

Higgs, J. M., Athanases, S. Z., Williams, A. P., Martinez, D. D., Sanchez, S. L. (2021). Amplifying historically marginalized voices through text choice and play with digital tools: Toward decentering whiteness in English teacher education. *Contemporary Issues in Technology and Teacher Education*, 21(3), 583-612.

# **Amplifying Historically Marginalized Voices Through Text Choice and Play With Digital Tools: Toward Decentering Whiteness in English Teacher Education**

Jennifer M. Higgs, Steven Z. Athanases, Alexis Patterson Williams,  
Danny C. Martinez, & Sergio L. Sanchez  
*University of California, Davis*

This article reports on a case study of an English language arts (ELA) teacher education course that prioritized amplification as a method to decenter whiteness in English teacher preparation. The researchers demonstrate how they engaged in designing a course that aimed to use interactive digital technologies and multimodal texts to amplify racially and ethnically marginalized voices in ELA preservice education. Design principles that facilitated amplification included saturation of the learning environment with mediational resources and tools (Gutiérrez & Vossoughi, 2010) and the notion of “low floor and wide walls” (Resnick & Silverman, 2005). The analysis revealed ways in which the course design supported engagement with culturally sustaining pedagogies and the amplification of authors, literary characters, and preservice teachers from historically marginalized groups. Concrete examples are provided of intentional design decisions and course features that opened up opportunities for preservice teachers to engage in discourse that foregrounded identities related to race, ethnicity, language, and gender/sexual orientation.

Fifteen English preservice teachers (PSTs) were seated at three different tables of five, each group focused on exploring resources to enrich discussion of *Orphan of Aztlán*, a poem written and performed by Chicano artist Luis Alfaro. The poem explores tensions in the speaker's identities as a Queer Chicano, and both the print text and Alfaro's video performance were superimposed on elaborate murals painted on a city wall. One group of PSTs read about intersectionalities, the second explored the contested history of Aztlán as an idealized homeland, and a third group searched online for examples of Chicano murals in Los Angeles.

Following these small group activities, members of each group joined one of two discussion circles: the face-to-face "inner circle" or the digital "outer circle" of Backchannel, an online synchronous discussion tool. The inner circle engaged in an oral discussion of the poem while the outer circle initiated a separate discussion about the poem through written interaction.

Nora, a biracial woman of Chinese descent, assumed a space in the inner circle. As discussion of the poem ensued, she hypothesized that some of the murals she explored may be telling a story that "other forms of text fail to include." She said, "I'm just thinking [the murals are] the literacy form... And history, essentially. If your history is not being taught, the community is providing textbooks in the form of very, very intricate art. These are astounding portraits." Nora dignified the murals as a *literacy form*, identifying how the visual images represent ideas and stories multimodally. She also added a critical dimension, suggesting that the murals are needed "if your history is not being taught."

Carmen, a Latina, assumed a place in the outer circle. Like Nora, she noted cultural artifacts in the murals and shared critical reflections in Backchannel chat. During discussion, one of her peers in the inner circle wondered about the t-shirt Alfaro wore in the video, which included a pink triangle and the phrase "Silence = Death."

The instructor, gay-identified and savvy about this history, refrained from comment, wondering what the group might say. Even though she was in the Backchannel group, Carmen eagerly raised her hand and asked if she could respond orally to her classmate's question about Alfaro's shirt. The instructor nodded and invited Carmen to proceed. She described how during a Holocaust unit, she discussed with her students Elie Wiesel's argument that "the world was silent and that's why so many millions of people were killed."

Carmen and her students also discussed the labeling of LGBTQ+ people "during the Holocaust [with a] pink triangle." Carmen contributed numerous knowledges to the Alfaro discussion: silence resulting in deaths during the Holocaust and "Silence = Death" on a pink triangle, a motto used by the gay community at protests against White House silence during the AIDS epidemic.

As the only member of the class knowledgeable about the pink triangle imagery, Carmen moved from behind the screen in Backchannel to assert

her information in the face-to-face conversation. Her movement between the class discourse spaces brought relevant critical knowledge to the discussion, and it also resulted in some reflection on the affordances and constraints of face-to-face and digital discourse for classroom communication.

This scene was from a university-based teacher inquiry course that worked to infuse texts by and about people of color to decenter whiteness in the curriculum. We share this glimpse of Nora and Carmen's activities in the inner and outer circles to highlight how they, along with other PSTs of color in their class, navigated different discourse spaces to explore texts authored by people of color and to share their own culturally rich knowledge and critical perspectives.

This article reports our examination of ways in which texts and digital tools created opportunities to amplify the voices of people of color in the teacher inquiry course. We first theoretically and empirically situate the design of our work with PSTs. We then highlight three PSTs from marginalized groups whose voices were amplified through exploration with digital tools.

### **Amplifying Historically Marginalized Voices in English Teacher Education: What's at Stake**

Developing preservice teachers' critical consciousness is an ethical obligation that teacher educators cannot take lightly. As equity- and social justice-oriented teacher educators have asserted, a primary purpose of university teacher preparation programs must be to equip future educators with mindsets and practices that "cultivate civility, empathy, cultural humility, and authentic caring" (Carter Andrews et al., 2019, p. 4).

Key to this work is resisting whiteness in teacher education as normative by centering and amplifying the perspectives and lived experiences of teachers, students, and families from historically marginalized communities (e.g., Annamma & Winn, 2019; Carter Andrews et al., 2021; Sleeter, 2017; Souto-Manning, 2019). By amplifying, we refer to practices that seek to turn up the volume of voices often sidelined or silenced in education.

As calls to decenter whiteness in teacher education have become more urgent, equity-oriented English educators have similarly pushed for a new vision of English language arts (ELA) teacher education that advances consequential learning and social transformation through antiracist pedagogies (e.g., de los Ríos et al., 2019; Martinez, 2017; Winn, 2013). We extend these calls by attending to the role that technology can play in organizing learning designs that intentionally promote the amplification of nondominant voices (Garcia, 2019; Higgs et al., 2021; Mirra, 2018; Morrell, 2015). While the move to upend colonizing English education practices is gaining traction (e.g., Baker-Bell, 2020; de los Ríos et al., 2019; Johnson, 2018), more research is needed to articulate designs that can help PSTs use and make sense of digital tools to develop antiracist and culturally sustaining pedagogies (CSP) and stances.

This article reports on a case study of an ELA teacher education course that prioritized amplification as a method to decenter whiteness in English teacher preparation. We demonstrate how a team of teacher educators (the authors) engaged in designing a course that aimed to use digital technologies and multimodal texts to amplify racially and ethnically marginalized voices in ELA preservice teacher education.

Guiding design principles that facilitated this process of amplification included saturation of the learning environment with mediational resources and tools (Gutiérrez & Vossoughi, 2010) and the notion of low floor and wide walls (Papert, 1980; Resnick & Silverman, 2005). More specifically, we saturated the learning environment with digital tools that fostered PSTs' self-reflection and collective sharing with peers and multimodal texts that centered the voices and experiences of people of color. We also sought to foster an inclusive and exploratory approach to learning by integrating the digital tools in ways that provided easy points of entry (low floor) and welcomed a diversity of voices and learning pathways (wide walls). The following questions guided our analysis:

- RQ1: In what ways did the course design create opportunities for PSTs to explore CSP and engage with amplification of authors and literary characters of color?
- RQ2: In what ways did the course design create opportunities for amplification of racially and ethnically marginalized voices in an ELA preservice education course?

### **Perspectives Guiding Course Design**

Decades of critical, asset-based pedagogical research have fought to decenter whiteness in educational contexts, from foundational articulations of culturally relevant pedagogy (Ladson-Billings, 1995), funds of knowledge (Moll et al., 1992), cultural modeling (Lee, 2001), and the third space (Gutiérrez et al., 1995) to the next-generation construct of culturally sustaining pedagogies (Paris, 2012). CSP seeks to shift the field from its preoccupation with the white gaze and move toward pedagogies that center and work to sustain the practices of communities of color (Paris & Alim, 2014).

