

**Reimagining the Aim of Professional Learning: The Impact of Critical Consciousness
Development on Social Justice Math Mentors**

by

Cassandra Sade Brentley

Bachelor of Arts, Duquesne University, 2008

Master of Arts, Argosy University, 2012

Submitted to the Graduate Faculty of the
School of Education in partial fulfillment
of the requirements for the degree of
Doctor of Education

University of Pittsburgh

2022

UNIVERSITY OF PITTSBURGH

SCHOOL OF EDUCATION

This dissertation was presented

by

Cassandra Sade Brentley

It was defended on

June 15, 2022

and approved by

Kari Kokka, Assistant Professor, Department of Teaching, Learning, and Leading

Carmen Thomas-Browne, Education Equity Consultant, Mass Insight

Dissertation Director: T. Elon Dancy II, Professor, Department of Educational Foundations,
Organizations, and Policy

Copyright © by Cassandra Sade Brentley

2022

Reimagining the Aim of Professional Learning: The Impact of Critical Consciousness Development on Social Justice Math Mentors

Cassandra Sade Brentley, EdD

University of Pittsburgh, 2022

This study explores the impact of attending optional professional learning events on the critical consciousness development of Ready to Learn (RtL) mentors over the course of one program year. Ready to Learn is an out of school time math tutoring and mentoring program that seeks to address opportunity gaps in math learning for middle school students in a mid-size, Midwest urban public school. The program aims to achieve this by deploying highly trained mentors to provide social justice centered math learning experiences. One aspect of the training process for RtL mentors is attending optional events hosted by CUE or that feature CUE faculty members to deepen the mentors' knowledge of current and historical conditions that impact urban education.

Critical consciousness, or *conscientização*, developed by Paulo Freire, is the theoretical framework informing the study. A qualitative evaluation using hybrid thematic analysis was conducted to evaluate this professional learning strategy to identify best practices and future applications for lecture style events hosted by the Center for Urban Education (CUE) as professional learning for community educators working in out-of-school environments. Critical consciousness development in educators is essential in building awareness of inequity and injustice in both education and the broader society. The findings provide evidence that attending optional professional learning events offered by CUE support foundational critical consciousness development for mentors who choose to participate. Additionally, mentors demonstrated

recognition of patterns of neoliberal influences on education in their post-event reflection responses and semi-structured interview responses suggesting a level of awareness that may lead to critical motivation and action. Moreover, once a person “chooses to see” and actively investigates factors impacting barriers to equity and justice they cannot unsee them. Thus, recognition of systemic oppression will create a new lens for RtL mentors to view their world no matter what career path they intend to pursue after their time in the program. Implications for future practice within the RtL program include continuing to offer opportunities for RtL mentors to attend professional learning events offered by CUE as a component of their self-directed professional learning, as well as incorporating event attendance as required training component.

Table of Contents

| | |
|--------------------------------------------------------------------------------------|-----------|
| 1.0 Introduction..... | 1 |
| 1.1 Relationality Statement..... | 2 |
| 1.2 Broader Problem | 3 |
| 1.3 Organizational System | 7 |
| 1.4 Stakeholders..... | 10 |
| 1.4.1 Center for Urban Education | 10 |
| 1.4.2 University of Pittsburgh School of Education | 11 |
| 1.4.3 Carnegie Mellon University Human and Computer Interaction Institute ... | 12 |
| 1.4.4 RtL Mentors | 13 |
| 1.4.5 RtL Partner Schools' Leadership | 13 |
| 1.4.6 RtL Middle School Student Participants | 14 |
| 1.4.7 RtL Middle School Student Participants' Caregivers | 16 |
| 1.4.8 RtL Grant Funders | 17 |
| 1.5 The Problem of Practice Statement | 20 |
| 2.0 Review of Supporting Knowledge | 24 |
| 2.1 Theoretical Framework | 24 |
| 2.1.1 Critical Consciousness & Culturally Sustaining Pedagogy..... | 26 |
| 2.1.2 Impact of Critical Consciousness Development on Students | 29 |
| 2.1.3 Culturally Sustaining Tutoring & Mentorship | 30 |
| 2.1.4 Teaching for Social Justice | 31 |
| 2.2 Inquiry Questions | 33 |

| | |
|-----------------------------------------------------------------------|-----------|
| 3.0 Methods and Measures..... | 34 |
| 3.1 Participants | 35 |
| 3.2 Data Collection..... | 37 |
| 3.3 Summary of Professional Learning Events..... | 39 |
| 4.0 Data Analysis..... | 48 |
| 4.1 Findings | 49 |
| 4.1.1 Key Finding: Opportunities for Critical Reflection..... | 50 |
| 4.1.2 Key Finding: Opportunities for Critical Motivation | 54 |
| 4.1.3 Key Finding: Moving Theory into Practice | 56 |
| 4.1.4 Key Finding: Identifying Critical Action | 58 |
| 4.1.5 Key Finding: Neoliberal Awareness | 59 |
| 4.2 Assumptions, Limitations, and Reliability | 65 |
| 4.3 Implications for Future Research and Practice..... | 67 |
| Bibliography | 70 |

List of Tables

Table 1. Mentor Demographics 36

Table 2. Optional Critical Professional Development Events Attended by Mentor-Tutors 47

List of Figures

| | |
|------------------------------------------------------|-----------|
| Figure 1. Power vs Interest Grid | 19 |
| Figure 2. Mentor Positionality Activity | 38 |

1.0 Introduction

For educators who strive to be agents of change in their communities and classrooms, critical consciousness development is foundational to effective praxis. This dissertation in practice proposal presents a research design that seeks to examine the impact of attending optional critical professional development events on the critical consciousness development of undergraduate social justice math mentor-tutors. Throughout the proposal the terms “youth worker” and “community educator” will be used to describe the role of the social justice math mentor-tutors. The two guiding questions informing the proposed study are (a) how did attending optional professional development events focused on the historical and current systemic inequity impacting education increase Ready to Learn mentor-tutors’ critical consciousness and (b) how did attending optional professional development events focused on the historical and current systemic inequity impacting education influence Ready to Learn mentor-tutors’ praxis, or their theoretically grounded or planned actions?

The theoretical perspectives that serve as the lens for the proposed research design and data analysis are the work of Paulo Freire and the historical traditions of African American education for freedom as documented by brilliant scholars such as Carter G. Woodson, Bob Moses, Vanessa Siddle Walker, and Gloria Ladson-Billings. Themes such as collective sacrifice, humanization, and the political power struggles attached to education can be found within the work of these scholars. The concept of teaching for liberation and justice is not new, yet it remains necessary in our society that continues to uphold white supremacy and oppress the most vulnerable people within our society in a multitude of unjust ways. Thus, the need to include critical consciousness development as a central learning objective in educator professional development is essential.

1.1 Relationality Statement

I am a Black woman. I am a mother, wife, daughter, and sister. I am a child of God walking in my purpose on assignment to disrupt inequitable systems in education. By no means do I see myself in a savior complex manner; rather, I serve as a living testimony. The trajectory of my life has been largely impacted by education. The opportunity to expand my world view through literature was offered to me, and my innate ambition held on tight to the idea of escaping poverty by “being smart,” something my mother would offer to me as encouragement everyday as I would leave my home for school. I completed high school at the top of my class, earned a bachelor’s degree, and set out to conquer the world as a banker.

I started my career in banking at the beginning of the Great Recession, the largest economic downturn since the Great Depression. It was in this role I learned that meritocracy is a myth, that capitalism fuels economic stratification and white supremacy, and that my degree could not compete with the social capital of my white peers and resources passed down to them through generational wealth. Nevertheless, I persisted. What I now realize is that these lived experiences were developing my own critical consciousness. I quickly realized corporate banking was not for me. Fast forward a decade later, and I now appreciate how my non-traditional path to becoming an educator serves to give me a critical perspective that shapes my thinking and research interest as a scholar-practitioner.

I am navigating the completion of my dissertation in practice during a global pandemic with the unique educational perspective of a parent of three children, a doctoral student, and an instructional designer implementing after-school programs. I acknowledge my own privilege of simply arriving at this milestone to achieve a self-fulfilling prophecy of becoming Dr. Cassandra Sade Brentley. I am indebted to my ancestors and seek to make them proud. I find purpose in my

children, Preston, Braxton, and Olivia, who serve as ever-present reminders of the urgency and importance of my work. In my current role implementing mathematics interventions for middle school students, my time as a banker reminds me of how urgent and critical math education is for children with similar cultural backgrounds as my own. I witnessed how well-resourced people use money, credit, and social capital as a tool to amass wealth. I fervently believe that my time as a corporate banker was not by accident—rather, it served to create a foundation to understand an important aspect of how capitalism functions. These lived experiences shape my worldview and the lens through which I propose this dissertation in practice proposal.

The aim of this study seeks to inform practice for any educator working toward liberation and freedom by providing learning experiences that affirm the brilliance children naturally embody. This study offers strategies that might create resources to make critical consciousness professional development accessible to out of school time educators seeking to create more equitable learning spaces for the children they serve. Beyond formal education spaces, the strategies presented contain possibilities to support people seeking critical consciousness development more broadly. Thus, this study seeks to contribute to field of educational equity in a variety of ways.

1.2 Broader Problem

The need for professional learning that aims to develop critical consciousness tailored to youth workers serving children in out-of-school time learning spaces is a key component to addressing opportunity gaps that exist in K-12 education. In the United States, youth workers' role as community educators to drive positive learning outcomes is significantly undervalued, which is

reflected in low wages and a lack of professional development that results in a high turnover rate (Thomas, 2002). Youth workers serve students in a variety of roles, such as tutors, mentors, and teaching artists, and they often take on a dual role as program coordinator or program director, organizing out-of-school learning experiences. Out-of-school time programs have the potential to create learning spaces that produce positive learning outcomes for children; however, research suggests that these gains are dependent on high-quality youth workers who deliver the programs to children (Bowie & Bronte-Tinkew, 2006; Walker, 2003; Yohalem, 2003). This understanding reflects the same factors that contribute to the opportunity gap in education across the United States.

The term “opportunity gap” in education opposes the concept of the achievement gap. On the one hand, the achievement gap refers to the disparity in academic performance between groups of students, typically through the examination of standardized test scores (Milner, 2012). On the other hand, the opportunity gap challenges this notion by shifting onus away from students, teachers, and individual schools and examining how the convergence of many other gaps within our society lead to structural and systemic inequity that creates considerably different learning contexts for students that cannot be compared and named as an achievement gap (Irvine, 2010). Ladson-Billings (2006) broadens the argument stating that the focus on the achievement gap should not be concentrated in standardized test scores between different racial groups, but rather on the “education debt” that is owed to generations of Americans that the education system has failed to provide. Out-of-school time community educators are uniquely positioned to address the opportunity gap and to support student learning in ways that are not driven by testing. However, to do so, professional development that explores issues of historic systemic inequity within society and education must be made available to equip community educators to ask critical questions of

their work with youth, to create more equitable learning spaces, and not to reproduce oppressive systems that youth may experience in the school environment. The foundation of these types of professional development experiences is critical consciousness development.

The benefits of professional learning and continuous training are well documented as they relate to almost all professions. For youth workers serving children in out-of-school learning spaces, the findings are consistent: youth workers who receive professional learning are more effective in delivering their programs and building meaningful relationships with children (Bouffard & Little, 2004). However, the existing literature fails to include the development of critical consciousness and addressing issues of bias and racism as core components of professional development for youth workers serving children in out-of-school time programs. The need for critical professional development that centers on race and equity is especially important for youth workers serving children of color, linguistically diverse students, and children who are situated in poverty. For children experiencing poverty, research reveals that staff in programs serving this population tend to have less experience and less formal education (McNamara et al., 2018). However, despite having less formal education credentials, many youth workers who serve minoritized students in out-of-school learning spaces bring a rich knowledge tradition that is often overlooked.

Community educators, such as youth workers serving in OST learning spaces, do not have the same opportunities for training and professional learning as people working in other educational settings. Community educators enter the field from a variety of pathways and often view their role as a steppingstone to future career goals. In addition, community educators bring varied skills and prior knowledge to their work that does not align with a one-size-fits-all approach to training development plans. For many after-school programs, community educators work in a

part-time capacity, which often does not allow adequate time that is required to focus on professional development. In addition, the limited financial resources of OST organizations create barriers for them to offer paid training to their part-time staff (Bowie & Bronte-Tinkew, 2006). Despite the barriers many organizations might face in providing high-quality professional learning experiences for their staff, the benefits are invaluable.

The greatest value of providing professional learning to community educators working in OST is the improved experience of the children they serve. Effective community educators are able to relate to the children attending their programs, design activities that interest the youth, manage challenging behaviors and group dynamics within the programs they facilitate, and understand the overarching mission and vision of the organization to communicate program goals to external stakeholders, such as caregivers, funders, and community partners (National Institute on Out-Of-School Time, 2000). Professional learning serves to establish or enhance these skills in community educators to ensure high-quality delivery of programs for youth.

The Ready to Learn math mentoring program offered by the Center for Urban Education in the University of Pittsburgh School of Education (CUE) seeks to address this problem by incorporating professional learning experiences that aim to develop the critical consciousness of all program staff. By encouraging mentors to attend CUE-sponsored events, as well as events focused on education equity offered by similar organizations. These professional learning experiences provide education that address issues of race and equity that contribute to the opportunity gap. While technical training is important to ensure math mentors within the program are adequately equipped to support youth learning, critical consciousness development is equally important to develop authentic relationships with students and to create learning experiences that respond to their cultural needs.

1.3 Organizational System

Ready to Learn (RtL) is a combination tutoring-mentoring initiative and research study that connects students from the University of Pittsburgh and Carnegie Mellon University with middle school students in Pittsburgh Public Schools to provide math tutoring in an out-of-school context. The overarching goal of the program is to provide grade school students with experiences to support their academic development in mathematics, with a specific focus on Algebra. The Ready to Learn program exists within a larger research-practice partnership between the University of Pittsburgh and Carnegie Mellon University titled, “Bridging Opportunity Gaps in Urban School Contexts.” Carnegie Mellon University contributes to the initiative by building a web-based application called Personalized Learning Squared, or PL². The PL² system aims to use research-driven mentor training along with artificial intelligence (AI) software designed to improve mentor efficiency. This research-practice partnership is funded by the Chan Zuckerberg Initiative and the Heinz Endowments.

