Spring 3-28-2024

More than just checking a box: Teachers' experiences of transformation in equity-focused professional learning

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A Dissertation Presented to

The Faculty of the Educational Doctorate in

Transformational Teaching and Learning Program of

Kutztown University of Pennsylvania

In Partial Fulfillment

Of the Requirement for the Degree Education Doctorate

By Melissa E. Moxley

March 2024

ABSTRACT OF THE DISSERTATION

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Kutztown, Pennsylvania

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Pennsylvania has the largest disparity between student and faculty demographics. In fact, over half of Pennsylvania schools employ zero teachers of color. As student demographics change and teacher demographics remain the same, there is an ever-increasing need to train in-service teachers on the tenets of diversity, equity, and inclusion. Training teachers to be culturally competent requires them to alter their understandings in a transformational way. Often, cash-strapped districts attempt to produce training sessions in-house, developed by administrators who may have little training in the area themselves. This leads to professional learning that is left in the conference room once teachers leave. Research demonstrates that schools that engage in quality equity-focused professional learning show an increase in test scores, better student mental health, and lower dropout rates. This study seeks to examine how teachers experience sessions of equity-focused professional learning to determine what aspects are effective in engaging teachers in the transformational learning process. The teachers in this study underwent equity-focused professional learning led by a consultant in the field in the 2022/2023 school

year. The teachers' experiences will be examined through a survey and ethnographic interviews. This qualitative and quantitative data would illustrate if teachers experienced transformation, as well as what that transformation looked and felt like. Finally, quantitative data analysis on student surveys that measure students' feelings of belonging can help to determine there is reciprocal transfer from professional learning, answering the question: does this type of training help to increase students' feelings of belonging?

Keywords: Professional Learning Community (PLC), professional learning, professional development, diversity, equity, belonging, transformational learning.

Dedication

When I was eight years old, I had an anxiety attack because I didn't know what topic I would research for my dissertation. I knew then that I wanted to pursue a terminal degree, but I failed to understand transformation's role in one's life. Throughout my years, there have been flashpoints where I doubted my path because I did not acknowledge the transformation I still had to endure. The irony is not lost on me that this dissertation is rooted in my lifelong desire to pursue the highest levels of education but also connects to the one aspect of life I did not account for, transformation.

This dissertation is dedicated to all the people in my life who reminded me of what I was capable of and saw me in a light I didn't see myself in. I would not have been able to accomplish this goal without the love and support of my family and friends, who never stopped seeing this in my future, even when I doubted it. This is also dedicated to all my students who dream big, even if that dream brings them anxiety. May that anxiety be the fuel that lights the dark nights filled with hard work and dedication.

Acknowledgments

This dissertation would not have been possible without the support, love, direction, and critique of many people. Chief among them, my committee chair, Dr. Amy Pfeiler-Wunder. Her guidance and mentorship (and snacks!) throughout this process have been invaluable. She is the embodiment of care and support that every doctoral student needs. My second reader, Dr. Mark Wolfmeyer, and my third reader, Dr. Greg Shelley have provided expert feedback and caring critique that made this work what it is. To Cindy, thank you for your statistics help when I was so lost in my data. My LSC, the Wunder Scholars, Beth and Marissa who walked this journey beside me and provided care and encouragement, all while working diligently on their own research, as well as their own life experiences. Without you both, this would not be possible. My critical friend (and "sister") Kim who shared resources, read papers, collaborated, and in general made sure I wasn't losing my mind throughout this process.

My mother, Betty, who was my biggest cheerleader, even when I didn't feel like cheering, and reminded me of my "why" whenever I needed an attitude adjustment. Thank you for being my rock. My best friend Robin, who , despite her own obstacles, managed to always look out for my chakras to make sure I was clear. My village, Heather, Brian, Dawn, Pam, John, and Danielle, who checked in, bought me drinks, and listened when I needed an ear. My dearest Bee, thank you for leveling me when I was off-balance, standing by me when I felt most alone, and talking me down when I needed it.

Finally (and most importantly), my children, Rowan and Rhys whose existence makes me strive to be a better human. Your enduring love and hope move me to make you proud. Your hugs and smiles were the fuel that kept me moving through this journey. This dissertation was possible because of you, and I hope you are inspired to continue your love of learning and

always strive to change the world. I know you will grow up and continue to bring light and love to all that you do. I truly love you more than you will ever know.

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Chapter 1: Puzzle of Practice

Overview

It was February of the most challenging year of my teaching career. Despite its status as the shortest month, February felt like it went on forever. The cold, grey weather and biting temperatures can wear down even the cheeriest teachers. Our professional development training for February was digital and asynchronous. The faculty knew what was coming: more lectures from people telling us not to lecture to kids. More "words of wisdom" from those who spent merely five years in a classroom. This session was no different.

We were instructed to watch a series of videos where two experts in Universal Design for Learning (UDL) discussed why it was the *only* way to teach and what we were currently doing was not serving kids. Yet, none of the presenters addressed that many of us already employed aspects of UDL in our classrooms. Many of us valued the tenets of UDL and had begun to engage in practices that benefited ALL students. It was not the topic of the professional development session that was so off-putting; it was the delivery. At Tiberius High School, this is the usual message transmitted during all professional development sessions. The training was laborious and disconnected from my work in the classroom. The two "experts" were polar opposites. From their introductions, I knew one was a middle-aged White woman with a bachelor's degree from a privileged background. The other was a relatively younger Black man with a Ph.D. who grew up in the projects. Both shared their stories as examples of how people are different, with different experiences, and faced different obstacles, something I did not think I needed to be told. After completing the training, I kvetched with a colleague who also bemoaned the tedious nature of the training. Then, the conversation soon took a disturbing turn.

My colleague shared her comments regarding the training session with another close colleague, Aaron[1]. Aaron was also discussing his disdain for the training. In his complaints, he challenged the validity of the experts' stories. "How can this man be who he says he is? He has a Ph.D. He spoke so eloquently. He claimed he was from the ghetto[2]. How can a kid from the ghetto get that far in life?"

As she recounted the conversation, my body went cold. "He's right," she agreed. "How can a boy from the ghetto not have any hint of a ghetto accent, how can he speak so well?"

"How do I sound?" I asked. "Do I sound like the product of a working-class family in an urban school district? Do I sound like a person who grew up eating government cheese?"

"No" she said, startled. But I could see the confused look on her face that revealed the disconnect going on in her brain.

"When I'm around my family, I sound like I'm straight out of Kensington. It's called code-switching, and many people do it; you just don't know it. So, it is possible to come from poverty and to make something of yourself, to move up social classes." Code-switching is what I have done my whole life, changing my pattern of speech and dress to fit in with cultures to which I do not belong, namely middle-class America (Sensoy & DiAngelo, 2017).

While for years, the term "color-blind" has been used to describe a viewpoint where individuals refuse to see the implications of race on society, this term is rife with ableism as it equates blindness with ignorance (Annamma et al., 2016). Color-evasiveness describes the "social and material consequences of racism and ableism (Annamma et al., 2016, p. 157). A

[1] All names have been changed to ensure anonymity
[2] The contextual meaning of this word has evolved over the past century and is often controversial in modern context. This word is used only as a direct quote.

failure to Recognize these systemic inequities is not uncommon among those who are White and middle-class, and as many teachers belong to that racial and socio-economic category, color-evasiveness can be especially problematic in schools (McIntosh, 2007; Research for Action, 2022)

"I guess I never thought about that" she said. So, I dropped it.

But I seethed. Why couldn't two dedicated and caring teachers see that this man, a historically marginalized[3] person, could have moved out of a socioeconomically disadvantaged area? How were they oblivious to the presence of White supremacy and its influence in society (McIntosh, 2007)? How, then could they see their students as anything other than where they are at this point in their lives (Howard, 2020)? How could they see the potential in all kids, not just the White middle-class ones? Without an understanding of the experiences of historically marginalized students, how could teachers support their achievement? How can teachers become critically conscious of how educators maintain systems of oppression consciously and unconsciously (Parkhouse, 2022)? This was the moment when I realized that all White educators need equity training.

Puzzle of Practice/Statement of Problem

As the student population of many schools around the country continues to diversify, the faculty at these schools remains predominantly White and middle-class (Lund & Carr, 2013; Research for Action, 2022; Zeichner, 2009). For White, middle-class teachers to understand the experiences of marginalized students, they cannot merely read theories and scholarly articles.

[3] The terms historically marginalized and historically minoritized are often used interchangeably to mean the same thing. When referencing research, I will use the term the author uses. Otherwise, I will use the term historically marginalized. (Richardson, 2023)

White teachers must personalize their understanding of oppression and reframe the way they understand racial, ethnic, and socioeconomic nuance in society (Lund & Carr, 2013). This means educators must transform their perception of structural inequities, critically reflect on student experiences, and recognize their role in the status quo (Brown, 2017; Datnow et al., 2022; McIntosh, 2007; Zeichner & Flessner, 2009). Many schools are implementing equity-focused professional development[4] to bridge the gap and help teachers understand historically marginalized students' lived experiences. Further, how can teachers transform their thinking to critically examine systemic social inequities replicated in the educational setting (Parkhouse, 2022)? The intention of this type of professional learning would ultimately lead to educators gaining culturally sustaining competencies through a transformative process (Ladson-Billings, 1995; Alim & Paris, 2017).

The need for equity-focused professional development in Pennsylvania is especially pertinent. From 2013 to 2021, the percentage of Pennsylvania students of color increased from 30.5% to 36.6%, while the percentage of teachers of color only increased from 5.4% to 6.2%, and nearly half of Pennsylvania schools employed zero teachers of color (Research for Action, 2022). Further, most teachers across America are middle-class, and many of those teachers are engaging with students who live below the poverty line (Leo, 2023). This disparity means that many teachers do not have firsthand knowledge of the experiences of marginalized students walking through their classroom doors. The Pennsylvania Educator Diversity Consortium (PEDC) has spearheaded efforts within the state to increase the number of teachers who identify as Black and Indigenous People of Color (BIPOC), providing a framework for districts and the

[4] While there is a delineation between *professional development* and *professional learning,* these terms are used interchangeably in the K-12 education field. When referring to specific literature, I will use the authors' term.

state to recruit, retain, and mentor teachers of color (Pennsylvania Educator Diversity Consortium, 2023). However, these efforts are in their infancy in Pennsylvania, and they have yet to adjust the existing demographic mismatch between teachers and students (Pennsylvania Educator Diversity Consortium, 2023). Equity-focused professional development can help in the meantime to ameliorate the effects of this disparity, and provide teachers with a lens to examine classroom and institutional-based practices and student experiences.

And yet, the question remains: how can these training sessions be effective in developing a lens of equity, and not merely checking a box? Equity work requires learners to be reflective and critical, and that often comes with feelings of pain and guilt that can sometimes create barriers to learning (Lund & Carr, 2013). For this process to be transformative, ensuring effective training sessions, the structure must be grounded in best practices in adult transformative education. Before the efficacy can be assessed, educators must first understand how teachers experience these trainings, as the *intended outcomes* may differ from the *experienced outcomes*. Too often, professional development ends once teachers leave the session, and this type of training is too important to students' success to die on the vine. The purpose of this research study is to support equity-focused professional development.

Researcher Positionality

I am a White, middle-class woman, born in a working-class neighborhood in a major city and a product of a large, urban school system. I was privileged enough to attend college and pursue a master's degree in education, which has allowed me entrance into spaces to which I would not previously have access. As I grew into this new identity, I had to learn to adapt how I presented myself to fit in with my new surroundings. It is important that I name my whiteness and the privileges it has afforded me as I engage in this work and become comfortable with

being uncomfortable. Specifically, my whiteness has given me the privilege to blend in to a majority White profession, teaching, in a majority White suburban area. As a new teacher, I did not have to worry about looking like my colleagues, or concern myself with being singled out because of the color of my skin.