We built on this tradition of research by exploring how the notion of amplification can enrich the learning experiences of preservice ELA teachers from historically marginalized communities. Our vision for the course was especially influenced by the CSP model, which positions "linguistic, literate, and cultural pluralism as part of the democratic project of schooling" (Paris, 2012, p. 93). CSP views this pluralism as key to schooling that contributes to positive social transformation, and it makes an explicit commitment to valuing and sustaining the practices, perspectives, and ways of being of students and communities of color who have been and continue to be damaged and erased through classroom learning.

In its refusal to foreground whiteness, CSP prioritizes the knowledge-ways and practices of communities of color. We believe that the work of CSP

begins with teacher education, and we take seriously the challenge of following through with teacher education curricular design (Richmond et al., 2016). In the course described here, a key goal was to communicate to PSTs the importance of a culturally sustaining stance and to organize learning opportunities that would support the development of this stance.

Despite the influence that critical pedagogies have had on modern conceptualizations of education, a disconnect remains between these robustly developed frameworks and their implementation in everyday class settings (Jackson, 2021). More research is needed to identify how critical educators design for and enact their commitments to humanizing and culturally sustaining pedagogical practices and how they leverage tools to support social justice orientations to teaching and learning (Bang & Vossoughi, 2016; Martinez, 2017; Winn, 2013) – not only in K-12 settings but in university-based teacher education courses.

Additionally, given the near ubiquitous role of digital technologies in all areas of modern life, critical teacher educators' uses of digital tools to prioritize social justice and equity in their courses is a topic of increasing interest that requires further study. Understanding how teacher education courses can design critical, culturally situated classroom and field experiences with digital technologies is paramount to preparing teachers who are "informed actors engaged with political issues" (Carter Andrews et al., 2018, p. 114) and attuned to changing contexts of teaching and learning.

The next section includes a description of scholarship that guided our team approach to the work of decentering whiteness in ELA teacher education through amplification of people of color authors and literary characters and the voices of racially and ethnically marginalized PSTs.

### **Amplification and Decentering Whiteness in Teacher Education**

A key component of decentering whiteness in educational contexts is amplifying historically marginalized voices and presenting counterstories that disrupt dominant narratives (Harper & Davis, 2012; Kinloch et al., 2020; Kroll, 2008; Patel, 2016; Sleeter, 2017; Smith, 2021; Solórzano & Yosso, 2002). Teacher educators who prioritize the work of decentering whiteness as they prepare preservice teachers and support in-service teachers seek to counter "the normative culture of Whiteness in teacher education and the perpetuation of its oppressive and debilitating impact on program design and implementation, pedagogy, and community interactions and partnerships" (Carter Andrews et al., 2021, p. 134).

Amplifying the voices of those marginalized in education and teacher education specifically requires a reenvisioning of what these communities represent – that is, a departure from deficit views of struggling communities toward views of robust communities brimming with community cultural wealth (Yosso, 2005), varied funds of knowledge (Moll et al., 1992), and radical possibilities that offer epistemic counternarratives (Carter Andrews et al., 2021).

Amplification also requires intentional pedagogical design choices. In particular, the selection and use of varied texts in courses ensures that students have sustained “encounters with the voices and perspectives of people of color” (Smith & Tuck, 2016, p. 23) and helps communicate that social justice pedagogy is a priority for all educators and not just a concern for people of color. Multiple voices represented multimodally (for example, through written and oral narratives, visual art, and music) can engage learners in “(alter)narratives” of marginalized people that communicate epistemologies and ethical systems that challenge the “master narrative” of white supremacy (Kroll, 2008). Presenting the voices and lived realities of people of color through a range of media can encourage critical conversations that decenter whiteness.

### **Saturation of the Course With Mediational Tools**

Our team foregrounded equity as we considered new design elements for the course (Gutiérrez & Jurow, 2016). To create equity-oriented and meaningful change in the learning environment, we committed to “saturating the learning environment with mediational tools to promote meaningful learning” (as did Gutiérrez & Vossoughi, 2010, p. 106). We envisioned the course as an environment rich with material, conceptual, and human tools to mediate the process of learning and development (Cole, 1996; Rogoff, 2003).

Through a multiyear iterative design process, the course had evolved into a collective inquiry focused on learning to facilitate discussion in culturally and linguistically diverse classes (e.g., Athanases, 2017). Anchoring exploration into discussion, mediational tools included texts by and about people of color selected and used intentionally by the instructor for several years, typically not read in teacher education or English methods courses.

Within this space, the present project added three digital tools, described in more detail in following sections, that we hoped would support PSTs’ development of culturally sustaining stances. We conjectured that creating opportunities to engage with texts and digital tools in ways that amplified voices often marginalized in traditional ELA coursework would help PSTs reimagine the purpose of ELA instruction and orient toward more equitable teaching practices in their future classrooms.

This vision aligns with those expressed by other critical teacher educators and literacy researchers who have emphasized the importance of digital practices that support purposeful, agentive, and critically engaged participation in new social spaces (e.g., Ávila & Pandya, 2013; Freedman et al., 2016; Higgs, 2020; Stornaiuolo & Thomas, 2017). As Morrell (2015) has noted, teachers – and teachers of teachers – have powerful opportunities to shape “tomorrow in today’s classrooms” (p. 312) and design for social change by combining critical perspectives and digital technologies.

### **Low Floor, Wide Walls**

To conceptualize and guide our approach to the course learning ethos, we drew on the design principle of low floor and wide walls proposed by

Resnick and Silverman (2005). Extending Papert's (1980) formulation of low floors (easy for novices to get started) and high ceilings (possible for experts to work on increasingly complex projects) for effective learning technologies, Resnick added the dimension of wide walls to call attention to the need to support and encourage a diversity of learning pathways.

Although this room metaphor is famously associated with programming (e.g., Logo and StarLogo languages), we found it provided a useful rubric for the learning experience in the artifact-rich preservice course. While we put less emphasis on high ceilings given the novice teacher learning context, creating opportunities that enabled learners to quickly understand how to use the technologies (low floor) and then finding new ways to explore texts, share ideas and identities, and become deeply engaged through those uses (wide walls) were central to our goal of amplification. The notion of wide walls also acknowledged the different learners in the space, as a key pedagogical move by the course instructor was his transparent self-positioning as a learner engaging the digital tools for the first time side-by-side with the PSTs.

### **A Theoretical Note**

As we engaged the concept of amplification in our analysis, we could not dismiss the function of the tools we were introducing to PSTs and their alignment with Fanonian notions of amplification. Fanon (1965) noted that the use of the radio was treated as incompatible with the cultural values and beliefs of native Algerians prior to the Algerian war of independence against France. The majority of Algerians believed the radio broadcasted media only to French settlers, and they did not want anything to do with "Frenchmen speaking to Frenchmen" (p. 74). Indeed, to many French settlers, messages broadcast from Paris were reminders "not to 'go native,' not to forget the rightfulness of [their] culture" (p. 71).

In the rumblings of revolution, however, native Algerians began to experience the power of narrating their own news to counter the French broadcasts. Specifically, they used the radio as a technology to amplify Algerian perspectives and to resist French power. When French authorities attempted to control Algerian access to radios by making sales illegal, Algerians covertly distributed radios and batteries. When French authorities asked radio broadcasters to jam the waves of *The Voice of Algiers*, Algerians found ways to share the always changing frequencies of the broadcast, continuing to sustain the messages of the revolution delivered by native Algerians committed to resistance. As Fanon powerfully described, Algerians narrated the news through readings of barely audible broadcasts that were regularly interrupted by the French colonizing power, a jarring aural experience that served to amplify Algerian resistance.

We draw a connection between Fanon's discussion of technologies of liberation and amplification of people of color voices with and alongside digital technologies in teacher education spaces as a method for decentering and resisting whiteness in ELA curricula in the United States. As a colonial project (de los Ríos et al., 2019), ELA has been shaped by a history in which white elites dictated which texts and whose stories should

socialize students into the dominant cultural zeitgeist (Morrell, 2007; Sperling & DiPardo, 2008).

Analogous to Radio Algeria, what continues to be privileged in many ELA classes has been shaped predominantly by texts, mostly written by white men, that jam and block voices, perspectives, and experiences of people of color. Although we now have technologies far more advanced than the radio, we, like Fanon, see the powerful possibilities at the intersection of technologies and texts for liberation. Specifically, in the context of the course described in this paper, we understand the amplification of people of color voices through varied texts and discourse technologies as a necessary “act of transgression” (McLaren, 1997) in decentering whiteness in English education. We aimed to inscribe these transgressive possibilities into our designs.