In response to the COVID-19 pandemic, RtL offers after-school tutoring and mentoring to students virtually through video conferencing technology. Before the COVID-19 pandemic, the program was offered in-person at the partner school sites. Participating middle school students, in sixth through eighth grade, engage in small group tutoring and mentoring sessions led by RtL mentors, who are trained University of Pittsburgh and Carnegie Mellon University students. The program employs a blended learning approach, infusing the adaptive AI math software ALEKS into each session to personalize the learning experience for students. The program aims to prepare students to take an algebra course in eighth grade.

The program occurs after school during the academic year in two parts: a fall and spring session. The program intentionally focuses on math skill development that leads to proficiency of

algebra concepts, as algebra is a gateway subject to higher-level math courses often required to gain entry into secondary and post-secondary programs that prepare students for high-paying careers, especially in science technology engineering and mathematics (STEM) fields. Moreover, students and mentors are paid for their participation in the program. Using social justice math projects, RtL aims to connect math to the real world and create a culturally relevant learning experience for students. For example, past RtL students completed projects about the water quality in Pittsburgh. The project required students to collect water samples from their homes and other local spaces, testing the water samples, and using math to analyze the results. Students then applied what they learned from testing local water samples to better understand environmental justice issues concerning access to clean water that were impacting residents of Flint, Michigan. Students learned about the sociopolitical factors fueling the problem and explored how citizens of Flint were affected by this social justice issue. At the end of the project, students presented their findings about local and national water quality at an exhibition open to the community.

To conduct projects like the aforementioned one effectively, RtL dedicates a considerable amount of time to training the college students who serve as mentor-tutors. In this position, the college students serve in a paid youth worker capacity, and they are responsible for delivering high-quality tutoring and mentorship to middle school students. The need for professional development in youth-serving organizations replicating the RtL program model or performing similar work has led to another research practice partnership exclusively focused on developing scalable training for youth workers within partner out-of-school time organizations. This separate yet connected work is funded by the R.K. Mellon Foundation.

Understanding the dynamic complexities connected to RtL being situated within a research-practice partnership that drives the design and delivery of the program is essential.

Research-practice partnerships (RPPs) are defined by Coburn and colleagues as “long-term, mutualistic collaborations between practitioners and researchers that are intentionally organized to investigate problems of practice and solutions for improving district outcomes” (Coburn et al., 2013, p. 13). Such projects offer many benefits from building multi-stakeholder partnerships to tackling wicked problems, such as addressing issues connected to the opportunity gap; however, competing institutional priorities and research objectives create even more nuance to navigate. As a boundary spanner within the RPP, my role serves to connect the universities with the community organizations, school districts, students, and families to create positive outcomes for all stakeholders.

The term “boundary spanner” is defined by Haas (2015) as “links between a unit and its environment” (p. 1034; see also Cross & Prusak, 2002; Leifer & Delbecq, 1978) who can play several different functions, such as information exchange, access to resources (Adams, 1976; Jemison, 1984), and group representation (Cross & Prusak, 2002; Friedman & Podolny, 1992). Given my interactions with stakeholders across multiple spaces connected to the RPP, I actively identify the need for professional learning experiences that contributes to raising the critical consciousness of stakeholders in a way that addresses the education debt that Ladson-Billings (2006) discusses and asserts that all citizens within our democratic society are responsible to take action to correct. While critical consciousness development is important for all stakeholders, this study focuses on the critical consciousness development of youth workers, in this case that of the RtL mentors.

1.4 Stakeholders

Stakeholder analysis is a foundational step in understanding a problem of practice and considering ways in which systems and drivers influence the problem. The main stakeholders for the RtL program are researchers and staff within the two university partners, The University of Pittsburgh Center for Urban Education, the University of Pittsburgh School of Education and Carnegie Mellon University Human and Computer Interaction Institute; RtL Mentors, consisting of the University of Pittsburgh and Carnegie Mellon University students; RtL partner schools' leadership teams within Pittsburgh Public Schools Milliones 6–12, Westinghouse Academy 6–12, Science and Technology Academy, and Manchester Academic Charter School; and RtL middle school student participants and their families. Additional stakeholders include the program officers at the two foundations funding the RPP, Chan Zuckerberg Initiative and Heinz Endowments.

1.4.1 Center for Urban Education

The Center for Urban Education (CUE) within the School of Education at the University of Pittsburgh is a research center dedicated to community partnership and engagement, educator development and practice, and student academic and social development. Dr. Helen Faison, who was both the first female and African American to hold the position of high school principal and deputy superintendent within Pittsburgh Public Schools, played a critical role in CUE's formation. The faculty and staff working within CUE are responsible for conducting the Ready to Learn program under the leadership of the CUE Executive Director and Helen Faison Endowed Chair, Dr. T. Elon Dancy, who serves as the co-principal investigator of the RPP that supports the work of RtL. Administrative staff within the University of Pittsburgh School of Education, such as the

grants team and technology team, provide support to the operations of the RtL program. Furthermore, CUE also serves as the physical meeting space for in-person professional development for RtL mentors.

1.4.2 University of Pittsburgh School of Education

The University of Pittsburgh School of Education upholds a commitment to educational equity and works to advance equity and justice in society through education. Three ways the school is working toward this goal is through sustained community engagement, critically grounded research, and pioneering social justice education. The School of Education at the University of Pittsburgh supports RtL in obtaining and managing program funding, sharing program outcomes within and outside of the university through newsletters and other publications, as well as through leadership development of program staff. The University of Pittsburgh School of Education mission and vision statement written by Dean Valerie Kinloch, which is provided below, offers a description that illustrates how the justice centered work of RtL fits into the broader aims of school.

“We ignite learning. We strive for well-being for all. **We teach.** We commit to student, family, and community success. **We commit to educational equity.** We advocate. We work for justice. **We cultivate relationships.** We forge engaged partnerships. **We collaborate.** We learn with and from communities. **We innovate and agitate.** We pursue and produce knowledge. We research. **We disrupt and transform inequitable educational structures.** We approach learning as intertwined with health, wellness, and human development. We address how national, global, social, and technological change impacts learning. **We shape practice and policy.** We teach with and for dignity. We think. We dream. **We lead with integrity.** We are the School of Education at the University of Pittsburgh” (Equity and Justice, 2022).

The work of RtL carries out the mission and vision in a number of ways. The program is collaborative as RtL is situated within a research practice partnership and engages multiple school and community partners. The program cultivates relationships between university students and middle school students working toward educational equity by providing culturally sustaining math tutoring and mentorship. The program seeks to innovate and agitate current mathematics education practices by teaching students Algebra in ways that are relevant and connected to the real world. Lastly, RtL seeks develop the math literacy of middle students in order to provide them with tools to access opportunities and critically examine the world. This alignment with the overarching mission and vision statement of the University of Pittsburgh School of Education is another example of how the school is carrying out the work of advancing educational equity through programs like RtL.

1.4.3 Carnegie Mellon University Human and Computer Interaction Institute

The Human-Computer Interaction Institute (HCII) is a research laboratory within Carnegie Mellon University that investigates the relationship between computer technology, human activity, and society. The HCII leads the development of the PL² software that combines the benefits of both human and computer tutoring. The RtL mentors use PL² as a part of their tutoring and mentoring practice and simultaneously serve as software users and testers, taking an active role in the design and development process. Researchers and software developers with HCII support the data analysis of RtL student participants' ALEKS learning analytics under the leadership of Dr. Ken Koedinger, co-principal investigator of the RPP that supports the work of RtL.

1.4.4 RtL Mentors

Ready to Learn mentors are undergraduate and graduate students at the University of Pittsburgh and Carnegie Mellon University. Mentor-tutors are designated as student workers at their respective universities and paid hourly for their work within the program, which includes any time spent training and preparing student lessons. Mentor-tutors are selected through an application process and complete a full month of professional development before they begin working with students. From September 2020 through May 2021, 21 RtL mentor-tutors served in the program: five mentor-tutors were Carnegie Mellon University students and 16 were University of Pittsburgh students. The RtL mentor-tutor program requires students to complete an application process for consideration for employment. Students are selected by the program director and one to two other program staff. The interview process uses an interview protocol and rubric to determine which students are the best fit for the program. During the interview, process mentor candidates are asked about their experience working within urban school contexts as well as their experience as a math tutor. This screening is important because RtL aims to match mentors with students who reflect similar racial and cultural backgrounds. Mentors contribute to the design and delivery of the program by providing regular feedback on their experience working with students through written reflections, group discussions, surveys, focus groups, and collaborative lesson planning and project development.

1.4.5 RtL Partner Schools' Leadership

Ready to Learn partners with four schools within the Pittsburgh region: three are within the Pittsburgh Public School District and the other is an independent charter school. Two of the

partner schools within the Pittsburgh Public School District, Milliones 6–12 and Westinghouse Academy 6–12, are neighborhood schools that operate within a community schools framework. At these two partner schools, the community school’s coordinator serves as the main point of contact to offer the RtL to students. Pittsburgh Science and Technology is a magnet school focused on STEM and computer science education. The school serves students from different geographical locations within the district and conducts an application and lottery system for admission. The main point of contact to coordinate programming at Pittsburgh Science and Technology is the assistant principal and classroom math teacher. Similarly, Manchester Academic Charter School requires families to apply for admission, but preference is given to students within proximity to the school. The main point of contact to coordinate the RtL program is the principal and the classroom math teacher. The different types of school organizations and the different roles of the points of contact further illustrate the boundary spanner role I play in organizing RtL programming alongside various stakeholders.

1.4.6 RtL Middle School Student Participants

Middle school students in sixth through eighth grade are invited to participate in the RtL program. Twenty spots are reserved for students at each school, and the program has the capacity to serve 80 students in total. An electronic registration form is used for caregivers to enroll their students in the program. Once capacity is reached, students are placed on a waiting list. If open spots remain after the initial registration period, then students on the waiting list are invited to participate, and program registration remains open until all spots are filled. All students are encouraged to register, and a placement assessment within the ALEKS AI software is used to place students in groups so that mentors can work with groups of students who require similar types of

support. The personalized nature of the tutoring and mentoring program provides space for both acceleration and remediation based on the needs of each student. Furthermore, students receive a stipend of up to \$100 a month for their participation in the program.

The program provides personalized math mentoring to middle school students attending three Pittsburgh Public Schools (PPS): Milliones, Westinghouse, and SciTech. Pittsburgh Public Schools is an urban school district serving about 20,000 students, with the majority of the student population made up of Black students and 71% of students coming from families who are economically disadvantaged. During the 2020-2021 school year, in the midst of a global pandemic, the program expanded to also support students at Manchester Academic Charter School. Manchester Academic Charter School is a K-8 school that serves 400 students, 94% are Black and 80% of students come from families who are economically disadvantaged.

Ready to learn aims to respond to the problem of low math proficiency of Black students attending PPS, as measured by the Pennsylvania System of School Assessment (PSSA). During the 2018-19 school year, less than 10% of Black students attending the three PPS schools the program serves scored proficient or advanced in Math on the PSSA. This level of proficiency is well below the 42% of white students within the district scoring proficient or advanced in math on the PSSA. While we know that state standardized tests are not always accurate measures of student knowledge, especially for minoritized students, this large disparity is a significant issue that requires urgent intervention. Algebra is the foundation for students' future success in science, technology, engineering, and math (STEM). Typically, students need to complete Algebra I in order to take higher-level mathematics and science courses. More broadly, the intervention addresses a core problem impacting the STEM career pipeline for students of color by reducing barriers to access, one of which is math proficiency.

Beyond the notion of learning Algebra for the purpose of career preparation, Algebra education and math literacy more broadly is foundational to participate in economic life and American society in ways to lead to a more free and liberated life. Skills such as problem-solving, reasoning, and critical thinking that learning Algebra requires are essential for students to be positioned as future change agents in political and economic institutions (Silva et al, 1990). Empowering students with skills to fully participate in society by disrupting historically oppressive practices will serve to address the opportunity gap leading to a more just society. Thus, math literacy creates opportunities for young people, especially young people who belong to historically marginalized groups, the ability to transcend systems of inequity and oppression to transform their lived experience.

1.4.7 RtL Middle School Student Participants' Caregivers

Caregivers of students play an important role in RtL, especially in the virtual format of the program. Caregivers serve as important sources of motivation and encouragement for students, and they play a key role in registering their students for the program, ensuring stipends are received, problem-solving issues that arise with stipend distribution, and serving as engaged audience members at the end-of-year student project showcase. Ready to Learn mentors and staff aim to develop relationships with caregivers to maintain consistent student attendance as well as to celebrate student success in the program. Caregiver engagement is a critical aspect of successful program delivery, and the RtL program works hard to include caregivers intentionally in the design and delivery of programming.

1.4.8 RtL Grant Funders

Grant funders play an important and strategic role in the RtL program as they hold the leaders of the RPP accountable for the stated outcomes of the project. Developing positive relationships with grant funders has the potential to lead to continued funding from the grant-making institution or recommendations to program officers at other foundations. Foundations are also powerful stakeholders in the overall research space, as they typically set the funding agenda that research projects must then align themselves with to receive funding. Sometimes, those agendas are incongruent and misaligned with the overarching goal of doing what is best for youth. In the case of RtL, generous funding has been made available to offer a program that both meets the research objectives and the needs of the student participants.

Chan Zuckerberg Initiative is the foundation owned by Facebook, and its funding priorities are centered on four pillars: science, education, community, and justice and opportunity. Throughout the four-year funding cycle, the program officer assigned to the RPP changed once. This change in leadership at the grant-making organization has had little impact on RtL. Heinz Endowments also provided a supplemental grant to support the scaling of RtL and to increase the capacity of the program to support four schools and 80 students. The existing relationship between the program officer and the CUE Executive Director has supported a strong working relationship with the funder. Again, these stakeholder relationships are especially important in planning for fiscal program sustainability and growth.