I have been teaching for 17 years, 16 of those years at Tiberius High School as a social studies teacher. Tiberius High School is the only high school in a majority-white district. In the 2018-2019 school year, I became department chair and was included in discussions and planning sessions for professional development for my department. In October 2020, I was selected to attend train-the-trainer sessions with the Equity Literacy Institute (ELI) to turnkey equity-focused professional development with my school. After only 14 hours of training, I was tasked with planning professional development sessions with another colleague for 154 teachers (151 of whom were White). We were told that the sessions would be delivered via Zoom and take no more than 9 hours. As my co-facilitator and I delivered the training digitally, we wondered how much of the content was sinking in. Were teachers learning? Were they challenging their existing views? Were they questioning their own positionality? In that context, we had no way of knowing. With these questions in mind, I embark on these puzzles of practice.

What we did know was that throughout our training sessions with the ELI, it was emphasized that equity-focused learning was difficult and required critical reflection. We knew that that type of reflection must be done in a safe space and in small groups to establish rapport (Lund & Carr, 2013). Delivering this type of professional development via Zoom to a group of teachers at various places along the equity continuum was not ideal. Together, my co-facilitator and I lobbied our administrators to abandon Zoom and opt for small group instruction. In the 2022-2023 school year all professional development was differentiated and delivered in smaller

groups.

Background and Research Context

In the 2022-2023 school year, the 154 teachers at Tiberius High School self-selected one of four pathways for professional development. The four options were brain-based learning, inclusion, social-emotional learning, and culturally relevant learning. Inservice days at the beginning of the school year were dedicated to small introductory sessions on each topic so that teachers could preview the content for each pathway before selecting the theme of their professional development for the year. Central administration brought in outside consultants to lead teachers through each pathway. The district selected the four pathways to help increase students' feelings of belonging, as identified through student surveys. The district defines student belonging as the feelings associated with acceptance, value, respect, and connection to adults and students.

Beginning in the 2021-2022 school year, students were given a survey that gauged their feelings of belonging at Tiberius High School with a series of questions that assessed their feelings of acceptance, value, respect, and connection. This survey was conducted through Panorama, a data collection tool purchased by the district. Students were asked about their connections to adults in the building, how well those at school understand them as people, and how respected they feel by faculty and other students (for a full list of questions, see Appendix B). Early results from the initial delivery of the survey indicated that a significant number of students did not feel as though they belonged, with a disproportionate number of students of color reporting feelings of isolation and alienation within the school. The survey results drove decision-making about professional development topics. The same survey was used in the ensuing school years to measure the effectiveness of district initiatives to improve school

climate. District initiatives included leveraging homeroom time to build community among various grade levels, club activities to increase participation, creating student focus groups to brainstorm school improvement ideas, and shifting professional learning time to train teachers in social-emotional learning and culturally relevant practices.

Overview of Methodology

This study utilized a mixed methods approach to examine the experiences of teachers as they engage in equity-focused professional development and to answer the following:

Quantitative and quantitative research question:

(1) What are the indicators, if any, of transformational change when teachers engage in equity-minded learning through participation in professional learning communities?

Quantitative research question:

(2) Is there a statistically significant change in student perceptions of belonging following teachers' participation in equity-focused professional learning communities?

Qualitative research question:

(3) How does transformational change of equity-focused practices occur over time in a high school setting?

Table one outlines each research question, the corresponding data collection method as well as the quantitative or qualitative nature of each question.

Table 1:

Research questions and data collection

Research Question	Data Collection Method	Qualitative or Quantitative
(1) What are the indicators, if any, of transformational change when teachers engage in equity-minded learning through participation in professional learning communities?	Learning Activities Survey (teacher) Ethnographic interviews (teacher)	Qualitative and quantitative Qualitative
(2) Is there a statistically significant change in student perceptions of belonging following teachers' participation in equity-focused professional learning communities?	Statistical analysis of student survey responses	Quantitative
(3) How does transformational change of equity-focused practices occur over time in a high school setting?	Ethnographic interviews (Teachers) Interviews with the director of OTL and the professional learning facilitator	Qualitative

A mixed methods approach began with surveys sent to participants in the culturally relevant teaching pathway (Cresswell, 2022). The survey is based upon the Learning Activities Survey that quantitatively measures transformational learning (for a full list of survey questions, see Appendix A) (King, 2009). The survey asks respondents a series of closed-ended questions focused on indicators of transformation, as well as open-ended questions to provide more detail regarding the participant's experience (King, 2009) The final question on the survey asks participants if they are willing to be interviewed to gain a deeper insight into their experience (for the full list of questions in the survey, see Appendix B). Ethnographic interviews were employed to gain a rich description of teacher experiences and how those experiences mirror the

transformational learning process (Spradley, 1970). Indicators of transformational change will be discussed throughout the review of relevant literature in chapter two. Students at Tiberius High School take a survey twice a school year that asks questions aimed at measuring their sense of belonging. This six-question survey provides quantitative data regarding a change in students' feelings of belonging (for a complete list of student survey questions, see Appendix D). Quantitative analysis of the results from student surveys to measure students' sense of belonging was conducted to determine if a statistically significant change in feelings of student belonging occurred over the same time period as equity-focused professional development was delivered.

This study examined the teachers' experiences and transformational change as they engage in equity-focused professional development using teacher surveys, ethnographic interviews, and student data available from the years of Panorama surveys on student belonging (Esposito & Evans-Winters, 2022; Spradley, 1970). Qualitative data will seek to understand the transformational learning process, and the effect on teachers' views of equity, as well as the perspectives surrounding the process of creating and implementing this professional learning through interviews with the facilitator and director of the Office of Teaching and Learning. Quantitative data from student surveys will identify any possible impact of professional development on students' feelings of belonging.

Significance

The end goal of all professional development is to change classroom practice to increase student achievement, sense of belonging, and overall growth (DuFour, 2021). Equity-focused professional development is essential to ensuring that all students are met where they are and are provided with the tools to be successful. This study focused on identifying delivery methods that are most effective at successfully developing teachers' lens of equity. Identifying effective

aspects of training sessions holds the potential to increase efficacy in the professional learning experience. This insight can then be applied to future professional development to support transformation of teacher practice. This study can potentially help districts improve their equity-focused professional development so that it is employed in a way that is not merely just checking a box but is indeed transforming the teachers' perspectives in a meaningful way.

Theoretical Framework

Transformative Learning Theory[3]

This study is grounded in Jack Mezirow's Transformative Learning Theory (Mezirow, 1990). Mezirow's theory is at the intersection of critical and constructivist theories, as it seeks to initiate social change through experiential learning targeted at schema changes (Mezirow, 1990). Transformative learning theory outlines the ways in which adults learn to change their perspectives, the process of which is different from how adults learn a skill or to perform a task (Cox, 2015). Mezirow emphasizes that this process is key to enacting social change in a liberatory way (Mezirow, 1990). Learners work with facilitators through the stages of the transformative process, and both engage in critical reflection and dialogue to challenge existing perspectives and reshape schema to accommodate new information (Mezirow, 1990).

Mezirow's theory outlines six stages through which all learners will progress during the transformative learning process. The first stage begins with a disorienting dilemma, wherein the learner experiences an event, or learns new information, that does not fit with their existing meaning structure, or schema (Cox, 2015). During this initial stage, the learner explores feelings in relation to the dilemma and the facilitator provides emotional support to the learner to help explore the feelings associated with the dilemma (Cox, 2015). Next, the learner and the

facilitator engage in a series of phases where they critically reflect on the dilemma, examine alternate viewpoints, and connect experiences (Cox, 2015).

The next two phases of Mezirow's theory involve exploring options and planning a course of action where the learner examines various interpretations and scenarios and explores the outcomes of these options (Cox, 2015). During these two phases, the facilitator helps the learner deal with the new realities and the changes to the meaning structures (Cox, 2015). Finally, the learner will integrate new perspectives into their lives as the facilitator provides modeling and support as the learner becomes more comfortable with the transformation (Cox, 2015).

As this study examines the experiences of teachers (adults) engaging in equity-focused professional development (transformative learning for social change), this theory is the lens through which I examined the data over time. This study seeks to identify the ways the training sessions incorporate phases of transformational learning, and the role of the facilitator in each phase. Examining the role of self-reflection in the training process will help to understand the teachers' experiences and if the new learning was truly transformative or merely prescriptive. Data was coded to identify themes related to transformational learning theory such as dilemma, dialogue, reflection, and growth (for a full list of codes, see Appendix C).

DuFour, et al. (2021) incorporate the concepts of transformative learning into their work on professional learning communities (PLC). The authors emphasize that there is a deep connection between organizational change and personal change, and that change must be facilitated in a meaningful and collective way in any school (Quinn, 1996 as cited in DuFour et al., 2021). The emphasis in their model is on professional learning, and not professional development. Professional development is passive and is focused on training, whereas

professional learning is active and focused on changing behaviors and beliefs (Easton, 2008). When engaged effectively, professional learning can have the power to initiate significant change in teachers' critical consciousness (Dufour et al., 2021).

Developing Critical Consciousness

During the Civil Rights Movement, African-American scholars developed an approach to help address racism at early ages (Sleeter & McClaren, 2000). This approach was initially known as "multiethnic education", but was later expanded to include gender, religion, and other aspects of identity and re-labeled "multicultural education (Sleeter & McClaren, 2000)." Initially, this approach focused on educating young people to address systemic inequities through activism (Sleeter & McClaren, 2000). However, as this approach has been adopted by white educators, the focus on activism has diminished, and multicultural education has often become nothing more than festivals and ethnic food celebrations (Gorski, 2016). In the early 21st century, a renewed drive to bring back the activism roots of multicultural education was spearheaded by James A. Banks (Howard, 2020). This recentering was meant to "disrupt the cycle of hegemony, inequality, and oppression that results in low academic achievement among students of diverse backgrounds (Banks, 2002, p. 44, as cited in Howard, 2020)." From this recentering has come a groundswell of other approaches to multicultural education, most of which emphasize the need for teachers to develop a critical consciousness (Howard, 2020).

Engaging teachers in professional learning to develop their critical consciousness is essential to disrupting inequitable educational systems (DuFour et al., 2021). Developing a critical consciousness is rooted in the transformative learning process, as it requires teachers to transform the way they see the world. This transformation begins with a disorienting dilemma, which is an experience that conflicts with the learner's existing world view and causes them to

engage in the transformation process (Mezirow, 1990). Dufour et al. (2021) incorporate these notions into their framework for Professional Learning Communities (PLCs), stating, “a group of educators coming to grips with how they see their students, how the students see themselves, and the fairness of traditional educational systems and structures can cause some serious cognitive dissonance (Dufour et al., 2021, p. 74).” Their framework continues to follow the tenets of transformative learning, which focuses on the power of social learning, the importance of careful facilitation, providing a safe and comfortable learning environment, and overall organizational support (DuFour et al., 2021). While DuFour et al. have studied PLCs which address many professional learning topics, there is little research specifically on PLCs working towards equity transformation.

Much of the existing literature focuses on developing critical consciousness in pre-service teachers. In their framework for preparing pre-service teachers, Arellano et al (2016) emphasize that to be culturally conscious, future teachers need to learn to challenge existing inequitable structures. Further, to be able to recognize and destroy inequitable structures, pre-service teachers need to undergo a paradigm shift that challenges them to consistently check their beliefs, examine their assumptions about the status quo, and ensure that they do not return to inequitable systems due to a lack of personal connection to marginalized groups (Arellano et al., 2016). Such paradigm shifts require critical reflection and the incorporation of new ways of knowing, in other words, they are transformational (Arellano et al., 2016)

Cordova, Garza, and Niño (2019) examine the transformational experiences of in-service teachers engaging in a transformative graduate program. This graduate program aimed at developing teachers’ lens of equity through graduate coursework rooted in transformational learning (Cordova, Garza, and Niño, 2019). From their work, the authors identify five themes of

transformation that emerged from the data. They are (1) differences between traditional and transformational learning environments; (2) reflection on specific readings influence the direction of transformation; (3) transformation is personally and professionally integrated; (4) transformation is ongoing and sustained in relationships; and (5) social justice grounds transformation (Cordova, Garza & Niño, 2019). During this study, the authors draw from Mezirow's (1990) transformative learning theory and Freire's (2000) theory of critical pedagogy to illuminate how the two theories work in practice and are complementary in nature. Critical reflection is an essential part of transformation, and transformation is necessary to develop a critical social justice lens (Cordova, Garza & Niño, 2019). Other higher education settings have employed programs to develop educators' critical consciousness (Howard, 2020; King, 1991). However, there is little research on the outcomes of embedding workshops to develop in-service teachers' critical consciousness in job-based professional learning.

