Building Infrastructure Leading to Diversity* (BUILD). We also review the social scientific and historical knowledge used to create the PDMs. After covering the PDM content and activities, we report evaluation data gathered through beta-testing and explain how the PDMs were finalized. In line with the principal themes of this special issue of *The Chronicle of Mentoring & Coaching*, we contend that to advance social justice in biomedical health science and healthcare provision, uncritical faculty mentors must embrace LRCM.

## Liberatory Race-conscious Mentorship and NIH BUILD PODER

Mentorship in biomedical health science education is vital to student success (Haverly & Brown, 2022). In Western and post-colonial societies, mentorship is often conceptualized and practiced as a race-neutral, unilateral, and hierarchical activity (van Louw & Waghid, 2008). Western mentorship has its origins in what Brazilian critical educator Paulo Freire (1970/2006) termed the *banking model of education*. In this model, students are treated as empty receptacles who must be filled with the "expertise" of an educator. Freire proposed that hierarchical modes of pedagogy suppress critical thought and students' ownership of knowledge, thus establishing the social conditions for the cultural reproduction of longstanding oppressions. The banking model centers standardized instruction, treats education as a utility for employment, and is neutral, univocal, and apolitical. In contrast, *LRCM* challenges the banking model by leaning on an ethos of social justice. This ethos prioritizes egalitarian relationships and the co-construction of learning conditions that contextualize social problems of living as a means for achieving mutual learning and praxis. Liberational forms of pedagogy emphasize the development of human beings, treat education as a holistic process that is lifelong, and is social-political, multivocal, and activist in character. Research by Camacho et al. (2021) and Moon et al. (in prep.) suggests that LRCM positively predicts science efficacy, science identity, and satisfaction with one's mentor, which can mitigate student pushout.

The practice of LRCM can counter and dismantle mainstream positivist, uncritical, and "bystanderesque" orthodoxies in biomedical education, research, and practice. Notably, BUILD is a Diversity Program Consortium initiative meant to engage underrepresented undergraduates in biomedical fields (DPC, 2023). Among the 10 BUILD sites, BUILD PODER (Promoting Opportunities for Diversity in Education and Research) at California State University-Northridge is the only space-and-place that approaches the Diversity Program Consortium's mission using critical race theory (CRT; see Saetermoe et al., 2017). A CRT foundation is employed to build "poder" (the Spanish noun for "power") by leveraging students' strengths and cultural capital. A feature of BUILD PODER is LRCM (see Saetermoe et al., in prep.). The program's professional development activities demonstrate how mentors can address the racist etiologies of student pushout, institutional inertia, and community-level health inequities. Accordingly, BUILD PODER developed, implemented, and evaluated a quintipartite CRT-, antiracist-, and anticolonial-based online modular training program. The next sections lay out this process.

## Module Conceptualization: Relevant Perspectives

Meaningful interactions with faculty are essential for student success (see Vargas et al., 2021). Positive faculty-student interactions are associated with favorable grades, high grade point averages, educational satisfaction, and retention (Cole, 2008). Few biomedical health science institutions provide culturally-congruent mentorship opportunities to students of color. The absence of LRCM-trained mentors introduces barriers to meaningful interactions and reduces the chances that students of color will enter and persist in biomedicine. Given this sociohistorical backdrop and the need to redress the multiple layers of racism in health science education and practice (see Saetermoe et al., 2017; Vargas & Saetermoe, 2023), BUILD PODER applied educational CRT, anticolonial perspectives, and liberation psychology to develop the PDMs.

### Educational Critical Race Theory

The BUILD PODER program used educational CRT tenets articulated by Solórzano et al. (2005) to inform the faculty development core (see Saetermoe et al., 2017). The five tenets are *race/racism centrality, challenge to dominant ideology, experiential knowledge, interdisciplinary work,* and *social justice*. Saetermoe et al. (in prep.) argue that educational CRT tenets can liberate people from social oppressions that limit their life opportunities (Black et al., 2022; Byars-Winston et al., 2018; Womack et al., 2020). Educational CRT recognizes racism's pervasiveness and counters majoritarian narratives that maintain the status quo. The experiences of oppressed persons and suppressed interdisciplinary knowledges are directed toward education-related social justice aims. To achieve this aim, BUILD PODER enlisted experts in antiracism, anticolonialism, deaf studies, developmental psychology, social psychology, and liberation psychology. This interdisciplinary team collated the LRCM PDM content and corresponding activities.

### Anticolonial Perspectives

The USA is a settler-colonial nation rooted in racist ideologies and respective practices (see Dunbar-Ortiz, 2014). Indigenous peoples were displaced

and replaced by white settlers who benefitted from capitalist systems sustained through chattel slavery. Anticolonial perspectives offer ways to understand and deconstruct the historical and present-day structures of settler colonialism and racism, as well as ways to reconstruct liberatory futures (Getachew & Mantena, 2021). Anticolonialism uncovers "the genealogies in contemporary colonial relationships to learning, knowledge, and knowledge production" (Patel, 2014, p. 360). Exposing the colonial foundations shaping science, teaching, and mentoring creates space for mentors to reevaluate and reconsider traditional approaches. For instance, the Civic Laboratory for Environmental Action Research in Newfoundland uses feminist and anti-colonial methodology to examine how data grounded in indigenous knowledge can address global-scale issues caused by plastic pollution (see Atlantic, 2019). Anticolonial knowledge generates empowerment and openness to new possibilities and opens opportunities to embody LRCM.

## Liberation Psychology

Rooted in critical pedagogy (see Freire, 1970/2006), liberation psychology concerns the role of psychologists and academics in raising *concientización* (social-political consciousness) and abolishing oppression (see Martín-Baró, 1994). For psychologists, Watkins and Shulman (2008) offer four liberational methods to mitigate a system-sustaining habitus: 1) develop social consciousness by unlearning aspects of Eurocentric/North American psychology, 2) question dysfunctional cultural arrangements, 3) change points of view to restore society, and 4) work with oppressed people to resolve longstanding social pathologies. Education psychologists advance similar tenets (see Sánchez et al., 2021). These views align with other quadripartite models proposed by education scholars (see Pewewardy et al., 2018). Researchers from BUILD PODER integrated this literature to construct the *antiracist educator's journey model* (Vargas & Saetermoe, 2023).