Power versus Interest Grid (see Figure 1) categorizes the stakeholders listed above by using the four clusters offered by Greene (2005): people with decision-making authority, people responsible for delivering the program, people who benefit from the program, and people who are disadvantaged from the program. The four categories are color-coded in the figure. The nature of

the program being situated within an RPP creates an intricate network of stakeholders with varying levels of interest and power. Thus, the stakeholders are then placed on the power versus interest grid that seeks to examine the power dynamics of the various stakeholders. In RtL, the most important stakeholder is the middle school student who is central to all other facets of the program. No matter how enriching the curriculum is or how well prepared the mentors are, if no youth are interested in participating in the program, the program fails to meet the core objective of addressing opportunity gaps in math learning. While the mapping is likely incomplete, it provides a closer understanding of how the network of stakeholders influences the planning and delivery of the program.

Power versus Interest Grid

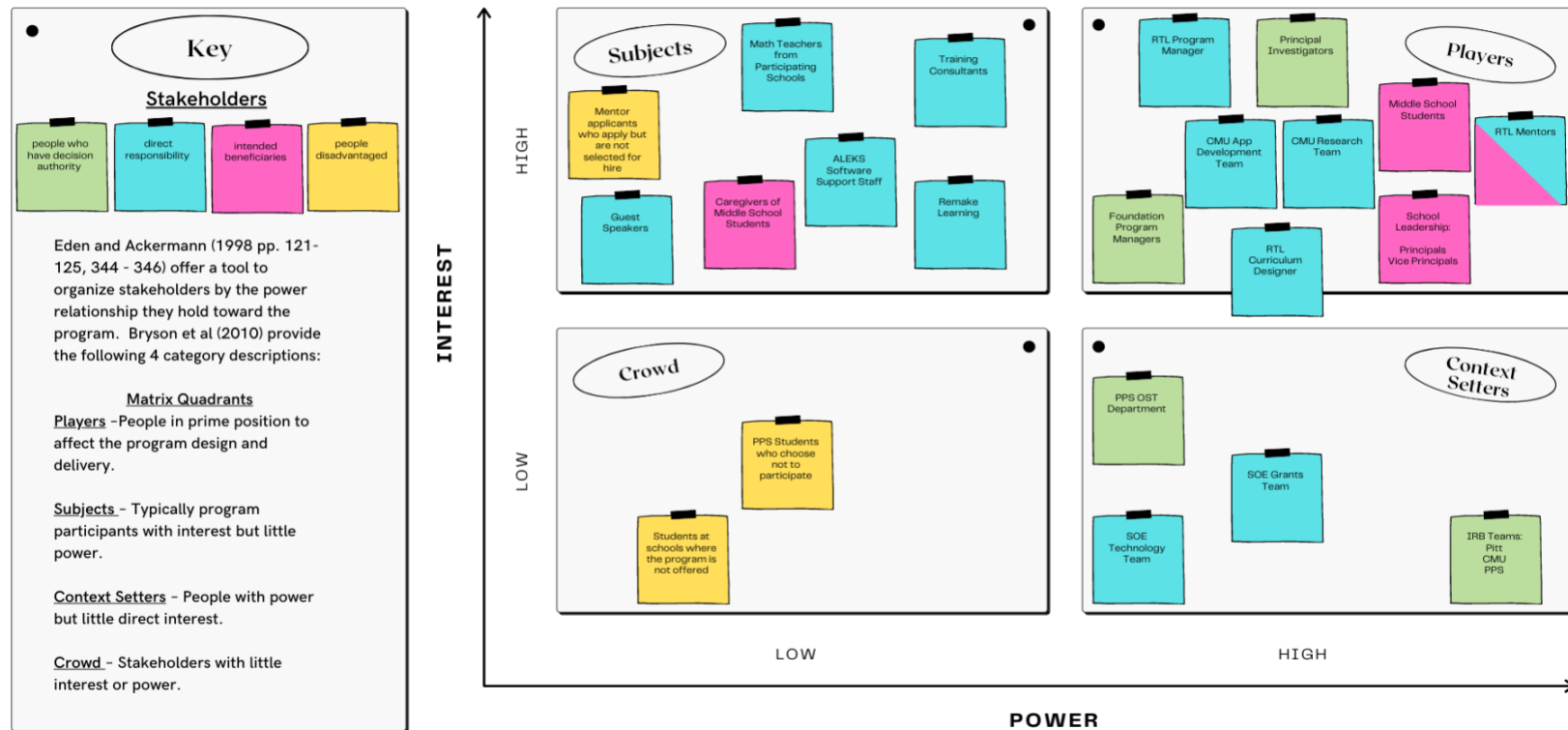


Figure 1. Power vs Interest Grid

1.5 The Problem of Practice Statement

A need exists for critical consciousness development for RtL mentors facilitating social justice math projects. For RtL mentors to lead middle school students through math projects that aim to apply math concepts to investigate social justice issues within society, the mentors must first be aware of the factors that race, class, gender, and power play in contributing to social injustice within society. Although the RtL program staff are intentional about the process of hiring mentors who have demonstrated a commitment to equity and justice through their previous work, extracurricular activities, and stated values and beliefs, a need remains to ensure mentors are prepared to work with middle school students in the facilitation of the culminating social justice math project. The urgency connected to this problem of practice lies in the potential harm that can be done to middle school student participants if RtL mentors are not adequately equipped to facilitate the complexities and nuances of the social justice math project. The program staff seeks to address this problem through mandatory and optional professional learning activities.

The RtL program initially only provided professional learning that was a high-level overview of issues of inequity as they relate to math learning. In the first year of the program, RtL partnered with Saga Education, and RtL mentors used a curriculum developed by Saga during in-person tutoring and mentoring sessions. Saga Education is an organization that partners with schools across the country in urban city centers, like Chicago and New York, to implement rigorous math interventions during the school day. The partnership with Saga Education was strategic in that their research informed model has resulted in strong math learning gains for students who engaged in the intervention. An evaluation of the program conducted by researcher

from The Abdul Latif Jameel Poverty Action Lab (J-PAL), Northwestern and University and the University of Chicago found that during the 2013-2014 school year the students in Chicago Public Schools who engaged in the Saga Education intervention learned an extra one to two years' worth of math (Ander et al., 2016). Initially, I planned to see how the Saga Education might be adapted to fit the needs of the out of school time programming that RtL offered.

While the Saga Education curriculum was helpful in the initial design of the RtL program, it lacked the connections to real-world applications, which reproduced math learning experiences void of culture and relevance, similar to what students received during the school day. With a goal to create more dynamic and culturally sustaining experiences, changes were made to the program curriculum during the summer of 2019 and again during the summer of 2020. With each curriculum enhancement, a greater focus was placed on the centering of social justice math to the instructional design of the program. With these improvements to the program design to align with the goal of centering social justice and equity a need emerged to provide professional learning for mentors to prepare them to provide effective tutoring and mentoring.

Currently, social justice math serves as a culminating project whereby students demonstrate their proficiency of math concepts. The interdisciplinary social justice math project is completed in small groups of two to four students. The learning experience provides opportunities for the middle school student participants of the program to learn skills in research and analysis, data visualization, history, social studies, geography, political science, public speaking and English language arts all while examining a real-world social justice issue through the lens of algebra. The out-of-school context of the RtL program provides a low-stakes environment for students to think critically about topics they are interested in while strengthening their confidence and competence as math learners. For these projects to be well-executed and

centered on the interest of the middle school student participants, RtL mentors must be able to respond to questions that may arise, direct students to appropriate resources, and be comfortable leading difficult and uncomfortable conversations with students in a manner that is developmentally appropriate. To ensure RtL mentors have these skills, professional learning opportunities that explore critical topics regarding equity in education and the broader society are necessary.

The RtL program is uniquely situated within the Center for Urban Education at the University of Pittsburgh where regular professional learning events are offered through lunch and learns, lecture series, book studies and the annual summer educator's forum. To leverage the expertise of the scholars that lead these events, RtL mentors are given the opportunity to attend the CUE lunch and learn and speaker series lectures as optional paid trainings. Events hosted by other centers and departments within the university are also made available as optional professional learning opportunities. Moreover, RtL mentor-tutors have the opportunity to attend critical professional learning events they find offered by other departments within the university or other organizations outside of the university that they believe will provide knowledge and skills they can apply to their role as an RtL mentor.

To receive credit for attending either type of professional development event, the mentor must complete a reflection form, which is submitted electronically through Google Forms. The online RtL CUCommunity space is utilized to post all the available optional training events, and RtL mentors can then register for each event based on their availability and interests. Since all of the CUE events during the 2020–2021 academic year were held virtually and recorded, many barriers to transportation and schedule conflicts for students were eliminated, as students could attend from any location and view the recording of the event at their leisure if they were unable to

attend the live event. This unique circumstance created by the COVID-19 pandemic created increased access to all RtL mentors who were interested in participating in optional professional learning activities.

The goal of this study is to explore how attending optional professional learning events impact the critical consciousness development of Ready to Learn mentors over the course of one program year. Through the evaluation of this training and development strategy, I seek to understand best practices for future implementations of CUE programming as professional learning for community educators working in out-of-school environments. While RtL seeks to address issues of math literacy for middle school students by deploying highly trained mentors to provide social justice centered learning experiences, incorporating CUE programming as part of the professional learning design can be beneficial to other individuals and organizations that influence education and education policy, such as but not limited to, K-12 schools, institutions of higher education, grant making organizations, political leaders and members of school boards.

2.0 Review of Supporting Knowledge

2.1 Theoretical Framework

The theoretical framework used for this research project is the concept of critical consciousness, or *conscientização*, developed by Paulo Freire, a Brazilian educator who worked to liberate rural Brazilians through literacy and sociopolitical action. The term "critical consciousness," or "critical awareness" refers to the process through which people who are oppressed or marginalized learn to critically examine their social situations and take action to improve them. Freire used it in Brazil to raise literacy among marginalized citizens, but he also employed it as a tool for liberation. In Freire's (1973) book *Education for Critical Consciousness*, he states “. . . to every understanding, sooner or later an action corresponds. Once man perceives a challenge, understands it, and recognizes the possibilities of response he acts. The nature of that action corresponds to the nature of his understanding” (p. 44). This emphasizes the importance of taking up a deep understanding of the context in which one is situated before you can take action and create meaningful change. For Ready to Learn mentors this requires understanding Urban Education broadly, the local education landscape, and the communities in which their students live before they begin working with students.

The emphasis on consciousness and social justice in Freire's work is influenced by religion and philosophy. We see the notion appear in Marx's theory that explores dialectic materialism in the late 1800s and argues that the consciousness associated with class oppression serves to sustain inequality and he explains why people act contrary to their personal and class interests. Later, consciousness emerged in theories offering an analysis of colonization in postcolonial Africa and

the Pacific Islands. Albert Memmi and Franz Fanon were among the leading social theorists of this era of the mid-twentieth century. In the United States, Carter Woodson's writings on Black education in the 1930s discussed the impact of segregation-era schooling which perpetuated racial injustice by socializing Black children in ways to make them believe they were inferior. These scholars, Memmi, Fanon, Woodson, and other early writers, contributed cultural lenses of critical consciousness elaborating on how the influence of institutional policies and practices contribute to systemic racism and oppression. Critical social analysis has increasingly relied on a rights perspective, both human and constitutional, in the mid-twentieth century, when Freire was developing his ideas (Watts et al., 2011). Freire's thinking on critical consciousness is informed by these earlier theorists, as well as his own experience working in Brazil to empower marginalized citizens to change their reality.

Freire is highly regarded by academics, educators, and social justice activists because of his ability to seamlessly intertwine critical theory, education pedagogy, and liberation. A true practitioner, his theory is grounded responsively in the needs of the people. His method of educating, which focuses on collaboration rather than a hierarchy between teacher and student reflects his egalitarian values. Freire was also critical of "banking" education where the teacher "deposited" knowledge in students, rather than creating space for student voices and real-world learning experiences. Freire believed reading, dialogue, reflection, and action were all necessary for critical consciousness development and key components of understanding historical, cultural, and political contexts (Watts et al., 2011).

The three core tenets of the Freirean framework of critical consciousness are critical reflection, critical motivation (or efficacy), and critical action. These three tenets served as the lens through which I conducted the qualitative analysis of the data (Freire, 2018). There is a complex

relationship between these three tenets that is neither linear nor finite, rather they take on a more fluid interconnectivity where critical reflection and critical motivation may not always lead to critical action. Freire describes reflection as the process of learning to question and examine “how history works, how received ways of thinking and feeling perpetuate existing structures of inequality” (Sanchez Carmen et al., 2015, p. 13). Critical motivation refers to the commitment a person has to pursue justice. Critical action is the convergence of critical reflection and critical motivation that leads to a person individually or collectively engaging in activities to address perceived injustice (Diemer et al., 2016). Using this critical consciousness framework, I plan to examine how attending professional development events focused on the historical and current systemic inequity impacting education and the broader society foster awareness of sociopolitical circumstances, develop critical questioning skills, and foster collective identity for RtL mentors (Watts & Hipolito-Delgado, 2015).

2.1.1 Critical Consciousness & Culturally Sustaining Pedagogy

Almost a century ago, Carter G. Woodson (1933/2017) described the necessity of critical consciousness development for African Americans stating,

history shows that it does not matter who is in power or what revolutionary forces take over the government, those who have not learned to do for themselves and have to depend solely on others never obtain any more rights or privileges in the end than they had in the beginning. (p. 86)

He provides a critique of the education system of the time, which closely matches present conditions. Woodson states factors such as curricula that do not culturally reflect the learner and do not include the contributions of African Americans throughout history, which he refers to as

“whitewash” (p. 41); inadequate learning facilities that lack the resources students require; and the purposeful omission of teaching American governance and how the political system works to African American students. These factors speak to the need for critical consciousness development more broadly and the importance for those experiencing oppression within society to seek knowledge that will help them understand sociopolitical issues and pursue justice through action to change their circumstances collectively.