In their examination of the concepts of fidelity of practice, Hutchinson and Hadjiouannou (2019) explore the incongruence of teacher perceptions of transformation and the actual implementation of the transformation in the classroom. The authors found that the teachers in their study self-reported transformation, but examination of their classroom practices proved otherwise (Hutchinson & Hadjiouannou, 2019). The authors theorize that this incongruence may stem from structural and institutional roadblocks that do not allow for the implementation of new learning that stems from the transformation. The authors hypothesize that shifting educational policies, lack of collaborative support, a lack of connectedness, and teachers overwhelmed with other required training could impede fidelity of practice (Hutchinson & Hadiouannou, 2019).

My positionality, experiences as a teacher in a predominantly White, middle-class school with an increasingly diverse student body, and my previous participation in equity-focused

professional learning have moved me to examine this puzzle of practice. Examining the experiences of teachers as they engage in equity-focused professional learning can help to illuminate best practices and pitfalls and can inform future research. Data analysis through the theoretical framework of transformational learning allows for a connection between theory and practice.

Definition of Terms

Implicit Bias: Unintentional bias that occurs unknowingly, but nevertheless affects actions, decisions, and behaviors (Seale, 2022).

Professional Development: A top-down approach that is facilitated by outside experts and is not differentiated based upon teacher experience (Moir, 2013).

Professional Learning: Individualized learning that is connected to classroom practices, grounded in adult learning theory, addresses the individual needs of teachers, and is continually supported. (Moir, 2013).

Safe space/brave space: This term is used to describe a space where individuals can speak freely without fear of attack by others. This space is open enough to include various perspectives and positions but is also structured with a clear set of rules, agreed upon by all, and ensures that the exchange of ideas is safe for all participants (Flensner & Von der Lippe, 2019).

In the next chapter I will examine the relevant literature that provides perspectives on my puzzle of practice. The major themes addressed are, the problem of structural inequities, students' sense of belonging, teaching teachers about equity, transformational change in school

culture, the foundations of culturally relevant/proficient/sustaining pedagogy, transformational learning, and professional development/learning. Each section reviews the associated scholarly research to provide context for this study.

Chapter Two: Perspectives on the puzzle of practice

Recent social developments in the United States have brought equity-focused professional development to the forefront of professional learning for many districts (Howard, 2020). However, the notion of culture and its importance in education is not novel. Indeed, Howard (2020) argues that schools have been teaching in a culturally responsive manner for decades but that White, middle-class, mono-lingual normalized culture exists in most American public schools. To shift from a White-dominant group focus to a more interculturally responsive paradigm; teachers need high-quality, job-embedded, transformative professional learning that will assist them in forming a lens of equity. That lens can then be used to educate students better but also to make decisions about structures and policies that upend the status quo and challenge existing structural inequities.

Kimberlé Crenshaw (1989) first proposed the theory of intersectionality, which emerged from the complexities of hegemonic power built into societal structures that affect individuals who belong to more than one marginalized group. Centering Black women in the analysis to illustrate how the multidimensional aspects of their identities serve to marginalize them both as people of color and as women (Crenshaw, 1989). While Black women were the focus of this work, Crenshaw extrapolates this concept to include anyone who identifies with two or more marginalized groups (Crenshaw, 1989). Intersectionality is an important concept in equity work, as acknowledging the structural inequities built into educational systems is essential to dismantling those systems.

The problem of structural inequities

As in all areas of society, racism and bias permeate educational systems, and any person who engages in educational spaces is also permeated with racial meanings created by structural inequity (Manglitz, Guy, & Merriweather, 2014). The nature of the education field is interpersonal and relational. Unlike the business world, the effects of racism are more impactful in education due to the sustained interpersonal interactions between students, teachers, and administrators (Ngounou & Gutiérrez, 2019). Research on school equity has demonstrated that schools are ineffective at serving all students equally, and societal inequities are mirrored in schools (Leo, 2023; Parkhouse et al., 2022). Students of color are disproportionately represented in lower tracks, which are also provided fewer resources, higher class sizes, and less experienced teachers (Ngounou & Gutiérrez, 2019). Therefore equity-focused professional development is even more essential to mitigate the inequities in students' educational experiences (Horsford, 2011, as cited in Ngounou & Gutiérrez, 2019).

Peggy McIntosh (2007) identified the concept of White privilege, which describes the unearned assets that White people can rely upon but go unacknowledged by White individuals. Further, teacher education programs do not prepare future White teachers with the skills to identify their role as oppressors, as individuals with advantage, or as active participants in a culture that reinforces inequities (McIntosh, 2007). To effectively implement equity in the classroom, teachers who identify as White must address their implicit biases, reflect on classroom and school policies, and examine what is and is not taught (Adams, 2022). This work requires teachers who identify as White to transform their thinking and challenge their understanding of how inequities have been institutionalized in schools (Howard, 2016). While teachers may not knowingly engage in racist, bigoted, or biased behavior, the phenomenon of

dysconscious racism still negatively impacts educational environments and, therefore, students (King, 1991).

King defines dysconscious racism as "a form of racism that tacitly accepts dominant white norms and privileges...an *impaired* consciousness or distorted way of thinking about race as compared to, for example, critical consciousness (King, 1991, p.135)." King came to this definition by studying journal responses of pre-service teachers regarding questions of racial inequity (King, 1991). The author found that pre-service teachers often failed to identify structural, historical, or social inequities and their impact on marginalized groups (King, 1991). This phenomenon was different from outright racism but nonetheless contributed to the continuation of the status quo (King, 1991). King continued to create a curriculum framework that challenged dysconscious racism and helped pre-service teachers develop a critical consciousness (King, 1991). Although much of the research on the development of critically conscious educators is focused on pre-service teachers, the tenets of transformational change that ignite this development are the same regardless of years of service and, therefore, can be used to engage in-service teachers in developing critical consciousness.

Students and their sense of belonging

Decades of education policy have shifted the focus of school success away from the holistic well-being of students and emphasized standardized test scores as the sole measure of success (Cobb & Krownapple, 2019). This has resulted in funding and initiatives that ignore students' overall well-being and focus only on achievement (Cobb & Krownapple, 2019). School policies that ignore holistic well-being reinforce structural inequities that continue to hurt marginalized students. Holistic well-being is defined as the "development of wholeness in a person (Lau, 2009, p718)." Cobb and Krownapple (2019) delve further, explaining that holistic

education involves four main factors that must be fostered to address the whole child. These four factors include fostering inclusion, belonging, culture, and dignity. Historically marginalized students are more likely to feel disconnected from the social fabric of their schools (Siperstein et al., 2022). By cultivating an environment focused on achievement, schools have unknowingly created a culture of belonging where only students who are able to achieve feel like they belong (Cobb & Krownapple, 2019; Siperstein et al., 2022).

Students define a sense of belonging as the extent to which they feel "personally accepted, included, and supported in school (Institute of Education Sciences, 2023, p.1)." This includes connections with peers, teachers, and other adults in the school (Institute of Education Sciences, 2023). For teachers, tending to students' sense of belonging manifests itself in actions that reflect respect for students' lived experiences and culture (Institute of Education Sciences, 2023). On a systems level, teachers also must acknowledge the significant barriers that prohibit students' sense of belonging because of the shift away from holistic well-being (Cobb & Krownapple, 2019).

The effects of this shift in focus have been devastating for students, particularly those who have been historically marginalized. Cobb and Krownapple (2019) identify the effects on students in broad categories: increased dropout rates, anxiety, suicide, othering, false dignity (that rationalizes unfairness to others), conformity (subtractive to student identity), exhaustion, negativity, unhealthy social groups, self-segregation, and emotional numbing. Equity initiatives have too often focused on providing access to resources, not belonging, and yet belonging is essential for well-being and academic success (Cobb & Krownapple, 2019; Hussain & Jones, 2019). This failure to tend to student feelings of belonging provides a barrier to learning. For students to achieve and eventually self-actualize, their basic needs (such as safety, food, shelter,

etc.) must first be met (Maslow, 1943, as cited in Cobb & Krownapple, 2019). Instead, schools need to foster an environment where students feel they belong unconditionally (Cobb & Krownapple, 2019). This nurturing environment will then inherently foster achievement, helping students to learn and grow, because their basic needs are met (Cobb & Krownapple, 2019). As teachers are the ones who have the most direct impact on students, there needs to be a focus on professional development that helps teachers address their own bias, and to create classroom environments that support students' feelings of belonging (Cobb & Krownapple, 2019).

Hussain and Jones (2019) studied the self-reported sense of belonging among students of color in higher education. The study primarily examined the experiences of Black and Latinx students, and found that students of color benefited from diverse interactions with others, positive cross-racial relationships, and perceived faculty interest (Hussain & Jones, 2019). The authors found that there was a positive correlation between increased sense of belonging among historically marginalized students when they have opportunities to engage in positive, cross-racial conversations outside of the classroom, and when they feel that their institution is committed to diversity (Hussain & Jones, 2019). This administrative support of a culture of diversity, equity, and inclusion is an essential element to increasing feelings of belonging among students of color (Hussain & Jones, 2019). While this study examined students in higher-education settings, there is evidence to support that this phenomenon is prominent in other levels of education, specifically public schools where funding and resources are often tied to property values.

Students' lack of connections to school is even more pronounced in urban areas where teachers are stretched too thin, with 150-200 students and little time to build relationships (Darling-Hammond, 2010). In these institutions, policies, and procedures are largely focused on

behavior management and control instead of building community and students' feelings of belonging (Darling-Hammond, 2010). This has a dehumanizing and disconnecting effect on students (Darling-Hammond, 2010). Teachers who often want and try to operate from an ethic of care are impeded by the push to cover curriculum to meet standardized tests and the overwhelming number of bureaucratic daily tasks (Darling-Hammond, 2010). When students attend schools that foster caring environments, they are more likely to grow, learn, and persist (Seale, 2022). To topple barriers to care and increase students' feelings of belonging, schools need to be transformed in ways that create structures to encourage teachers to operate with an ethic of care, connect with, and provide support for students so that they can commit to learning (Darling-Hammond, 2010; Thapa et al., 2013).

Siperstein et al. (2022) studied student perspectives on belonging and inclusive behavior. The authors found that students defined inclusivity as: "how peers exhibit inclusive behavior, the characteristics of students who are inclusive, and the broader school context that supports inclusive behavior among the students (Siperstein et al. 2022, p. 387). The authors found that students placed an emphasis on the impact of teacher behavior and a culture of belonging, and that teachers modeling inclusive behavior inspired students to do the same (Siperstein et al., 2022). Teachers who practiced this type of behavior were often described as kind, available to students, showing personal interest in the wellbeing of students, and practicing quality inclusive differentiated instruction (Siperstein et al., 2022). These characteristics are consistent with research on dispositions of culturally competent teachers, illustrating that culturally competent teachers create environments where students feel they belong.

Transformational change in school culture

Creating cultural shifts in schools is a monumental task. Educational institutions have not evolved away from the factory model of education, which was first employed in the early 20th century (Cobb & Krownapple, 2019). This model emphasizes achievement and does not recognize the significant social inequities that affect the lives of students both inside and outside of the classroom walls (Cobb & Krownapple, 2019). To create schools that meet all students where they are, and foster growth in ways that recognize their physiological, emotional, and educational needs, systems need to be completely overhauled and reestablished in equitable ways (Cobb & Krownapple, 2019).

According to Thapa et al. (2013), transforming school culture must include attention to norms and values that support students socially, emotionally, and physically. This change needs to include all stakeholders, including families and the community (Thapa et al., 2013). The authors discuss five essential areas of focus for successful transformational change: safety, relationships, teaching and learning, institutional environment, and the school improvement process (Thapa et al., 2013). Focusing on these five areas can result in a more positive school culture which, in turn, can have substantial influence on the motivation to learn, work to mitigate negative socio-economic impacts on students, decrease violence and aggression, and work as a protective factor for students (Thapa et al., 2013).

