## **OUTLINES - CRITICAL PRACTICE STUDIES**

• Vol. 26, Special Issue • 2024 • (94-112) • www.outlines.dk

# Revitalizing Vygotskian radical legacy in cultural-historical research for addressing racial injustice in education

#### Rebekah Pollock

Department of Learning Sciences, Georgia State University, United States

#### **Dosun Ko**

Department of Education, Santa Clara University, United States

## **Abstract**

This study responds to recent calls for the revitalization of the Vygotskian radical legacy and the reclamation of critical uses of cultural-historical research through a retrospective analysis of two case studies. The first case study describes the development and application of a discourse-based formative intervention framework to reveal psychological processes associated with reimagining and enacting possible futures among early adolescent Black girls. The second presents the Future-Making Learning Lab's efforts to address racial injustice in school discipline and empower parents and school personnel to collectively envision a culturally responsive, inclusive school system. Importantly, these case studies represented epistemological, methodological, and axiological expansions of formative intervention methodology through efforts to amplify the voices of participants and leverage their experiential knowledge through interactive participation structures and researchers' integration of critical theoretical lenses to devise and employ mediating artifacts. These, in turn, support participants' transformative agency to criticize current practices, ideologies, and structures, and imagine possible futures.

Keywords: Cultural-historical activity theory, formative interventions, learning lab, discourse-based formative intervention

## Introduction

Critical scholarship informed by Cultural-Historical (CH) theoretical approach has historically centered on the intersectional inequalities entrenched in educational systems. It has also worked towards organizing educational possibilities by expanding notions of human learning and development, and reconceptualizing learners/participants as social change agents working for individual and social transformation (Rajala et al., 2023; Sannino & Engström, 2018; Stetsenko, 2020, 2021). Through multiple generations, cultural-historical activity theory (CHAT; Engeström, 2016; Sannino & Engeström, 2018) has provided CH researchers with theoretical lenses and methodological tools. This intellectual legacy of CHAT scholarship, which informs and guides social change experiments, has been used to expose inequitable systems and their profound effects on students from marginalized communities, as well as to restructure those systems.

Despite the transformative Vygotskian tradition that focuses on dismantling injustice, recent critiques within CH scholarship have centered around the lack of attention to the socio-political context, insufficient explication of the goals and endpoints of research toward equitable futures, and inadequate discussions on the authors' positioning in working within politicized contexts (Ko et al., 2023; Stetsenko, 2021).

A call for the reclamation of critical uses of CH research has accompanied these critiques. Reclamation could include imagining and enacting a "sought-after future" (Stetsenko, 2020, p. 11; see also Rajala et al., 2023; Sannino, 2020). It could also encompass a careful balance of commitment and flexibility, aimed at achieving sustainability while resisting domestication of the Vygotskian revolutionary tradition (Rajala et al., 2023; Stetsenko, 2022). Finally, this reclamation could include explicit dedication to equity, attention to the sociohistorical contexts and emancipatory goals of research (Gutierrez et al., 2016), and more explicit positioning of researchers in relation to participants (Philip et al., 2018; Stetsenko, 2021).

Given ongoing socio-political tensions in the U.S.—including the demonization of the use of critical race theory in schools (Crenshaw, 2023), persistent racialization of school discipline (Bal et al., 2018), and banning of social and emotional learning (SEL) (Bennion, 2023; Harrison et al., 2023)—the reclamation of critical uses of CH research can be a critical instrument to disclose, resist, and restructure (in)visible infrastructure that upholds White supremacy and privilege, and perpetuates oppressive ideological and material conditions.

To address obdurate educational inequities that persist in the U.S. educational system through CH research, it is imperative to explicitly attend to historicity, equity, transformative future possibilities, and the agentic actions of people who, though vulnerable, but filled with future possibilities (Gutiérrez et al., 2016). Given the complex, multifaceted nature of inequities, documenting and intervening in the existing inequities also require the use of critical theories from other research traditions. These can act as interpretative tools, contributing to a nuanced and situated understanding and representation of the local political contexts of inequity (Ko et al., 2023; Stetsenko, 2021). Stated differently, pushing the boundaries of CH scholarship demands epistemological and methodological expansions, fulfilled through the integration of critical theories, to carry on the Vygotskian revolutionary legacy towards social changes.

In social change experiments informed by CH theoretical approach, mediating artifacts are utilized to support and expand change-oriented human praxis—i.e., reflections and actions —(Gutierrez et al., 2016; Rabardel & Béguin, 2005; Wartofsky, 1979; Vygotsky, 1978). Mediating artifacts (e.g., narratives of racialized individuals, statistics capturing social injustice) enable researchers and participants to uncover normative sociocultural assumptions, values, and inequitable infrastructures, therefore supporting in revealing existing inequitable systems and their sources (Ko et al., 2023; Gutiérrez et al., 2016; Rajala et al., 2023; Sannino, 2020; Stetsenko, 2020, 2021). Furthermore, mediating artifacts facilitate envisioning emancipatory futures, breaking away from existing sociocultural norms and values, and imagining alternative social structures. This, in turn, supports researchers and participants in becoming agents of social change, working to restructure systems for greater equity (Rajala et al., 2023; Sannino & Engström, 2018; Stetsenko, 2020, 2021).

The purpose of this paper is to retrospectively examine two case studies to explore expansive possibilities of CH research in organizing equitable futures—not for but—with educational stakeholders from communities navigating, surviving, and resisting inequitable structures. Our selection of cases was driven by discussions between the authors in which we identified the pursuit of common assumptions and aims, including the recognition of the (in)visible infrastructure that characterizes and perpetuates inequitable social systems in the U.S. and the need to make this explicit, using different methods with different participants. The case studies we have chosen are positioned within different socio-political tensions (i.e., the banning of SEL in some U.S. states and racialization of school discipline); they include participants at different ages and developmental levels (i.e., early adolescents and adults); and they use different methods (i.e., curricular-based adult-facilitated peer-based discussions and Change Lab sessions). However, they were both guided by aspects of formative intervention methodology (Engeström, 2016; Sannino et al., 2014) including, participatory designs, appropriation of mediational artifacts/tools, and explicit emancipatory aims. Notably, this paper will foreground how we sought to expand the formative intervention methodology (Engeström, 2016; Sannino et al., 2014), theoretically grounded in cultural-historical theoretical approaches, to divulge (in)visible social infrastructure that constrain learning and life opportunities of youth of color and organize local stakeholders' transformative learning experiences. More specifically, we aim to ask:

How did each study integrate critical theoretical frameworks to expand the epistemological and ethical approaches of formative intervention for addressing racial injustices?