Decades later, bell hooks takes up the need for educator critical consciousness development adding a Black Feminist lens and acknowledging the devastating impact of school integration for Black children who were no longer taught by Black women that cared for them in ways they did not experience in integrated schools led by white women teachers. Black women educators understood the type of education Black students required, which is both technical and political. In *Teaching to Transgress*, hooks (1994) describes how educating as a practice of freedom is an approach that anyone can learn. Through examples of her lived experience as a teacher creating learning environments inspired by Freire’s work, she describes how she sought to dismantle the banking system of education and develop the critical consciousness of students. hooks suggests that everyone in the learning environment should grow from active participation, including the teacher. This approach adds the layer of holistic wellness to Freirean principles that hooks named “engaged pedagogy” (hooks, 1994).

Around the same time in 1995, Ladson-Billings called for “a culturally relevant pedagogy that would propose to do three things—produce students who can achieve academically, produce students who demonstrate cultural competence, and develop students who can both understand and critique the existing social order” (p. 474). Emerging from the Civil Rights movement and multicultural education reform, CRT theory began in the 1980s and moved into practice in the

1990s. Aiming to address the opportunity gap and create more equitable learning environments, CRT requires educators who engage in the strategies to develop their own critical consciousness in order to meet the needs of their students (Gay, 2000). CRP responds to the deficit and difference pedagogical approaches that seek to eradicate the cultural, communication and knowledge of students and produce conformity to white American middle-class social norms. CRP and culturally responsive pedagogy (Cazden & Leggett, 1976; Gay, 2000), are often used synonymously in educational research and in teacher education and professional development. This reflects the extraordinary impact the pedagogy has made in the profession. Yet, the language to name the theory and practice continues to evolve.

As best practices regarding CRP continue to adapt to the changing needs of teacher and students the language is also changing, with a move away from CRP and toward culturally sustaining pedagogies. Paris (2012) states “culturally sustaining pedagogy seeks to perpetuate and foster—to sustain—linguistic, literate, and cultural pluralism as part of the democratic project of schooling” (p. 93). He posits that culturally sustaining pedagogy moves beyond mere relevance or responsiveness to require more permanent sustainment of culture and language in ways that support multilingual and multicultural theory and practice of educators, students, and the communities in which they live. Simultaneously, culturally sustaining pedagogy seeks to provide access for young people to critically question the dominant culture. Moreover, Gutiérrez (2008) pushes the definition of culturally sustaining pedagogy to include the concept of “third space” (Gutiérrez et al., 1999) where curriculum is designed to center the historical and current aspects of students’ lived experience “while at the same time oriented toward an imagined possible future” (p. 154). This critical addition of creating space for students to dream of a possible future where

they find themselves liberated, however they personally define liberation, is an important mind shift to achieving the change they seek.

In the twenty-first century critical consciousness development remains a core tenant of effective implementation of culturally sustaining teaching practices, although critical consciousness may not always be explicitly named. For example, strategies and training to uncover explicit bias are ultimately aiming to develop critical consciousness. Essentially, any training that requires participants to acknowledge their place and privilege in the world in relationship to people, think students, families, co-workers, who share space in their learning environments is aiming to, at some degree, develop critical consciousness. I include this brief overview of the history of culturally sustaining pedagogy as it relates to critical consciousness development because one of the aims of Ready to Learn is to prepare our mentors to work with the middle school students they support using culturally sustaining teaching and learning strategies. In order to do so impactfully, we must start with self and offer training and development opportunities for critical consciousness development as a foundation for effective practice.

2.1.2 Impact of Critical Consciousness Development on Students

Critical consciousness development in students has the potential to lead to improved academic outcomes, such as improved attendance, classroom engagement, and standardized test scores in math and science (Luter et al., 2016). According to Diemer et al. (2016), individual outcomes for marginalized youth with higher levels of critical consciousness include “optimal mental health, greater academic engagement and achievement, higher levels of enrollment in higher education, and more successful career development in adolescence” (p. 219). At the university level, a case study exploring critical consciousness development through community

service projects connected to coursework fell short of the ultimate goal of moving theory into action. The findings of the study showed that although students demonstrated an increased critical consciousness through the ability to identify and name social injustices impacting the health of residents in their community, the students were not able to make connections to their newly stated commitments to equity and justice and actionable ways that might impact change (Rondini, 2015). The case study examined informal reflection assignments, class discussions, and end-of-semester interviews to explore the effectiveness of service-learning projects in developing critical consciousness in college students. The lack of motivation to action may be attributed to the race and class make-up of the college students in the course, who are likely not as motivated to disrupt inequitable systems that they benefit from. For the purposes of this study, I am focusing on college students who serve in a community educator capacity and have demonstrated a commitment to social education in their practice as a math mentor-tutor.

2.1.3 Culturally Sustaining Tutoring & Mentorship

While community educators may not perceive themselves as teachers in the same way formally trained educators might, since they teach youth who attend their programs, they stand to benefit from learning culturally sustaining teaching strategies. Critical consciousness development is a foundational component of RtL mentor training to prepare mentors to provide culturally sustaining tutoring and mentorship. Research demonstrates that when students connect academic knowledge with their personal experiences, it makes the learning process more concrete and enjoyable (Gay, 2000). Although the RtL mentor training is much shorter than a preservice teacher program, culturally sustaining strategies used to prepare teachers for effective practice are also applicable to the RtL mentor training.

For OST educators teaching for social justice, critical consciousness development is essential not only to their professional development but also to their wellbeing. Teaching for social justice in our current political climate is taxing and sometimes dangerous. Even more so for educators of color teaching for social justice, thus, culturally sustaining strategies provide tools for both racial literacy development and community building. For this reason, providing RtL mentors with training that seeks to develop their critical consciousness provides the foundation in which they are prepared to receive training on how to implement culturally sustaining tutoring strategies within the after-school math tutoring program.

2.1.4 Teaching for Social Justice

The RtL program incorporates social justice math (SJM) to help students make meaningful connections between math concepts and ways to apply what they are learning in the real world. The SJM projects impact student learning outcomes by providing opportunities to name, analyze, and think through possible solutions for social justice issues that impact their lives (Hammond, 2015). Kokka (2015) offers a definition of SJM grounded in three main principles: (a) teachers and students use SJM to empower marginalized groups of people; (b) SJM creates opportunities for rigorous and active math learning, especially for historically marginalized learners; and (c) SJM learning experiences are co-constructed and power is shared between the teacher and the learner. These principles of SJM align with the Freirean framework of critical consciousness development. As such, for RtL mentor-tutors to effectively facilitate SJM projects, they must first do the internal identity work of understanding their own biases to critically question inequity within society. Ready to Learn mentor-tutors must also be comfortable and confident in their ability to discuss difficult topics such as racism and poverty with the students they support.

Developing their own critical consciousness is an essential factor for mentor-tutors to lead the SJM projects.

Learning for Justice, formally known as Teaching Tolerance, a project of the Southern Poverty Law Center, provides Social Justice Standards as a framework for anti-bias education. The framework identifies four anchor standards: identity, diversity, justice, and action (Southern Poverty Law Center, 2021). Ready to Learn uses these standards to design and analyze the SJM projects middle school students complete, and RtL mentors are expected to understand the standards and use the framework as a guide when supporting students as they complete their SJM projects. This process is a learning experience for both the middle school student and the college math mentor.

Teaching mathematics for social justice creates opportunities for positive learning outcomes by incorporating a curriculum that centers on the experiences of marginalized students and encourages students to use mathematics critically as a tool for change to question power relationships within society and to analyze oppressive systems (Gonzalez, 2009). The skills required to execute SJM projects effectively require specialized training. One of the challenges of teaching for social justice is that students may initially exhibit a sense of powerlessness when they are confronted with sober realities beyond their immediate experiences, but they can move beyond this state (Bigelow, 2002). As the educator, how do you handle this? What skills do RtL mentor-tutors need to be prepared for these potential instructional challenges? These questions can be answered by incorporating CPD as a key component of RtL mentor-tutor onboarding and within an ongoing professional development plan. The research project presented in the next section seeks to evaluate the effectiveness of CPD for preparing RtL mentor-tutors to develop critical consciousness in preparation to lead SJM projects.

2.2 Inquiry Questions

The inquiry questions that guided my study aim to examine the effectiveness of self-directed critical professional development and the overarching impact on the praxis of RtL mentors who participated in the optional critical professional learning events. The inquiry questions are the following:

- How did attending optional professional learning events focused on the historical and current systemic inequity impacting education influence RtL mentors' perception of their practice as mentors-tutors?
- How did attending optional professional learning events focused on the historical and current systemic inequity impacting education influence RtL mentors' perception of their own lived experience?

I predicted that the data would reveal that RtL mentors experience an increased awareness of inequity and power dynamics that impact the American education system, which also connects to their own lived experience as students. Additionally, I anticipated the training sessions would leave the mentors grappling with more questions regarding equity in education and ways they might help the students they serve to overcome systemic barriers. Moreover, I predicted that RtL mentors who attended more than four optional professional learning events would reflect on ways they might take action to positively impact students as an RtL mentor and more broadly.

3.0 Methods and Measures

In evaluating the effectiveness of optional professional learning events on the critical consciousness development of RtL mentors through the examination of perceptions and planned actions, results of this work lend to demonstrate social justice centered professional learning events curated by CUE provide a path for critical reflection that leads to motivation and planned action resulting in a mindset shift regarding tutoring and mentoring practices and education more broadly. Below I provide a review of the data collection and connect the data to the inquiry questions.

The dissertation in practice framework I used is the evaluation model. The data collection began during the Fall of 2020. Following data collection common practices, data was analyzed as it was collected (Glesne, 2011). For an in-depth explanation of specific data collection methods see Table 1. The data collected was obtained through interviews and through collecting archival documents that were stored online. Additional data sources included analytical journal notes and memory elicitations. The memory elicitations were of memories shared between the participants and me while they served as RtL mentors. These shared memories included times that I facilitated training with mentors, observed their practice working with students or any other memory that came to mind relevant to the research purpose. I also referred to a researcher journal that I kept, which included my insights, ideas, and questions relating to the interviews and historical documents.

Historical data collected from RtL mentors during the 2020–2021 program year was utilized to investigate the effectiveness of trainings. The trainings were in the form of professional learning events that focused on the historical and current systemic inequity impacting education

and the broader society and were optional for participants to attend while serving as RtL mentors. Although the professional learning events were optional, mentors who attended were paid their hourly rate for attending. The two pieces of historical documentation that were analyzed were positionality statements written by mentors at the beginning of the program year and event reflection responses submitted via Google Form that mentors completed after each optional professional development event attended. Transcripts from three mentor interviews were analyzed. Qualitative data analysis was conducted on the historical documents and semi-structured interview transcripts. The data was then coded to explore the impact of the professional learning events and the perceptions of how RtL mentors planned to use their new knowledge and skills to inform their practice as community educators.

3.1 Participants

The participants for my dissertation in practice research study are 21 RtL mentor-tutors who served in the program from September 2020 to May 2021. Of the 21 mentor-tutors who served the program during this timeframe, 15 attended one or more optional critical professional development events. In total, 71 optional training event reflection forms were completed by RtL mentor-tutors after attending optional professional learning events. Additionally, positionality statements completed by RtL mentors after a mandatory training session in September 2020 were analyzed and used as a baseline for how mentors self-identify and how they entered the work as math mentor-tutors.

Table 1. Mentor Demographics

| Name | Self-Identification from Positionality Statement | Academic Major | Year and | Length of Time as RtL Mentor |
|----------------|----------------------------------------------------------|--------------------------------------------------|----------|------------------------------|
| Mentor-Tutor 1 | Ghanaian | Senior – Psychology and Africana Studies | | First year |
| Mentor-Tutor 2 | Jamaican American | Senior – Marketing, Finance and Economics | | Second Year |
| Mentor-Tutor 3 | Indian woman | Junior – Economics and Political Science | | First Year |
| Mentor-Tutor 4 | Queer white woman | Senior – Film and Fiction Writing | | First Year |
| Mentor-Tutor 5 | Black woman | Senior – Africana Studies | | First Year |
| Mentor-Tutor 6 | First-generation Filipino-American queer immigrant | Junior – Communication Science and Disorders | | First Year |
| Mentor-Tutor 7 | Latina woman, part Ecuadorian, Puerto Rican, and Italian | Senior – Psychology | | First Year |
| Mentor-Tutor 8 | White Jewish | Senior – History, Poetry and Secondary Education | | Second Year |

Participants were selected using the purposeful sampling technique to reduce the dataset and focus on the information-rich cases of eight RtL mentor-tutors and examine their critical consciousness development over time (Patton, 2002). The criteria I will use to identify the purposeful sample will be RtL mentors who attended five or more optional professional development events. This strategy will reduce the data set from 71 responses to 58. The purposeful sample does not include any Carnegie Mellon University students, as none participated in five or

more optional professional development events. The data sample includes six seniors and two juniors. Two of the college students in the sample served in the mentor-tutor role for two years, and the other college students were new to the role. The majority of college students serving as mentors were majoring in liberal arts disciplines, such as psychology, film, and history, with the exception of one student who majored in marketing and finance. The purposeful sample includes students who represent a diverse ethnic and gender mix (see Table 1 for a complete description of participant characteristics).

3.2 Data Collection

This study analyzed reflection responses collected from RtL mentors through a digital Google Form over the course of the 2020–2021 RtL program year. Mentor-tutors were given the opportunity to attend optional professional learning events that were shared with them in the Ready to Learn Online CUEmmunity. For each event, RtL mentors were required to complete the reflection activity to be compensated for their time attending the optional professional learning events. Mentors who attended were compensated their hourly rate. The optional professional learning events were mostly offered by the Center for Urban Education at the University of Pittsburgh School of Education, and they varied in length and topic; however, all the optional training events focused on race, equity, and/or justice as a central theme. The reflection form contained five questions: (1) first and last name, (2) event name, (3) event date, (4) event time, and (5) the reflection question, “Please complete a short reflection regarding what you learned from attending the event and how you might apply it to your role as an RtL mentor.”