## Antiracist Educator's Journey

The antiracist educator's journey model is an amalgamation of several social theories (see Vargas & Saetermoe, 2023). Two key theories underlying the model are *system justification theory* and ecological systems theory (see also Vargas et al., 2021).

### *System Justification Theory*

Support for the status quo is a common human proclivity. (see Jost, 2019; Jost & Banaji, 1994). Advantaged and disadvantaged groups are motivated to defend their unique stakes in the system, regardless of whether defensive actions actually serve the objective interests of one's group or self (Jost et al., 2019). System justification regulates stress, guilt, cognitive dissonance, and uncertainty anxiety, which create the social conditions that tolerate injustice (see Jost & Hunyady, 2005). Research on system justification theory has been useful in revealing nuances in system-serving biases related to ethnicity/race (e.g., Jost et al., 2005; Stroebe et al., 2010). In the educational domain, research on system justification has found that favorable beliefs about the status quo can undermine marginalized students' well-being or academic performance (e.g., Godfrey et al., 2017; O'Brien et al., 2011). Educational theories also demonstrate how system justification shapes the discourses mentors and educators execute to dismiss, ignore, or rationalize unjust educational arrangements (Vargas et al., 2021; Vargas & Saetermoe, 2023). Dominant ideologies justify educational inequity by providing the race-neutral rhetoric necessary to minimize or deny white supremacy. Vargas et al. (2021) identified 10 system-justifying discursive themes. Race-dysconscious mentors deploy rhetorical frames based on ahistoricization, assimilationism, avoidance, color evasion, denialism, equality, individualization, meritocracy, pathologization, and victimization. System-justifying discourses disrupt egalitarian mentor-protégé relationships (see Vargas et al., 2024).

### *Ecological systems theory*

Educational racism in mentorship persists via the recursive relations between individuals and their immediate and distal contexts (see Vargas & Saetermoe, 2023). The main premise of ecological systems theory is that human development unfolds within interactive micro-, meso-, macro-, and temporal-level social systems (see Bronfenbrenner, 1979; Lerner, 2007, 2015; Overton, 1998, 2015). Ecosystems take the form of families, peer groups, social institutions, and societal norms/laws. Ecosystems are not static entities. Their malleability has important implications for the development of (un)productive ethnic/racial identities (see Spencer, 2008; Spencer & Harpalani, 2004). Vargas and Saetermoe argue that most educators are dysconscious toward the racialized ecosystems within education and their own lives. Educators are often unaware of how their own racial socialization has inculcated implicit biases, race-dysconscious assumptions, and *micro-aggressive* expressions. When educators do not recognize the connections between individual- and systemic-level racism (i.e., *ecosystemic racism*), mentor-protégé relationships are jeopardized (Vargas et al., 2021; Vargas et al., 2024).

The antiracist educator's journey model. The antiracist educator's journey is a viable race-conscious solution to the pushout problem in education (see Vargas & Saetermoe, 2023). The BUILD PODER program was indispensable in authenticating the antiracist educator's journey and in advancing the model's humanitarian values (see Saetermoe et al., 2017). To assure health

equity, the antiracist educator's journey justifies applying an ecosystemic lens in the training of biomedical health science mentors. According to Vargas and Saetermoe, the elimination of racial inequities in education requires that educators comprehend and combat ecosystemic racism, or the "multilevel and recursive human events that implicate phenomenology, interpersonal transactions, local institutions, social-political structures, and intergenerational processes in the reproduction of race-based power hierarchies" (p. 4). The antiracist educator's journey lays out a "roadmap" educators can use to self-position themselves within racialized ecosystems and, in turn, counter system-justifying discourses and system-sustaining dominant ideologies (see also Vargas et al., 2021). The model is a guide on how to develop race consciousness and form antiracist identities.

The antiracist educator's journey model guided the development of the LRCM PDMs. The model articulates four phases of antiracist self-liberation, termed *awareness*, *deconstruction*, *reconstruction*, and *praxis* (Vargas & Saetermoe, 2023). The first phase requires that educators become aware of race-dysconscious ideologies within educational ecosystems (see also Vargas et al., 2021). The second phase forces educators to analyze and challenge their racialized beliefs and internalized assumptions around race/racism. The third phase involves internalizing novel antiracist knowledge and rethinking uncritical pedagogies. The final phase is characterized by actions and practices that generate educational justice. To elicit journeys of self-liberation, BUILD PODER constructed modules that mirror the four phases of the antiracist educator's journey. Module content and activities rely on interdisciplinary antiracist-anticolonial knowledge to draw links between ecosystemic racism, system-justifying discourses, and LRCM. The PDMs are intended to be used by faculty who mentor undergraduate and graduate students, teaching and research assistants, and research lab directors and managers.

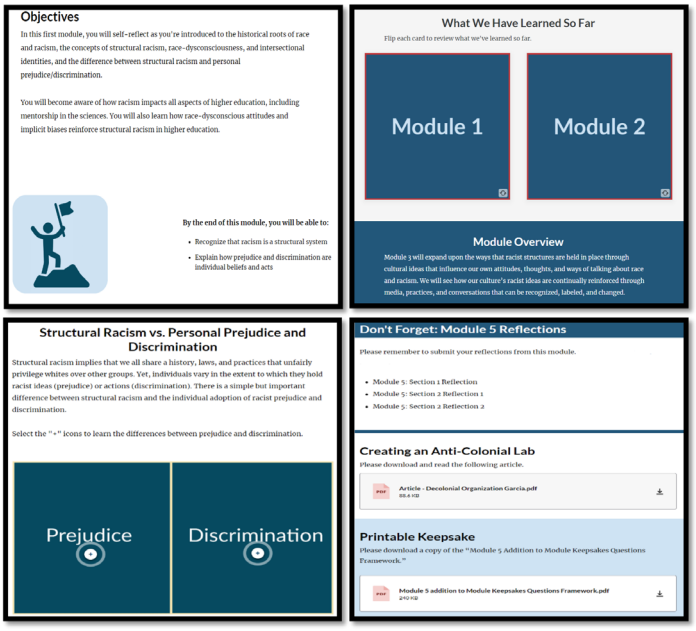
## Module Development

The authors met across several meetings to brainstorm, isolate, obtain, and collate the content for the PDMs. In line with CRT, this endeavor was race conscious, interdisciplinary, and social justice-centered. Each PDM was planned out collectively, although primary responsibility for a module or module section was delegated to the appropriate content expert (e.g., modules addressing colonialism were led by the second author). Regular meetings continued throughout the entire development process to ensure module continuity and coherence. The entire process took place between June 2018 and March 2021.