Bush-Mecenas (2022) examined the success of transformational equity initiatives in a nested case study. The author finds that schools that successfully implemented transformational equity initiatives began with root cause analysis of all systems, policies, and procedures (Bush-Mecenas, 2022). This helped to ensure the creation of new policies that address causes of inequities, not just ameliorating the effects of inequity (Bush-Mecenas, 2022). This analysis was

done through examination and interpretation of raw data, which then informed the creation of performance metrics, routines and tools, and professional norms (Bush-Mecenas, 2022). Further, the communication between schools within a district, and between districts themselves, can help facilitate conversations about metrics, tools, and routines and their efficacy (Bush-Mecenas, 2022).

The work of Datnow et al., (2022) has emphasized that social justice initiatives that transform schools should be driven by policies and procedures that are undergirded by research on organizational change. The authors present two models of successful implementation of social justice initiatives and highlight how these institutions relied upon research on institutional change to ensure that systems, policies, and procedures aligned with their equity goals (Datnow et al., 2022). Both institutions provided with various "on-ramps" for which individuals to engage in change, aligned all actions with shared institutional goals, involved all stakeholders, and relied on the expertise of the professionals (Datnow, 2022). The authors also highlight the transformative nature of social justice work, and that transformation requires relational and emotional dimensions, connections between people, openness, and trust that must be cultivated and sustained over time (Datnow, 2022). The synergistic nature of social justice initiatives rooted in institutional change theories can transform institutions across all contextual levels. Perhaps the most influential context in educational settings is instructional practices that directly affect student experiences, notably the implementation of culturally relevant/proficient/sustaining pedagogy.

In an examination of the administrative role in transformational professional learning, Kazemi, et al. (2022) highlight that the socio-political culture of the school can heavily influence the ways in which professional learning is designed and implemented, thus affecting the

outcomes of the learning. The authors found that when principals engage in modelling, participating in teacher professional learning, buffering district expectations, and collaborating with all stakeholders, there is an increase in reciprocal transfer and positive impacts on students (Kazemi, et al., 2022). The principal in the study respected and protected valuable teacher learning time, and this culture of learning at all levels correlated to increased effectiveness of the professional learning itself (Kazemi, et al. 2022).

Teaching teachers about equity

With the understanding of the prescient need for equity-focused professional learning, the question remains, how to guide teachers through this transformational process in a meaningful way that translates to alterations in classroom behavior? Ngounou & Gutiérrez (2019) examined the value of interracial facilitation of racial equity training and found that due to the emotionally charged nature of these types of training, many White participants experience feelings of anxiety and guilt, and participants of color experience feelings of anger and frustration. Feelings of anxiety, guilt, anger, and frustration can create roadblocks to the transformational learning process and prevent teachers from addressing their own understandings of race (Lund & Carr, 2013).

The challenge of addressing issues of race without alienating White participants or retraumatizing participants of color remains an important facet of equity-focused professional development. Lund and Carr (2013) examine this process through the lens of transformational learning and engage participants in critical reflection during training sessions. This process of critical reflection calls on participants to examine their own identities, then to engage in dialogue with others regarding their identities, putting the examination of self and experience in

conversation with one another to create a more multifaceted understanding of social perspectives (Lund & Carr, 2013).

Frances Kendall (2013) discusses the obstacles that White people face when engaging in discussions about race and identifies three specific barriers to understanding racial privilege and inequity. The first barrier, according to Kendall, is that White people fail to see themselves as both individuals *and* as part of a social structure built upon privilege (Kendall, 2013). This serves to anesthetize White people against recognizing social inequity and having to address inequity in a system from which they draw privilege (Kendall, 2013). This also prevents them from recognizing that they belong to a group of privileged people for whom they are responsible for their growth and understanding of privilege (Kendall, 2013). The second barrier is the assumption that racism is interpersonal, and that "friendships" among White people and people of color will fix the issue (Kendall, 2013). Regardless of interpersonal relationships, racism is deeply imbedded in society and therefore, nothing will change until racist culture, laws, policies, and practices are overhauled and rebuilt in the name of equity (Kendall, 2013). Finally, the last barrier is that White people fail to accept that they, too, are responsible for a system that provides benefits for their whiteness at the expense of people of color (Kendall, 2013). This allows for an absolution of guilt for White people as they can hide behind their good intentions, and therefore elude responsibility (Kendall, 2013). Seale (2022) pushes this notion further by rejecting the idea of implicit bias all together. The author sees implicit bias as a way for White people to wash their hands of their role in the continuation of social inequities (Seale, 2022). Taken together, these barriers need to be recognized and incorporated into training sessions that deal with diversity, equity, and inclusion if they are to be successful in initiating transformational social change.

Manglitz, Guy, and Merriweather (2014) delve deeper into the skills facilitators need to engage in equity work and examine both the emotive and cognitive attributes that enable successful facilitation. The authors found that most adults incorrectly perceive race as a biological construct, not as a social one (Manglitz, Guy, & Merriweather, 2014). This understanding then influences an individual's consciousness of race, and to reframe this understanding, participants need to engage in the transformational learning process to disrupt and reframe racial consciousness. This process requires cognitive and emotive skill building because assumptions people hold about race are part of their entire being, and the disruption of that is profoundly life-altering (Manglitz, Guy, & Merriweather, 2014).

Howard (2016) identifies the need for teachers identifying as White to engage in the transformational work of overhauling their understanding of race. This work begins with inner transformation but continues with outer work to transform education and challenge systemic inequities (Howard, 2016). Howard states that schools have placed White educators into multiracial schools and expect them to be culturally competent individuals when they have never been taught what that means (Howard, 2016). But to transform inward, and not act outwardly is to fail to engage with the issues of social justice (Cuenca, 2014; Sheets, 2000; as cited in Howard, 2016).

While equity-focused professional learning is transformational, it is also critical and liberatory. Paolo Freire's seminal work *Pedagogy of the Oppressed* (2000) created a critical framework to empower educators to disrupt systems of oppression and power. As a companion theory, Joyce King (1991) suggests that to empower White educators, a "liberatory pedagogy for the elite" is necessary to harness the privilege of White educators to challenge systems of oppression and examine how schooling (including their own education) reinforces unequal

distribution of resources, inequity, and domination. Freire states that liberation must come from the oppressed themselves, the author provides theoretical underpinnings of the ways members of the dominant group can act in solidarity (Freire, 2000). King goes further to create an actionable framework for pre-service teachers to commit to disrupting of the status quo (King,1991). This framework provides pre-service teachers with a lens with which to examine and dismantle oppressive systems. Similar frameworks can be employed through equity-focused professional learning in schools.

Cobb and Krownapple (2019) examined the effects of equity-focused learning in schools and its ability to disrupt the status quo in educational settings. The authors determined that while there have been some successful implementations of equity training, schools are engaging in what they call the "dysfunctional cycle of equity work (Cobb and Krownappple, 2019)." This research illuminates the all-too-common pattern of first reacting to a catalyst, then committing to equity, followed by the district running into problems with implementation, and finally, the acceptance of the status quo (Cobb & Krownapple, 2019). To disrupt the dysfunctional cycle of equity work, the authors provide a framework based on four pillars: inclusion, belonging, culture, and dignity (Cobb & Krownapple, 2019). These pillars work synergistically to ensure the success of equity work. The authors theorize that personal and institutional transformation is imperative to properly implement equity initiatives (Cobb & Krownapple, 2019). This institutional transformation, supported by those four pillars, can ensure the creation of equitable systems that guide equitable practices (Cobb & Krownapple, 2019).

Culturally relevant/proficient/sustaining pedagogy

Equity-focused professional learning employs a transformational process in the mind of an educator, but in practice, that transformation takes the shape of culturally

relevant/proficient/sustaining pedagogy. To effectively address student needs, teachers need to employ foundations of culturally relevant/proficient/sustaining pedagogy. This field has evolved over the past three decades as critical theories have merged to move from cultural relevance to proficiency, and sustenance.

Cultural Relevance

The theory of culturally sustaining pedagogy builds on the initial works of Gloria Ladson-Billings (1995), who identified a novel approach to teaching students of color that recognizes and values their experiences. Ladson-Billings stressed the importance of respecting students' funds of knowledge and used those funds to empower students in the learning process (Ladson-Billings, 1995). This leverages the knowledge of marginalized students that is often missing from traditional classrooms to help increase educational outcomes (Leo, 2023). Further, educators practicing culturally relevant pedagogy operate with an ethic of care for their students, and care-centered teaching can create feelings of belonging and safety that are additive and not subtractive of students' culture (Ladson-Billings, 1995; Noddings, 2013; Valenzuela, 1999).

Cultural Proficiency

Nuri-Robins et al. (2012) challenge educators to push cultural relevance further and transform their practice to be culturally proficient. The authors state that cultural proficiency is more than an approach, it is a way of being that is proactive, provides tools (rather than techniques), focuses on behavior, and applies to individual actions and organizational practices (Nuri-Robins et al., 2012). The theory of cultural proficiency states that cultural relevance or competence is an early stage in the transformation toward cultural proficiency (Nuri-Robins et al., 2012). Culturally relevant/competent educators engage with differences using elements of

cultural competence as standards in a reactionary way (Nuri-Robbins et al., 2012). Culturally proficient educators take a lifelong approach that incorporates standards but also engage in *conscientization,* which is where individuals understand and engage in their institution through critical reflection and action (Freire, 2000; Nuri-Robins et al., 2012).

Cultural Sustenance

Alim and Paris (2017) theorize that educators must go beyond cultural relevance and move toward cultural sustenance. The authors draw upon Valenzuela's (1999) work on subtractive schooling and how education rooted in dominant culture can have a subtractive effect on aspects of students' own culture (Alim & Paris, 2017). By incorporating culturally sustaining pedagogy, educators help students retain their culture and learn in ways that connect to their personal lives and add to student experiences, not subtract from them (Alim& Paris, 2017). Recognizing that students come to school with varied backgrounds shaped by structural inequity is important in reshaping how teachers view students and form relationships (Zeichner, 2009).

In the classroom, culturally sustaining pedagogy begins with relationships (Milner, 2014). Teachers must gain entry into students' lives to understand their experiences and create meaningful instruction rooted in those experiences (Milner, 2014). Entry must start with trust and care on the part of the teacher (Milner, 2014). Built upon the work of Nel Noddings (2013), care has been at the center of many modern educational theories. Culturally relevant pedagogy that connects student lives to the curriculum must first be firmly rooted in an ethic of care (Monchinski, 2010). Further, Milner (2014) observed that effective culturally proficient teaching is outcome-driven and socially responsible. Teachers who are outcome-driven and socially responsible push students to think about themselves in relation to society, power dynamics, and

the roles that race, ethnicity, national origin, sexual orientation, and gender identity (among other things) play in social constructs (Milner, 2014; Zeichner, 2009).

Extending the work of Noddings, Valenzuela (1999) incorporates an ethic of care in relation to the Mexican concept of *educación.* While studying Mexican immigrant youth in an inner-city school in Houston, Texas, the author identified a phenomenon later deemed subtractive schooling (Valenzuela, 1999). In this phenomenon, Mexican students enter school with foundations in *educación* which is broader than the English definition of education, as it also incorporates family and community involvement in the moral, ethical, and social development of students, as well as the individual's commitment to society and respect for others (Valenzuela, 1999). The author identifies that the subtractive nature of the American education system removes the concept of *educación,* consequently subtracting a large part of student identities as it relates to education (Valenzuela, 1999). The author continues, stating that the role that care plays in *educación,* emphasizes that teachers can counter the subtractive nature of education by working from an ethic of care, coupled with critical consciousness (Valenzuela, 1999). With this approach, students' cultural and linguistic identities can be harnessed to create authentic learning and culturally additive environments (Valenzuela, 1999).