## **Design Context**

The focal course was situated in a university-based postbaccalaureate program that annually credentials approximately 150 teachers, with a focus on preparing teachers for work in diverse California schools. The course, titled Inquiry into Classroom Practice: Application of Teacher Research Approaches, is part of a four-course series that straddled the credential and optional follow-up master of arts degree year. The course is the gateway course to the masters of arts, preparing PSTs to conduct longer term inquiry work during their 1st year of teaching. PSTs enrolled in the course while they were midway through a 5-month period of supervised, extended practice teaching of two classes, each in regional schools serving racially, culturally, linguistically, and socioeconomically diverse communities.

## **Focal Course as a Site for Design and Innovation**

Innovating within the focal course is part of an established record of ongoing design work. The focal course had long been the site of investigation and innovation through iterative design cycles informed by patterns in PSTs’ engagements in course activities. Iterations heightened PSTs’ uses of diverse inquiry tools to learn more deeply about their culturally and linguistically diverse learners (Athanasas et al., 2012) and about ways teacher education pedagogy could saturate the learning space with varied resources and knowledges that worked in concert and in conflict, supported by visualization tools to map emerging understandings (Athanasas et al., 2020).

Other iterations highlighted tools and processes to support PSTs in moving from a deficit focus on linguistically diverse learners to an asset-based lens (Athanasas & Wong, 2018) and the ways collective inquiry guided deep engagement with facilitating dialogic discourse in ELA classes, surfacing challenges and tensions (Athanasas, 2017; Athanasas & Sanchez, 2021). Throughout these iterations, the focus was on fostering development of an inquiry stance (Cochran-Smith & Lytle, 2009) on equity-focused teaching, learning, and schooling, with sharpened foci emerging from investigations and ongoing reflections. Recent iterations also introduced literary works to ground inquiry course experiences,

centered talk about literature as an inquiry focus, and centered works by and about people of color.

The present study arose from a project in which a new iteration introduced several updates. First, coresearchers worked with the instructor to introduce a set of digital tools that could support recent developments in the course focus on collective inquiry into classroom talk in diverse classrooms. The team continued the tradition of saturating the learning space with learning tools and resources, now with the added design feature of infusing the course with digital tools with diverse potential uses for K-12 classrooms.

Second, the notion of low floors and wide walls guided the design of a preservice learning space, in which norms for use of tools were coconstructed with PSTs and were emergent and evolving. Third, the full team of five authors introduced new theoretical framing to inquire into ways in which diverse texts and tools might explore culturally sustaining pedagogy within the PST inquiry space. Such framing also foregrounded critical perspectives on decentering whiteness and on amplifying voices and perspectives of authors, literary voices, and PSTs of color within the inquiry course.

### **Learners in the Space**

The ELA cohort of 15 PST participants all held bachelor of arts degrees in English or a related field, and all were participating in supervised teaching of two middle/high school classrooms in culturally and linguistically diverse classes, while enrolled in the late afternoon/early evening focal course. All five authors are former K-12 teachers, and all have taught courses in teacher education in the focal teacher education program. Together we are part of a multiyear, grant-funded Teachers-as-Learners project focused on designing and investigating ways to support PSTs in learning to facilitate equity-focused discussion in culturally and linguistically diverse secondary ELA classes.

For the present project, the first and fourth authors joined the inquiry course instructor (second author) in design and documentation of the focal course. All five authors participated in theorizing or data review for the study. Collectively, we represent a diverse ethnic/racial group. The first author is a Korean American woman. The second author (course instructor) is a white gay-identified man. The third author is a Black woman. The fourth author identifies as Chicano. The fifth author is a South American man and doctoral student, whose first language is Spanish. Our project, particularly our data analysis, is shaped by our diverse lenses and pedagogical commitments to decentering whiteness within teacher education by amplifying historically marginalized voices and fostering opportunities for expansive learning.

### **Teacher Education Instruction Aligned With Low Floors and Wide Walls**

The design principle of low floors also guided how the course instructor positioned himself as a fellow learner. In planning the course, he invited

the team to engage in ways to provide PSTs with tools necessary to flatten and unsettle ELA instruction through the teacher inquiry process. The first and fourth authors entered the course space as experts in uses of respective technologies and also committed to studying the instructor's practice and ways PSTs engaged with activity.

From our initial meetings, the instructor was clear about his own apprehension toward using some of the technological tools introduced, which included Backchannel, Swivl, and Mursion (see Table 1). These tools were new to the instructor, and he was forthright about his discomfort in introducing them to the PSTs with so little user experience. The members of the research team, with varying degrees of expertise with the tools, agreed to join the course to introduce respective tools.

As a team, we believed the instructor's concerns about using these tools made the learning situation useful to the entire learning community, since he would be learning alongside his students. We agreed that shifting expert/novice roles within his classroom would be a valuable point of discussion with the PSTs and that this shift mirrored the kinds of situations that arise for in-service teachers daily in classrooms. The team moved forward with documenting how the instructor introduced various tools to support discussions about diverse texts.

The instructor also enacted the principle of wide walls. He made clear that he valued epistemological plurality and expected PSTs to bring their whole selves to their reading and course discussions of texts. During set-up for engagement with a literary work (*Orphan of Aztlán*) mediated by one of the focal tech tools, the instructor said:

So we distributed some kind of new expertise in a sense by having three groups explore three different resources or topics that might enrich the discussion of the poem. But we can also think of *multiple* knowledges, which can include your own past experiences with reading relevant literatures. Your own life experiences. Your own encounters with these ideas or concepts. So I want to encourage you, in either one of our discussion spaces, to tap into other knowledges and a whole range of knowledges that you may have, that might come into play as you explore the poem.

In these ways some of our design principles were manifested in practice: low floors for all PSTs to enter and try out practices and tools, modeled by the instructor as fellow learner; and wide walls, through explicit invitation for PSTs to voice interpretations that tapped their various and diverse convictions, knowledges, cultural experiences, and critical perspectives in the discourse.

### **Diverse Literary Works and Digital Tools Infused Within the Inquiry Course**

The course treated each activity as an occasion to expand PSTs' engagement with literary works by authors of color and to explore diversity and equity issues, to expand PST knowledge of noncanonical literary works and, in some cases, to explore texts for potential use in secondary

ELA classes. The [appendix](#) shows six literary works used in the course. The table illustrates infusion of these works as focus for discourse and digital tool experimentation. This article focuses on PSTs' engagements with the texts in Rows 4-6.

The three digital tools we selected, Backchannel, Swivl, and Mursion (Table 1), were chosen because (a) they offered varied opportunities to support discussions and interactions with texts, thereby fulfilling the wide walls design criterion and (b) they could be used by novice and experienced users, thus fulfilling the low floor"design criterion. Each tool had an assigned expert, who introduced it to the class with a brief technical demonstration and an assisted practice session.

The first author introduced Backchannel, a classroom chat/discussion tool that was designed specifically for educational use (for example, it integrates with several popular K-12 learning management systems). After a teacher creates a chat room and shares the join code with students, students can engage in synchronous discussions through posted comments.

The second tool introduced was Swivl, a robotic video capture system designed for recording class sessions or presentations. Swivl was introduced by the fourth author as a technology that could be used to capture multiple small group conversations at once, thus enabling teachers to be present for all students' contributions outside of whole-class discussion.

The third tool, Mursion, is an augmented reality platform that enables users (e.g., teachers or healthcare workers) to interact with human-controlled avatars that are engaged in real-time interactions in designed scenarios (i.e., a human actor who is trained to use the augmented reality technology performs the avatars and responds to a user as they work through a scenario focusing on particular interactions). These scenarios aim to provide users with low-risk environments in which to test out and rehearse particular practices. Mursion's avatars (in our case, student avatars) were developed to represent different racial and ethnic backgrounds. The available student avatar profiles also include emergent bilingual students.