Notably, the authors recognized that people may struggle applying various concepts brought forth in the modules. It may be particularly challenging for those from majoritarian communities. Despite these realities, the authors worked off the principle that educators must understand their intersectional identities and lived experiences as both dominant and subordinate people in a hierarchical system.

The authors worked with WeLearn, a private company that develops custom educational materials. WeLearn was essential in creating a seamless online training experience for users. The PDMs are accessible through the internet with the aid of a learning management system. Most

**Figure 1**
*Sample Screenshots of the BUILD PODER Professional development modules*



academic institutions use learning management systems (e.g., Canvas) for common functions like course delivery, testing, and grading. To engage users effectively, the PDMs were designed to be self-paced and interactive. Written reflection exercises, videos, and other interactive features were used to avoid the passive experience typical of many training modules. The five primary PDMs contain introductory and concluding sections. Introductory sections present module objectives, expected learning outcomes, refreshers of previous modules, section overviews, and module-specific reflection exercises. Conclusion sections include section summaries, printable keepsakes, reflection exercise reminders, resources for continued learning, and teasers about the subsequent module.

## Module: "Getting Started"

The online course begins with a tutorial-like module. This module is not considered one of the five primary PDMs and is the shortest in the package. The "Getting Started" module has two sections: "Welcome" and "Navigating Your Course." The first section orients users to the graphical user interface and the interactive features of the PDMs. Features include animations, images, quotes, slideshows, and videos. The Welcome section also introduces basic terminology that recurs throughout the other five PDMs and concludes with a brief interactive activity. The second section reviews the course structure, requisite technology and technical knowledge, technology setup, and troubleshooting tips. This section also explains how to navigate the PDMs' interactive features, which involve accordions (i.e., expandable/collapsible menus), tabs, hotspot graphics for image interactions, and process interactives for slideshows. The module ends by explaining how to upload reflection exercises onto users' learning management systems.

## Module 1: Introduction to LRCM

### *Module Content*

The first primary module is an overview of the entire training program and is a prelude to four modules modeled after the antiracist educator's journey. Module 1 includes five main sections. The first section introduces the recurring argument that race is a relatively novel concept in human history and exists only to serve racist power. A briefing on the origins of race and "whiteness" is offered via slideshows and videos about North American colonialism and the legal roots of whiteness. The notion that race is biological is demythologized by illustrating cases of *scientific racism*. Section 2 defines *structural racism,* explains the nature of social structures, and distinguishes structural racism from *prejudice* and *discrimination*. The third section defines two additional recurring concepts: *dysconsciousness* and *intersectionality*. An animated video explains how race elevates white people above other groups. Sections 4 and 5 take information from prior sections and connect the content to mentorship. These two sections cover race-related issues regarding faculty-student ratios and the importance of mentorship. To reinforce the PDMs' recurring arguments, users are able to download and print a 1-page flyer containing a mentor-related vignette and a glossary of five key concepts.

### *Module Activities*

Module 1 incorporates an ungraded Knowledge Check activity in Section 2 and two reflection exercises (located in Sections 3 and 4). The Knowledge Check activity takes the form of a vignette and multiple-choice prompt; the correct answer and an explanation are provided. The first reflection exercise asks users to examine educational data and to write down examples of structural changes that can generate equity. The second exercise requires that users examine equity data from their own institutions; users are then prompted to answer three specific questions about the data.

## Module 2: Awareness—Social Construction of Race and Racism in the USA

### *Module Content*

Module 2 mirrors the antiracist educator's journey's awareness phase (see Vargas & Saetermoe, 2023). The module has three main sections. Section 1 describes white supremacy as the linchpin that holds racism in place. The section provides a well-documented history of racial inequity in the USA. The role of white elites (e.g., political leaders) in legalizing the concept of whiteness is discussed. Section 2 introduces a timeline of important historical events known to have created structural racism. Prior racist practices (e.g., land grabs and redlining) are used as examples to explain how the playing field was never even for persons of color. The section transitions into a discussion of historical racism in education and healthcare. The final section lists five broad strategies for antiracist action and six related "daily practices," which users can download and print in the form of a 1-page flyer.

### *Module Activities*

Module 2 has two "Knowledge Check" activities and one reflection exercise (located in Section 1). The Knowledge Check activities have the same structure and format as the Knowledge Check activity in Module 1. To raise anticolonial awareness, the reflection exercise integrates a "Who Said It?" activity in which white supremacist quotes and corresponding authors are presented via flip cards. The activity illustrates the normalization of genocide on indigenous people by having users

learn about the overt white supremacist quotes of prominent historical political figures. Users are then prompted to write about their thoughts about white supremacy. Users of color are asked to write about the personal impact of racism; white users are asked to write about how they benefit from racism. At the same time, ethnic/racial groups are not monolithic; users can come from many backgrounds. As such, all users are asked to reflect on the origins of their interest in science and how that experience provides a bridge to students who are in the early stages of their science identity development.