How did each study devise and utilize mediating artifacts to disclose the (in)visible infrastructures that profoundly impact minoritized youth?

How did each study promote transformative learning experiences of participants to envision alternative worlds?

First, we will present two case studies. Within each, we will outline an interdisciplinary lens, informed by the cross-pollination between formative intervention and critical theoretical frameworks, to augment formative intervention's epistemological and methodological expansions, thereby contributing to the exposure of the (in)visible socio-political infrastructure that perpetuate educational inequities. Then, we will apply this interdisciplinary lens to conduct a retrospective analysis of formative interventions implemented in different politicized contexts. Second, we will synthesize our findings from the two case studies to elucidate how CH research scholarship carries on the Vygotskian revolutionary tradition by purposefully attending to equity, historicity, and local context of inequities, building reciprocal partnerships with local stakeholders, and promoting their sociopolitical visions towards equitable futures.

## Case Study #1: Reimagining and Enacting Possible Futures Within a Discourse-Based Formative Intervention

Project PREVENT (Promoting Respect, Enhancing Value, Establishing New Trust) emerged over 20 years ago during a time of heightened awareness of the international sex trade industry, its prevalence in the United States, and regional trends (Bolling & Harper, 2007). Locally, Black/African American girls from economically marginalized communities were targeted for recruitment into the industry at significantly higher rates than girls from other backgrounds, and the average age of recruitment was 12-13 years old (Kruger et al., 2016a). At that time, an interdisciplinary team of researchers identified an overall dearth of research documenting the lived experiences of early adolescent Black girls (10-14 years old), the age group prior to the average age of recruitment, and could not identify any studies revealing the factors that might contribute to their increased vulnerability. This gap led to exploratory studies documenting factors likely to contribute to greater vulnerability (Harper et al., 2016; Kruger et al., 2013) and development of methods for promoting resilience and healthy development during the years leading up to the age at which they were being targeted.

Researchers employed the participatory culture-specific intervention model (Nastasi et al., 2004) and Vygotskian (1978) theories of learning and development to create an interactive, participatory, and discussion-based approach to providing culturally specific SEL for groups of early adolescent Black girls from a variety of backgrounds. This collaboration led to the development of a flexible and culturally responsive curriculum for adaptation and use within these culture-specific interventions (Nastasi et al., 2004; Kruger et al., 2016a; 2016b). Focused on promoting resilience and healthy development among adolescent Black girls, this curriculum "uses critical thinking to solve problems and increase positive relationships" (Project PREVENT Curriculum cover page).

One such culture-specific intervention occurred within a four-year research-practice partnership with an urban, K-8 charter school involving 22 Back girls in 5<sup>th</sup> to 7<sup>th</sup> grade. This took place during the second year of our team's involvement with this school, and it included discussions focused on decision-making, safety, coping, images of women, roles of women, and media literacy. It also included a termination session, centered on reflecting upon what the participants had learned or gained. The current study focuses

more specifically on participants' discussions of sociocultural representations of Black women that emerged within two of the discussions: "Roles of Women" and "Termination" sessions. Specifically, this study aims to explore the epistemological and methodological expansions required for a deeper understanding of participants' discussions surrounding this topic.

## Framework for a Discourse-Based Formative Intervention for Transformative Social and Emotional Learning Among Adolescents

The longer-term project was guided by the participatory culture-specific intervention model (Nastasi et al., 2004), while Vygotskian (1978) social learning theories informed the use of adult-facilitated, peer-based discussions for instruction and data collection through their conceptualization of the simultaneity of individual and social transformation and learning and development in relationship to this. The formative intervention framework (Engeström, 2016) further adds emancipatory goals and notions of expansive learning (i.e., development of critical media literacy) and transformative agency (i.e., increasing positive relationships with adults and among peers and greater efficacy in decision making skills). Additionally, the framework for transformative SEL (Jagers et al., 2019) conceptualized transformative citizenship, targeting individual, interpersonal, and institutional changes, along with the social and emotional competencies associated with these changes. Integrating these four frameworks and representing important epistemological expansions, the Discourse-Based Formative Intervention (D-BFI) conceptualizes developmental outcomes in terms of the cultivation of higher order psychological processes to support a more complex understanding of a specified topic and heightened participation in discussions related to it. Additionally, developmental outcomes proceed from the dialogic interactions that occur within adult-facilitated, peer-based discussions (Pollock, 2023).

## Application of the Framework for a D-BFI for Greater Understanding of Outcomes Associated with Adult-Facilitated, Peer-Based Discussions

Amidst controversies over the explicit teaching of social and emotional skills (Bennion, 2023; Harrison et al., 2023), the specific needs of students of color are often overlooked. For example, the implementation of SEL often serves more as an additional form of behavior control rather than genuine opportunities for students to learn and grow (Simmons, 2021). Additionally, widely used SEL curricula commonly include lessons on emotion regulation and decision-making skills. However, they often fail to consider the relatively higher stakes situations, such as encounters with police or predators posing as boyfriends, in which students of color are often called upon to exercise these skills (Simmons, 2019). The D-BFI framework for transformative SEL among adolescents provides an interdisciplinary approach, enabling researchers to facilitate and evaluate the outcomes of SEL that engages early adolescent Black girls in critical thinking surrounding issues pertinent to them (Pollock, 2023). This is an integral part of providing interventions designed to promote resilience and healthy development within a particularly vulnerable population (i.e., early adolescent Black girls; Kruger et al., 2016a).

Methodological expansions for a deeper understanding of outcomes associated with adult-facilitated, peer-based discussions consisted of the development of a process-oriented approach for analyzing these dialogues (Pollock, 2023). Grounded in Vygotskian (1978) theories of learning and development, this approach embodied interaction within the "zone of proximal development," (Vygotsky, 1978) with the adult-facilitator representing the more competent other (Pollock, 2023). Moreover, through the development and application of multiple analytic lenses (i.e., outcomes from participants' perspectives and higher-order psychological processes), this analytic approach was crafted to examine the results of adult-facilitated, peer-based discussions in terms of adolescent participants' references to sources of knowledge to support their use of higher order psychological processes in engaging with relevant and complex topics (i.e., stereotypical representations of Black women and girls; Pollock, 2023).