Leo (2023) emphasizes that current approaches to cultural proficiency are missing any reference to social class. The author argues that "insufficient attention has been paid to the deeper relationships between class, culture, and identity and the connections between class and race (Leo, 2023, p. 231)." As most teachers in the United States come from middle-class backgrounds, and class is strongly linked to educational outcomes, a lack of class-consciousness can affect how teachers treat students, families, and communities (Leo, 2023). Leo continues that

the addition of class-consciousness to existing understandings of cultural proficiency would complement the traditional emphasis on race and gender (Leo, 2023).

Culturally relevant pedagogy has demonstrated success in increasing student outcomes, standardized test scores, student feelings of belonging, writing skills, and positive associations of ethnic identity (Leo, 2023; Parkhouse et al., 2019, as cited in Parkhouse et al., 2022). While the benefits of culturally relevant pedagogy are evident in groups of historically marginalized students, there is evidence that this approach positively impacts all groups of students (Parkhouse et al., 2022). With a cache of research to support its efficacy, districts have a professional and ethical imperative to ensure that teachers are trained in the tenets of culturally responsive teaching (Parkhouse et al., 2022). For this training to be implemented with fidelity, it must be professionally embedded, connected to what teachers do in the classroom, and systemically supported at all levels of leadership (DuFour et al., 2021; Guskey, 2000; Singleton, 2018, as cited in Parkhouse, 2022).

Transformative/Transformational learning

The process of equity-focused professional development pushes teachers to examine their held beliefs and reshape their thinking regarding race, which is an integral part of their identity. This process is transformational, requiring critical reflection and a reframing of the self. Mezirow (1990) first theorized that learning for change and learning a skill are two different processes. Transformative learning theory stands at the intersection of constructivist and critical theories, as Mezirow first developed this theory to create social change through individual transformation (Mezirow, 1990). Mezirow notes that any fight for social justice requires critical-dialectal discourse, or the process through which individuals come to understand their own beliefs and experiences (Mezirow, 2003). In this process, a facilitator guides the learner through

a series of phases where they challenge existing knowledge in opposition to new information, critically reflecting throughout each phase (Cox, 2015).

Critical reflection challenges the learner to examine assumptions and presuppositions that exist because of previously held meaning structures (Mezirow, 1990). It is through critical reflection that learners can reframe meaning structures, and transformation can occur (Mezirow, 1990). Mezirow distinguishes between critical reflection and mere reflection in that it examines hegemony and systems of power, and an individual's place in those systems (Mezirow, 1990). Cranton (2016) emphasizes that critical reflection is key to emancipatory learning. Emancipatory learning comes from the process of critically reflecting on the self and the social systems in which we exist (Cranton, 2016). Mezirow (2003) emphasizes that skills, sensitivities, and understandings centered on emotional intelligence will help foster the transformative process, which can be developed by a skilled transformative facilitator.

Cordova et al. (2019) draw on Mezirow's theories to examine the transformation of twenty-one educators enrolled in a graduate program focusing on transformative social justice. Through qualitative analysis the authors identify five themes of transformation that emerged from the data (Cordova et al., 2019). Theme one illuminates the differences between traditional and transformational learning environments in that transformational learning environments include the community, acknowledge intersectionality, emphasize reflection and dialogue, and respect students' funds of knowledge (Cordova et al., 2019). Theme two identifies readings that are key in guiding the direction of transformation, namely Paolo Freire's *Pedagogy of the Oppressed* (2000) and Angela Valenzuela's *Subtractive Schooling* (1999), which both address the role of dominant groups in oppression and are foundational to critical theory and culturally responsive teaching (Cordova et al., 2019). Theme three connects personal and professional

transformation, as "who one is as an individual becomes who they are as educators" (Cordova et al., 2019, p. 119). This theme recognizes the importance of authentic relationships, caring, and people's identities, perceptions, and experiences (Cordova et al., 2019). Building on theme three, theme four acknowledges that transformation is grounded in authentic and sustained relationships and reinforces the notion that the transformational process includes the whole self (Cordova et al., 2019). Finally, theme five grounds the transformational process in social justice and critical reflection which undergirds Mezirow's theory (Cordova et al., 2019).

Understanding transformational learning is necessary in designing coherent and effective learning experiences for adults. Kathleen King (2009) developed the Learning Activities Survey, which quantifies the transformational experience and can provide insight into the efficacy of transformational learning. This survey was developed to aid in examining and planning transformational learning experiences (King, 2009). It was created after an extensive review of relevant literature, and then externally reviewed by field experts (King, 2009). The survey was then tested at three different institutions, utilized repeated member-checking, and examined for correlation validity (King, 2009). This survey can be useful in quantifying the transformational process, but is not the only metric by which transformation can be examined. A deep qualitative examination is necessary to ensure a full picture of transformation.

Professional development/Professional learning

Decades of research have illuminated several best practices regarding professional learning. Primarily, effective professional learning is job-embedded, social, extends over the long term, and is conducted in an environment that supports learning (Webster-Wright, 2009). Critical reflection is necessary to transform teaching and to ensure that professional learning leads to changes in practice (Guskey & Yoon, 2009; Webster-Wright, 2009). Further, it is

important to attend to teachers' beliefs about the topic addressed in professional learning and provide the tools for teachers to observe and practice their new learning (Siwatu, 2007). The implementation of any new professional learning program should be field tested with a small group of teachers to first test its effectiveness (Guskey & Yoon, 2009). This provides the place-based evidence to gain valuable buy in from the larger group of teachers.

Too often, districts engage in professional development, which is episodic and isolated, not professional learning (Webster-Wright, 2009). The focus on development limits the translation of new learning to classroom practice, and results in teachers disengaging from the learning (Webster-Wright, 2009). Further, the use of the term professional development has been criticized as being deficit-based, as it indicates that there is a need for professionals to be developed by those above them (Webster-Wright, 2009). On the contrary, professional learning indicates that the learning is teacher-centered, and self-directed; both of which are aspects of professional learning that align with the concepts of transformational learning theory (Webster-Wright, 2009; Mezirow, 1990).

Choi (2022) echoes Webster-Wright's assertation that teachers need learning experiences that connect to what they do in the classroom and employ practices that recognize teachers as professionals with expertise in their field. Choi emphasizes that for administrators to foster learning, they must design learning opportunities that address teachers' needs, which can only be done through administrative visits to classrooms (Choi, 2022). Darling-Hammond (2010) takes this notion further, stating that this practice must be embedded in a school culture of learning that extends to all stakeholders. This culture invests in learning through critical reflection at all levels to ensure improvement of the school, teaching, learning, policies, and practices (Darling-Hammond, 2010).

Ehrenfeld (2022) puts forth an ecological systems perspective on professional learning, addressing the notion that teacher learning is not linear. Instead, the author theorizes that professional learning is a reflective and interconnected process that involves all levels of teachers' ecological systems working connectedly to change practice (Ehrenfeld, 2022). Ehrenfeld operationalizes this theory stating that professional learning needs to reflect interconnection and should be broad in scope and based in discourse, not temporal and linear (Ehrenfeld, 2022). Long-term learning goals that do not demand immediate results but focus on growth and change in the educator are more effective in translating to change in teachers' practices (Ehrenfeld, 2022).

While implementing equity-focused professional development, attention must be paid to best practices of engaging in-service teachers in learning that will translate to the classroom. Hutchinson and Hadjiouannou (2019) examined how teachers enrolled in a graduate program understood the associated transformation toward becoming a culturally relevant educator, and how much that transformation changed their practice. The authors found that two years after the program, teachers self-reported an increase in confidence in teaching students in a culturally relevant way. Still, observations of their classrooms showed an incongruence between self-reported transformation and changes in their actual classroom practice (Hutchinson and Hadjiouannou, 2019). This phenomenon of incongruence highlighted the notion of fidelity of practice, that is, does new learning translate to a change in teaching (Hutchinson and Hadjiouannou, 2019)? The puzzle of practice I am exploring seeks to examine both the teacher's experience and any statistically significant change in students' feeling of belonging to identify if the professional development was effective in changing teacher behavior enough to impact students.

The authors identify potential causes of the lack of fidelity of implementation: new student populations, shifting educational policies, lack of collaborative support, curricular changes, changes in instructional programs, overwhelming trainings and workshops, and lack of connectedness (Hutchinson and Hadjiouannou, 2019). Teacher perceptions identified in this study's interview process could show how these obstacles to fidelity of implementation exist at Tiberius High School. Issues with a lack of fidelity of implementation highlight that the efficacy of equity-focused professional development lies not just in the delivery of the learning but in systemic support for the work in which teachers engage. Fidelity of implementation relies on districts ensuring teachers have collaborative support, stability in their curriculum, and are not overwhelmed by other trainings and workshops. This is also supported by the work of Guskey (2000), who identifies that for professional development to be effective, it must be systemic, embedded in what teachers do every day, and that changes are not so overwhelming that teachers must develop coping strategies that alter the intended change (Crandall, Eisman, & Louis, 1986; Drucker, 1985, as cited in Guskey, 2000).

While administrative support is important in ensuring implementation fidelity, school culture also plays a role. DuFour et al. (2021) state that although administrators “can pronounce a change in policy or procedures for schools, they cannot legislate or mandate a change in the assumptions, beliefs, values, expectations, or habits of the educators within those schools (p. 63).” Therefore, not only is it imperative for administrators to support equity-focused professional development structurally, but it is also necessary for school administrators to tend to the culture in the school. When a culture is antithetical to supporting change, teachers face complex new tasks, supported with few resources, and increased anxiety without administrative support of their emotions (DuFour et al., 2021). Further, institutional support needs to be

communicated clearly and consistently throughout the process. Too often, school district officials take the credit if the change is successful and blame teachers' lack of implementation if change is unsuccessful (Dufour et al., 2021). As a result, without a culture of support teachers engage in defense mechanisms and deflections that are barriers that impede the fidelity of implementation (DuFour et al., 2021).

Following this survey of relevant literature, in the next chapter I will outline my research's design. This study seeks to examine the indicators of transformational change that occurs when teachers engage in equity-focused professional learning and how that learning unfolds in a high school setting, including any possible changes in students' sense of belonging. The relevant literature discussed above provides a basis to examine data that answers the research questions. In the next chapter, I will detail the research design including an overview of the convergent mixed-methods approach, the setting, analysis process, as well as limitations.

Chapter three: Design of contextualized investigation

Research Design

This study employed a convergent mixed-methods approach to qualitatively understand the teachers' experiences of equity-focused professional development, explore the process of planning and executing professional learning by a facilitator and district administrators, as well as quantitatively examine any change in feelings of student belonging (Cresswell & Cresswell, 2018). A convergent mixed-methods approach analyzes both quantitative and qualitative data independently, which are then merged to provide an analysis of a problem of practice (Cresswell & Cresswell, 2018). The approach, including the research questions are represented in Figure 1.

Figure 1

Convergent mixed-methods design with research questions and corresponding data.