### **Focal Activities: Bringing Together Diverse Texts and Digital Tools**

A first tryout of Backchannel was anchored in exploration of *Orphan of Aztlán* ([appendix](#)), through reading and viewing of Alfaro's performance of the poem. This discussion was referenced in this article's opening vignette. Aligned with CSP goals of exploring lessons that historicize experiences of marginalized communities, the instructor explained that supplementary resource explorations would be held in groups of five PSTs: "We have murals, Aztlán, and Latinx Queer intersectionalities. We're taking a look at how we can enrich a [literature] discussion through use of informational sources that we can gather online."

**Table 1** Digital Tools Explored in the Course

Digital Tool	What Does It Do?	Purpose in Course
<a href="#"><u>Backchannel Chat</u></a>	Backchannel Chat is a classroom online discussion tool that allows teachers to facilitate synchronous interactions using chat-style discussion rooms.	PSTs used Backchannel in two tryout opportunities: (a) as a tool help participants in the Socratic-style “outer circle” to interact and to envision interactions with inner-circle face-to-face discussants; (b) in two online-only subgroups, to explore a single literary work in depth with the instructor, followed by shared written reflections on perceived affordances and challenges of Backchannel.  PSTs also reflected on potential adaptations for use with K-12 students.
<a href="#"><u>SWIVL</u></a>	SWIVL is a robotic base that rotates automatically to follow a designated person wearing a “marker” to video record them using a mobile device. SWIVL has the capacity to audio and video record up to 5 additional groups simultaneously via “markers” (mics) and other mobile devices.	Introduced to demonstrate to students some ways of capturing group discussions without the presence of the instructor. This was modeled in this course, and students were asked to use SWIVL in their own student teaching placements.
<a href="#"><u>Mursion</u></a>	Mursion is an augmented reality platform used to provide experiential learning opportunities for developing expertise in a future oriented practice.	Introduced to provide PSTs with a simulated classroom discussion of Sandra Cisneros’ “My Name” with culturally and linguistically diverse student avatars.

Tasks were assigned to each of the groups. For example, because Alfaro introduced but does not define Aztlán, one group reviewed definitions, cultural significance, and complexities. A second group read an essay on intersectionality in diverse and minoritized identities to deepen their understandings of the tensions identified by Alfaro of being a Queer Chicano. A third group explored a website that illustrated and documented kinds and functions of Chicanx murals in Los Angeles. The site had links to many examples so they could analyze the visual images and cultural and religious iconography embedded in the print and video versions of the poem, set against the backdrop of a large, richly envisioned mural. As noted in our opening vignette, members of the three resource groups were distributed between the face-to-face inner circle and the outer tech-mediated space, encouraged to enrich the discourse with newly acquired perspectives and other knowledges.

The story PSTs read in advance of a more extended Backchannel activity (*Nemecia*, see [appendix](#)) featured tensions between a pair of cousins in a Mexican American family in New Mexico, related to misunderstandings about Nemecia's childhood trauma. Maria, the narrator, imagined that her cousin killed their grandfather and only later learned that Nemecia was traumatized by witnessing the killing. The trauma fostered abusive behaviors in Nemecia, and this combined with the misunderstanding creates a breach between the cousins that is explored in the narrative with nuance and intensity. Through various events steeped in culture and religious rites, Nemecia distanced herself from the extended family and assimilated into Anglo culture in Los Angeles, with bleach blond hair and her new Americanized name, Norma.

For the Mursion augmented reality (AR) activity, we asked PSTs to participate in a scenario that our team had designed to facilitate equitable discussion practices in culturally and linguistically diverse classrooms (see Higgs et al., 2021, for a more complete description of the AR design and activity for teacher learning). Ahead of participating in the scenario, we asked the PSTs to learn about their culturally and linguistically diverse students in their AR classroom by reading short biographies. We also asked the PSTs to prepare a discussion-based lesson related to the vignette "My Name" from Sandra Cisneros' *The House on Mango Street*. This text was chosen to anchor the AR scenario due to its centering of a Latina protagonist, Esperanza, and for the potentially rich discussions it could foster around issues such as agency, identity, and gendered social norms.

During the actual Mursion engagement, we asked PSTs first to participate in a brief warm-up exercise that included talking with the student avatars. The teachers then taught the lessons they had created for approximately 10 minutes. Immediately following scenario completion, each PST watched a recording of their Mursion lesson with a member of the research team and reflected on the lesson, pausing the recording at any moment they deemed notable (e.g., challenging, surprising, or amusing) to share their thoughts.

## **Data Collection and Analysis**

As a team, we generated a database that included data serving two purposes. First, to document the unfolding practices, we collected

ethnographic fieldnotes, audiotaped discourse, and written and taped reflections from the instructor, research team members, and PSTs. Documentation and reflection provided baseline accounting of PSTs' engagements in face-to-face and tech-supported discourse. We reviewed documentation of practices to characterize ways activities centered on texts by and about people of color unfolded and engaged PSTs in discourse. We particularly sought to understand how activities created opportunities to explore culturally sustaining pedagogies. We also paid attention to the ways in which activities aligned with the design principle of low floors and wide walls.

Second, to gather an in-depth look at how PSTs participated in activities with the digital tools, we collected transcripts of the Backchannel online discussions and recorded and transcribed data from the Mursion AR activity. Also, supporting both activities, PSTs generated spoken and written reflections on affordances of the digital tools and challenges in using them. PSTs engaged in small group conversations about considerations that emerged during use of the tools and what adaptations might be needed to try out such tools in their future classrooms. Three groups, one per tool, constructed slideshows and collectively presented to the entire class on emerging themes related to use of the tools. We collected digital artifacts, written materials, and audio recordings from these interactions.

For the present study, we focused on racially and ethnically marginalized PSTs in these spaces to explore ways in which their voices and perspectives may have been amplified through elements of the design. In other words, we were interested in understanding in what ways and to what degree were the voices of PSTs from racially and ethnically marginalized communities amplified through a convergence of texts by and about people of color and in discourse mediated by play with digital tools. We examined transcript data especially for roles these PSTs played in the discourse, their frequency of contributions, and the content and texture of their remarks.

We drafted memos on these PSTs' engagements and selected three PSTs to highlight for the present study. Given our interest in amplification, we selected three from historically marginalized communities. In the 8 years prior to the year of study, the secondary English cohorts totaled 182 (annual average 23), with an annual mean of 33% people of color, including those who identified as mixed-race. This demographic data included a low of 20% one year and a high of 46% each of 2 years.

Compared with the national teaching force of secondary-level teachers, the numbers of people of color in this program across the 8 prior years (33% ELA) exceeded national figures of secondary people of color teachers overall (20%) and 22% of teachers with under 3 years of experience (U.S. Department of Education, 2016). Black teachers were underrepresented in the focal program (3.3% vs. 6.8% nationally; 8% among newer teachers); Latinx PSTs across 8 years (11.6%) exceeded the national average of 8.5% at the secondary level; and Asian PSTs (11.6%) far exceeded 2.2% Asian-identified secondary teachers nationally. In the year of the focal study, the English cohort of 15 PSTs was comprised of eight PSTs (53%) who identified as people of color or biracial: two Latinx, two Asian, one Filipina, one Middle Eastern/North African, and two biracial (Asian/white).

In other recent work, team members have centered inquiries and insights of diverse and nationally underrepresented people of color, including case studies of Black PSTs (Athanas & Sanchez, 2021; Banes et al., 2021) and an inquiry group of four PSTs of diverse Asian ancestries: Hmong, Vietnamese, Korean, and Chinese (Athanas et al., 2020). Given the course focus on inquiry into dialogic instruction, we reviewed ways in which people of color participated in centering their voices in small and large-group discussion. Three of these PSTs (Nora and Carmen from our opening vignette and a Middle Eastern/North African woman) emerged and persisted as active discussants. We reviewed the other PSTs and selected three from historically marginalized groups who seldom spoke during face-to-face discussions yet participated frequently during digital discourse opportunities.

The saturation of the space with diverse texts and digital tools enabled us to see different ways and varying degrees to which these PSTs' voices were amplified across course activities. A three-by-three-by-three design informed our selection of PSTs for focus. We selected three PSTs, examples of engagements with three different diverse texts, and with data from three different digital tool experiences. This approach necessitated removing other data examples from the course to sharpen the focus on data most relevant to our research questions.