The previous conceptualization of outcomes in terms of the cultivation of higher order psychological processes to support a more complex understanding of a specified topic and heightened participation in discussions, positions adult-facilitated, peer-based discussions as a holistic and participatory approach to facilitating SEL among adolescents. Higher order psychological processes form the core of mediated action within adultfacilitated, peer-based discussions (Pollock, 2023). From a Vygotskian perspective, higher order psychological processes include cognitive and affective aspects and support dialogic interactions within the discussion. Cognitive and affective aspects of higher order psychological processes share similar characteristics; including their biological and sociocultural origins, complexity, dynamism, and mediated processual nature (Cong-Lem, 2023; Holodynski, 2013); and both emerge within a developmental trajectory that proceeds from the interpersonal to the intrapersonal (Holodynski, 2013). Additionally, they are distinct from one another, yet interconnected (Cong-Lem, 2023) and a heuristic allows for the identification of affective aspects of higher order psychological processes evident in participants' responses (Golombek & Doran, 2014). Finally, more specific higher order psychological processes are organized within organizing constructs that include perceptual activity, mediated memory, concept formation, identity construction, and volitional action (Pollock, 2023, 2024).

Finally, consistent with a historical approach to analysis, I identified specific outcomes of the series of discussions within the 'Termination' session. The current study focuses on one of these, which was participants' ability to identify and discuss stereotypical roles/characteristics of women. Moreover, based on several participants' identification of the 'Roles of Women' session as one that led to this outcome, I examined this session to learn about the process by which they arrived at this outcome. For the sake of clarity in reporting, I will discuss them in the order in which they occurred.

## Development of Researcher- and Participant-Generated Artifacts and Their Use as Mediation Artifacts

Epistemological expansions centered around the formulation of interdisciplinary theoretical frameworks—i.e., D-BFI for transformative social and emotional learning among adolescents (Pollock, 2023)—and methodological expansions emphasized the inclusion of early adolescent participants in research design (i.e., joint identification of discussion topics) and positioned adult-facilitated, peer-based discussions as a holistic and

participatory approach to facilitating SEL (i.e., conceptualization of the cognitive, affective, and behavioral aspects of higher order psychological processes used to support participation in these discussions), leading to the expansion of our curriculum through identification of researcher- and participant-generated artifacts. Specifically, participants' identification of media and the messages communicated led to researcher-generated artifacts such as the documentary "Girl Like Me" (Davis, 2007), created by a high schoolaged Black girl to discuss experiences with societal reactions to Black girls. Additionally, songs, music videos, movies, and TV shows popular among this group of participants became essential components. Two examples include clips from the Madea movies (Perry, 2006) and American Housewives television series (Weinstock, et al., 2008-2023). Participant-generated artifacts further enriched the study, including drawings that illustrated song lyrics, visual representation of what they learned about the discussion topics, and written reflections on their experiences with the intervention.

Used within the discussions, these artifacts functioned as mediation artifacts/tools for revealing this group of participants' lived experiences with images of women and girls and re-imagining and enacting possible futures. Within exploratory discussions (Pollock, 2024), such as the Roles of Women session, verbal exchanges between the adult facilitators and adolescent participants and among adolescent participants surrounding the music video for "She Knows" (Ne-Yo, 2013), the Madea character (Perry, 2006), and actors in the Real Housewives television series allowed facilitators and participants to make stereotypical representations of Black women in the music industry (i.e., the Jezebel caricature) and other media (i.e., the Matriarch caricature) explicit and visible (see Figure 1). Specifically, participants engaged in analyzing, revealing patterns, and engaging in social reasoning about stereotypical representations of Black women in various types of media. Participants also engaged in co-constructing knowledge between each other. Moreover, affective aspects of revealing patterns included the use of "really" to intensify their identification of patterns of stereotypical portrayals of Black people in media (Golombek & Doran, 2014). Together, the cognitive and affective aspects of these higher order psychological processes comprised concept formation and volitional action. Stated differently, this illustrative example offers how these mediating tools helped early adolescent Black girls expose societal stereotypes and distorted representations of Black women and enabled them to engage in a nuanced exploration of complex socio-cultural oppression.

## Reimagining and Enacting Possible Futures Through Verbal Exchanges and Participant-Created Artifacts Related to Mediation Artifacts

The development of researcher-and participant-generated artifacts and their use as mediation tools within adult-facilitated, peer-based discussions also allowed for reimagining and enacting possible futures. Within termination sessions with two groups of participants, which included reflective discussions (Pollock, 2024), verbal exchanges between the adult facilitators and adolescent participants and among adolescent participants, allowed participants to reflect on what they had learned and how they had grown through the previous sessions. For example, participants indicated the Roles of Women session was helpful and interesting and stated their intentions to be different from stereotypical representations of Black women and girls and to decide for themselves who they are. Specifically, participants engaged in *developing personal theories* and *co-*

constructing knowledge by building on previous discussions to identify the most interesting or helpful and refer to the analysis and social reasoning that occurred during that discussion. Moreover, affective aspects of developing personal theories included participants' explicit juxtaposition of negative appraisals of other's tendency to apply stereotypes and positive/oppositional appraisal of themselves and idealized intention for the future juxtaposed with reality (Golombek & Doran, 2014). Together, the cognitive and affective aspects of these higher order psychological processes comprise identity construction and volitional action. Stated differently, this reveals how this participatory intervention helped early adolescent Black girls develop the transformative agency to resist societal stereotypes that hamper the positive identity construction of Black girls.

Participant-created artifacts included drawings illustrating what they learned about the topics of the discussions and written reflections on their experiences with the discussions. Through written reflections, participants indicated learning about stereotypes of women and "where to find them" (6<sup>th</sup> or 7<sup>th</sup> grade participant). They also indicated the desire to not live their lives according to stereotypical portrayals of Black women. Specifically, participants engaged in *co-constructing knowledge* by building on previous discussions to identify which was the most interesting or helpful and *stating an intended action* based on the discussions. Moreover, affective aspects of higher order psychological processes associated with volitional action included participants' idealized declarations of who they want to be juxtaposed with sociocultural representations available to them. Together, the cognitive and affective aspects of these higher order psychological processes comprise volitional action, revealing participants' agency. Stated differently, this reveals how this participatory intervention helped early adolescent Black girls refuse socially constructed, stereotyping images of Black women and reimagine themselves as empowered and agentic persons.