### Module 3: Deconstruction—Unlearning the Language of Racist Ideologies

#### *Module Content*

Module 3 mirrors the antiracist educator's journey's deconstruction phase (see Vargas & Saetermoe, 2023). The module contains four sections. Section 1 leans on the CRT tenet regarding dominant ideologies by exposing users to the notion of the *"Good-Bad" Binary Myth*. The myth is used as a rhetorical device to show how ideologies individualize or oversimplify ecosystemic racism as means to deny/justify racist conditions and white privilege. Section 2 examines quotidian race dysconsciousness and the distinct interactions experienced by persons of color and white people in a racist society. Additional concepts reviewed in this section include the *white racial frame* and *segments of knowledge*, which are used to show how people rely on race-dysconscious mental frames and discursive habits. Section 3 draws from ecological systems theory and the *ecosystemic critical mentoring model* (see Vargas et al., 2021) to frame language as "the bridge" between the user and their culture. The last section introduces users to system-justifying discourses. People's motivations to support the status quo are explored. To help users identify discourses that support a racist status quo, users are able to download and print a 1-page flyer containing a glossary of ten common system-justifying discourses.

#### *Module Activities*

Module 3 has two reflection exercises (located in Sections 1 and 4). Reflection Exercise 1 asks users to compose a story about a childhood experience with racism and to respond to five questions. Reflection Exercise 2 uses vignettes to illustrate the 10 system-justifying discourses in Vargas et al. (2021). Users construct counter-narratives using 10 counter-discourses from the antiracist educator's journey (Vargas & Saetermoe, 2023).

### Module 4: Reconstruction—Designing Actions for LRCM

#### *Module Content*

Module 4 mirrors the antiracist educator's journey's reconstruction phase (see Vargas & Saetermoe, 2023). Two sections comprise the module. The first section focuses on *community cultural wealth*, which is framed as an asset-based alternative to deficit-based mentoring. The community cultural wealth approach elevates the accumulated assets and resources that minoritized students/communities use in order to survive in a racially oppressive system (Yosso, 2005). Module 4 covers six community cultural wealth "capitals": *aspirational*, *familial*, *linguistic*, *navigational*, *resistant*, and *social*. The cultural capitals are exemplified via quotes, vignettes, and videos. Section 2 focuses on the six capitals to help the user appreciate the value of antiracist and collaborative relationships with protégés. Users can also download and print a 1-page flyer containing a glossary of the six community cultural wealth capitals.

#### *Module Activities*

Module 4 has two reflection exercises (located in Sections 1 and 2). The first reflection exercise asks users to watch a video of a student sharing their story. Users are prompted to reflect on the community cultural wealth capitals referenced in the student story. The second reflection exercise requires users to read a vignette and apply the community cultural wealth capitals. Both reflection exercises are designed to assist users enact LRCM.

### Module 5: Praxis—Reimagining Research Laboratory Dynamics through LRCM

#### *Module Content*

Module 5 mirrors the antiracist educator's journey's praxis phase (see Vargas & Saetermoe, 2023). The module contains two sections. Section 1 provides examples of antiracist and anticolonial practices/labs (e.g., Particles for Justice). These examples are shown through videos and downloadable articles. Section 2 is devoted almost entirely to two of the three reflection exercises (discussed below); this section also reviews a checklist users can apply when working with protégés. Users can also download and print the 3-page checklist.

#### *Module Activities*

Module 5 has three reflection exercises (located in Sections 1 and 2). Reflection Exercise 1 asks users to write about the power dynamics and historical context of the situations described in the examples of antiracist-anticolonial labs. Users are only required to respond to one of the examples

provided. Reflection Exercise 2 has users role-play as a mentor for a fictitious student. A video of the student's situation is played and users are prompted to answer several questions about how they would respond as a mentor. Reflection Exercise 3 asks users to write down how users intend to apply knowledge from the PDMs in the future.

## Module Evaluation

The last author coordinated efforts to obtain an unbiased critique of the PDMs. The Center for Research Evaluation (hereafter "the Center") at the University of Mississippi was contracted to conduct an independent evaluation (CERE, 2024). The Center has experience in external evaluation and assisting organizations measure the impact of their projects. The Center's evaluation plan and the authors' module finalization plan are discussed below. Data were obtained from two studies. Separate subsections present the design and findings for each study.

### Evaluation Methodology Implemented by the Center

A sequential mixed-methods approach was adopted. Part 1 applied a staggered pretest-posttest nonrandomized quasi-experimental design. Part 2 applied focus group methods. These studies were approved by the Institutional Review Board of the authors' home campus.

#### *Sample*

Participant eligibility was originally based on five criteria: 1) full-time faculty status, 2) tenure-line status, 3) current mentor to students, 4) no prior experience with CRT training, and 5) trained in a STEM field. Due to low recruitment rates, these criteria were abandoned. A convenience sample of *N* 21 diverse educators was obtained. All participants were full-time employees and all but one were faculty (*n* = 15 were tenure-track faculty). The sample was 76.2% (*n* = 16) female and 61.9% (*n* = 13) white. Only 52.4% (*n* = 11) of sampled participants were mentors and 85.7% (n = 18) reported attending no prior CRT-related trainings.

#### *Recruitment*

Participants were recruited from a university in Southern California (SC-U) and a university in Mississippi (Miss-U). At SC-U, a group of newer faculty were sent an invitation to participate in Study 1; this yielded six participants. After relaxing the eligibility criteria, an additional seven participants were recruited, resulting in $N_{SC\text{-}U}$ = 13 participants. These participants were given a $155 gift card; focus group participants were given an additional $20 gift card. At Miss-U, recruitment materials were sent out to faculty members who mentor students in research. Their recruitment efforts yielded $N^{Miss\text{-}U}$ = 8 participants.

#### *Design*

Study 1 used a staggered quasi-experimental design (Figure 1). All participants were given a pretest in October 2021 (i.e., Time 1). In December 2021, SC-U participants were first to receive the intervention (i.e., PDMs); Miss-U participants served as the do-nothing control group. The first posttest was given to all participants in February 2022 (i.e., Time 2). In March 2022, the roles were switched. The last posttest was given to all participants in May 2022 (i.e., Time 3). Using this design, it was possible to examine the long-term effects of the PDMs among participants from SC-U while replicating the experiment with Miss-U. Pretest-posttest indicators included 25 knowledge questions and 18 attitudinal measures about race, mentorship, and situational judgment in racial contexts. Knowledge scores were based on the sum of correct responses. Attitudinal indicators were measured using 7-point Likert scales. Data were analyzed using the Wilcoxon signed-rank test. Analyses were performed on SPSS Version 27.