### **Design Outcomes**

Our analysis revealed how the course design supported the amplification of voices of authors, literary characters, and PSTs of color. Saturating the environment with multimodal texts and interactive digital tools provided opportunities for the learners to share their perspectives in ways that may not have been possible in a face-to-face course that privileged traditional views of the ELA canon. In the following sections we focus on the experiences of three PSTs, Natalie, Santiago, and Jia (pseudonyms), to illustrate how intentional embedding of a set of literary works and interactive digital tools created space for these PSTs from historically marginalized groups to share compelling experiences, stories, and tensions.

#### **Natalie**

Natalie, a Chinese American woman, reported having an active presence on Facebook and identified as a gamer. However, in the face-to-face space of the teacher inquiry class, Natalie rarely spoke. When she occasionally offered remarks, at times invited by the instructor, she held the floor briefly and her peers listened. In contrast, in Backchannel, Natalie's voice was amplified through frequent extended comments. While some of her peers used Backchannel to question each other and add texture and depth to the discourse, what marked Natalie's discourse as amplified in Backchannel discussion was the increased frequency of her turns at talk and the pointed nature of her use of uptake with peers.

In these ways, Natalie was at the center of discourse throughout the chat – a position noticeably different from her more peripheral presence in face-to-face discussion. She garnered many likes and responses from peers

in Backchannel as she articulated close interpretations of the story, used other knowledges to expand the discourse, and offered opinion statements that stirred peers' reflections.

During one Backchannel exchange, another PST cast the character Nemecia as "broken" due to her childhood trauma of witnessing a family member's death at the hands of another. Natalie quickly and comfortably challenged her peer: "Though to clarify, I genuinely don't believe or have ever considered her [Nemecia] broken. Flawed, yes. Twisted, yes. But not broken." Shortly after, Natalie argued that the spotlight should be on the victimization of Maria (the narrator) at the hands of her cousin: "Does Maria come from an any more broken place? And yet she's the one with the cracked doll and scars." When a peer asked how Maria might be considered broken, Natalie quickly responded, "Emotionally, as well as physically." Her agile participation through frequent remarks that advanced her literary interpretations centered her in the conversational threads.

Natalie fluidly integrated her own history in her Backchannel communication well. A peer commented that Nemecia was coddled due to her trauma, which led to Maria being overshadowed and neglected within the family. Natalie tapped personal experience in her response, connecting and empathizing with characters based on her own family experiences:

You know, from someone who's gone through this with my own family, I can understand (but not forgive) the adults' decision. As my mom put it to me once when I asked her to defend me, "He [my brother] is my child too!"

When asked to reflect on her participation in different discourse spaces, Natalie offered thoughtful reflections regarding how and why she participated (or chose not to participate) in face-to-face and digital environments. She noted that she disliked "talking in whole-class discussion unless it's a Socratic seminar or debate" and intentionally remained quiet in face-to-face settings if the interaction felt inauthentic to idea sharing: "If it's just raising your hand and \*\*\*, I don't care for others' reactions – I care about getting my idea out there."

Participating in a conversation in which she was expected to "just raise [her] hand" did not interest Natalie, and so she intentionally kept silent. However, she also said that she felt stymied in face-to-face conversations if she felt she was in a situation in which she could not fully and comfortably share her ideas:

I'd probably be the first to admit that I love analyzing things, so I often have really strong ideas that I feel the need to share. For in-person conversations, I often try to hold back or not say anything just because I know the force or intensity of what I say could be overpowering. For things like this, it removes that aspect of the pressure because I can say anything without taking other people's opportunities or chances away to speak.

While Natalie felt “held back” in some face-to-face conversations, she commented that she viewed Backchannel as an environment in which she could explore her “love of analyzing things.” She reported feeling “fully engaged in the conversation and ... expecting to be heard or responded to, and likewise with others,” which motivated her to share and to “actively ... try to respond to others’ comments.” Backchannel acted as an amplification tool for Natalie, making her analytic contributions and personal connections to texts visible through written discourse.

### **Santiago**

Like Natalie, Santiago, who immigrated from Mexico, remained fairly silent during whole-class discussions. Unlike Natalie, he did not take immediately to Backchannel discussion. In initial Backchannel sessions, he offered few remarks, and he often appeared disengaged during those discussions. In his debriefing about the use of Backchannel for engagement with *Orphan of Aztlán*, however, Santiago’s reflections indicated that he had not been disengaged at all. In fact, he revealed that the text had triggered a deep personal connection that prompted him to delve into related online research instead of chat participation:

I have been really angry for a few months now because I feel excluded from Mexican culture, because I’m a white Mexican and that’s sort of an identity I hadn’t realized I was until a few months ago. So when we read this poem ... it made me really pissed. And then I started Googling things, and then I was kind of in the discussion, but then when you guys brought up Aztlán, I was like, “Oh, I feel like that’s included to help me better understand my own situation.” So then I went to Google. ... So I found having a computer in front of me is really distracting.

After the instructor asked Santiago if he felt excluded from the conversation in Backchannel or by the poem, Santiago quickly clarified that his feelings of exclusion were related to the tensions he felt related to identity:

Because growing up I felt like I was too Mexican for white people, but I was too white for Mexicans. And so when he’s [Alfaro’s] like, are you going to include me or not, in the poem, I realized that that is a sort of conversation I never had with myself. And so yeah, I feel kind of alienated from this discourse, and I’m like, but this is a discourse I should have been involved in a long time ago, so then I started blaming myself, and then that’s where it all started.

Santiago revealed how the activities prompted reflection on his complex identities (“too Mexican for white people, too white for Mexicans”) that sent him to learn more about Aztlán online. He confidently shared how he used his digital discourse time to engage issues that deeply spoke to his interests in identity.

Although we did not ask what he meant when he called it an identity “I hadn’t realized I was until a few months ago,” the historical contextualization of the poem prompted him to explore histories and

discourses. He also said, “I should have been involved in a long time ago.” Santiago’s comments suggest that engaging with Alfaro’s poem amplified not only the artist’s lived experiences as a member of multiple marginalized groups but also Santiago’s own experiences as a person experiencing disenfranchisement related to racialized identities. The culturally relevant text seemed to open a reflective space that allowed him to examine and “understand [his] own situation” with more clarity.

Santiago had rarely participated in the flow of conversation in much of the inquiry course. However, transcripts of Backchannel discourse about the story “Nemecia” suggested that his voice was significantly amplified in the chat space. The transcript data show that he posed several questions to his peers that elicited responses and that he offered numerous emotion-laden contributions to the discussion. In fact, Santiago launched the online chat for a group of 10 PSTs, serving as the impetus for the full group.

He offered the first of his questions for the group, asking, “Did you all feel sympathy for Nemecia?” His response prompted six of the other nine PSTs in this chat to take up his question, including two PSTs of color and all four white students. Because he never raised questions in face-to-face discussions and in Backchannel discussion of *Orphan of Aztlán*, Santiago’s active participation while discussing “Nemecia” was noticeable. His questions were provocative (“Do you guys think Nemecia’s random acts of ‘love’ count as gaslighting?” “Is their primary purpose to confuse the hell out of Maria so that Nemecia can then be abusive?”), and they led to lively exchanges with classmates.

Santiago’s contributions during the Backchannel discussion of “Nemecia” were often emotion-laden and personal, perhaps more than those made by any of his peers. In sharing his strong reactions to the text, he often connected to classmates’ comments by affirming their interpretations and offering glimpses of his own history. For example, in response to a comment from Natalie, he wrote, “Natalie I think you and I had very similar reactions to this story. I went through really bad emotional abandonment as a kid too ... and I 1000% sided with Maria and hated almost everyone else in this story.” In another instance, he responded to his peers’ comments about Nemecia being hurtful to her cousin by voicing his revulsion at her behavior:

@Nadine, @Natalie: I was kind of already done with her [Nemecia] by that point, but yeah, that was gross. I was more disgusted by the physically scarring her in the middle of the night, though. That's where I decided Nemecia is trash.