## Case Study #2: Critical Universal Design for Learning-Informed Learning Lab to Address Racial Injustice in School Discipline

In the U.S. school system, students of color with and without disabilities experience frequent and harsher school discipline (e.g., suspension, expulsion, and referrals to law enforcement), compared to their White counterparts. Notably, Black and Indigenous youth have historically been the primary targets of this punitive school system (Gregory et al., 2010). Racial disparities in school discipline are historically and geographically situated systemic injustice, with patterns that are deployed differently across various spatial and temporal contexts (Artiles, 2019). Thus, addressing intersectional marginalization in school discipline requires localized solutions that align with the needs, goals, and collective visions of local stakeholders (Bal, 2018; Ko et al., 2022; Ko et al., 2023). To tackle racial injustice in school discipline, the Learning Lab methodology, a community-based, participatory systemic design process, was developed (Bal, 2011). The Learning Lab is a formative intervention methodology through which local stakeholders (e.g., educators, families, students, and community members) analyze systemic challenges and design locally meaningful, equity-oriented solutions. The Learning Lab has been implemented in urban, suburban, and rural schools and districts in

Wisconsin, Kansas, Florida, and New Hampshire, as well as internationally in Brazil, and within an Ojibwe tribal nation (Bal et al., 2014; Bal et al., 2018; Ko et al., 2024).

In this section, we introduce the Future-Making Learning Lab, which was implemented during the 2021-2022 academic year at James Baldwin Middle School, an urban school located in a Midwest State in the U.S. During the 2020-2021 academic year, the racial and ethnic breakdown of the student population at James Baldwin Middle School was as follows: 36.35% of the students were White, 23.53% were Black or African American, 18.56% were Hispanic or Latinx, 11.5% were Asian, 0.26% were American Indian or Alaska Native, 0.39% were Native Hawaiian or Other Pacific Islander, and 9.41% belonged to two or more racial groups. In addition, 61.9% of the students qualified for free or reduced-price lunch programs, and 12.16% were receiving special education services. James Baldwin Middle was no exception to the racialized outcome disparities in school discipline; Black students disproportionately experienced harsher school punishments. Although they constituted approximately a quarter of the student population, they accounted for 49.5% of in-school suspensions and 47.7% of out-of-school suspensions. As a new leader, the school principal and his leadership team introduced and enacted multiple practices and programs (e.g., restorative justice, de-escalating strategies). However, they found that these initiatives were ineffective without systemic transformation. Therefore, the James Baldwin Middle school decided to participate in the Learning Lab Project. Learning Lab consisted of nine stakeholders: Jackson (Black, Mentoring Coach), Yadira (Black, Parent), Jamila (Black, Parent), Katie (White, Special Education Teacher), Rachel (White, Special Education Teacher), Robin (White, Social Studies Teacher), Haley (Black, English Language Art Teacher), Anna (White, Vice Principal), and Brian (Multiracial, Principal). Eight Future-Making Learning Lab sessions, ranging from 90 to 150 minutes, were purposefully designed to foster expansive learning actions among participants — i.e., critically unveiling systemic contradictions and collectively designing new solutions to break out from the racist and ableist school system (Engeström, 2016).

In particular, the school community's needs and goals were centered around developing an inclusive, culturally responsive support system by amplifying the voices and perspectives of families, especially those from historically marginalized communities. Consequently, the Future-Making Learning Lab integrated and used the Critical Universal Design for Learning (C-UDL) framework as a lever to expand its epistemological and methodological approaches and to serve as an ethical guideline for the research practice.

### Critical Universal Design for Learning (C-UDL) Theoretical Approach

As an adaptive problem-solving process, the Learning Lab has sought epistemological, methodological, and axiological expansions through the integration of transformative theoretical tools to address the localized problems of practice (Ko et al., 2021). For example, a former Learning Lab intervention utilized critical geography (Soja, 2010) with a clear political and emancipatory purpose to dissect and expose racialized urban geography of opportunities that profoundly impact differential learning opportunities across the color line (Bal et al., 2018). The Indigenous Learning Lab employed the decolonizing theoretical framework (Smith, 2012) to inform ethical research practices, build mutual partnerships with Indigenous families and youth, and leverage

tribal communities' voices and educational sovereignty to dismantle the settler-colonial school system (Ko et al., 2021; Ko et al., 2022). For the Future-Making Learning Lab project, the research team utilized the C-UDL framework to collectively design a culturally sustaining and inclusive school support system.

UDL has been used as an inclusive framework to remove barriers in curriculum, pedagogy, and assessment to ensure access to learning and participation for all students with ability differences (Rose & Meyer, 2002). UDL emphasizes a) organizing learning environments with multiple forms of presenting content (e.g., visual and auditory presentations); b) allowing students to use multiple platforms to demonstrate their mastery of learning (e.g., drawing, oral presentation, role-playing); and c) providing multiple forms of engagement to motivate students' interests and participation (Baglieri, 2020; Rose & Meyer, 2002). Despite its contribution to dismantling the ableist school structure, UDL has been criticized for its color-neutral approach and application, thereby giving less attention to power, privilege, and marginalization at the intersection of different social markers in the school system and broader society (Waitoller & Thorius, 2016). Critical scholarship in the field of inclusive/special education has called for the expansion of the UDL framework to explicitly attend to the role of the historical entanglement of racism and ableism, affirm students of color's intersectional identities, and leverage youth's everyday knowledge and experience to sustain ever-changing youth's cultural practices for transformative learning and teaching (Fornauf & Mascio, 2023; Waitoller & Thorius, 2016). This expansive reconceptualization of UDL can guide local stakeholders' systemic design process through Learning Lab by (1) providing multiple forms of design tools and social support through which local stakeholders unpack systemic challenges and design transformative solutions; (2) purposefully amplifying the voices of communities of color through multiple forms of engagement (e.g., drawings, oral narratives); and (3) addressing (in)visible power differential entrenched in school structure to build reciprocal participation structures.