Eight Study 1 participants expressed an interest in participating in Study 2, which took place between April and May 2022. Two focus groups from SC-U (each with three participants) and one from Miss-U (with two participants) provided data. Focus groups lasted approximately 60 minutes and occurred via Zoom conference call. Participants were asked questions about their reactions to the PDMs, the module content, user experience, PDM length, and recommendations.

**Figure 1**
*Illustration of the Staggered Pretest-Posttest Quasi-experimental Design*

| | Assignment | Time 1 | Intervention | Time 2 | Intervention | Time 3 |
|---|---|---|---|---|---|---|
| **SC-U:** | N | O | X | O | | O |
| **Miss-U:** | N | O | | O | X | O |
| | | Oct. 2021 | Dec. 2021 | Feb. 2022 | Mar. 2022 | May 2022 |

Note. N = "No Random Assignment"; O = "Observation/Measurement"; X = "Treatment" (i.e., exposure to PDMs).

## Study 1: Results and Conclusions

Quasi-experimental results were mixed. Between Time 1 ($M$ = 16.69; $SD$ = 2.18) and Time 2 ($M$ = 20.23; $SD$ = 3.14), SC-U participants reported a significant increase in knowledge, $t(12) = 6.06$, $p = .003$; however, there were no changes in situational judgment. Also, during the same period, Miss-U participants reported significant knowledge increases, $t(7) = 8.83$, $p = .01$. Between Time 2 ($M$ = 1.89; $SD$ = 0.30) and Time 3 ($M$ = 2.38; $SD$ = 0.30), Miss-U participants reported a significant increase in mentoring attitudes, $t(7) = 7.33$, $p = .01$; this was not true among SC-U participants. Also, during the same period, SC-U participants reported significant increases in situational judgment, $t(12) = 2.99$, p = .01. Between Time 1 ($M$ = 2.41; $SD$ = 1.10) and Time 3 (M = 2.79; SD = 0.73), SC-U participants reported a significant increase in favorable race-related attitudes, $t(11) = 2.43$, $p = .04$.

Collectively, these findings make it difficult to directly attribute changes to the PDMs. Both groups saw increases in knowledge between Times 1 and 2, despite the fact that only the SC-U group was exposed to the PDMs. Although SC-U participants' race-related attitudes increased between Times 1 and 3, suggestive of a long-term intervention effect, a more rigorous and randomized experimental design is needed to make this determination. The most favorable evidence of the PDMs' efficacy emerged from the Miss-U group, who were the only participants to report increases in positive mentorship attitudes following exposure to the intervention. At the same time, most participants ($n$ = 17; 81.0%) found the modules to be easily navigable, well-organized, and worth the user's time commitment.

## Study 2: Results and Conclusions

Focus group feedback was generally positive. Although some participants were familiar with some of the PDM content, other aspects of the modules were less familiar or completely novel. For instance, two participants found it useful that the PDMs drew connections between individual-level acts of racism and systemic-level white supremacy. Participants identified four areas in need of improvement. First, participants would have preferred to receive specific action steps in order to integrate CRT in their research laboratories. Second, participants stated that the reflection exercises demanded a substantial amount of work. Relatedly, participants reported a desire to receive feedback on their reflection exercises. A third issue concerned the PDM content. At times, participants found it difficult to understand the purpose of some content or how the material pertains to mentorship. The final recommendation regarded the addition of student stories and concrete exemplars.

Focus group feedback suggested that users may perceive greater module utility and relevance if mechanisms are in place to offer constructive critique of the reflection exercises. In addition to constructive feedback, these mechanisms can take the form of student stories and exemplars that provide clarity on how to include CRT in LRCM practices. Results from Study 2 assisted the authors in developing the final set of PDMs.

## Recommendations Proposed by the Center and Module Finalization

Recommendations from the Center regarded matters around technology, implementation of LRCM, PDM content, and uptake. Regarding technology, some users were not satisfied with the process of submitting reflection exercises. It was recommended that the submission process be streamlined to improve user experience. Additionally, it was stated that the user experience would benefit from the inclusion of hyperlinks/videos. Other users were unsure how to translate the modules into actionable steps. Mechanisms for providing mentoring strategies and feedback were desired. The workload associated with the reflection exercises was also an issue; the Center proposed a reduction in load. In terms of PDM content, the main advice provided by users concerned the integration of more current information and examples. A final Center recommendation pertained to PDM uptake by biomedical educators and institutions. Users reported that adoption of the PDMs would be more likely if the modules included more scenarios involving students and if the disconcerting aspects of the PDMs were balanced with more positive content.

Many of the aforementioned suggestions were considered when finalizing the PDMs. To help users apply the module content in real-world situations, Module 5 was modified to include specific suggestions. A downloadable handout is available to illustrate actions that are relevant across numerous contexts (e.g., initial meetings; discussion of graduate programs). To decrease workload, the number of mandatory reflection exercises was reduced. In the final version, each PDM can be completed within 45 minutes to 1 hour. Moreover, a hybrid model that combines the PDMs with day-, week-, or month-long in-person or virtual meetings is possible and can provide opportunities to receive feedback and additional mentoring ideas (see also ISTP, 2024).

## Limitations and Future Directions

With regard to the evaluation of the PDMs, two major design constraints may explain the mixed findings. First, sample sizes were extremely small and resulted in low statistical power. Empirical studies with larger sample sizes are needed to provide better quantitative estimates of the PDMs' short- and long-term efficacy. Larger samples would also permit for the analysis of data disaggregated by important social factors like race, sex, age, and class. Second, owing to difficulties in recruitment and the use of convenience sampling,

self-selection bias may have been high. That is, participants may have already held relatively favorable attitudes and knowledge, resulting in ceiling effects. Additional experiments with larger and diverse samples are needed to properly evaluate the PDMs' utility.