The emotionality of Santiago’s contributions is reflected in his remarks about the story’s titular character: “bad emotional abandonment,” “hated almost everyone else in this story,” “that was gross,” “I was disgusted,” “Nemecia is trash.” Aligned with recent scholarship on how emotion is fundamentally a part of literary engagement and must be noticed and interrogated to expand interpretive possibilities (Thein et al., 2015), in this space Santiago’s emotional response to literary texts was arguably amplified and centered.

Despite his relative silence in the face-to-face class environment, Backchannel seemed to offer Santiago a space in which he felt he could raise questions, offer intense emotional commentary on the text, and engage in some self-disclosure. In addition, he directly addressed peers, including those who were similarly quiet in face-to-face exchanges (e.g., he addressed Natalie several times).

The extent to which he was aware of his amplification in this digital environment is unclear, however. When the instructor later asked the group to “go meta” on the tool and provide commentary about the nature of discourse in Backchannel, one of Santiago’s peers (Jia) noted, “I would have felt more comfortable getting personal if we were in person.” Santiago took up Jia’s remark with a surprising reaction: “Same, I would have felt more comfortable getting personal if we were in person.” While the data indicate that Santiago was an expressive and agentive communicator in the digital space – initiating discourse threads, adding emotional texture, and taking up peers’ remarks – his comment suggests that he may have been unaware of how his voice had been turned up as he engaged with different course resources and artifacts.

### **Jia**

In exploration of the AR tool Murson, five PSTs from the group engaged with a scenario that asked them to lead a discussion of “My Name” from *The House on Mango Street* with five middle school aged avatars. The PSTs then followed their short lesson delivery with an immediate reflection/debriefing interview about their experience with a member of the research team. “My Name” explores racial, ethnic, and linguistic identities and issues of cultural assimilation. In other work, we have identified a range of themes related to the PSTs’ attempts to facilitate these engagements (Higgs et al., 2021). These themes included tensions teachers felt when attempting to attend to a pair of pedagogical objectives: (a) focusing avatar students on close readings of the text, and (b) engaging in culturally sustaining pedagogy, such as responding meaningfully to avatars’ reports of disliking the racial/ethnic/gendered markers associated with their own names.

An additional theme we did not explore previously and that we examined in this study relates to ways in which Murson design decisions converged to amplify the perspectives and lived experiences of PSTs of color in relation to ways their own identities were implicated in the “My Name” discussion they attempted to lead with the student avatars.

In particular, interactions with an avatar named Davi, identified as an emergent bilingual girl of Cambodian descent, appeared to provoke a strong reaction in the PSTs in the Murson subgroup. All the PSTs referred to feeling profoundly uncomfortable, moved, or taken aback when she shared in the virtual classroom setting her negative feelings about her name: “People don’t know how to pronounce it, and it sounds weird. It sounds very Cambodian, and I wish I had a normal American name like Amanda or something. ... It sounds like a boy’s name.” White PSTs and PSTs of color reported improvising in the moment, endeavoring to affirm Davi in culturally sustaining ways. The group of PSTs also noted that hearing Davi’s struggle with her name heightened their conviction about

the importance of culturally sustaining pedagogies. However, for the PSTs of color in the Mursion subgroup, this experience with Davi also prompted additional reflection on their own positionalities as members of historically marginalized communities.

Jia, a Korean American woman, was reserved in the face-to-face discussion space, but her contributions were thoughtful and sparked reactions and conversations. In the “Nemecia” Backchannel discussion, for example, one of her comments about the text prompted strong peer response, amplifying her interpretive voice. During that segment of online discussion, the group explored Nemecia’s cultural divorce from her Latinx community identity in New Mexico to become the embodiment of the LA/Anglo ideal, complete with bleach-blond hair and a new name (Norma). Jia used the “@” symbol to indicate uptake of questions and remarks from the instructor and another PST of color and replied, “I read the name Norma as resembling ‘normal’ or ‘normalcy,’ which she had lacked previously and what she seemed to have achieved in her new life she had created for herself.”

Her comments sparked enthusiastic agreement from six of her nine peers, who responded with like symbols and affirming responses: “Ooooh Jia,” “@Jia waaaaowww,” and “@ Jia\*snapping\*.” In addition, the instructor commented in the chat that he had never heard nor thought of that connection despite having taught the text many times previously.

While Jia was an insightful but infrequent participant in Backchannel, the engagement with Mursion seemed to provide her with an opportunity not only to explore her positionality as an educator striving for culturally sustaining pedagogies but also as a Korean American who had experienced cultural othering in a way that mirrored Davi’s name-related othering. The Mursion scenario seemed to provide Jia with wide walls to engage her own cultural resources in the moment as she engaged the student avatars in a lesson about “My Name.” In the rapidly unfolding AR classroom discussion, Jia improvised, tapping into her own experiences with changing her full Korean name as she responded to Davi about her feelings about her “not normal” Cambodian name:

Yeah, I totally relate to that. So my name is Korean ... Jiwoo, which no one can pronounce and it's such a struggle. So when I was growing up I hated it, too, but I actually really like it now. It makes you so much more unique. Not that Jasmine's not unique [name of another student avatar] – I love that also. But you know, when you have a different name, it shows your culture, it shows that you're different, which can also be a really cool thing. I love your name, Davi sounds super cool. And I don't really think it sounds like a boy name.

Jia found the Davi moment in the scenario resonated with her lived experiences, as she shared during her post-Mursion reflection: “The whole thing about kind of not fitting in and having this name that means something else. And it's also something that I relate to on a personal level.” The Mursion scenario offered an opportunity for Jia to see and respond compassionately to her avatar student, and it also provided space for Jia

to amplify her history, her culture, and her own challenges and frustrations of having a name “no one can pronounce.”

Jia brought her own identity into the discourse and used it as an important moment to affirm Davi’s cultural background and decenter Western notions of normal. The AR scenario and the reflection after created opportunities for Jia to amplify her voice as an equity-oriented educator committed to sustaining multiple identities and experiences (“it shows your culture,” “it shows that you’re different”), and as a nonwhite person navigating a world that often views difference as a transgression rather than “a really cool thing.”

## **Discussion and Implications**

Our project makes contributions to research on instructional practices at the intersection of culturally sustaining pedagogies and meaningful uses of digital technologies as well as to research on innovating teacher education curriculum. First, we centered the importance of teacher education course designs that intentionally focus on amplification of voices of authors, literary characters, and preservice teachers from historically marginalized groups. The design principle of low floors highlights entry points that welcome PSTs and teacher educators to explore new texts and technologies in service of this goal. It included opportunities to observe these various digital and nondigital tools in practice, rehearse their use, and reflect on affordances and needed adaptations as they envision taking them up in their own classrooms. The wide walls design dimension framed ways in which the voices, experiences, and knowledges of PSTs of color can be engaged and amplified in a teacher education course, a space where PST identities frequently are silenced or rendered invisible. Our analyses suggest the value of designing teacher education so that PSTs have ample opportunities to engage in discourse foregrounding identities related to race, ethnicity, language, and gender/sexual orientation.

Our project also highlighted ways in which research and education partners can reorient a teacher inquiry course from being a generic class driven by compliance to state credentialing regimens to one in which innovation is centered. We highlighted innovation for purposes of engaging the next generation of teachers in processes that position them as learners working to resist the dominance of the white gaze in education. In our collaborative work, we designed to renounce the normalization of whiteness in teacher education by amplifying the experiences and voices of people of color through our chosen texts and digital technologies.

Our analyses indicated that this intentional decentering through texts, technologies, and interactions contributed to face-to-face and digital learning environments in which our PSTs of color felt comfortable sharing their perspectives, histories, and realities. Our hope is that this amplification will lead to greater agency in the interactions that they experience as students (Wong et al., 2019) and that they design as ELA teachers in their own classrooms.

Finally, our data showed that as these PSTs drew upon their diverse experiences, positionalities, and pedagogical commitments, and experienced their voices amplified across different communication modes, they did so in the company of their peers, who were themselves PSTs of color and white PSTs. We saw in our data various ways in which the amplification of people of color voices advanced collective discourse and knowledge.

We saw in the discourses reported in our opening vignette, for example, how Nora highlighted the significance of murals as literacy, history, and art for a community whose history is seldom told, and how Carmen unlocked the social, historical, and political importance of the pink triangle icon. Natalie's amplified voice was central in Backchannel discussions as she engaged in ongoing uptake, offered critical interpretations, and tapped multiple resources.