## Using Critical UDL Framework as Epistemological and Moral Lens for Research Practice

Learning Lab aimed to amplify the voices and sociopolitical future imaginations of local stakeholders, particularly those from nondominant communities, to disrupt "epistemic oppression" (Dotson, 2014) deeply entrenched in the conventional school participation structures. Historically, families of color have experienced "epistemic injustice" (Fricker, 2007)—epistemic silence that erases the voices, historicity, and resistance of people from nondominant communities—in school participation, even though the school policies and practices profoundly impact their children's learning opportunities, joy, and overall well-being within the educational system (Ishimaru, 2020). To transgress this scripted participation structure, Learning Lab purposefully recruited Black parents whose children with and without disabilities disproportionately experienced a punitive school system. Families of color often encounter deficit-laden ideologies and the complex, bureaucratic institutional procedures, along with inscrutable legal terminologies, and jargon, that serve to privilege school staff over families (Ocasio-Stoutenburg & Harry, 2021). With critical awareness of existing power dynamics between school personnel and families, the research team introduced inclusive group norms (e.g.,

equitable sharing of floor time, avoiding educational jargon). Race-neutral solutions to racialized problems can further marginalize students already facing intersectional oppression. To challenge the mere development of color-neutral solutions, the research team emphasized the importance of engaging in honest racial dialogues at the start of each meeting. Purposefully promoting a safe space helped members share their own racialized experience in school building and broader society and understand how race intersects with ability and other social markers of differences and recognize how normative Whiteness functions as normativity to shape racialized behavioral outcomes. The research team also shared agendas before each meeting to help families of color have adequate time to review and prepare their participation. Co-existing with administrators and classroom teachers may deter family members from sharing their candid emotions and experiential knowledge. Therefore, after each session, the research team conducted follow-up communication with family members via email or phone call. This helped gather their insights and suggestions that served as guidance to design activities and mediating artifacts for subsequent sessions.

#### Utilizing Critical Design Artifacts to Disclosing (In)visible Systemic Challenges

In each Learning Lab session, the research team employed a variety of mediating artifacts, informed by the C-UDL framework. These design artifacts served as instruments through which Lab members collectively engaged in intersectional, historical, and empirical analysis of systemic contradictions perpetuating racial disproportionality in school discipline and envisioned an alternative school system by crafting transformative solutions. Particularly, these design artifacts played a pivotal role in mediating members' systemic design praxis—i.e., critically reflecting on policies, programs, and practices, and taking action to reshape the school system. These artifacts were purposefully designed to promote and activate members' intersectional, historicized, and situated epistemologies, which is essential to preventing a mere technical diagnosis of problems that could result in the development of simply race-neutral, technical solutions (Author et al., under review).

To promote the use of intersectional lenses, the research team utilized visualizations of school academic and behavioral outcome data, which is disaggregated by intersectional social markers (e.g., race, gender, disability, and economic status). These visualizations of school data helped members uncover racialized and gendered inequities that were otherwise obscured within aggregated datasets. Engaging in collective case studies allowed members to employ an intersectional lens to critically explore how the interplay of race and disability interdependently shape disparities in behavioral outcomes. They discovered that Black students with disabilities disproportionately received exclusionary school discipline without adequate levels of restorative support, such as conference, restorative dialogues, compared to White students with the same disabilities.

Racialized school discipline is a manifestation of historically accumulated educational debts (Ladson-Billings, 2006). Therefore, attending to broader local racial histories and structural contradictions is critical to diagnose the root causes of racialized problems. Historical documents and news articles, which covered the city's history of racial segregation and racial integration through busing policy after Brown decision in 1954, were mobilized to unveil how the city's long historical legacy of racial and residential segregation continue to be indexed in the current policies and practices. A

district policy was enacted to ensure racial diversity within the student population. Accordingly, the James Baldwin School bused in students of color from impoverished communities of color. This historical analysis enabled members to critically examine whether school infrastructure was adequately prepared to accommodate existing diversity. Geographic Information System (GIS) maps and school attendance maps were also used to help members develop a spatial understanding through which they critically investigated how life opportunities are spatially unevenly distributed, and how the school system does not reflect the existing economic diversity of the school population.

After developing a historical and situated understanding, members turned their attention to the analysis of the current school system. The existing school discipline protocol served as a mediating artifact, helping members identify systemic challenges, breakdowns, and even strengths. The research team also offered guiding questions (e.g., who benefits from the current system and whose voices are missing). Members identified pervasive deficit ideologies (e.g., stereotyped assumptions on students of color from low-income families) and a punitive school culture that shaped everyday institutional practices and interpersonal interactions. They also identified that the existing school wide behavioral plan was primarily designed to react to behavioral incidents, with a noticeable lack of preventive behavioral support strategies. Furthermore, Lab members found lack of community engagement and outreach which could serve to restore broken relationships between school and communities of color. Uncovering systemic contradictions can dialectically reimagine new material conditions (Engeström, 2016). These systemic challenges thus motivated Learning Lab members to design a new support system that is preventive, culturally responsive, and inclusive.

#### **Collective Envisioning Possible Futures**

Based on the systemic challenges identified in the previous sessions, members collectively designed transformative solutions. Notably, the research team purposefully utilized guiding questions, informed by the C-UDL theoretical framework, to mediate members' collective future making. These guiding questions, for example, included: How can we honor and leverage students' and families' cultural assets, informal learning experiences, and students' intersectional identities? How can we better understand families and communities? How can we increase students' meaningful participation and engagement and tap into their interests? How can we minimize stereotype threats? and how can we better support students who are vulnerable to school discipline (e.g., students of color and students with disabilities)? Such guiding questions served as a mediating tool to steer members toward collective envisioning of multiple solutions.

Members envisioned leveraging family's cultural knowledge and community's voices to provide culturally responsive behavioral support for students, as well as to develop professional learning opportunities for school staff. For example, members suggested recruiting parents of color to lead special interest groups, in which students of color could learn positive behaviors and promote their identities in a culturally responsive manner. Acknowledging that school staff often grapple with students' behavioral incidents with limited tools and resources, Lab members also reimagined a support structure that would provide school staff with the available tools and resources to address the students' behavioral needs (e.g., de-escalation training and restorative justice training). In an effort

to mend historically infused fractures in relationships, members envisioned holding conferences at the community sites. Families with students with disabilities often face systemic barriers, such as inscrutable special education laws and policies, making it difficult to navigate the complex special education system. To provide more inclusive support for these families, members also suggested hosting information sessions at the community sites. At these sessions, special education teachers and administrators could elucidate special education related school policies and programs, making information more accessible. Members also reimagined harnessing the ever-shifting youth culture (e.g., using media platforms like TikTok, popular podcasts) to pique students' interests and connect to their lived experiences, thereby affirming students' ever-changing identities and cultural practices as vital resources for transformative learning and teaching. James Baldwin Middle school is implementing transformative solutions designed through the Future-Making Learning Lab.