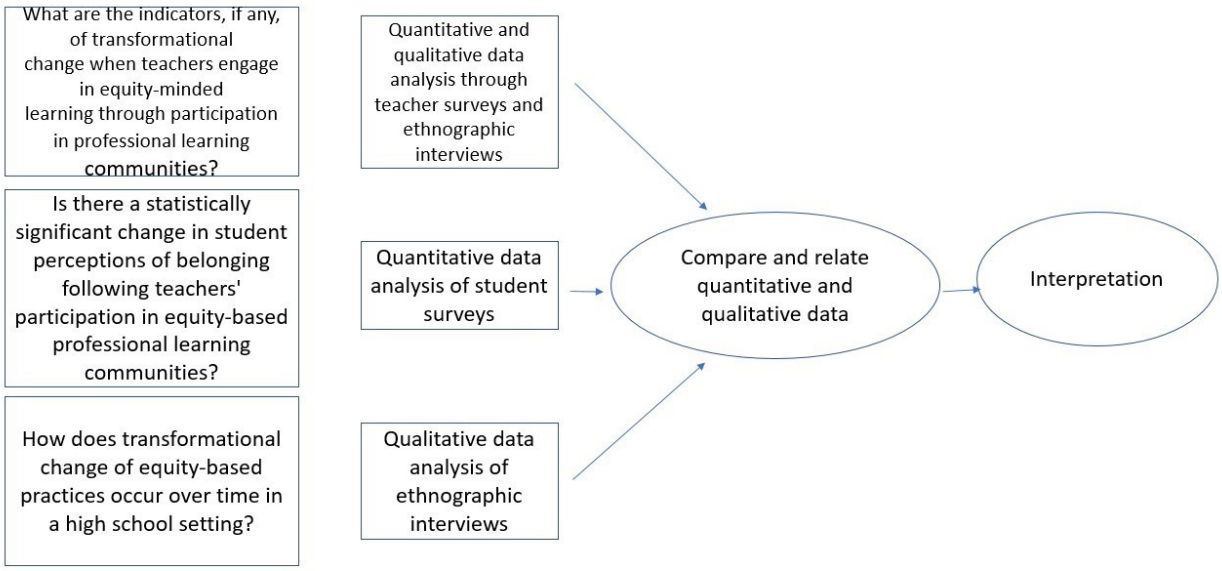


Figure adapted from Cresswell & Cresswell, 2018

While this approach's characteristics are generally agreed upon, perspectives on the nature of this method vary (Cresswell, 2022). Mehrtens (2009) views a mixed methods approach as transformative and has the power to bring about powerful social change. Mehrtens theorizes that by adding dimensions that address axiology (what is valued), ontology (the understanding of being), and epistemology (the theory of knowledge), mixed-methods research can engage cultural competence and bring about transformative social change (Mehrtens, 2012). This study is grounded in Mehrtens' approach, as the qualitative nature seeks to understand the teachers' experiences of transformation holistically and intersectionally, as well as possible effects on students.

Quantitative methods

Quantitative methods were used to measure transformation in teachers and changes in feelings of belonging in students. Teachers were surveyed to gain detailed insight into if and how they experienced a transformation because of professional learning (Cresswell & Cresswell, 2018). The survey is based on Kathleen P. King's Learning Activities Survey, which was developed to quantitatively measure transformative learning (King, 2009). King's survey has been validated and is tied to Mezirow's stages of transformative learning (King, 2009) (see Appendix A). The teacher survey also included a final question about the participant's willingness to engage in a follow-up interview.

To answer the second research question (is there a statistically significant change in student perceptions of belonging following teachers' participation in equity-focused professional learning communities?), this study used statistical analysis (chi-squared test) of student survey data collected twice a year over two years. The district-designed student survey is given through Panorama (a web-based survey program) to all students at Tiberius High School in the fall and

again in the spring and is designed to examine students' feelings of belonging. The questions ask students to respond to closed-ended questions using a Likert scale (with one being "not at all" and five being "completely"). The program produces data points measuring the number of positive responses from students' self-reporting of feelings of belonging. The program considers any rating of a four or five on the Likert scale to be a positive response. In the survey, belonging is measured as acceptance and respect from peers and feelings of connection to adults.

This study analyzed the change in positive responses of the class of 2025 as well as the change in positive responses from students who identify as Hispanic/Latinx and Black. The class of 2025 was enrolled at Tiberius High School during the entirety of the professional learning. The data was also analyzed by subgroups to determine if there is a statistically significant change among individual groups (race, ethnicity, gender). Subgroups are self-selected by students during the survey based on how students identify themselves.

If the null hypothesis were true, the observed results (2023 student survey results) would not increase at a larger rate than the expected (2021 student survey results). To test the null hypothesis the numbers of positive responses for 2021 and 2023 were computed using Excel to find the Chi-square, which was then used to find the p-value for the class of 2025 (570 students in 2021 and 568 students in 2023), students who identify as Hispanic/Latinx (346 students in both 2021 and 2023), and students who identify as Black (119 students in both 2021 and 2023). The results of this test produce an image of a global means of change as a possible function of the equity-focused professional learning.

Qualitative methods

The qualitative aspect of this study is a descriptive case study and sought to gain a thick description of teachers' experiences using ethnographic interviews (Spradley, 1970; Yin, 2018). Descriptive case studies focus on contemporary events, attempt to describe a phenomenon, and do not require control over behavioral events (Yin, 2018). Descriptive case studies often employ surveys and interviews to provide a rich description of a phenomenon (Yin, 2018). This study examines the phenomenon of equity-focused professional learning as it relates to experiences of teachers and effects on students. Ethnographic interviews were developed to examine human experience as it relates to culture (Spradley, 1970). Ethnographic interviews are conducted in the informant's natural setting, and are intentionally designed to gain a detailed, nuanced, and holistic understanding of the culture (Spradley, 1970). In this study, ethnographic interviews were used to gain a more nuanced understanding of teachers' experiences with equity-focused professional learning.

Modern theorists have built upon Spradley's original approach to incorporate critical theories of care, intersectionality, and power dynamics (Esposito & Evans-Winters, 2022). As equity-focused professional learning pushes individuals to transform their thinking, it is a deeply personal experience (Mezirow, 1990). This process requires self-reflection and can often bring about complex feelings about one's own privilege (Lund & Carr, 2013). Maintaining an ethic of care and trust, as well as tending to the nature of power and intersectionality are imperative to ensuring participants feel safe (Esposito & Evans-Winters, 2022). Given the focus of this study, ethnographic interviews conducted with teachers were grounded in care, trust, power dynamics, and the intersectional nature of human experience.

Setting and demographics

Tiberius High School is a large public institution consisting of grades nine through twelve. The district is predominantly White and middle-class and is situated in the suburbs of a large metropolitan area in Pennsylvania. Tiberius High School has a student population of approximately 2,800 students and employs 151 teachers (National Center for Education Statistics, 2022). Of the 2,800 students at Tiberius High School, approximately 6% identify as Asian, 5% identify as Black, 13% identify as Hispanic, 73% identify as White, and 3% identify as two or more races (National Center for Education Statistics, 2022). In the 2022/2023 school year, Tiberius High School employed 151 teachers, one who identifies as Black, and two who identify as Hispanic. The district has acknowledged the increasing disproportionality of the student body's racial and ethnic makeup in relation to the faculty's demographics. This phenomenon is not unique to Tiberius High School, as Pennsylvania has the largest disparity between the racial and ethnic makeup of student body and faculty (Research for Action, 2022).

While the district has worked to attract more teachers of color, administrators have also identified the need to develop culturally relevant practices among the current faculty. In the 2022/2023 school year, teachers self-selected one of four pathways through professional development, one of which focused on culturally relevant pedagogy (the other three pathways focused on brain-based learning, social-emotional learning, and inclusion). Culturally relevant pedagogy was the most frequently selected pathway, which could indicate teachers' desire to develop their lens of equity. The training sessions were conducted in a group of 81 teachers (54 of whom were high school teachers, the remaining teachers came from the middle level) in person for two afternoons, and via Zoom for two additional afternoons. The training sessions were facilitated by a professional employed through an outside consulting firm and included

discussions centered on students and institutional practices, as well as vignettes that encouraged teachers to examine current classroom practices.

Participants

Teachers

After completing the professional development sessions, a survey was delivered via email to the 54 high school faculty members who attended all sessions. These teachers are all full-time teachers at Tiberius High School and have self-selected the professional development pathway that focuses on culturally relevant pedagogy. This survey is adapted from the Learning Activities Survey developed by King (2009), and measures transformation through quantitative and qualitative data collection. Names were not associated with participants in the collection process to ensure respondent anonymity (Creswell & Cresswell, 2018). The final question in the survey asked about the participants' willingness to take part in an in-person interview about their experience throughout the training sessions. Of those 54 teachers, 18 responded to the survey, and five agreed to the interview. The interviews were conducted in locations of the participant's choosing, and lasted about 30 minutes (Spradley, 1970). The interviews were recorded and transcribed using Otter, an app-based transcription service. Pseudonyms were used to maintain anonymity, and transcriptions were stored on a password-protected device, and the files themselves were password protected (Cresswell & Cresswell, 2018). Member checking was used to ensure validity of transcription (Rossman & Rallis, 2017). Interviews were then coded to identify categories and common themes, and critical colleagues were employed to help validate findings (Rossman & Rallis, 2017).

Students

Student surveys were analyzed to answer research question number two (is there a statistically significant change in student perceptions of belonging following teachers' participation in equity-focused professional learning communities?). This survey was conducted by the district twice a year for three years, and the data is available to all faculty at Tiberius High School. Survey responses are anonymous and are stored on a password-protected web-based application requiring dual authentication. This study examined the student responses of one cohort of roughly 570 student responses. This cohort was chosen because they have been students at the high school for the duration of the equity-focused professional learning. No student names or other identifying information beyond demographics is collected in the survey process, and no student identities can be connected to responses.

Finally, to complete the picture and answer research question three, interviews were conducted with the director of the Office of Teaching and Learning (OTL) at West Jersey School District, and the facilitator of the professional learning sessions who was contracted from an outside agency. These two interviews focused on the process through which the OTL director and the facilitator engage as they plan and execute the professional learning sessions. These perspectives provide a holistic view of the entire professional learning process.

Data analysis

Quantitative

Teacher survey. The Learning Activities survey provides a guide to calculate and score participant responses (King, 2009). This scoring guideline takes the numerical score participants select for certain questions, and then uses predetermined codes to quantify open ended responses

called the Perspective Transformation Index (PT-Index) on a scale of one to three (King, 2009). If a response indicates that the participant experienced transformation associated with an educational event, the response is assigned a score of three (King, 2009). If the response indicates that the participant experienced some transformation associated with the educational event, the response is assigned a score of two (King, 2009). Finally, if the response indicates that the participant did not experience transformation, the response is assigned a score of one (King, 2009). These scores are compiled and examined overall, as well as individually by question (King, 2009).

Student survey. Student survey responses are quantified by the web-based application through which the survey is delivered. Data points are generated to show the number of students who identify feelings of belonging associated with the school. Statistical analysis (Chi-squared) was used to compare the original scores to final survey scores to determine if there has been a statistically significant change in students' feeling of belonging.

Qualitative

Once the qualitative data was collected through the teacher interviews, the responses were deductively coded to identify categories and themes (Saldaña, 2021). Predetermined codes were drawn from the foundations of transformational learning theory (Mezirow, 1990). Those codes were tied to the stages of transformation, a disorienting dilemma, self-examination, critical reflection, outside experience, and transformation. Throughout the coding process, analytic memos were kept tracking the analysis of the data (Saldaña, 2021). Three cycles of coding were conducted to review codes, develop categories, and identify emerging themes until saturation was achieved (Saldaña, 2021).

Once the teacher interviews were coded, the responses were then analyzed to create a timeline of teacher transformation (Lyublinskaya & Du, 2022). The interview responses from the director of OTL and the facilitator were also analyzed to create a timeline of professional learning development. Analysis of the interviews with teachers, the director of OTL, and the facilitator provided flashpoints, or events in the entirety of the process of transformation. (Sheridan et al, 2011; Travis, 2020) These events were then transcribed on to individual note cards and color coded according to the interviewee (teacher, director of OTL, facilitator). Once the three timelines were created, they were then merged into one comprehensive timeline illustrate the potential transformation process from all perspectives. The timelining process helped to uncover the nuances of the transformation process at the institutional level by creating a 360-degree view of transformation from all perspectives (Lyublinskaya & Du, 2022).

Figure 3 outlines each research question, and its corresponding data collection and analysis. Once each of the data points are collected and analyzed, the data will be converged to provide an overall perspective of the transformative process in a high school setting. The merging of qualitative and quantitative data, though messy, provides a dynamic and complex view of the interaction between all data points (Creamer, 2020).