Additionally, positionality statements completed by mentors as a program orientation exercise were analyzed. The mentor-tutors were asked to complete the positionality activity in the online RtL CUCommunity. This exercise of creating a positionality statement and reflecting on their own cultural background is a recommended exercise for educators working to incorporate culturally sustaining teaching strategies in their practice (Ladson-Billings, 2000). The mentor-tutors were given the following prompt for the positionality statement activity, which is presented in Figure 1:

- As a follow-up to our training today, please consider the following questions and share your thoughts in the comments. Please be mindful not to share anything sensitive that you are not comfortable having the rest of us read. Reflection Prompt: Reflect on our discussion about positionality and leadership and write a 250-word or less positionality statement. Consider the following: Your background, values, life experiences, and personal schema; how you see the world; and how you understand yourself and interact with others. Write a positionality statement that illustrates how you see yourself as an educator and how your *experiences* influence how you approach the work of education and leadership.

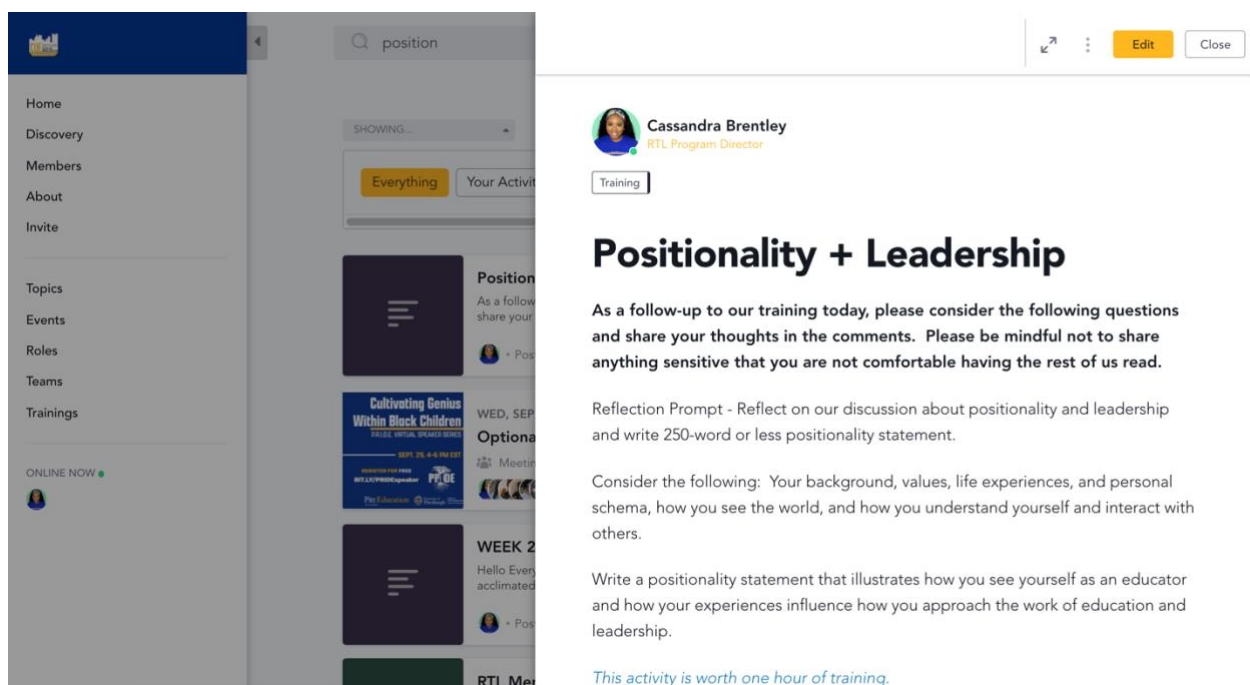


Figure 2. Mentor Positionality Activity

Lastly, of the eight mentors who engaged in five or more optional professional development events, three were selected to complete a one-hour semi-structured interviews to better understand their perceptions and attitudes regarding the impact and effectiveness of the professional learning events. These interviews were conducted via zoom and participants were provided incentives for their time. The interviews were transcribed digitally using online software technology, then reviewed and edited for accuracy. Member checking techniques were utilized and participants who completed interviews were provided the written analysis to check for accuracy with their experiences.

3.3 Summary of Professional Learning Events

The Center for Urban Education at the University of Pittsburgh hosts lecture series as part of their mission to disseminate knowledge. The mantra of CUE is “learn, share and transform.” “The lunch and learn public talk is an initiative that engages this mantra” (Dancy, personal communication, December 5, 2020). The lecture guests, topics and broader themes are carefully selected by the Executive Director of the CUE, Dr. T. Elon Dancy II. As a component of the RtL professional development strategy students are invited to attend in the lunch and learn lectures and other CUE hosted speaker events to develop a broader understanding of the education context that they mentor within. The summary of each optional professional learning experience that mentors were given the opportunity to attend are summarized in this section to provide insight as to how each event discussed topics that promote critical consciousness development (see Table 2 at the end of this section for a summary of professional learning activities).

In understanding the design of the lecture series, it is important to know that guest speakers are selected to discuss issues that are impacting education and respond to current topics. It is also important to consider the sociopolitical climate that this research study was conducted within. The summer of 2020 was filled with uprising and racial tension all over the country as Black people and other minoritized groups grew tired of racist fueled violence against Black citizens. The senseless murders of George Floyd, Breonna Taylor and Ahmaud Arbery that occurred in 2020 caused people to rally together in cities and towns across the country, demanding the United States to address the racism of past and present (Chang et al, 2020). The lack of coordinated response to the coronavirus pandemic that disproportionately impacted Black Americans added another layer to the fight for justice that ensued in ways the country hadn't seen since the Civil Rights Movement. Education in the United States, and many other countries, is very political and as such in order to raise the critical consciousness of RtL mentors teaching for social justice it is imperative that professional learning design attends to the needs for technical skill development, theoretical and pedagogical development as well as elements that support the learner in understanding the sociopolitical context, systems and cultural environment that their work will occur within and influence. The optional professional learning events attempt to address the latter.

The first optional event that was offered to RtL mentors to attend as optional professional learning was held September 22 and titled, "Centering Equity, Justice, and Antiracism in our Teaching and Advising." This was the first lunch and learn event of the academic year and it was facilitated by Dr. Dana Thompson Dorsey, Associate Professor & Associate Director of (CUE). The panelist included member of the University of Pittsburgh School of Education faculty: Dr. Linda DeAngelo, Associate Professor; Dr. Lori Delale-O'Connor, Assistant Professor; Dr. Leigh Patel, Professor. During the panel discussion the faculty members discussed foundational readings

they use in their courses that address issues of anti-Blackness, systemic racism, and white supremacy in American society. They shared strategies to engage students in critical, reflective, and introspective work to help them grow to be equitable and just teachers, leaders, scholars, and humans.

On September 30, 2020 the PittEd Justice Collective and the School of Education's Alumni and Development Office sponsored an Alumni Lecture with Dr. Bettina L. Love titled, "We Want To Do More Than Survive: Abolitionist Teaching And The Pursuit Of Educational Freedom." Dr. Love is the author of a book with the same title and discussed the book as well as her vision for education reimaged and how education leaders must shift their thinking as children return to school, many for the first time, since the COVID-19 pandemic began. In a follow-up talk titled, "Tomorrow, with Valerie Kinloch and Bettina Love," an event hosted by Remake Learning, a Pittsburgh based education advocacy organization, the conversation continued as the two scholars discussed what possibilities exist for remaking education. The talk explored questions such as, what skills will young people need to flourish in the future, how might we shift-power in research-educator practice and what does a future look like after Abolitionist Teaching? This event prompted attendees to consider current education injustice, while also encouraging attendees to dream about what possibilities might exist in the future as we move toward a more just practice of education.

The following week, on October 8, 2020, mentors had the opportunity to attend the speaker event, "Building Abolition in our Communities, Now," featuring Dr. Erica Meiners, an esteemed writer, educator, and organizer. In a dialogue style talk facilitated by chair of the Pitt SOE Department of Teaching, Learning, and Leading, Dr. Sabina Vaught, the two discussed how to build abolition in our communities. This talk built upon the previous week with Drs. Love and

Kinloch broadening the focus of abolition strategies for freedom from schools to the community. In this professional learning event mentors were made of aware of community related factors that impact education. Later that month, on October 20, 2021, mentors had the option to attend the lunch and learn titled, “Centering Equity, Justice, and Antiracism in our Research, Frameworks and Methods.” This panel discussion was facilitated by Dr. Page with Pitt SOE faculty members Dr. Gina Garcia, Associate Professor; Dr. Darris Means, Associate Professor; Dr. Maximilian Schuster, Assistant Professor participating as panelist. Each panelist offered a conference style presentation of their work and shared examples of how they center equity, justice, and antiracism in both their research and the research frameworks that they engage. This event provided diverse perspectives of education research as well as insight on higher education research as a potential career path. Although the latter may not have been explicitly stated in the event marketing, this event offered a unique perspective of the broad interest driven possibilities a career in higher education research provides.

The month of October wrapped up with an optional professional learning event hosted by CUE titled, “Hairstories of Violence: Examining How Hair Mediates Schooling and Social Practices.” During this talk, the featured speaker, Dr. Bryan Brayboy, explored the impact of hair on schooling and social practices over the course of four centuries using the concept he created with Dr. Jeremiah Chin called “Terrortory.” This lunch and learn was facilitated by Dr. Sabina Vaught and consisted of pre-reading the article titled, “On the Development of Terrortory” authored by Drs. Brayboy and Chin. This talk provided mentors the opportunity to reflect on their own lived experience and consider policies that exist to enact oppression on certain groups of people.

In November more optional professional learning events were offered to RtL mentors to attend. On November 5, 2020, a Lunch and Learn featuring Kali Akuno and facilitated by Dr. Sabina Vaught and doctoral student Chris Wright was hosted by CUE. Kali Akuno is an organizer with the Malcolm X Grassroots Movement, educator, and writer. During the talk the three discussed the U.S. presidential election, political education, activism, and his book *Jackson Rising: The Struggle for Economic Democracy and Black Self-Determination in Jackson, Mississippi*. This talk took place during a critical historical moment two days after the U.S. presidential elections, which was held on Tuesday, November 3rd. At the time of this event a winner of the 2022 presidential election had not yet been named. During this event mentors were given the opportunity to learn about the power dynamics that are at play in American government and ask critical questions of policy and practice that influence national politics.

In November, RtL mentors were also given the opportunity to engage in an asynchronous lecture experience from the Stanford University's Race, Inequality and Language in Education (RILE) conference featuring University of Pittsburgh School of Education faculty member Dr. Kokka. The focus of the lecture was centered on abolitionist education and connections to healing, innovation and reimagining what is possible in creating curriculum that engages abolitionist strategies. Since this event was presented as an asynchronous professional learning experience mentors were able to watch the recording and complete the reflection activity at a time that was convenient for them. Including asynchronous optional professional learning opportunities was an important aspect of the training and development strategy to meet the changing needs of our mentors who were college students navigating a global pandemic.

The Fall semester wrapped up with a final optional professional learning event titled, "Inequity American Style: What Role do Schools Play?" In this lecture Dr. Douglas Downey from

Ohio State University discussed several key empirical patterns that suggest that schools primarily reflect rather than generate inequalities in children's math and reading skills. This event allowed mentors to consider their role as informal math educators and understand factors that create the conditions that they work within. The event also provided the opportunity for mentors to reflect on their own education experience and identify factors they may not have previously considered having influence on the trajectory of their own education. This was the last optional professional learning event offered before mentors went on winter break.

The beginning of the Spring 2021 semester started at an unprecedented moment in American history and politics. After the highly controversial elections in November of 2020, with candidates from the president to senators and congressmen demanding recounts and claiming election fraud, we moved into what started to resemble the actions of a civil war. With white supremacy fully exposed, on January 6, 2021 a heavily armed mob of over 2,000 United States citizen rioted at the United States Capital Building seeking to overturn the 2020 Presidential election results on behalf of and with approval from the current president at that time who had been defeated by previous Vice President Joe Biden. I include this context of what was taking place in this historical moment as it is relevant to the strategic and responsive lecture series programming Dr. Dancy designed for CUE during the Spring 2021 semester. Ready to Learn mentors were again given the option during the Spring 2021 semester to attend lecture events hosted by CUE.

The first optional lecture event of the spring semester RtL mentors could attend was titled, “What Just Happened? Race, Justice, and Politics after the Capitol Siege.” The panel featured University of Pittsburgh leadership and University of Pittsburgh School of Education faculty who discussed the current state of political affairs and their implications for the future of racial justice

in the United States. The event was hosted on January 18, 2021 and the panelist included Clyde Pickett, Vice Chancellor, Office for Equity, Diversity, and Inclusion, Kristin Kanthak, Associate Professor, Department of Political Science, Tomar Pierson-Brown, Associate Dean for Equity and Inclusive Excellence, School of Law, Thomas Farmer, Professor and Department Chair for Health and Human Development, School of Education.

On February 2, 2021, RtL mentors had the opportunity to attend a lecture featuring Dr. Denisha Jones and Jesse Hagopian titled, “Educators for Black Lives.” The guest lectures discussed their new book, “An Uprising for Educational Justice: Black Lives Matter At School.” The conversation style lecture discussed organizing around BLM in school communities alongside colleagues, students, and families. Information was shared about Black Lives Matter At School’s National Demands, Year of Purpose, and Week of Action, and resources for educators for organizing with your own school community. This event was connected to a lecture hosted on the following day, February 3, 2021, titled, “Youth Organizing.” This event featured Chris Rogers from Black Lives Matter in Schools and Nicholas Anglin from Black, Young, and Educated (BYE) who discussed their community-organizing work. Both events provided RtL mentors who attended an opportunity to explore ways in which resistance movements are responding to the current lived experiences of Black students and communities from a school organizing perspective.