## Revitalizing Vygotskian Radical Legacy through Social Change Interventions

Cultural-Historical scholarship has generated a powerful intellectual legacy and pragmatic tools aimed at transforming human activity systems. Specifically, formative intervention methodology can act as an emancipatory instrument, cultivating new knowledge, tools, practices, and identities to address pressing systemic contradictions. Despite its explicit equity-oriented focus, formative intervention scholarship has been called upon to confront racial injustice in politicized contexts (Stetsenko, 2021). Through the lens of two case studies, we explored the expansive possibilities of the formative intervention methodology in advancing the Vygotskian revolutionary tradition within CH research. These case studies aimed to elucidate how formative intervention methodology integrate critical, interdisciplinary theoretical perspectives to broaden the epistemological, methodological, and axiological approaches of formative interventions in tackling urgent racial injustice. We also sought to illuminate how these epistemological and methodological expansions can inform the creation and utilization of mediating artifacts through which to disclose (in)visible infrastructures that profoundly impact racialized experience and life outcomes of minoritized youth, while also promote transformative learning experiences of participants for shaping their possible futures.

These case studies varied in their focus, participants, theoretical perspectives, and analytic scope. The first case study centered on transformative social and emotional learning among early adolescent participants. Moreover, it employed the D-BFI framework (Pollock, 2023) and adopted a narrow analytic scope, focusing on two out of eight total sets of discussions, to illustrate critical social analysis (i.e., concept formation), healthy identity construction, and volitional action in relation to stereotypical socio-cultural representations Black women and girls as outcomes of a series of adult-facilitated peer-based discussions. In contrast, the second case study examined inequitable school discipline by engaging parents, administrators, and teachers in identifying and addressing sources of racialized school disciplinary practices within their school. Moreover, this case study utilized the C-UDL theoretical framework and maintained a broader analytic scope across eight sessions in which participants identified specific injustice to disciplinary

practices and proposed emancipatory solutions. Importantly, we aim to leverage these differences to illustrate multiple ways formative intervention methodology can serve as an emancipatory instrument within a sociocultural context characterized by (in)visible infrastructures that require disclosure and remediation.

Both case studies illustrated transformative endeavors to amplify the voices and perspectives of participants and leverage their experiential knowledge through interactive and inclusive participation structures. The first case study employed an interactive participation structure that allowed joint identification of discussion topics and sessions, primarily structured around adult-facilitated, peer-based discussions. This approach empowered early adolescent Black girls to identify discussion topics and issues important to them and reflecting their own experiences. The second case study included an inclusive participation structure, which included providing agendas in advance, establishing inclusive group norms, and conducting individual follow-up communication with families of color. This participation structure enabled school stakeholders, particularly from nondominant groups, to narrate their lived experiences, articulate educational aspirations and visions for their future generations, and tap into their cultural knowledge to envision new, equity-oriented solutions.

Both case studies also illustrated researchers' integration of critical theoretical lenses to devise and employ mediating artifacts, which supported participants' efforts to criticize current practices, ideologies, and structures, and imagine possible futures. The first case study required a critical understanding of approaches to social and emotional learning, expansive reconceptualization of Vygotskian social learning theories, and the transformative SEL framework and their application within formative intervention methodology to evaluate the outcomes of discussions with early adolescent Black girls surrounding stereotypical representations of Black women and girls. The development of mediating artifacts for use with participants included music videos, song lyrics, questions, historical information from adult facilitators, and drawings and narrative reflections from participants. The use of these artifacts within the interactive participation structure enabled early adolescent girls to criticize and resist stereotypical representations of Black women and girls and re-envision their sociocultural identities as their own possible futures.

The second case study required a situated, historicized, and intersectional understanding of racial injustice in school discipline, along with an expansive reconceptualization of UDL and their application within formative intervention methodology. This approach explicitly attended to the entanglement of racism and ableism, while actively avoiding race-neutral solutions. Specifically, this theoretical approach led to researchers' critical awareness of the need for inclusion of a group of stakeholders representative of the most affected students, the creation of a safe space, disaggregation of academic and behavioral data according to intersectional social identities, and a focus on avoiding race-neutral solutions. The development of mediating artifacts for use with participants included visualizations of the schools' academic and behavioral outcomes data, historical documents and news articles, GIS maps and school attendance maps, the existing school-wide behavior plan, and guiding questions from researchers. Finally, their use within the previously described inclusive participation structure allowed participants to use academic and behavioral outcome data to identify race-based inequitable discipline practices; historical documents and news articles to reveal contemporary patterns and their historical roots; GIS maps and school attendance

maps to reveal the uneven distribution of life opportunities; and the existing school-wide behavior plan to identify a punitive rather than preventative approach to discipline. Finally, critical UDL-informed guiding questions facilitated expansive learning of school stakeholders to collectively envision a culturally responsive and inclusive school system as their possible future.

Finally, both case studies responded to the urgent call for revitalizing Vygotskian radical legacy, addressing educational injustices, being aggravated by White supremacist's attempt to ban critical theories and social emotional learning opportunities in public schools. Specifically, the first case harnessed the Vygotskian radical legacy as a method for providing transformative SEL opportunities for a group of early adolescent Black girls. Grounded in the concept of transformative citizenship, in which responsible participation in society involves questioning inequitable structures and working towards greater equity, the transformative social and emotional framework (Jagers et al., 2019) conceptualized the constructs associated with development of transformative citizenship among children and adolescents within the structure of PreK-12 schooling and proposed the use of participatory action methods for implementation of this framework. Moreover, with the addition of Vygotskian social learning theories and the principles of formative interventions, the D-BFI for transformative SEL among adolescents can provide a useful tool for providing transformative SEL and connect the method with transformative and emancipatory outcomes, such as re-imagining and enacting possible futures.

Similarly, the community-driven systemic design process detailed in the second case study can serve as an emancipatory tool for the school community to identify their racialized inequities embedded in their everyday policies, programs, and practices. District and school leaders can employ Learning Lab methodology to cultivate an inclusive, problem-solving space, amplify multiple stakeholders, especially those from historically marginalized communities, and galvanize their sociopolitical future imaginations to collaboratively design transformative school systems aimed at promoting well-being, joy, inclusion, and meaningful participation of all students with ability differences.