Santiago's sharing of his identity-related challenges was a profound moment for him, as well as an educative one for his classmates who heard and learned from the struggles he voiced. His question-raising launched the "Nemecia" Backchannel discussion, and his emotionally inflected engagements helped shape the ensuing conversation.

Jia shared an insightful literary interpretation in Backchannel that nobody, including the instructor, had considered. Her responses to the student avatar Davi contributed significantly to the whole-class discussion about the importance of teachers' abilities to improvise in culturally sustaining ways during class interactions. While we focused on how course design supported the amplification of voices of authors, literary characters, and PSTs from historically marginalized groups, it is important to note that reenvisioning English teacher education to decenter whiteness resulted in a richer collective experience for all learners in the space.

### **Author Note**

The research reported in this article was funded by a grant to UC Davis from the James S. McDonnell Foundation 21st Century Science Initiative — Understanding Teacher Change and Teachers as Learners, Grant #220020519 (Steven Z. Athanases, PI).

### **References**

- Annamma, S. A., & Winn, M. (2019). Transforming our mission: Animating teacher education through intersectional justice. *Theory Into Practice*, 58(4), 318-327. <https://doi.org/10.1080/00405841.2019.1626618>
- Athanases, S. Z. (2017). A curricular conversation in teacher education: In the domain of dialogic teaching. In R. K. Durst, G. E. Newell, & J. D. Marshall (Eds.), *English language arts research and teaching: Revisiting and extending Arthur Applebee's contributions* (pp. 57-72). Routledge.
- Athanases, S. Z., & Sanchez, S. L. (2021). *Challenges for preservice teachers in learning to lead discussions: Inquiry in diverse classrooms*.

[Manuscript submitted for publication]. School of Education, University of California, Davis.

Athanases, S. Z., Sanchez, S. L., & Martin, L. (2020). Saturate, situate, synthesize: Fostering preservice teachers' conceptual and practical knowledge for learning to lead class discussion. *Teaching and Teacher Education: An International Journal of Research and Studies*, 88. <https://www.sciencedirect.com/science/article/pii/S0742051X18308151?via%3Dihub>

Athanases, S. Z., Wahleithner, J. M., & Bennett, L. H. (2012). Learning to attend to culturally and linguistically diverse learners through teacher inquiry in teacher education. *Teachers College Record*, 114(7), 1-50. <http://www.tcrecord.org/library/content.asp?contentid=16470>

Athanases, S. Z., & Wong, J. W. (2018). Learning from analyzing linguistically diverse students' work: A contribution of preservice teacher inquiry. *Educational Forum*, 82(2), 191-207. <https://www.tandfonline.com/doi/full/10.1080/00131725.2018.1420860>

Ávila, J., & Pandya, J. Z. (2013). *Critical digital literacies as social praxis: Intersections and challenges*. Peter Lang.

Baker-Bell, A. (2020). *Linguistic justice: Black language, literacy, identity, and pedagogy*. Routledge.

Banes, L. C., Houk, J. G., Athanases, S. Z., & Sanchez, S. L. (2021). *Multi-lens noticing in teachers' first attempts at facilitating discussions in diverse English classes*. [Manuscript submitted for publication]. School of Education, University of California, Davis.

Bang, M., & Vossoughi, S. (2016). Participatory design research and educational justice: Studying learning and relations within social change making. *Cognition and Instruction*, 34(3), 173–193. <https://doi.org/10.1080/07370008.2016.1181879>

Carter Andrews, D. J., Brown, T., Castillo, B. M., Jackson, D., & Vellanki, V. (2019). Beyond damage-centered teacher education: Humanizing pedagogy for teacher educators and preservice teachers. *Teachers College Record*, 121(6), 1-28.

Carter Andrews, D. J., He, Y., Marciano, J. E., Richmond, G., & Salazar, M. (2021). Decentering Whiteness in teacher education: Addressing the questions of who, with whom, and how. *Journal of Teacher Education*, 72(2), 134-137. <https://doi.org/10.1177%2F0022487120987966>

Carter Andrews, D. J., Richmond, G., & Floden, R. (2018). Teacher education for critical democracy: Understanding our commitments as design challenges and opportunities. *Journal of Teacher Education*, 69(2), 114-117. <https://doi.org/10.1177/0022487117752363>

Cochran-Smith, M., & Lytle, S. L. (2015). *Inquiry as stance: Practitioner research for the next generation*. Teachers College Press.

Cole, M. (1996). *Cultural psychology: A once and future discipline*. Harvard University Press.

de los Rios, C.V., Martinez, D. C., Musser, A., Canady, A., Camangian, P., & Quijada-Cerecer, P.D. (2019). Toward repairing harm: Colonial English education in the United States. *Theory into Practice*, 58(4), 359-367.

Eidman-Aadahl, E., & O'Donnell-Allen, C. (2012). Digital directions in professional development. *Language Arts*, 89(4), 279-284.

Fanon, F. (1965). *A dying colonialism*. (Trans. Haakon Chevalier). Grove Press.

Freedman, S. W., Hull, G. A., Higgs, J., & Booten, K. (2016). Teaching writing in a digital and global age: Toward access, learning, and development for all. In C. Bell & D. Gitomer (Eds.), *Handbook of research on teaching* (5<sup>th</sup> ed.; pp. 1389-1449). American Educational Research Association.

Garcia, A. (2019). *Good reception: Teens, teachers and mobile media in a Los Angeles high school*. MIT Press.

Gutiérrez, K. D., & Jurow, A. S. (2016). Social design experiments: Toward equity by design. *Journal of the Learning Sciences*, 25(4), 565-598.

Gutiérrez, K. D., Rymes, B., & Larson, J. (1995). Script, counterscript, and underlife in the classroom: James Brown versus *Brown v. Board of Education*. *Harvard Educational Review*, 65(3), 445-472.  
<https://doi.org/10.17763/haer.65.3.r16146n25h4mh384>

Gutiérrez, K. D., & Vossoughi, S. (2010). Lifting off the ground to return anew: Mediated praxis, transformative learning, and social design experiments. *Journal of Teacher Education*, 61(1-2), 100-117.

Harper, S. R., & Davis, C. H. F. (2012). They (don't) care about education: A counternarrative on Black male students' responses to inequitable schooling. *Educational Foundations*, 26, 103-120.

Higgs, J. (2020). Digital discourse in classrooms: Language arts teachers' reported perceptions and implementation. *Research in the Teaching of English*, 55(1), 32-55.

Higgs, J., Welsh, M. E., & Athanases, S. Z. (2021). "It's so similar but so different from my real-life classroom": Using AR in learning to facilitate discussion in diverse ELA classes. In C. Moran & M. Rice (Eds.), *Augmented and virtual reality in English language arts* (pp. 87-105). Lexington Books.

- Jackson, A. (2021). Design principles as cultural artifacts: Pedagogical improvisation and the bridging of critical theory and teaching practice. *Mind, Culture, and Activity*, 28(1), 61-81. <https://doi.org/10.1080/10749039.2021.1882500>
- Johnson, L. L. (2018). Where do we go from here? Toward a critical race English education. *Research in the Teaching of English*, 53(2), 102-124.
- Kinloch, V., Penn, C. & Burkhard, T. (2020). Black lives matter: Storying, identities, and counternarratives. *Journal of Literacy Research*, 52(4), 382-405.
- Kroll, C. (2008). Chapter One: Imagining ourselves into transcultural spaces: Decentering whiteness in the classroom. *Counterpoints*, 321, 29-46. <http://www.jstor.org/stable/42979957>
- Ladson-Billings, G. (1995). Toward a theory of culturally relevant pedagogy. *American Educational Research Journal*, 32(3), 465-491.
- Lee, C. D. (2001). Is October Brown Chinese? A cultural modeling activity system for underachieving students. *American Educational Research Journal*, 38(1), 97-141. <https://doi.org/10.3102%2F00028312038001097>
- Martinez, D. C. (2017). Imagining a language of solidarity for Black and Latinx youth in English language arts classrooms. *English Education*, 49(2), 179-196.
- McLaren, P. (1997). Decentering whiteness. *Multicultural Education*, 5(1), 4-11.
- Mirra, N. (2018). Pursuing a commitment to public scholarship through the practice of annotation. *The Assembly*, 1, 28-36.
- Moll, L. C., Amanti, C., Neff, D., & Gonzalez, N. (1992). Funds of knowledge for teaching: Using a qualitative approach to connect homes and classrooms. *Theory into Practice*, 31(2), 132-141. <https://doi.org/10.1080/00405849209543534>
- Morrell, E. (2007). *Critical literacy and urban youth: Pedagogies of access, dissent, and liberation*. Routledge.
- Morrell, E. (2015). The 2014 NCTE Presidential address: Powerful English at NCTE yesterday, today, and tomorrow: Toward the next movement. *Research in the Teaching of English*, 49(3), 307-327.
- Papert, S. (1980). *Mindstorms: Children, computers, and powerful ideas*. Basic Books.
- Paris, D. (2012) Culturally sustaining pedagogy: A needed change in stance, terminology, and practice. *Educational Researcher*, 41(3), 93-97. <https://doi.org/10.3102%2F0013189X12441244>