Focus group feedback has informed future planning around the PDMs' applications, as well as related research. One endeavor already under way involves community learning circles that facilitate reciprocal knowledge- and connection-building as users engage with the PDMs. In this 12-week hybrid professional development course, the PDMs are combined with community learning circles devoted to antiracism and establishing cultures of relational accountability that extend beyond short-term and individual-level outcomes. Community learning circles meet via synchronous Zoom meetings that are facilitated by the second and third authors. Both authors—along with the fourth author—also provide constructive and critical feedback regarding users' reflection exercises. Meanwhile, the first author is running a longitudinal quasi-experiment with eight time points, in which the goal is to measure the immediate attitudinal and cognitive impact of module exposure during the 12 weeks of the course (Times 1-6) and the behavioral impact of the PDMs approximately three- and six-months post-exposure. This research can help validate the utility of the PDMs in developing educators' race consciousness and antiracist identities.

## Discussion

Dominant ideologies and ahistoricism embedded within traditional mentorship contribute to the pushout problem by reproducing inequitable ecosystems steeped in racism. In biomedicine and health science, cultural discontinuities between students of color and predominately-white spaces cultivate race-dysconscious learning conditions. As such, traditional mentorship restricts the desires, hopes, and imaginations of students of color, who possess the community cultural wealth needed to mete out equity in the delivery of healthcare to marginalized communities. An approach like LRCM offers a promising alternative that aims to transform institutions through critical consciousness, praxis, and the establishment of a culture of relational accountability.

### Critical Consciousness and Praxis

The antiracist educator's journey provided a suitable model to develop LRCM-based PDMs. The phases of awareness, deconstruction, reconstruction, and praxis capture the processes that promote race consciousness development and that lead to individual- and institutional-level transformation. Evaluation data indicated that the PDMs can have a positive impact on attitudes about race and mentorship, although further research should be conducted to ascertain the impact of the PDMs on actual mentorship behavior. A shift in mindset—from one that positions faculty above students to one that values an active interrogation of power and privilege—offers a path toward liberation. Of course, due to limitations in the evaluation data, it cannot be said definitively that participants developed novel liberational mindsets; further investigations with larger samples are needed to empirically examine this claim. Still, we can reasonably extrapolate from the extant literature on human psychology that mentors who embrace LRCM-based practices may begin to navigate painful conversations about the ecosystemic legacies of settler-colonialism, racism, and oppression (see Vargas & Saetermoe, 2023). It is also plausible that practices based on LRCM can create affirming and validating spaces to collectively reflect, reexamine, reconsider, and reclaim suppressed histories and cultural practices. A vital component of praxis is solidarity. The antiracist educator's journey and LRCM are tools mentors can utilize to establish a sense of togetherness and "we-ness" with protégés.

### Relational Accountability

In addition to raising critical consciousness and promoting praxis, the LRCM PDMs represent a call to accountability within biomedical health science. The antiracist educator's journey and LRCM aim to bring educators and students into relationships rooted in race consciousness and empowerment. To sustain these relationships, it is necessary to recognize the relational dynamics of one's own power and privilege. *Relational accountability* is "a process of systematically bringing relationships into consciousness and becoming accountable with, for, and to them" (Wilson, 2013, p. 314). Relationally accountable mentors can bridge the cultural discontinuities that pushout students of color from biomedicine and other STEM fields. Indeed, focus group feedback reflects relational accountability and, specifically, a willingness among mentors and educators to move beyond passive learning about systemic oppression and into active group-based learning centered on social transformation.

## Conclusion

Liberational journeys and LRCM pave inroads that lead to self-transformation, relational accountability, the dissolution of the banking model of education, and the normalization of social justice-oriented pedagogy. At the same time, and in light of the personal stakes, resistance to the status quo is frightening, if not paralyzing. The comfort of stasis is a fierce temptation. Educators and students have the power to transcend this robust force, nonetheless. Both must negotiate a new social contract. To advance social justice in biomedicine and health science, educators must embrace LRCM. The LRCM PDMs are valuable tools for educators taking the journey to develop their

own race consciousness and antiracist identity. Mentors must accept how ecosystemic racism limits the academic and life opportunities of students of color. Actions grounded in anything less than this self-reconciliation amount to "social justice theatre" rather than genuine antiracist praxis.

## Additional Acknowledgements

The authors would like to thank Dr. Que-Lam Huynh (who was instrumental in overseeing the content of all of the modules to ensure continuity and quality), Dr. Patchareeya P. Kwan (for her coordination with WeLearn), and Dr. Shannon Sharp (for her invaluable expertise in conducting the independent evaluation for this project). We also acknowledge the Health Equity Research and Education (HERE) Center for their support of this research. The HERE Center is an antiracist organization that works to diversify research and education. Lastly, we acknowledge the anonymous reviewers of this article.

**Disclosure Statement:** No potential conflict of interest was reported by the authors.

## References

Atlantic, The. (2019, June 13). 'Recycling is like a band-aid on gangrene' [Video]. YouTube. https://www.youtube.com/watch?v=QgLKoJZ0dHw&t=6s

Black, S., Byars-Winston, A., Cabrera, I., & Pfund, C. (2022). Enhancing research mentors' cultural awareness in STEM: A mentor training intervention. *UI Journal, 13*(1), 1-20. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10112533/pdf/nihms-1882297.pdf

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design.* Harvard University Press.