Additional optional professional learning opportunities offered to RtL mentors during the Spring of 2021 were an event titled “Black Radicals Make for Bad Citizens: Undoing the Myth of the School-to-Prison Pipeline,” which is a professional learning opportunity identified by an RtL mentor and made available to everyone as an optional professional learning event. This self-directed commitment to professional learning demonstrates the value RtL mentors found in attending optional lecture style events as professional development. In addition to these events RtL

mentors continued to have the option to identify events on or off campus to attend as optional paid professional learning experiences. The RtL mentors were required to complete the online reflection form to confirm which event they attended and how the learning was applicable to their role as an RtL mentor.

These professional learning events are listed and described to provide insight to the types of scholars and topics RtL mentors had the opportunity to engage with as attendees at these lecture style events. While all the professional learning opportunities centered equity and justice each speaker or panel applies their own lens of expertise and critique. This intersection of divergent thoughts, theories, and paradigms of practice provided space for RtL mentors to reflect, become inspired, and plan to change their own actions. This training approach leveraged existing university resources to develop a path for critical consciousness development in rich and meaningful ways. In the data analysis that follows the reflections, perceptions and planned actions of RtL mentors are examined through the analysis of reflection journal responses to better understand the impact these optional professional learning experiences had on mentor critical consciousness development.

Table 2. Optional Critical Professional Development Events Attended by Mentor-Tutors

| Date and Time | Title and Description |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9/30/2020 4:30 PM | We Want To Do More Than Survive: Abolitionist Teaching And The Pursuit Of Educational Freedom with Dr. Bettina L. Love |
| 10/8/2020 12 PM | Building Abolition in our Communities, Now Erica R. Meiners and Dr. Sabina Vaught |
| 10/20/2020 11 AM | Centering Equity, Justice, and Antiracism in our Research, Frameworks and Methods Facilitator: Dr. Lindsay Page, Associate Professor Panelists: Dr. Gina Garcia, Associate Professor; Dr. Darris Means, Associate Professor; Dr. Maximilian Schuster, Assistant Professor |
| 10/22/2020 | CUE Lunch & Learn: Hairstories of Violence: Examining How Hair Mediates Schooling and Social Practices Drs. Brayboy and Vaught |
| 11/5/2020 12 PM | CUE Lunch & Learn: Kali Akuno Dr. Kali Akuno in conversation with Dr. Vaught and doctoral student Chris Wright |
| 11/5/2020 Recorded | 2020 RILE Conference: Educational Abolition Dr. Kari Kokka |
| 11/18/2020 2 PM | Inequity American Style: What Role do Schools Play? Dr. Douglas Downey of The Ohio State University |
| 1/18/2021 12 PM | What Just Happened? Race, Justice, and Politics after the Capitol Siege Panelists: Clyde Pickett, Kristin Kanthak, Tomar Pierson-Brown, Thomas Farmer |
| 2/2/2021 5 PM | Educators for Black Lives Dr. Denisha Jones and Jesse Hagopian |
| 2/3/2021 5 PM | Youth Organizing Chris Rogers from BLM in Schools and Nicholas Anglin from Black, Young, and Educated (BYE) |

4.0 Data Analysis

A hybrid method of inductive and deductive thematic analysis was used to understand the raw data which sought to evaluate the effectiveness of optional professional learning events on the critical consciousness development of RtL mentors. The methodological approach integrated data-driven codes and theory-driven codes based on the three core tenets of the Freirean framework of critical consciousness (Fereday & Muir-Cochrane, 2006). Although reflexive thematic analysis was not conducted, principles of this approach were applied to the analysis, such as acknowledging the “inescapable subjectivity of data interpretation” (Braun & Clark, 2020a, p. 1).

Strategies of reflexive thematic analysis were used to examine the mentor reflection responses, positionality statements and interview transcripts. Through intense immersion into the data, first I familiarized myself with the data by reading through the reflection responses, positionality statements and interview transcripts several times. Next the data was coded specifically looking for the themes connected to the inquiry questions, while also paying attention to other themes I noticed that came up multiple times throughout the analysis. I added the additional themes I noticed to my code book (Braun & Clarke, 2020b). This blended theoretically informed framework provided the agility to explore both pre-defined and organic themes during the data analysis process. The themes served as analytic outputs representing the coding outcomes. The final themes identified seek to find shared meaning within the data that conceptualize how attending optional critical professional development events influenced critical consciousness development of RtL mentors.

The theme that I thought would be most obvious when analyzing the mentor reflection activity was how mentors thought about applying theory into practice as the reflection activity explicitly asks, “please complete a short reflection regarding what you learned from attending the event and how you might apply it to your role as an RtL mentor.” However, there were only 13 instances where mentors directly answered this question. The next three themes, critical reflection, critical motivation, and critical action are the three core tenets of the Freirean framework of critical consciousness. I selected these three themes strategically to answer the inquiry questions and determine if the optional professional development events had any bearing on the development of critical consciousness for RtL mentors. The theme that emerged organically from the data was awareness of neoliberal influences in education.

In considering the theme that surfaced organically it is important to unpack the meaning of neoliberal as it related to education. Neoliberalism prioritizes the development of human capital in students, raising questions about the purpose of education. In understanding the neoliberal influence on the purpose of education and the impacts of education inequity one must consider the intersections of state governance, democracy, and schools. Developing critical consciousness is essential to recognize how neoliberal agendas that seek to maintain the status quo create insurmountable barriers to addressing opportunity gaps in education (Hastings, 2019). Thus, the ability to call out these connections demonstrates critical consciousness development.

4.1 Findings

This study set out to evaluate the effectiveness of optional professional learning experiences in cultivating the critical consciousness development of RtL mentors.

Five key findings were identified from the analysis of the three data points:

1. **Critical reflection: Attending optional professional learning events led to RtL mentors' reflection of their own lived experience providing an opportunity for critical reflection.** In both the reflection activity and the interviews mentors discussed memories and introspective thoughts connecting what they learned by attending the optional professional learning events to their lived experience.
2. **Critical motivation: Attending optional professional learning events led to RtL mentors' identifying specific ways they can address issues of injustice within their sphere of influence.** In the positionality statements, reflection activity and interviews mentors expressed motivation to engage in actions that seek to address issues of inequity and injustice in a variety of ways.
3. **Moving theory into practice: Attending optional professional learning events led RtL mentors to identify specific ways to implement what they learned into their mentoring and tutoring practice.** In the reflection activity and interviews mentors made connections between what they learned during the professional learning event and actionable ways to apply what they learned to their practice as mentors and tutors.
4. **Critical Action: Attending optional professional learning events led RtL mentors to recognize past actions they took to address issues of injustice and inequity.** In the reflection activity and interviews mentors shared examples of activities they had previously engaged in to address injustice and inequity within their lives.
5. **Neoliberal Awareness: Attending optional professional learning events led RtL mentors to recognize unjust systems and neoliberal influences in education.** In the reflection activity and during the interviews mentors discussed how the optional professional learning events created awareness of larger systems and macro influences on education conditions for minoritized students, specifically naming white supremacy as a contributor to education injustice.

These findings suggest that optional professional learning opportunities provided by CUE and similar higher education institutions create a foundation for critical consciousness development for RtL mentors that enhance their understanding of the context and factors influencing the education setting they work within.

4.1.1 Key Finding: Opportunities for Critical Reflection

The first key finding from the data was that attending optional professional learning events provided opportunities for mentors to critically reflect on their own lived experiences. Critical reflection is an important grounding step to critical consciousness development. This finding

surfaced in the analysis of both the mentor reflection activity and the mentor interviews. This theme aligns with both inquiry questions in considering how attending optional professional development events influenced mentors' perceptions of their practice as mentor-tutors as well as their own lived experience. One mentor (Mentor Eight, a white Jewish woman) stated,

...But it can't just be us (or people like us) coming into schools forever and helping a select few kids sort of tolerate math. I think it's also important to encourage them to interrogate why they may hate math in the first place-- math isn't this objective, unbiased thing, it's controlled and manipulated by people. So, these kids were taught math in such a way that MADE them hate it, and that has nothing to do with the discipline of math itself. And there's reasons for that which stem from a lot of different places. I think it's important to not only encourage students to like math, but also imagine with them how math education could look different, and to acknowledge that math education failed them and they may have the power to turn around and change that for another kid.

Mentor Three, an Indian woman, shared a similar noticing in a reflection response, stating, "My sense is that this talk is building upon many things we have been discussing this year. Importantly, the continuation of emphasizing that non-Black people need to do the work to make change." These are powerful reflections that demonstrate an understanding of nuances in education that are not typically included in training and development of out of school time tutors and mentors.

Some mentors shared experiences and critical reflection that expressed introspective thoughts on the ways in which the optional professional learning events caused them to consider their personal experiences. For example, Mentor Four, a Black woman, stated,

In the event, it was talked about how from a young age black students are taught about enslavement from a very Eurocentric point of view. While students (and everyone) need to

be educated on the matter it can also be limiting when that's all you see. Even in my own life I stopped watching entertainment films about slavery for this exact reason. I think the main thing I took away is that from a very young age black students are taught that they can't.

In this reflection response Mentor Four recognizes and shares actions they took in their own life, choosing not to watch entertainment about slavery, as a form of resistance to Eurocentric points of view that dominate popular culture. Mentor Seven, a Latina woman, reflecting on this same event stated,

There was also a comment made by Denisha Jones that I thought was extremely important. She said that black students are always taught everything around black enslavement and black pain and never about the joys and power and accomplishments of being black and the black people that preceded them. I think this is soooo important because if we constantly teach black students only about the pain, they'll never realize how amazing and smart their ancestors were as well!

Again, this perspective acknowledges the lack of culturally uplifting curriculum as a problem and goes on to describe the importance of teaching in opposition to Black pain. Mentor Three reflected on ways to discuss race from an asset-based lens stating, "I appreciate that we already follow these guidelines during RtL; while we make sure to discuss social movements and race, we do so in the lens of empowerment. I think that is the most important thing, as it uplifts the students." All of these examples demonstrate critical reflection that seeks to make connections

between topics presented during the optional professional learning event and experiences of the mentor.

Similarly, Mentor Six, a first-generation Filipino American queer immigrant, reflected on the needs to nurture students in their reflection response to a youth led panel, stating, “I was moved by the experiences of the Black youth that was presented in the webinar and how complex AND powerful their words are when it comes to ‘the education debt.’ These students elicited a powerful message of wanting to convey their distress and highlight the importance of nurture within their lives.” The reflective attention that mentors give to repairing harm through care suggests a commitment or conviction to equity and justice.

Deep personal critical reflection surfaced as mentors thought deeply about the information presented at each lecture style event and made connections to their own lives. Mentor Four, a queer white woman, shared in a reflection response,

As a mentor, I can show that I'm a safe person to talk to by putting my pronouns next to my Zoom name. I've avoided doing so in the past because I don't feel super comfortable yet telling people that I'm gender-nonconforming. Sometimes I put she/her there and leave it at that, as I do identify with those pronouns, but then I don't feel fully myself. I personally have to work through some of my own feelings with gender and my worry that outing myself will harm me.

This reflection response provides insight to the deep personal reflection that the CUE events led mentors to take introspective looks at their behavior and ways they might change how they show up in learning spaces to better support their own identity and that of others they share space with.

4.1.2 Key Finding: Opportunities for Critical Motivation

In addition to providing opportunities for critical reflection, mentors demonstrated motivation to engage in planned actions to implement ideas they learned through attending the optional professional development events. One example of this type of conviction to “change the narrative” by showing up for students in ways that seeks to understand and uplift as more than a math tutor is seen in this quote from Mentor Two, a Jamaican American Man,

As an RtL mentor I feel as though we may find ourselves in a position to choose. To choose whether we focus on the schooling and trying to teach students how we were taught. Or whether we try to change the narrative. I think that it is important that we try to improve the math skills of the students. As that is what our program is set to do. At the same time, as human beings I think it is important that we take time to understand the student. If they will allow it. From there hopefully we can embody the title mentor and take our responsibilities beyond the scope of mathematics.

This statement gives insight to how Mentor Two intends to use their new knowledge to recognize the humanity of students and understand what they need. The mentor used the phrase, “if they will allow it,” which acknowledges that relationship building is a mutual process and it shows the mentor is considering the power dynamics of the educator/student relationship.

Another example of a mentor demonstrating critical motivation through thoughts shared in the post event reflection activity can be found in this statement written by Mentor Four,

As a mentor I want to become more of an abolitionist- I want to approach teaching through a lens of love and support rather than the repetition/memorization sort of "education" many

of us received as children. Students need to know that we are there for them and that we see them, fully.

A third example of mentor motivation toward enacting change is found in this statement by Mentor Three: “As an RtL mentor, I want to be an advocate from transforming the education system, not just reforming it. I want to be part of the movement towards equitable education which adapts to every student's needs.” These three examples reveal how participants were motivated to engage in planned actions based on what they learned from professional learning events. The third example in this set also introduces the idea of being an advocate for students.

More examples of critical motivation surfaced during the data analysis with mentors affirming the need to show up as advocates for students. For example, Mentor Eight stated,

As an educator, it's not enough to find new and innovative ways to teach or to fight for more school funding, but I have to advocate for all of the above mentioned things because that is what is going to be affecting my students more than any teaching strategy I could read in a book.

Another example of thoughts shared by mentors through their reflection activity regarding advocacy are seen in this response from Mentor Three,

I think this is an important thing to keep in mind as an RtL mentor– the students whom we are working with are the future. In my role not only as a tutor but an advocate for my students' success, I want to make sure they feel empowered to speak up for themselves and others against injustice.

Lastly, the idea of advocacy is discussed more thoroughly in this reflection response by Mentor Eight with attention given to the need for advocacy in remote learning policies and practices.

Us as mentors have a commitment to providing support for students and seeing them for their whole beings. We have a responsibility to the students within education and in their lives to support and advocate for them as much as possible. In addition, carceral policing of students is a large issue that hasn't been abolished in education, in my opinion, it isn't our jobs as mentor to further police students to use cameras and muting and such. Especially as an extension of education, because students probably already deal with this on a daily. And this is amplified in virtual learning settings in the students home.

These four examples of how mentors are thinking about advocacy as a motivator to support students and influence change provides insight into the planned actions of mentors and their critical motivation to do the type of work required to create more equitable and just learning environments.