Paris, D., & Alim, H. S. (2014). What are we seeking to sustain through culturally sustaining pedagogy? A loving critique forward. *Harvard Educational Review*, 36(1), 85-100. <https://doi.org/10.17763/haer.84.1.982l873k2ht16m77>

Patel, L. (2016). *Decolonizing educational research: From ownership to answerability*. Routledge.

Resnick, M., & Silverman, B. (2005, June). Some reflections on designing construction kits for kids. *Proceedings of the 2005 Conference on Interaction Design and Children* (pp. 117-122). <https://doi.org/10.1145/1109540.1109556>

Richmond, G., Bartell, T., & Dunn, A. H. (2016). Beyond “tinkering”: Enacting the imperative for change in teacher education in a climate of standards and accountability. *Journal of Teacher Education*, 67(2), 102-104. <https://doi.org/10.1177/0022487116628837>

Rogoff, B. (2003). *The cultural nature of human development*. Oxford University Press.

Sleeter, C. E. (2017). Critical race theory and the whiteness of teacher education. *Urban Education*, 52(2), 155-169.

Smith, L. T. (2021). *Decolonizing methodologies: Research and indigenous peoples*. Zed Books Ltd.

Smith, M. D., & Tuck, E. (2016). Decentering whiteness: Teaching antiracism on a predominantly white campus. In S. Willie-LeBreton (Ed.), *Transforming the academy : Faculty perspectives on diversity and pedagogy* (pp. 13-36). Rutgers University Press.

Solórzano, D. G., & Yosso, T. J. (2002). Critical race methodology: Counter-storytelling as an analytical framework for education research. *Qualitative Inquiry*, 8(1), 23-44. <https://doi.org/10.1177/107780040200800103>

Stornaiuolo, A., & Thomas, E. E. (2017). Disrupting educational inequalities through youth digital activism. *Review of Research in Education*, 41(1), 337-357. <https://doi.org/10.3102/0091732X16687973>

Souto-Manning, M. (2019). Transforming university-based teacher education: Preparing asset-, equity-, and justice-oriented teachers within the contemporary political context. *Teachers College Record* 121(6), 1-26.

Sperling, M., & DiPardo, A. (2008). English education research and classroom practice: New directions for new times. *Review of Research in Education*, 32(1), 62-108.

Thein, A. H., Guise, M., & Sloan, D. L. (2015). Examining emotional rules in the English classroom: A critical discourse analysis of one student's

literary responses in two academic contexts. *Research in the Teaching of English*, 49(3), 200-223.

U.S. Department of Education. (2016, July). *The state of racial diversity in the educator workforce*. <https://www2.ed.gov/rschstat/eval/highered/racial-diversity/state-racial-diversity-workforce.pdf>

Winn, M. T. (2013). Toward a restorative English education. *Research in the Teaching of English*, 48(1), 126-135.

Wong, J. W., Athanases, S. Z., & Banes, L. C. (2020). Developing as an agentive bilingual teacher: Self-reflexive and student-learning inquiry as teacher education resources. *International Journal of Bilingual Education and Bilingualism*, 23(2), 153-169. <https://www.tandfonline.com/eprint/NauQVK2QjkbHy8Xcnn3X/full>

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>

*Contemporary Issues in Technology and Teacher Education* is an online journal. All text, tables, and figures in the print version of this article are exact representations of the original. However, the original article may also include video and audio files, which can be accessed online at <http://www.citejournal.org>

**Appendix**  
**Multicultural Literary Works Explored in the Course**

Literary Work	Characters, Voices, Sociopolitical Themes Invoked	Focus of Activity in Exploring Pedagogical Processes and Tools
“Preface to a Twenty-Volume Suicide Note” (1961), Amiri Baraka (LeRoi Jones)	Speaker of the poem reflects on troubling trends and hopelessness. Does not explicitly name macro themes but several PSTs who studied contemporary Black literature highlighted historical contexts within which Baraka wrote. <a href="https://poets.org/poet/amiri-baraka">https://poets.org/poet/amiri-baraka</a>	Inner face-to-face and outer digital circles (Socratic style). Inner face-to-face circle engaged in literary discussion to engage with the text and reflect on processes of being in the spoken discussion. Outer digital circle explored the following questions using Backchannel: What patterns did you notice in dialogic moves facilitator and peers in the inner circle made? How did literary interpretation and meaning navigate through the discourse? How did talk get distributed? In Backchannel, what did you notice about how talk moved, by whom, and in service of what purposes and outcomes? What challenges and shortcomings did you notice?
“The Purpose of Nuns” (1993), Judith Ortiz Cofer	Marianisma, pursuit of “purity” aligned with Virgin Mary, recalls longing for cloistered life of Catholic nuns, as escape from “a world	Activity began with instructor’s oral reading of the poem. Poem used to illustrate the need to continually search for non-canonical works

Literary Work	Characters, Voices, Sociopolitical Themes Invoked	Focus of Activity in Exploring Pedagogical Processes and Tools
	splashed in violent colors”	that center voices of people of color.
<i>The Kite Runner</i> (2003), Khale d Hosseini	Father-son relationship; friendship and betrayal; atonement. Sexual assault; “backdrop of tumultuous events, from the fall of <a href="#">Afghanistan's monarchy</a> through the <a href="#">Soviet military intervention</a> , the exodus of <a href="#">refugees to Pakistan</a> and the US, and the rise of the <a href="#">Taliban</a> regime.”	PSTs considered the question: What do we notice in the facilitation of discussion in the inner face-to-face discussion circle? In the Backchannel outer circle? What are perceived benefits and challenges?
“Nemecia” (2015), Kirstin Valdez Quade	Nuances and complexities of Latinx identities; cultural assimilation; betrayal and recollections of childhood trauma	This was the core text for extended tryouts of Backchannel. Discussion questions included: What did you notice about the tensions between the narrator and the titular character? What about images toward the end of Nemecia’s journey with apparent assimilation to dominant Anglo norms?
“Orphan of Aztlán” (1994), Luis Alfaro <a href="#">Video</a> <a href="#">Print</a> (click on “Luis’ work”)	Poem’s speaker explores tensions around intersectional identities (“I am a queer Chicano....”); Chicano movement and identities; Chicanx murals in LA; caught at the “border” between	Core text for in-class tryout of Backchannel. Sample questions: What do you learn from thematic support resources and how do they enable you to notice literary, cultural, and

Literary Work	Characters, Voices, Sociopolitical Themes Invoked	Focus of Activity in Exploring Pedagogical Processes and Tools
	Chicano and queer; conception of Aztlán & other texts (multimodality of texts); intertextuality, multiple resources	historical themes in the poem and in discussion of the poem?
“My Name” (1984; from <i>The House on Mango Street</i> ), Sandra Cisneros	Links between names and identities, implications of assuming names to align with mainstream white-sounding names	Core text for in-class tryout of Mursion. Sample prompts: What kinds of lesson and discussion facilitation can you do in the AR space with five diverse middle school aged avatars? Debriefing: What thoughts did you have in the flow of talk with the avatars? What forms of improvisation did you make?