Byars-Winston, A., Womack, V. Y., Butz, A. R., McGee, R., Quinn, S. C., Utzerath, E., Saetermoe, C. L., & Thomas, S. B. (2018). Pilot study of an intervention to increase cultural awareness in research mentoring: Implications for diversifying the scientific workforce. *Journal of Clinical and Translational Science, 2*(2), 86-94. https://doi.org/10.1017/cts.2018.25

Camacho, T. C., Vasquez-Salgado, Y., Chavira, G., Boyns, D., Appelrouth, S., Saetermoe, C., & Khachikian, C. (2021). Science identity among Latinx students in the biomedical sciences: The role of a critical race theory-informed undergraduate research experience. *CBE Life Sciences Education, 20*(2), 1-10. https://doi.org/10.1187/cbe.19-06-0124

Capper, C. A. (2015). The 20th-year anniversary of critical race theory in education: Implications for leading to eliminate racism. *Educational Administration Quarterly, 51*(5), 791-833. https://doi.org/10.1177/0013161x15607616

Center for Research Evaluation [CERE]. (2024). Center for research evaluation. https://cere.olemiss.edu/

Cole, D. G. (2008). Constructive criticism: The role of student-faculty interactions on African-American and Hispanic students' educational gains. *Journal of College Student Development, 49*(6), 587-605. https://doi.org/10.1353/csd.0.0040

Crenshaw, K. (1989). Demarginalizing the intersection of race and sex: A Black feminist critique of antidiscrimination doctrine, feminist theory, and antiracist politics. *University of Chicago Legal Forum, 1989*(1), 139-167. https://doi.org/10.4324/9780429500480-5

Crenshaw, K. (1991). Mapping the margins: Intersectionality, identity politics, and violence against women of color. *Stanford Law Review, 43*(6), 1241-1299. https://doi.org/10.2307/1229039

Crenshaw, K., Gotanda, N., Peller, G., & Thomas, K. (Eds.) (1995). *Critical race theory: The key writings that formed the movement*. The New Press.

[DPC] Diversity Program Consortium. (2023). BUilding Infrastructure Leading to Diversity. Retrieved from https://diversityprogramconsortium.org/dpc/consortium-members/build

Dunbar-Ortiz, R. (2014). *An Indigenous peoples' history of the United States*. Beacon Press.

Freire, P. (1970/2006). The banking model of education. In E. F. Provenzo (Ed.), *Critical Issues in Education: An anthology of readings* (pp. 105–117). Sage Publications.

Getachew, A., & Mantena, K. (2021). Anticolonialism and the decolonization of political theory. *Critical Times, 4*(3), 359-388. https://doi.org/10.1215/26410478-9355193

Godfrey, E. B., Santos, C. E., & Burson, E. (2017). For better or worse? System-justifying beliefs in sixth-grade predict trajectories of self-esteem and behavior across early adolescence. *Child Development, 90*(1), 180-195. https://doi.org/10.1111/cdev.12854

Haverly, C., & Brown, B. A. (2022). Mentoring across differences in science education: Applying a brokering framework. *Science Education, 106*(5), 1135-1148. https://doi.org/10.1002/sce.21720

[ISTP] Inclusive STEM Teaching Project. (2024). Welcome to the inclusive STEM teaching project! https://www.inclusivestemteaching.org

Jost, J. T. (2019). A quarter century of system justification theory: Questions, answers, criticisms, and societal applications. *British Journal of Social Psychology, 58*(2), 263-314. https://doi.org/10.1111/bjso.12297

Jost, J. T., Badaan, V., Goudarzi, S., Hoffarth, M., & Mogami, M. (2019). The future of system

justification theory. *British Journal of Social Psychology, 58*(2), 382-392. https://doi.org/10.1111/bjso.12309

Jost, J. T., & Banaji, M. R. (1994). The role of stereotyping in system-justification and the production of false consciousness. British *Journal of Social Psychology, 33*(1), 1-27. https://doi.org/10.1111/j.2044-8309.1994.tb01008.x

Jost, J. T., & Hunyady, O. (2005). Antecedents and consequences of system-justifying ideologies. *Current Directions in Psychological Science, 14*(5), 260-265. https://doi.org/10.1111/j.0963-7214.2005.00377.x

Jost, J. T., Kivetz, Y., Rubini, M., Guermandi, G., & Mosso, C. (2005). System-justifying functions of complementary regional and ethnic stereotypes: Cross-national evidence. *Social Justice Research, 18*(3), 305-333. https://doi.org/10.1007/s11211-005-6827-z

Lerner, R. M. (2007). Developmental science, developmental systems, and contemporary theories of human development. In R. A. Lerner (Ed.), *Handbook of child psychology: Vol. 1, Theoretical models of human development* (6th ed., pp. 1-17). Wiley.

Lerner, R. M. (2015). Promoting positive human development and social justice: Integrating theory, research and application in contemporary developmental science. International *Journal of Psychology, 50*(3), 165-173. https://doi.org/10.1002/ijop.12162

Martín-Baró, I. (1994). *Writings*. Harvard University Press.

Moon, S., Guan, S.-S. A., Vargas, J. H., Lin, J. C. P., Kwan, P., Saetermoe, C. L., Flores, G., & Chavira, G. (in prep.). Critical mentorship in undergraduate research experience builds science identity and self-efficacy. *International Journal of Science and Mathematics Education.*

O'Brien, L. T., Mars, D. E., & Eccleston, C. (2011). System-justifying ideologies and academic outcomes among first-year Latino college students. *Cultural Diversity and Ethnic Minority Psychology, 17*(4), 406-414. https://doi.org/10.1037/a0025436

Overton, W. F. (1998). Developmental psychology: Philosophy, concepts, and methodology. In W. Damon (Editor-in-Chief) & R. M. Lerner (Vol. Ed.), *Handbook of child psychology: theoretical models of human development* (Vol. 1, 5th ed., pp. 107-187). Wiley.

Overton, W. F. (2015). Process and relational developmental systems. In W. F. Overton & P. C. Molenaar (Eds.), *Theory and method: Handbook of child psychology and developmental science* (Vol. 1, 7th ed., pp. 9-62). John Wiley & Sons.

Patel, L. (2014). Countering coloniality in educational research: From ownership to answerability. *Educational Studies, 50*(4), 357-377. https://doi.org/10.1080/00131946.2014.924942

Perez-Rodriguez, J., & de la Fuente, A. (2017). Now is the time for a postracial medicine: Biomedical research, the National Institutes of Health, and the perpetuation of scientific racism. *American Journal of Bioethics, 17*(9), 36-47. https://doi.org/10.1080/15265161.2017.1353165

Pewewardy, C. D., Lees, A., & Clark-Shim, H. (2018). The transformational indigenous praxis model: Stages for developing critical consciousness in indigenous education. *Wicazo Sa Review, 33*(1), 38-69. https://doi.org/10.5749/wicazosareview.33.1.0038

Saetermoe, C. L., Chavira, G., Khachikian, C. S., Boyns, D., & Cabello, B. (2017). Critical race theory as a bridge in science training: The California State University, Northridge BUILD PODER program. *Biomedical Central Proceedings, 11*(S12), 41-55. https://doi.org/10.1186/s12919-017-0089-2

Saetermoe, C. L., Vargas, J. H., Paez, J., & Garrow, W. (in prep.). Liberatory race-conscious mentorship practices: Collaborating for change. *Action in Teacher Education*.