4.1.3 Key Finding: Moving Theory into Practice

In conducting the data analysis, I grappled with the difference between critical motivation and the idea of praxis or theory informed action. I decided to separate the two themes because while a mentor might share thoughts that speak to their motivation to take up the work of equity and justice, whereby developing critical consciousness along the way that does not necessarily directly connect with how mentors intend to apply their new knowledge to their practice as mentors and tutors. Thus, the moving theory into practice theme explicitly identifies instances where the mentor provides insight as to how they plan to use what they learned by attending the optional professional development events in their work as an RtL mentor.

For example, in the statement below by Mentor Five provides a strategy they intent to use to create a safe learning environment as an RtL mentor.

As an RtL mentor, I want to make sure my students are in a learning environment where they feel safe and supported for whom they are. That starts by opening up a discussion for students to express themselves as they are comfortable.

More examples of this type of specific naming of planned actions are visible in this reflection statement by Mentor Three,

As an RtL mentor, I feel responsible to do right by Black students by being, as Dr. Love said, a co-conspirator. I want to teach with empathy and work to build a system where students are thriving, not simply surviving.

Here the mentors describe a desire to incorporate empathy into their practice as a mentor and share that they seek to be a co-conspirator. In this next example of a statement from Mentor One showcases their critical motivation by providing example of what not to do in order to approach the work of mentoring and tutoring from an authentic space.

I'm especially concerned with how this factors into our roles as tutors in the RtL program. Sometimes, we may get carried away in our wanting to understand our students and form a relationship with them. We may try to use certain phrases and terms because we associate them with "urbanism." We may be overzealous in our desire to be "down" and "woke" and end up just making our students uncomfortable. It is very important to not be experts but be lifelong learners. Just like a new word became passé in two minutes, so can we become unlearned in two minutes.

This example demonstrates an awareness of positionality and a desire to be authentic and open while attending to students' needs. All in all, while there were strong examples of mentors thinking

strategically about how to implement what they learned during the optional professional development events into their practice as mentors and tutors there remained an overall lack of articulation of specific actionable ways that mentors might move theory into practice.

4.1.4 Key Finding: Identifying Critical Action

Unlike critical motivation, which described a desire to act, the references within critical action provide instances where mentors shared action they have taken toward addressing inequity or injustice. Although there were few examples of true critical action shared within the three data sources a few strong examples surfaced. Mentor Eight shared,

Both of these things inform my work as an RtL mentor (and as a future educator) because it is important for me to be an effective community member in addition to showing up every week to teach the kids math for two hours. If I want to truly make an impact on my student's lives, I have to show up for them outside of school and continue fighting to make the conditions of the whole community better, not just of the school. For me right now, that means doing anti-eviction work and outreach through the Pittsburgh Union of Regional Renters. Any work that grants more power to a community will, in turn, make the schools in those communities better.

Mentor Six shared an example of the result of implementing student voice strategies into an RtL mentoring and tutoring session stating,

We should allow our students to speak about their experiences and they should be listened to, especially by us as mentors. I enjoyed our discussion today at RtL because a couple of our mentees were able to speak of their experiences and how it has affected them.

This example is embodying two themes theory in practice and critical action. This example also epitomizes the overall goal of the professional learning strategy, which is to expose mentors to learning experiences that positively influence their practice and encourage the use of culturally sustaining practices in their work. Nonetheless, the frequency of examples similar to the two offered were limited. This suggests more intentional follow-up training may be needed in order to connect theory to practice in ways that provide mentors with actionable strategies. One way to accomplish this may be to incorporate book studies into the professional learning design.

4.1.5 Key Finding: Neoliberal Awareness

Neoliberal awareness is the theme that organically surfaced during the data analysis process, yet it provides the strongest connection in examining the effectiveness of the professional learning strategy that aimed to provide learning experienced that called attention to the challenges and opportunities of the education settings the RtL mentors work within. Given the tensions of the political environment that the academic year fell within the responsive programming of CUE provided opportunities to unpack and address issues of power, privilege, and politics and their intersections with education. It is important to note that the study includes reflections from CUE events and events hosted by other organizations, however, this finding comes out of RtL mentor reflection responses of CUE sponsored events only. This suggests that the lecture style events hosted by CUE responding to the current state of education and society more broadly required mentors to grapple with equity by first critiquing neoliberalism.

Examples of a mentors processing their understanding from the events focused on the political state of the country were plentiful. In this statement the mentor's thoughts on the topic are visible, "One take away from the lecture was all of the broader social policy changes that

influence education that must change prior to reforming the education system.” The CUE events that directly focused on the political state of the county provided the most opportunities for RtL mentors to reflect on how current sociopolitical conditions impact education. Mentors provided insight to their thought process in the reflection activity responses and during the semi-structured interviews. The statement below from Mentor Five shows how the mentor is thinking about race, incarceration, and education.

Black and brown students are heavily discriminated against in the classrooms, more likely than their classmates to be punished for similar actions. Then there is the school-to-prison pipeline that disproportionately affects us. These are manifestations of the race tensions in this country that are currently worse now than a few years ago.

Another example from Mentor Eight considers the connections between race, incarceration, and education,

One of my biggest takeaways from the event was that it is really important to acknowledge the fact that the school to prison pipeline is a calculated effort by the US government to stop Black people from attaining wealth and attending university, as well as a way to ensure that de facto segregation continues.

And again, we see another example from Mentor Eight who provides their thoughts and understanding of the school to prison nexus in this question,

How can we reform police, when they originate from slave patrols and their clear purpose is to control Black, brown, and working-class people? Then, how can we reform American schools when they have their roots in colonialist violence and the upholding of white supremacy?

The posing of a question in the prior example suggests Mentor Eight is grappling with the ideas presented during the optional professional learning event that may lead to critical motivation and critical action, but at minimum the question posing expresses a conviction that change is needed despite the mentor not knowing how to bring about the necessary change. Additionally, this mentor statement highlights a pivotal take away the mentor shared, “his conclusions are that schools are mostly compensatory; at best, school reform is a suboptimal way of reducing inequality; and at worst, it distracts from the real sources of inequality.”

Mentors also shared their thoughts and feelings about the 2020 presidential elections and the riot on the United States Capitol building that followed. We see one example of a mentor expressing their understanding of the 2021 Capital Siege and ways they might approach the topic with the students they mentor and tutor in the reflection response below from Mentor Two.

It was very informative and shed light on an array of viewpoints regarding the Capital Siege. Since the occurrence of the event I have been contemplating how to talk about it with students. One thing that really stood out to me was the importance of stressing to students that white supremacy is not the birth child of [the current president] but rather he is a symptom of it. Meaning that this has been around for ages and [the current president] has used his platform to encourage those who have been "in hiding" to be more outright with their racism. Hopefully this will help students understand that racism is deep rooted in this country and its people's daily lives and that once Biden is inaugurated as president, racism doesn't magically go away.

Another reflection shared by Mentor Three on the 2021 capital riots states, “White rage is predictable and particularly bares its face in response to Black excellence.” These statements provide insight into the mentors’ thoughts and feelings about society during the time of their

reflection. In the reflection response below from Mentor One a connection is made between Black voter turnout and Black determination.

The election brought out a record number of voters including a record number of black voters. For the first time, black people voted not because we did not have a choice, but because enough was enough and we were determined to get a say and change the way things were going. Recent uprisings have happened with the brutal murder of black people by police officers as well as the current government's decision to sweep these happenings under the rug. I think this is the first step for black determination.

These are three examples of how the CUE lectures provided critical professional learning opportunities that responded to the state of the nation during a critical moment in our country's history.

The theme neoliberal awareness was also found in the ways in which mentors named white supremacy and discussed the influences of white supremacy on matter of schools and schooling. One example is shown in this reflection response by Mentor Eight where the mentor questions the ability to repair a system that was not designed for all to succeed.

Like Brayboy said, schools today reenact colonialist and white supremacist violence in ways that are portrayed as impartial and even inevitable-- boarding schools closed, but hair policies and dress codes remain the same. So if we changed these codes, if we fired racist superintendents, would things change? Or are the bones too rotten?

Another connection to white supremacy and schooling is made by Mentor Four in this statement,

In our white supremacist society schools that don't have resources for students of color are unfortunately doing what they were designed to do- recreate oppression for these children, recreate lack of knowledge.

A third example of a mentor naming white supremacy and how it undermines the American education system is found in this positionality statement response by Mentor Eight.

I think that even if they do have the best of intentions, people like teachers and social workers still function as agents of white supremacy and the PIC and it's important for me to recognize that when I am entering a classroom.

Again, we gain insight into mentors' perceptions in this statement that describes the impact of white supremacy and capitalism on minoritized people from Mentor Three, "She also talks about how white supremacy feeds itself by coopting indigenous and Black people and is a violent apparatus that is inextricably linked to capitalism." Mentor Five makes connections between systemic oppression and privilege in the reflection statement below.

Attending this seminar really opened my eyes to how systemically embedded violence is in our society, and more specifically in our institutions. When in the structures made to help in situations of violence, can re-victimize individuals, mostly because these structures were made to serve people of privilege.

Along this same train of awareness development Mentor Eight shared,

I had a lightbulb moment regarding abolition and reform when they were discussing how liberal reform essentially recreates the exact same punishment issues happening on a higher level, happening in every aspect of our society towards black people. I've been thinking a lot lately about what it means to live in a country that, as the speakers said, is founded on violence and continues to run on violence and oppression in the name of a capitalist state.

I love the focus on redefining abolition not as "tearing down," but as a practice and commitment we make in our communities, to one another, to create "alternative educational approaches" and alternative support systems. In our white supremacist society schools that don't have resources for students of color are unfortunately doing what they were designed to do- recreate oppression for these children, recreate lack of knowledge. As a mentor I want to become more of an abolitionist- I want to approach teaching through a lens of love and support rather than the repetition/memorization sort of "education" many of us received as children. Students need to know that we are there for them and that we see them, fully.

All of these statements and reflections provide evidence that mentors left optional professional development events thinking critically about external factors that contribute to opportunity gaps in education. These mentor reflection responses and replies to semi-structured interview questions demonstrate awareness of conditions that drive the wicked problem of education inequity especially for historically marginalized students and their families. The mentors' ability to specifically name neoliberal contributions to oppression such as capitalism and the ties to white supremacy suggest critical consciousness development at a foundational level.

It is also important to consider that despite this study taking place during a global pandemic, mentors did not center the state of this health crisis in their reflection of what they learned from attending the optional professional learning events. This is significant in that it suggests the mentors understand that the COVID-19 pandemic exacerbated existing problems influencing the education conditions and cannot be blamed for challenges that have plagued the broken system for centuries. The finding regarding neoliberal awareness also solidify the importance of an

interdisciplinary approach to professional learning that attends to technical aspects as well as the current and historical environmental influences of the spaces that education practitioners engage in praxis.

All in all, the findings suggest that attending optional professional learning events with topics focused on the current and historical inequities impacting urban education provided opportunities for mentors to think critically about their own lived experiences and their practice as RtL mentors, as well as develop awareness of neoliberal influences on the American education system broadly. This professional learning strategy that provides community educators with interest driven professional learning opportunities can serve as a model for other tutoring and mentoring programs to leverage. The intentional and timely lecture series that are offered by CUE also provide free access to dynamic education scholars who work at the precipice of change. The virtual offering of these professional learning events create new opportunities to broaden the reach and archive a truly unique curriculum that attends to the evolving needs and interest of educators across all spectrums of urban education.

4.2 Assumptions, Limitations, and Reliability

Several assumptions influenced my analysis of the data and impacted the limitations and reliability of the study. The first assumption is that mentor tutors attended the optional professional learning events because they were genuinely interested in the topics and learning more about equity issues impacting education. Since the optional professional learning events were also paid training opportunities, RtL mentors were also motivated to attend to earn extra money. This assumption was confirmed by all three mentors who participated in the semi-structured interviews. While all

three mentors who were interviewed explicitly stated the fact that the optional professional learning events were paid did influence their decision to participate, they also stated they were genuinely interested in the topics of the events they decided to attend. I also assumed that RtL mentor shared their true opinions, thoughts, and feelings in the reflection activity, which was not anonymous. The data analysis revealed that students who attended five or more optional professional learning events provided rich and thoughtful responses offering authentic reflections of their experiences. This confirms that despite the benefit of being paid for their time and the lack of anonymity of the reflection responses mentors were motivated to attend the professional learning events by more than mere monetary benefit and provided truthful reflection responses.

The limitations of the study include a small sample size of mentor-tutors from one program operating within an atypical virtual environment created in response to the COVID-19 pandemic. Traditionally, CUE lectures and other professional learning opportunities are held in person; however, during the timeframe of the study all events were virtual. It is important to note, in the prior year of the program mentor-tutors were invited to attend CUE lectures as critical professional learning opportunities and select mentors often took advantage of this opportunity, which led me to identify a pattern that suggests mentor-tutors who are committed to learning more about equity in education attend these types of events, whether in person or virtually. Another limitation is that mentors are selected for the position based on their demonstrated commitment to equity and justice prior to assuming the role. One way in which we assess commitment to equity and justice and prior knowledge of inequitable systems influencing education are by the question asked during the interview process. This factor makes it difficult to differentiate new knowledge from prior knowledge.

One example is a question that asks the RtL mentor candidates what they believe are the three most important factors influencing urban education. This creates a limitation in that RtL mentors who engage in the program have likely already begun developing their critical consciousness and enter the position with some prior knowledge of injustice impacting education and the broader society. Strategies to more accurately evaluate the impact of CUE events on critical consciousness development of RtL mentors are provided in the next section.