CH research is fundamentally grounded in innovation, imagination, and utopian goals (Ko et al., 2023; Rajala et al., 2023), while formative intervention methodology aims to facilitate expansive learning and transformative agency (Engeström, 2016). Moreover, its application within the sociocultural context of the U.S. requires considering diversity, racialized social structures, and the complex histories of intersectional violence and marginalization (Gutierrez et al., 2016; Stetsenko, 2021), situated within (in)visible and inequitable infrastructures. The two case studies presented in this study have highlighted two primary expansions of formative intervention methodology required within this context. Firstly, given that students and families of color are often marginalized, and their voices remain unheard, expanding formative interventions in this context demands a focus on the inclusion of these groups. It is essential to establish interactive participation structures that ensure their voices are not only heard but also actively utilized as counternarratives for exposing the underlying (in)visible infrastructures. Secondly, the (in)visible infrastructures must be made explicit before they can be dismantled. Therefore, expansion of formative interventions within this context requires appropriation of mediation artifacts to elucidate inequities, their sources, and the processes that sustain them. This expansion includes researchers' use of critical interdisciplinary theories to disclose present inequities. This also includes researchers' and participants' use of real-life narratives and experiential knowledge as mediating artifacts to uncover racialized inequities that currently exist and identify how these injustices profoundly affect their lives. Moreover, mediating artifacts (e.g., using media platforms like TikTok and UDL-informed guiding questions) can serve as future-forwarding tools through which to imagine new individual and collective futures.

## References

- Artiles, A. J. (2019). Reenvisioning equity research: Disability identification disparities as a case in point. *Educational Researcher*, 48(6), 325-335. https://doi.org/10.3102/0013189X19871949
- Baglieri, S. (2020). Toward inclusive education? Focusing a critical lens on universal design for learning. *Canadian Journal of Disability Studies*, 9(5), 42–74. https://doi.org/10.15353/cjds.v9i5.690
- Bal, A. (2011). Culturally responsive school-wide positive behavioral interventions and supports framework. Wisconsin Department of Public Instruction.
- Bal, A., Kozleski, E. B., Schrader, E. M., Rodriguez, E. M., & Pelton, S. (2014). Systemic transformation from the ground–up: Using learning lab to design culturally responsive schoolwide positive behavioral supports. *Remedial and Special Education*, 35(6), 327–339. https://doi.org/10.1177/0741932514536995
- Bal, A., Afacan, K., & Cakir, H. I. (2018). Culturally responsive school discipline: Implementing learning lab at a high school for systemic transformation. *American Educational Research Journal*, 55(5), 1007–1050. https://doi.org/10.3102/0002831218768796
- Bennion, E. A. (2023). The future of academic freedom: State legislatures and classroom content bans. *Political Science Today*, *3*(2), 18-19.
- Bolling, M. & Harper, E. (2007). The commercial sexual exploitation of children [white paper, electronic version]. *Georgia State University Center for School Safety, School Climate, and Classroom Management*. https://education.gsu.edu/schoolsafety
- Golombek, P., & Doran, M. (2014). Unifying cognition, emotion, and activity in language teacher professional development. *Teaching and Teacher Education*, *39*, 102-111. https://www.doi.org/10.1016/j.tate.2014.01.002
- Cong-Lem, N. (2023). Emotion and its relation to cognition from Vygotsky's perspective. *European Journal of Psychology of Education*, 38(2), 865-880. https://www.doi.org/10.1007/s10212-022-00624-x
- Crenshaw, K. (2023). The panic over critical race theory iss an attempt to whitewash U.S. history. In E. Taylor, D. Gillborn, & G. Ladson-Billings (Eds.), *Foundations of critical race theory in education* (pp. 362-364). Routledge.
- Davis, K. (2007, April 16). *A girl like me* [Video]. YouTube. https://www.youtube.com/watch?v=z0BxFRu\_SOw
- Engeström, Y. (2016). Studies in expansive learning: Learning what is not yet there. Cambridge University Press.
- Fornauf, B. S., & Mascio, B. (2022). Rejecting "normal": UDL as a lever for equity in rural teacher education. *New Directions for Teaching and Learning, 2022*(172), 43-53. https://doi.org/https://doi.org/10.1002/tl.20523
- Fricker, M. (2007). Epistemic injustice: Power and the ethics of knowing. Oxford University Press.

Gutiérrez, K. D., Engeström, Y., & Sannino, A. (2016). Expanding educational research and interventionist methodologies. *Cognition and Instruction*, *34*(3), 275-284. https://doi.org/10.1080/07370008.2016.1183347

Harper, E., Kruger, A. C., Hamilton, C., Meyers, J., Truscott, S. D., & Varjas, K. (2016). Practitioners' perceptions of culturally responsive school-based mental health services for low-income African American girls. *School Psychology Forum 10*(1) 16-28.

Harrison, L. M., Hurd, E., & Brinegar, K. M. (2023). Critical race theory, books, and ChatGPT: Moving from a ban culture in education to a culture of restoration. *Middle School Journal*, *54*(3), 2-4. https://doi.org/10.1080/00940771.2023.2189862

- Holodynski, M. (2013). The internalization theory of emotions: A cultural historical approach to the development of emotions. *Mind, Culture, and Activity*, 20(1), 4-38. https://www.doi.org/10.1080/10749039.2012.745571
  - Jagers, R. J., Rivas-Drake, D., Williams, B. (2019). Transformative social and emotional learning (SEL): Toward SEL in service of educational equity and excellence. *Educational Psychologist*, 54(3) 162-184. https://www.doi.org/10.1080/00461520.2019.1623032
- Ko, D., Bal, A., Bird Bear, A., Sannino, A., & Engeström, Y. (2021). Transformative agency for justice: addressing racial disparity of school discipline with the Indigenous Learning Lab. *Race Ethnicity and Education*, 25(7), 997–1020. https://doi.org/10.1080/13613324.2021.1969903
- Ko, D., Bal, A., Bird Bear, A., Orie, L., & Mawene, D. (2022). Indigenous learning lab as prefigurative political action to dismantle settler-colonial system of exclusion. *International Journal of Inclusive Education*, 1–20. https://doi.org/10.1080/13603116.2022.2119488
- Ko, D., Bal, A., Bird Bear, A., Orie, L., & Mawene, D. (2023). Learning lab as a utopian methodology for future making: decolonizing knowledge production toward racial justice in school discipline. *Mind, Culture, and Activity*, 30(1), 5–23. https://doi.org/10.1080/10749039.2023.2205391
- Ko, D., Lim, S., & Bal, A. (2024). Leveraging universal design for learning as an equity-oriented systemic design framework to dismantle exclusionary school systems. *Multiple Voices for Ethnically Diverse Exceptional Learners*, 23(2), 7-20. https://doi.org/10.56829/2158-396x-23.2.7
- Kruger, A., Harper, E., Harris, P., Sanders, D., Levin, K., & Meyers, J. (2013). Sexualized and dangerous relationships: Listening to the voices of low-income African American girls placed at risk for sexual exploitation. *Western Journal of Emergency Medicine*, 14(4), 370. https://www.doi.org/10.5811/westjem.2013.2.16195
- Kruger, A. C., Harper, E., Zabek, F., Collins, S., Perkins, C., & Meyers, J. (2016a). Facilitating a school-based prevention of commercial sexual exploitation of children. *Health promotion practice*, 17(4), 530-536. https://www.doi.org/10.1177/1524839916628863