Sánchez, B., Anderson, A. J., Weiston-Serdan, T., Catlett, B. S. (2021). Anti-racism education and training for adult mentors who work with BIPOC adolescents. *Journal of Adolescent Research, 36*(6), 686-716. https://doi.org/10.1177/07435584211043288

Solórzano, D. G., Villalpando, O., & Oseguera, L. (2005). Educational inequities and Latina/o undergraduate students in the United States: A critical race analysis of their educational process. *Journal of Hispanic Higher Education, 4*(3), 272-294. https://doi.org/10.1177/1538192705276550

Spencer, M. B. (2008). Phenomenological and ecological systems theory: Development of diverse groups. In W. Damon & R. M. Lerner (Eds.), *Child and adolescent development: An advanced course* (pp. 696-740). John Wiley & Sons.

Spencer, M. B., & Harpalani, V. (2004). Nature, nurture, and the question of "How?": A phenomenological variant of ecological systems theory. In C. Garcia-Coll, K. Kearer, & R. Lerner (Eds.), *Nature and nurture: The complex interplay of genetic and environmental influences on human behavior and development* (pp. 53-77). Erlbaum.

Stroebe, K., Barreto, M., & Ellemers, N. (2010). Experiencing discrimination: How members of disadvantaged groups can be helped to cope with discrimination. *Social Issues and Policy Review, 4*(1), 181-213. https://doi.org/10.1111/j.1751-2409.2010.01021.x

Tate, W. F. (1997). Critical race theory and education: History, theory and implications. *Review of Research in Education, 22*, 195-247. https://doi.org/10.2307/1167376

Tsai, J., Lindo, E., & Bridges, K. (2021). Seeing the window, finding the spider: Applying critical race theory to medical education to

make up where biomedical models and social determinants of health curricula fall short. *Frontiers in Public Health, 9*. https://doi.org/10.3389/fpubh.2021.653643

van Louw, T., & Waghid, Y. (2008). A deliberative democratic view of mentorship. *South African Journal of Higher Education, 22*(1), 207-221. https://doi.org/10.4314/sajhe.v22i1.25782

Vargas, J. H., Paez, J. M., Vasquez-Salgado, Y., Garrow, W., & Saetermoe, C. L. (2024). Eradicating dominant ideologies in higher education: The responsibility of campus leadership in developing a culturally-congruent education experience. *Journal of Higher Education Policy and Management*, 1-21. https://doi.org/10.1080/1360080X.2024.2333594

Vargas, J. H., & Peet, J. Z. (2024). The first primer for the QuantCrit-curious critical race theorist or psychologist: On intersectionality theory, interaction effects, and AN(C)OVA/regression models. *Journal of Social Issues, 80*.

Vargas, J. H., & Saetermoe, C. L. (2023). The antiracist educator's journey and the psychology of critical consciousness development: A new roadmap, *Educational Psychologist, 59*(1), 1-22. https://doi.org/10.1080/00461520.2023.2243329

Vargas, J. H., Saetermoe, C. L., & Chavira, G. (2021). Using critical race theory to reframe mentor training: Theoretical considerations regarding the ecological systems of mentorship. *Higher Education, 81*(5), 1043-1062. https://doi.org/10.1007/s10734-020-00598-z

Vasquez-Salgado, Y., Greenfield, P. M., & Guan, S.-S. A. (2021). Home-school cultural value mismatch: Antecedents and consequences in a multi-ethnic sample transitioning to college. *Frontiers in Psychology, 12*. https://doi.org/10.3389/fpsyg.2021.618479

Watkins, M., & Shulman, H. (2008). *Toward psychologies of liberation: Critical theory and practice in psychology and the human sciences.* Palgrave Macmillan. https://doi.org/10.1007/978-0-230-22773-6

Wilson, S. (2013). Using indigenist research to shape our future. In M. Gray, J. Coates, M. Yellow Bird, & T. Hetherington (Eds.), *Decolonizing Social Work I* (pp. 311-322). Ashgate Publishing.

Womack, V. Y., Wood, C. V., House, S. C., Quinn, S. C., Thomas, S. B., McGee, R., & Byars-Winston, A. (2020). Culturally aware mentorship: Lasting impacts of a novel intervention on academic administrators and faculty. *PLoS ONE, 15*(8), 1-17. https://doi.org/10.1371/journal.pone.0236983

Yosso, T. J. (2005). Whose culture has capital? A critical race theory discussion of community cultural wealth. *Race, Ethnicity and Education, 8*(1), 69-91. https://doi.org/10.1080/1361332052000341006

## About the Authors

**Dr. Jose H. Vargas** is a social psychologist, theorist, and methodologist at California State University, Northridge. He earned his doctorate from the University of Nevada, Reno. His latest research focuses on the role of race-dysconscious discourses in the reproduction of inequitable and discriminatory educational ecosystems.

**Dr. José M. Paez** is an Assistant Professor of Social Work at California State University, Northridge (CSUN). He earned his Ed.D. from CSUN in 2020. His research interests include liberation-based healing, decoloniality, and intersectionality in social work education.

**Dr. Will Garrow** holds a PhD from Gallaudet University. He was first introduced to the Deaf community through snowboarding; he has been very involved with the Deaf community ever since. His research and activism focus on how the intersectionality of audism and other isms impact our society and on how communities use Community Cultural Wealth to resist various forms of oppressions.

**Dr. Carrie L. Saetermoe** is a Professor of Psychology at California State University, Northridge. She has been Principal Investigator of several grants from the National Institutes of Health. She weaves contextualism, critical race theory and liberation psychology into a foundation for imagining new ways of building educational equity that include all voices and innovative ideas.