Table 2

Research questions, data collection and analysis methods

Research Question	Data Collection Method	Analysis
(1) What are the indicators, if any, of transformational change when teachers engage in equity-minded learning through participation in professional learning communities?	Learning Activities Survey (quantitative) Ethnographic interviews (qualitative)	Coding and scoring of Learning Activities Survey Deductive coding of interview answers and writing of analytic memos to identify categories and themes
(2) Is there a statistically significant change in student perceptions of belonging following teachers' participation in equity-focused professional learning communities?	Statistical analysis of student survey responses (quantitative)	Statistical analysis of the change in the percentage of students in the cohort and their indication of their sense of belonging.
(3) How does transformational change of equity-focused practices occur over time in a high school setting?	Ethnographic interviews (qualitative) Interviews with the director of OTL and the professional learning facilitator.	Deductive coding of interview answers and writing of analytic memos to identify categories and themes. Timelining to round out the full picture of the transformation process.

Validity

To ensure validity of findings, construct and structural validity were used on quantitative data, and triangulation and participant validation were used on all qualitative data (Cresswell & Cresswell, 2018; Rossman & Rallis, 2017). Student survey questions have been validated by the third party who created the data collection tool, Panorama (PanoramaEd.com, 2020). The

researchers at Panorama use a six-step process to ensure reliability, structural validity, and convergent and discriminant validity (PanoramaEd.com, 2020). The Learning Activities Survey was developed after an extensive review of related literature, was externally reviewed by experts in the field of adult education, utilized repeated member-checking in three different institutions, and examined for correlation validity (King, 2009 as cited in Romano, 2017). Correlation validity improved with structured interviews following the administration of the Learning Activities Survey (Romano, 2016). The qualitative data was triangulated using member checking, reviews by critical colleagues, and comparison with teacher survey results (Rossman & Rallis, 2017). Critical colleagues included seasoned teachers and fellow doctoral candidates with experience in this area. Following the conclusion of each interview, data was validated through participant checking to ensure that the transcript accurately represents the participants' intended responses (Rossman & Rallis, 2017). Coding identified categories and themes from the interviews to answer the research questions (Rossman & Rallis, 2017).

A mixed methods approach creates a threat to validity because of the uneven sample sizes as well as the difference in data collection (Cresswell & Cresswell, 2018). The quantitative data are represented by two sample sizes of 540 students and 18 teachers, while the qualitative data will be collected on a sample size of five. The Transformative Learning Survey poses threats to validity in that it attempts to quantify a qualitative experience by assigning a score to personal transformation (Romano, 2017). Despite the disparity in sample size, the mixed-methods approach has benefits that outweigh the shortcomings as the methodology provides quantitative data that is supported and fleshed out by the qualitative data, providing a clearer picture of the nature of transformation.

Limitations

The short-term nature, small sample size, and selection procedures of this study pose limitations to the generalizability of findings (Rossman & Rallis, 2017). The study only examined the experiences of teachers in one school year; however, research indicates that transformation occurs over time (King, 2009). Therefore, the true nature of the transformational experience cannot be captured over the study's brief duration. Further, King states that a major limitation in the Learning Activities Survey is that it cannot isolate the exact reason for the transformative change (King, 2009). However, the author suggests that using qualitative methods, such as interviews, to create a more accurate picture of adult transformation can help to minimize this limitation (King, 2009). This study utilized ethnographic interviews to enhance the quantitative data from the teacher survey. Despite these limitations, the benefit of this research still outweighs the drawbacks to the structure of the study by providing a multi-faceted view of the design, implementation, delivery, and experiences of equity-focused professional learning.

Another limitation is the discrepancy in sample size between the students surveyed, teachers surveyed, and the number of interviews, as this is a limitation in all mixed-methods studies (Rossman & Rallis, 2017). In addition to the discrepancy in sample size between the qualitative and quantitative data, this study's examination of only one high school in one area limits the findings. Generalizability would require multiple school districts with much larger quantitative and qualitative sample sizes. Finally, sample selection procedures limit the study's validity. Teachers self-selected their learning pathway, which indicates an eagerness to learn about the topic. Qualitative sampling was done through convenience and availability, which limits a full understanding of the teachers' experiences. The student survey program did not allow tracking of particular student responses without violating anonymity. Therefore, I chose to

sample a cohort of students, which maintains student anonymity through the program. As the same students' survey responses were not being measured (some new students may join the cohort, and others may leave throughout the duration of the study), this limits the accuracy of the quantitative measurement of student belonging. Finally, the intersectionality of human experience further creates limitations to generalizability, as the nuanced nature of transformation may take various forms depending on individual participants (Crenshaw, 1989; King, 2009).

In the next chapter I will present my analysis of the data and merge the qualitative and quantitative data to examine the full picture of possible transformational change through equity-focused professional learning. This will examine the process from planning to implementation, to the effects on participating teachers and students. Through analysis, I will then discuss where transformational change may be indicated.

Chapter 4: Analysis and Results

Research questions and overview of data collection

This study examined the experiences of high school teachers as they engaged in equity-focused professional learning. As equity-focused professional learning is intended to be transformative, this study examined the learning process through Mezirow's (1990) theory of transformative learning. Mezirow theorizes that the way learners change their understanding of the world is different than learning a task (Mezirow, 1990). Learners change their perspectives through a series of phases (disorienting dilemma, self-examination, critical reflection, recognition of dissatisfaction, explanation of alternatives, plan for action, acquisition of new knowledge, experimenting with new roles, competence building, and reintegration of new perspectives) assisted by a skilled facilitator (Mezirow, 1990). Applying that theory, the data collected identified if the teachers experienced transformation, indicators of that transformation, as well as the impacts on praxis and on students' sense of belonging. The study used a mixed-methods approach to answer the following research questions:

Quantitative and qualitative research question:

(1) What are the indicators, if any, of transformational change when teachers engage in equity-minded learning through participation in professional learning communities?

Quantitative research question:

(2) Is there a statistically significant change in student perceptions of belonging following teachers' participation in equity-based professional learning communities?

Qualitative research question:

(3) How does transformational change of equity-based practices occur over time in a high school setting?

In this chapter, I will detail the analysis process and apply the results to answer each of the three questions above. The data will be analyzed and presented following the convergent mixed-methods approach, analyzing each data set and then merging the data to answer the research questions (Cresswell, 2018). Qualitative and quantitative data from teacher surveys and ethnographic interviews will be used to answer research question one. Quantitative data from student surveys will be used to answer research question two. Qualitative data from ethnographic interviews and interviews with the Director of the Office of Teaching and Learning (Dr. Powell) and the facilitator of the professional learning community (Dr. Madison) will be used to answer research question three. Given the convergent methods approach, I will repeat and highlight Figure 2 to identify where I am in the analysis process. The figure will be repeated before each section to elucidate the research question the data is answering.

Figure 2

Convergent mixed-methods with research questions

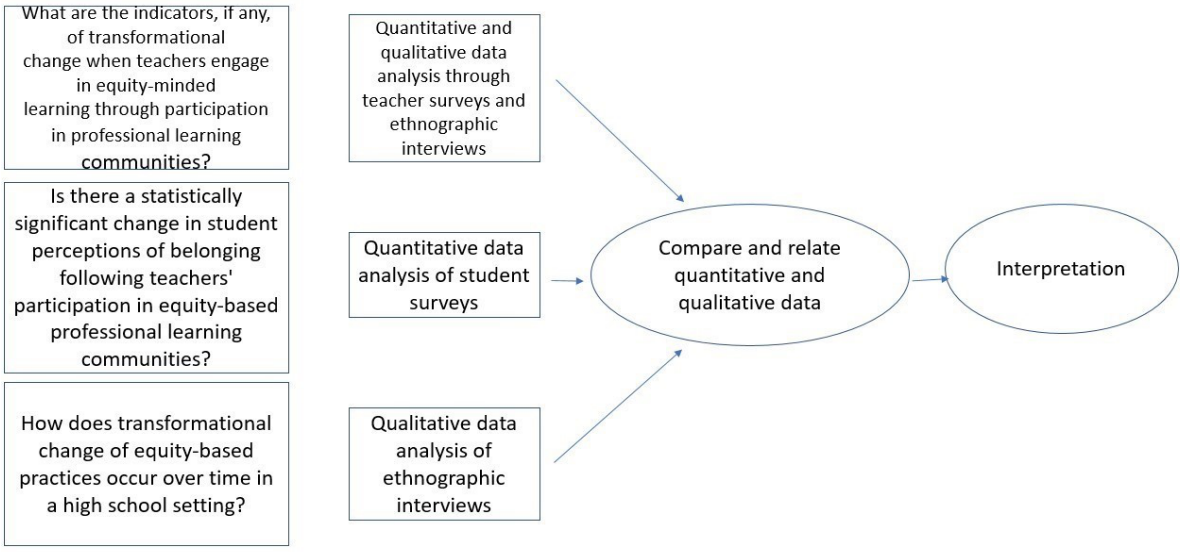


Figure adapted from Cresswell & Cresswell, 2018

Data Analysis Process

Teacher surveys

To answer research question one, (what are the indicators, if any, of transformational change when teachers engage in equity-minded learning in professional learning communities?) the 54 participating teachers received a survey derived from Kathleen King's (2009) Learning Activities Survey (LAS) at the conclusion of the professional learning sessions in the 2022/2023 school year. This survey was designed to identify transformative learning experiences and can be adapted to various settings and participants. Transformative learning experiences change the way a person experiences the world and reframes their meaning structures to accommodate new information. The survey questions seek to identify if teachers experienced anything that made

them change the way they act, think, or feel. Questions then delve deeper asking for a narrative explanation of the experience or change, as well what may have influenced the change. Of those 54 teachers, 18 responded to the survey. The survey provided quantitative and qualitative data, both of which were employed to gain an overall sense of the participant's experiences. The survey provided quantitative data in the form of closed and open-ended questions that given a score to indicate transformation. Some examples of statements from the survey that indicate transformation include the respondent states that they:

- tried out new roles so that they would become more comfortable or confident about them
- questioned their ideas and realized they no longer agreed with my previous beliefs or role expectations
- tried to figure out a way to adopt these new ways of acting
- began to think about the reactions and feedback from my new behavior
- adopted these new ways of acting

The survey also provides qualitative data through checklists and open-ended questions to further detail the transformation. Respondents that experience transformation may state things such as that they:

- see the world in a different perspective
- thought about information in a different way
- realized that they would have responded/reacted differently in the past
- felt moved to act on something they had never before

The surveys were then scored following the scoring guidelines developed and prescribed by King (2009)**.** Questions one, two, and five (highlighted in blue in the chart below) of the

survey are read and given a score of one if there is no transformation indicated, two if some transformation is indicated, and three if significant transformation is indicated (King, 2009). The scores are tallied to gain the PT Index. The PT Index indicates whether subjects "have experienced perspective transformation" during the training sessions (King, 2009, p. 38). The PT Index ranges from four (indicating no transformation took place) to 12 (indicating significant transformation) (King, 2009). Participants' answers to questions four, six, seven, eight, nine, and ten (highlighted in green in the chart below) provided qualitative data to further explain any transformation. Question three provides both quantitative PT Index data as well as open ended qualitative data and is highlighted in yellow. Table three lists each question, the type of question it is, and the corresponding scoring method.

Table 3

Teacher Survey Questions: Lines in blue indicate quantitative questions, lines in green indicate qualitative questions, and lines in yellow indicate questions that are both qualitative and quantitative.

	Question	Question Type	Scoring
1.	Thinking about your experiences in the Culturally Responsive Teaching professional development in the 2022/2023 school year, check off any statements that may apply	Closed-ended/ Checklist	Quantitative/PT Index
2.	Since you have been enrolled in the Culturally Relevant Teaching pathway, do you believe you have experienced a time when you realized that your values, beliefs, opinions, or expectations had changed?	Closed-ended Yes/No	Quantitative/PT Index
3.	Briefly describe what happened	Open-ended	Quantitative/PT Index Qualitative
4.	Which of the following influenced this change?	Closed-ended/ Checklist	Qualitative
5.	What lesson/activity/reading influenced the change?	Closed-ended/ Checklist	Quantitative/PT Index
6.	Was there a significant change in your life that influenced the change you experienced?	Closed-ended/Checklist	Qualitative
7.	Thinking back to when you first realized that your views or perspective had changed, what did your participation in the pathway have to do with the experience of change?	Open-ended	Qualitative
8.	Would you characterize yourself as one who usually thinks back over previous decisions or past behavior?	Closed-ended/ Yes/No	Qualitative
9.	Which of the following has been part of your experience as part of this professional development pathway?	Closed-ended/ Checklist	Qualitative
10.	Which of the following occurred while you attended the pathway?	Closed-ended/ Checklist	Qualitative

As a summary, the LAS included closed and open-ended questions that provided both quantitative and qualitative data. Questions sought to identify aspects of transformation in participants, which provided a numerical measure of transformation, which translates to a PT-Index. The open-ended questions provide a more rich description of the transformation and help to minimize the limitation associated with quantifying a human experience.