4.3 Implications for Future Research and Practice

The findings of this study provide evidence that attending optional professional learning events offered by CUE or featuring CUE faculty support foundational critical consciousness development for RtL mentors who choose to participate. Critical consciousness development is essential in building awareness of inequity and injustice in education and the broader society. It is important to consider that the Freirean framework of critical consciousness development is neither fixed nor finite and one's level of consciousness may change requiring a lifelong commitment to remaining open to understanding and addressing the nuances that fuel inequity. The patterns of recognition of neoliberal influences on education demonstrated by mentors through their perceptions in the post-event reflection responses and semi-structured interviews suggests a level of awareness that may lead to critical motivation and action. Moreover, once a person becomes aware and actively investigates factors impacting barriers to equity and justice, they become more inclined to recognize injustice occurring all around them. Thus, recognition of systemic oppression will create a new lens for RtL mentors to analyze their world no matter what career path they intend to pursue after their time in the program.

Implications for future practice within the RtL program specifically include continuing to offer opportunities for RtL mentors to attend professional learning events offered by CUE as a component of their self-directed professional learning. In addition, providing a space for group discussion and reflection might serve to enhance the learning experience, specifically in regard to supporting the RtL mentors in thinking about actionable ways to move what was learned at the event into their practice as mentors and tutors. Given that all of the CUE sponsored events were recorded and archived on YouTube, opportunities exist to leverage these recordings to create an asynchronous learning path that can be incorporated into future professional development design and implementation.

More specifically, a self-guided curriculum can be designed that incorporates viewing the recorded past CUE lecture and panel discussion events, then providing reflection activities and additional reading materials to support deeper learning. A website could be created to provide broad access to this type of asynchronous self-directed learning experience. Another option could be to create modules within the Ready to Learn Online CUEMMUNITY that would provide more controlled access to the resources but would also create an online community of practice that could engage with other like-minded people who are interested in education that serve to build their critical consciousness with a focus on educational equity and justice.

In addition, opportunities exist for understanding why some RtL mentors decided not to participate in the optional professional learning events. The findings of this inquiry may uncover barriers to participation that can be mitigated in the future. In considering other factors that are missing that could serve to enhance this training and development strategy designing resources for education leaders and program administrators interested in implementing this model in their programs may prove useful. These implementation guides might include mapping particular

recorded CUE lectures to specific learning objectives and outcomes, guided journal writing prompts and recommended discussion questions. Taking this idea further, hosting a workshop on ways to incorporate this training and development strategy for education leaders might support effective implementation of the model in a variety of settings.

Lastly, utilizing an instrument designed and validated to measure critical consciousness development over time would serve as another tool to measure the effectiveness of the aims of this professional learning strategy. Administering a critical consciousness pre and post survey before and after mentors attend the CUE events to better understand what knowledge of power, injustice, and freedom they have prior to and after attending the event. This will support determining more accurately if there is an observable change over time that can be explicitly attributed to participation in optional professional learning events hosted by CUE. It is also important to note that this study did not analyze critical consciousness data by race, gender and the intersectional impact that inform how people reflect on their lived experience, which should be done in future analysis and more intentionally incorporated into research design.

In conclusion, this study provides compelling evidence that suggests RtL mentors who attended five or more optional professional learning events hosted by CUE demonstrated increased awareness of neoliberal influences impacting equity in education through critical reflection, critical motivation and in some instances critical action. I posit, that this strategy for professional learning creates space for interest driven personal and professional development. It also leverages the intentionally designed CUE programming that centers issues of equity and justice in urban education, which is an effective approach to critical consciousness development that seeks to bring awareness of systemic factors contributing to the opportunity gap in American education.

Bibliography

- Adams, S. J. (1976). The structure and dynamics of behavior in organizational boundary roles. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology*. Rand McNally.
- Ander, R., Guryan, J., & Ludwig, J. (2016, March). *Improving academic outcomes for disadvantaged students: Scaling up individualized tutorials*. The Hamilton Project Policy Proposal.
- Bigelow, B. (2002). Defeating despair. In B. Bigelow & B. Peterson (Eds.), *Rethinking globalization: Teaching for justice in an unjust world* (pp. 329–334). Rethinking Schools.
- Bouffard, S., & Little, P. (2004). Promoting quality through professional development: A framework for evaluation. *Harvard Family Research Project, Issues and Opportunities in Out-of-School Time Evaluations*, 8, 1–12. <https://archive.globalfrp.org/content/download/1100/48605/file/issuebrief8.pdf>
- Bowie, L., & Bronte-Tinkew, J. (2006). *The importance of professional development for youth workers*. Child Trends. http://www.childtrends.org/Files/Child_Trends-2007_06_15_RB_ProDevel.pdf
- Braun, V., & Clarke, V. (2020a). Can I use TA? should I use TA? should I *not* use TA? comparing reflexive thematic analysis and other pattern-based qualitative analytic approaches. *Counselling and Psychotherapy Research*, 21(1), 37–47. <https://doi.org/10.1002/capr.12360>
- Braun, V., & Clarke, V. (2020b). One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative Research in Psychology*, 18(3), 328–352. <https://doi.org/10.1080/14780887.2020.1769238>
- Cazden, C., & Leggett, E. (1976). *Culturally responsive education: A discussion of LAU remedies, II*. Prepared for the U.S. Department of Health, Education, and Welfare. National Institute of Education.
- Chang, A., Martin, R., & Marripodi, E. (2020, August 16). Summer of racial reckoning. *NPR*. Retrieved March 9, 2022, from <https://www.npr.org/2020/08/16/902179773/summer-of-racial-reckoning-the-match-lit>.
- Coburn, C. E., Penuel, W. R., & Geil, K. (2013). *Research-practice partnerships at the district level: A new strategy for leveraging research for educational improvement*. New York: William T. Grant Foundation.

- Coburn, C. E., & Talbert, J. E. (2006). Conceptions of evidence use in school districts: Mapping the terrain. *American Journal of Education*, 112(4), 469–495. <https://doi.org/10.1086/505056>
- Cross, R., & Prusak, L. (2002). The people who make organizations go-or stop. *Harvard Business Review*, 80(6), 5–12. <https://doi.org/10.1093/oso%2F9780195159509.003.00172>.
- Diemer, M. A., Rapa, L. J., Voight, A. M., & McWhirter, E. H. (2016). Critical consciousness: A developmental approach to addressing marginalization and oppression. *Child Development Perspectives*, 10(4), 216–221. <https://doi.org/10.1111/cdep.12193>
- Equity and Justice*. University of Pittsburgh School of Education. (2022). Retrieved June 18, 2021, from <https://www.education.pitt.edu/about/equity-and-justice>
- Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *International Journal of Qualitative Methods*, 5(1), 80–92. <https://doi.org/10.1177/160940690600500107>
- Freire, P. (2018). *Pedagogy of the oppressed: 50th Anniversary Edition* (D. Macedo, Trans; 4th ed.). Bloomsbury Academic.
- Friedman, R. A., & Podolny, J. (1992). Differentiation of boundary spanning roles: labor negotiations and implications for role conflict. *Administrative Science Quarterly*, 37(1), 28–47. <https://doi.org/10.2307/2393532>
- Gay, G. (2000). *Culturally responsive teaching: Theory, research, and practice*. Teachers College Press.
- Glesne, C. (2011). *Becoming qualitative researchers: An introduction* (4th ed.). Pearson.
- Gonzalez, L. (2009). Teaching mathematics for social justice: Reflections on a community of practice for urban high school mathematics teachers. *Journal of Urban Mathematics Education*, 2(1), 22–51. <https://doi.org/10.21423/jume-v2i1a32>
- Greene, J. C. (2005). Stakeholders. In S. Mathison (Ed.), *Encyclopedia of evaluation* (pp. 397–398). Sage.
- Gutiérrez, K., Baquedano-Lopez, P., & Tejeda, C. (1999). Rethinking diversity: Hybridity and hybrid language practices in the third space. *Mind, Culture, and Activity*, 6, 286–303.
- Haas, A. (2015). Crowding at the frontier: Boundary spanners, gatekeepers and knowledge brokers. *Journal of Knowledge Management*, 19(5), 1029–1047. <https://doi.org/10.1108/jkm-01-2015-0036>
- Hammond, Z. (2015). *Culturally responsive teaching and the brain: Promoting authentic engagement and rigor among culturally and linguistically diverse students*. Corwin, a SAGE company.

- Hastings, M. (2019) Neoliberalism and education. *Oxford Research Encyclopedia of Education*. Retrieved 4 May, 2022, from <https://oxfordre.com/education/view/10.1093/acrefore/9780190264093.001.0001/acrefore-9780190264093-e-404>
- hooks, b. (1994). *Teaching to transgress: Education as the practice of freedom*. Routledge.
- Irvine, J. J. (2010). Foreword. In H. R. Milner (Ed.), *Culture, curriculum, and identity in education* (pp. xi–xvi). Palgrave Macmillan.
- Jemison, D. B. (1984). The importance of boundary spanning roles in strategic decision-making. *Journal of Management Studies*, 21(2), 131–152.
- Kohli, R., Picower, B., Martinez, A., & Ortiz, N. (2015). Critical professional development: Centering the social justice needs of teachers. *International Journal of Critical Pedagogy*, 6(2), 7–24. <http://libjournal.uncg.edu/ijcp/article/view/1057>
- Kokka, K. (2015). Addressing dilemmas of social justice mathematics through collaboration of students, educators, and researchers. *Educational Considerations*, 43(1), 13–21. <https://doi.org/10.4148/0146-9282.1031>
- Ladson-Billings, G. (1995). Toward a theory of culturally relevant pedagogy. *American Educational Research Journal*, 32, 465–491.
- Ladson-Billings, G. (2000). Fighting for our lives: Preparing teachers to teach African American students. *Journal of Teacher Education*, 51(3), 206–214. <https://doi.org/10.1177/0022487100051003008>
- 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>
- Leifer, R., & Delbecq, A. (1978). Organizational/environmental interchange: A model of boundary spanning activity. *Academy of Management Review*, 3(1), 40–51. <https://doi.org/10.5465/amr.1978.4296354>
- Luter, D., Mitchell, A., & Taylor, H. (2017). Critical consciousness and schooling: The impact of the Community as a Classroom Program on Academic Indicators. *Education Sciences*, 7(1), 25. <https://doi.org/10.3390/educsci7010025>
- Martinez, A. N., Valdez, C., & Cariaga, S. (2016). Solidarity with the people: Organizing to disrupt teacher alienation. *Equity & Excellence in Education*, 49(3), 300–313. <https://doi.org/10.1080/10665684.2016.1194104>
- McNamara, A. R., Akiva, T., & Delale-O'Connor, L. (2018). Opportunity gaps in out-of-school learning: How structural and process features of programs relate to race and socioeconomic status. *Applied Developmental Science*, 24(4), 360–375. <https://doi.org/10.1080/10888691.2018.1513794>

- Milner, H. R. (2012). Beyond a test score: Explaining opportunity gaps in educational practice. *Journal of Black Studies*, 43(6), 693–718. <https://doi.org/10.1177/0021934712442539>
- National Institute on Out-Of-School Time. (2000). *Making an impact on out-of-school time: A guide for Corporation for National Service programs engaged in after-school, summer, and weekend activities for young people*. National Institute on Out-Of-School Time. <https://digitalcommons.unomaha.edu/slceguides/15>
- Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Sage.
- Picower, B. (2015). Tools of inaction: the impasse between teaching social issues and creating social change. *Teachers and Teaching*, 21(7), 908–922. <https://doi.org/10.1080/13540602.2014.995488>
- Ritchie, J. S., & Wilson, D. E. (2000). *Teacher narrative as critical inquiry: Rewriting the script*. Teachers College Press.
- Rondini, A. C. (2015). Observations of critical consciousness development in the context of service learning. *Teaching Sociology*, 43(2), 137–145. <https://doi.org/10.1177/0092055x15573028>
- Rogers, R., Kramer, M. A., Mosley, M., & Literacy for Social Justice Teacher Research Group. (2009). *Designing socially just learning communities: Critical literacy education across the lifespan*. Routledge.
- Sanchez Carmen, S. A., Dominguez, M., Greene, A. C., Mendoza, E., Fine, M., Neville, H. A., & Gutierrez, K. D. (2015). Revisiting the collective in critical consciousness: Diverse sociopolitical wisdoms and ontological healing in sociopolitical development. *Urban Review*, 47, 824–846. <https://doi.org/10.1007/s11256-015-0338-514>
- Silva, C. M., Moses, R. P., Rivers, J., & Johnson, P. (1990). The Algebra Project: Making middle school mathematics count. *The Journal of Negro Education*, 59(3), 375–391. <https://doi.org/10.2307/2295571>
- Southern Poverty Law Center. (2021). Learning for justice frameworks. *Learning for Justice*. Retrieved July 9, 2021, from <https://www.learningforjustice.org/frameworks>
- Thomas, D. C. (2002). The North American certification project in historical perspective. *Journal of Child and Youth Care Work*, 17, 7–15. <https://acypjournal.pitt.edu/ojs/jcycw/article/view/323/307>
- Villarruel, F. A., Perkins, D. F., Borden, L. M., & Keith, J. G. (2003). *Community youth development: Programs, policies, and practices*. Sage.
- Walker, J. A. (2003). The essential youth worker. In F. A. Villarruel, D. F. Perkins, L. M. Borden, & J. G. Keith (Eds.), *Community youth development: Programs, policies, and practices* (pp. 373–393). Sage.

- Walker, V. S. (2018). *The lost education of Horace Tate: Uncovering the hidden heroes who fought for justice in schools*. The New Press.
- Watts, R. J., & Hipolito-Delgado, C. P. (2015). Thinking ourselves to liberation?: Advancing sociopolitical action in critical consciousness. *The Urban Review*, 47(5), 847–867. <https://doi.org/10.1007/s11256-015-0341-x>
- Watts, R. J., Diemer, M. A., Voight, A. M. (2011). Critical consciousness: Current status and future directions. *New Directions for Child and Adolescent Development*, 134, 43–57. <https://doi.org/10.1002/cd.310>
- Woodson, C. G. (1933/2017). *The mis-education of the negro*. 12th Media Services.
- Yohalem, N. (2003). Adults who make a difference: Identifying the skills and characteristics of successful youth workers. In F. A. Villarruel, D. F. Perkins, L. M. Borden, & J. G. Keith (Eds.), *Community youth development: Programs, policies, and practices* (pp. 358–372). Sage.