- Kruger, A. C., Zabek, F., Collins, S., Harper, E. A., Hamilton, C., McGee, M. C., Perkins, C., & Meyers, J. (2016b). African American girls' descriptions of life in high-risk neighborhoods. *School Psychology Forum* 10(1) 29-40.
- Ladson-Billings, G. (2006). From the achievement gap to the education debt: Understanding achievement in U.S. schools. *Educational Researcher*, 35(7), 3-12. https://doi.org/10.3102/0013189X035007003
- Nastasi, B. K., Moore, R. B., & Varjas, K. M. (2004). School-based mental health services: Creating comprehensive and culturally specific programs. American Psychological Association.
- Ne-Yo. (2013). She knows [Song]. On Born Sinner. Roc Nation; Columbia; Dreamville.
- Ocasio-Stoutenburg, L. L., & Harry, B. (2021). Case studies in building equity through family advocacy in special education. Teachers College.
- Perry, T. (2006). Madea's Family Reunion [Film]. Lionsgate Films.
- Philip, T. M., Bang, M., & Jackson, K. (2018). Articulating the "how," the "for what," the "for whom," and the "with whom" in concert: A call to broaden the benchmarks of our scholarship. *Cognition and Instruction*, 36(2), 83-88. https://doi.org/10.1080/07370008.2018.1413530
- Pollock, R. (2023). The possibilities of becoming: An examination of the use of higher order psychological processes and sources of knowledge in two reflective discussions with early adolescent Black girls [Doctoral dissertation, Georgia State University]. ScholarWorks@Georgia State University. https://www.doi.org/10.57709/35454025
- Pollock, R. & Kruger, A. C. (2024, April 11-14). Constructing educational opportunities through transformative discussions with early adolescent Black girls. Paper presented at the 2024 Annual Meeting of the American Educational Research Association. Available from the AERA Online Paper Repository.
- Rabardel, P., & Beguin, P. (2005). Instrument mediated activity: From subject development to anthropocentric design. *Theoretical Issues in Ergonomics Science*, 6(5), 429-461. <a href="https://www.doi.org/10.1080/14639220500078179">https://www.doi.org/10.1080/14639220500078179</a>
- Rajala, A., Cole, M., & Esteban-Guitart, M. (2023). Utopian methodology: Researching educational interventions to promote equity over multiple timescales. *Journal of the Learning Sciences*, 32(1), 110-136. https://doi.org/10.1080/10508406.2022.2144736
- Rose, D.H. and Meyer, A. (2002) *Teaching every student in the digital age: Universal design for learning.* Association for Supervision and Curriculum Development.
- Sannino, A., & Engeström, Y. (2018). Cultural-historical activity theory: founding insights and new challenges. *Cultural-Historical Psychology*, 14(3), 43-56. https://doi.org/10.17759/chp.2018140304
- Simmons, D. N. (2019). You can't be emotionally intelligent without being culturally responsive: Why FCS must employ both to meet the needs of our nation. *Journal of Family and Consumer Sciences*, 111(2), 7-16. https://www.doi.org/10.14307/JFCS111.2.7
- Simmons, D. (2021). Why SEL alone isn't enough. *Educational Leadership*, 78(6), 30-34. Smith, L. T. (2012). *Decolonizing methodologies: Research and Indigenous peoples* (2nd ed.). Zed Books.
- Soja, E. W. (2010). Seeking spatial justice. University of Minnesota Press.

- Stetsenko, A. (2020). Critical challenges in cultural-historical activity theory: the urgency Cultural-Historical Psychology, agency. *16*(2), https://doi.org/10.17759/chp.2020160202
- Stetsenko, A. (2021). Scholarship in the context of a historic socioeconomic and political turmoil: reassessing and taking stock of CHAT. Commentary on Y. Engeström and A. Sannino "from mediated actions to heterogenous coalitions: four generations of activity-theoretical studies of work and learning". Mind, Culture, and Activity, 28(1), 32-43. https://doi.org/10.1080/10749039.2021.1874419
- Stetsenko, A. (2022). Radicalizing theory and Vygotsky: Addressing crisis through activist-transformative methodology. Human Arenas. https://doi.org/10.1007/s42087-022-00299-2
- Vygotsky, L. (1978). Mind in Society. Harvard University Press.
- Waitoller, F. R., & Thorius, K. R. K. (2016). Cross-pollinating culturally sustaining pedagogy and universal design for learning: Toward an inclusive pedagogy that accounts for dis/Ability. Harvard Educational Review, 86(3), 366-389. https://doi.org/10.17763/1943-5045-86.3.366
- Wartofsky, (1979). Perception, representation, and the forms of action: Towards an historical epistemology: [1973]. In R. S. Cohen & M. W. Wartofsky (Eds.), Models: Representation and the scientific understanding (pp. 188-210). D. Reidel Publishing Company.
- Weinstock, S., Hersh, G., Eskelin, L., Haughton-Lawson, L., Neslage, L., Sylvester, A., Neslage, L., Swan, A., Cohen, A. (2008-2023). Real Housewives of Atlanta [TV series].

### Acknowledgement

We extend our deepest gratitude to Dr. Patricia Martínez-Álvarez and Dr. Monica Lemos for their pivotal roles in organizing and spearheading this mentoring activity. We also thank all the participants involved in the two case studies presented in this paper, for their commitment to collectively envisioning new worlds. Their experiences, resilience, daily resistance, and ingenuity has provided invaluable lessons that enrich our epistemic and ethical lenses as critical scholars and learning scientists. Lastly, we acknowledge that due to the word constraints, there may be limitations in faithful representation and empowering portrayal of the collective future-making of our participants.

#### About the authors

Rebekah Pollock is an instructor in the Department of Learning Sciences at Georgia State University in the United States. Her research draws from Vygotskian social learning theories and participatory ethnographic methods to study learning and development within discussion-based instruction with adolescents.

Dosun Ko is an Assistant Professor in the Department of Education at Santa Clara University. His research centers on the intersections of race and disability in special education, specifically examining the racialized processes of disability identification and school discipline. He is also dedicated to participatory co-design with local school communities to develop transformative solutions that promote equity and inclusion.