Teacher interviews

To gain a more nuanced understanding of possible indicators of transformational change, ethnographic interviews were conducted with five teachers who participated in the professional learning sessions. These interviews ranged from 11 to 31 minutes in length. They were recorded and transcribed using the Otter app, which resulted in transcripts ranging from six to nine pages in length. Interview transcripts were sent to the participants to confirm that the transcripts accurately reflected their answers. The interviews were then coded using *a priori* codes derived from Mezirow's (1990) transformative learning theory. Some of the codes derived from Mezirow's theory include: disorienting dilemma, self-examination, critical reflection, outside experience, and transformation (for a full list of codes and themes see Appendix C). The transcripts underwent several cycles of coding until saturation was reached. From the coding process, themes emerged and were applied to answer research questions one and three. I will discuss these themes in depth in the thematic investigation section.

Student Survey Data

To answer research question two (is there a statistically significant change in student perceptions of belonging following teachers' participation in equity-based professional learning communities?), existing student survey data was analyzed to determine if there was a statistically

significant change in students' feelings of belonging before and after teachers engaged in equity-focused professional development. The sample of students all belonged to the class of 2025 (570 students in 2021 and 568 students in 2023), which provided a smaller number of students than studying the entire student body, but the limitations of the survey software did not allow for the tracking individual students over time. Further, the web-based application did not provide individual student answers for analysis, instead, the program only generates a number of positive responses to each of the six questions.

Interviews With Teachers and Other Stakeholders

To answer research question three (how does transformational change of equity-based practices occur over time in a high school setting?), interview responses from the director of the Office of Teaching and Learning (OTL) and the facilitator of the professional learning sessions were analyzed to illuminate the full perspective on the transformation process from all perspectives. The responses were analyzed using graphic elicitation in the form of timelining (Sheridan et al., 2011). This form of graphic elicitation provided perspective on the nuance of the lived human experience, as time is an important aspect of human experience (Sheridan et al., 2011). The addition of timelining allowed for all data sources to align in a narrative way to round out the holistic image of the transformative process. What follows next is the analysis of each research question individually. I will then converge the data to provide a more nuanced understanding of the indicators, if any, of transformational change.

Raw Data and Thematic Investigation

Figure 3

The convergent mixed-methods approach answering research question one

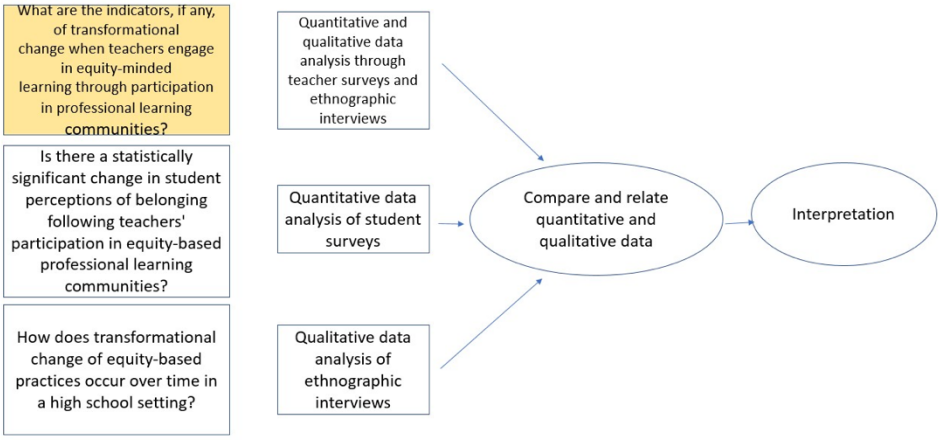


Figure adapted from Cresswell & Cresswell, 2018

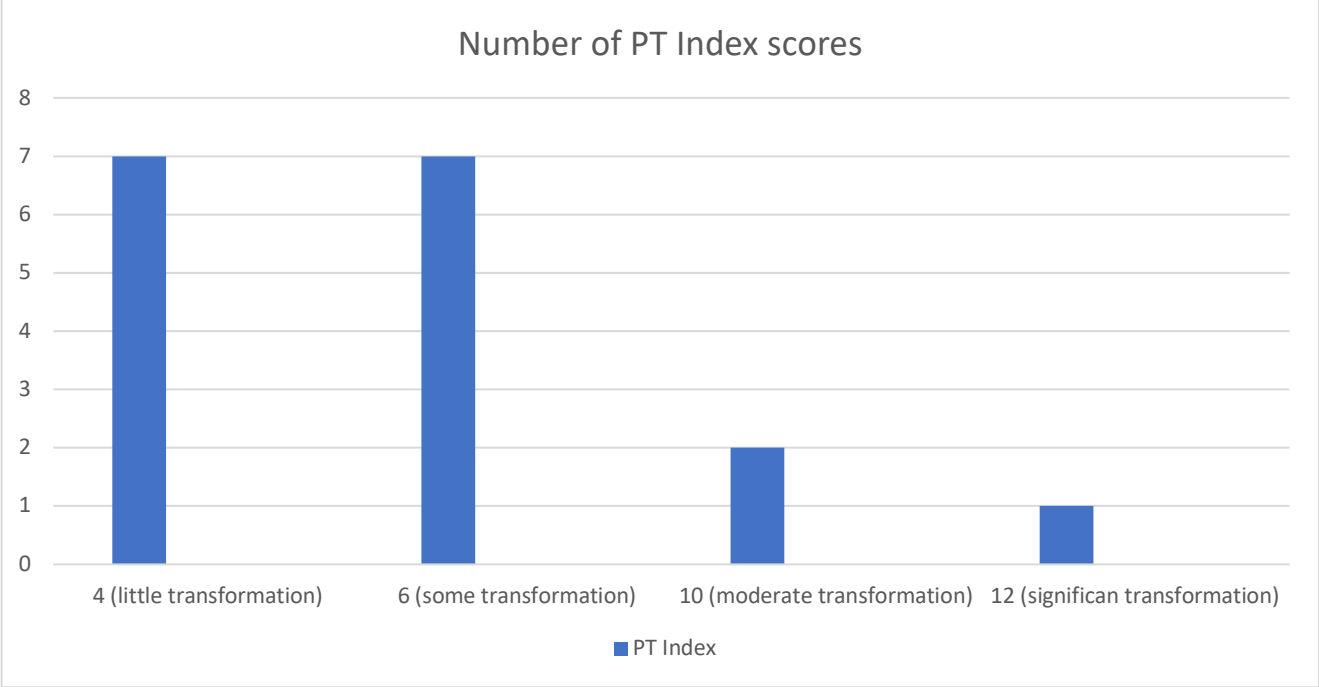
Results of the Learning Activities Survey (LAS)

To answer research question one (what are the indicators, if any, of transformational change when teachers engage in equity-minded learning through participation in professional learning communities?), I analyzed the Learning Activities Survey (18 respondents) followed by ethnographic interviews with five teachers. I begin with the analysis of the LAS which provides quantitative and qualitative data reflective of the transformational process. The 18 responses to the Learning Activities Survey were analyzed to create a PT Index, which indicates the level (if any) of participants' transformation (see figure 4). Seven of the surveys scored a PT Index of four, indicating little transformation occurred. Seven of the surveys scored a PT Index of six, indicating that minimal transformation occurred. Two of the surveys scored a PT Index of ten,

indicating moderate transformation, and one survey scored a PT Index of 12, indicating significant transformation. The chart below identifies the PT Index scores calculated:

Figure 4

Number of Pt-Index Scores on Teacher Surveys



Further, question one of the LAS contains a list of indicators of transformation (based upon Mezirow's transformative learning theory), and participants are asked to check all that apply. The number of recorded responses for each indicator is illustrated in table 4.

Table 4

Number of responses for each indicator in the teacher survey

Indicator	Number of responses
(A) I had an experience that caused me to question the way I normally act.	5
(B) I had an experience that caused me to question my ideas about social roles.	4
(C) As I questioned my ideas, I realized I no longer agreed with my previous beliefs or role expectations.	1
(D) Or instead, as I questioned my ideas, I realized I still agree with my beliefs or role expectations.	6
(E) I realized that other people also questioned their beliefs.	7
(F) I thought about acting in a different way from my usual beliefs and roles.	2
(G) I felt uncomfortable with traditional social expectations.	2
(H) I tried out new roles so that I would become more comfortable or confident about them.	3
(I) I tried to figure out a way to adopt these new ways of acting.	10
(J) I gathered the information I needed to adopt these new ways of acting.	2
(K) I began to think about the reactions and feedback from my new behavior.	2
(L) I took action and adopted these new ways of acting.	2
(M) I do not identify with any of the statements above.	6

King correlates each of the above indicators with one or more of Mezirow's ten stages of perspective transformation. Table 5 shows the questions and their correlating indicators of transformation.

Table 5

Mezirow's stages of perspective and corresponding indicators in the teacher survey

Mezirow's Stages of Perspective Transformation (Mezirow, 1990)	Indicator(s)
1. A disorienting dilemma	A, B
2. Self-examination with feelings of guilt or shame	C, D
3. A critical assessment of epistemic, sociocultural or psychic assumptions	G
4. Recognition that one's discontent and the process of transformation are shared and that others have negotiated a similar change.	E
5. Exploration of options for new roles, relationships, and actions	F
6. Planning a course of action	I
7. Acquisition of knowledge and skills for implementing one's plans	J
8. Provisional trying of new roles	H
9. Building of competence and self-confidence in new roles and relationships	K
10. A reintegration into one's life on the basis of conditions dictated by one's new perspective	L

Mezirow's stages "represent the full cycle of perspective transformation", which means that individuals progress through each of these stages in order (King, 2009, p.5). Based on that presumption, respondents should have selected indicators corresponding to the perspective transformation stage at which they stopped. However, of the 18 respondents, ten of them selected (I) "I tried to figure out a way to adopt these new ways of acting," which indicates that 55% of respondents identified that they have progressed to at least stage six. Analysis of the number of respondents who selected indicators that correlated to stages one through 5 are less than ten, which calls into question the respondents' awareness of their own transformation. Indeed, King (2009) warns that perspective changes in adult learners are not always evident and may not be revealed to the learner or the observer through traditional means. Nine respondents (50%) indicated either (A) or (B), which correlates to Mezirow's stage one, a disorienting dilemma.

While all learners begin at this stage, it is possible that not all learners see this experience as the beginning of transformation. As transformation happens over time, learners may not recognize a disorienting dilemma as the first step in their transformation, and it may not be fully realized until the learner experiences all stages of transformation.

Of the 18 respondents, seven of them selected indicator (E) "I realized that other people also questioned their beliefs." This awareness of the beliefs of others is reinforced by several interview participants who noted that they were keenly aware of what others were thinking and how it related to their praxis. The social nature of transformative learning should be noted, as the interaction, the discussion, and subsequent reflection are all part of Mezirow's (1990) theory.

Six of the respondents selected (D), "or instead, as I questioned my ideas, I realized I still agree with my beliefs or role expectations." This indicator correlates to stage two of Mezirow's theory, where individuals engage in self-examination and associated feelings of guilt or shame (Mezirow, 1990). The recognition of self-examination is an important one, as it illustrates the metacognitive aspect of transformation.

All respondents indicated they are the type of person who reflects on previous decisions and past behavior. Mezirow states that certain "skills, sensitivities, and insights are relevant to participating in critical-dialectical discourse," an essential aspect of the transformative process (Mezirow, 2003, p. 60). This would indicate that individuals who already possess skills, sensitivities, and insights that are helpful in the transformative process are more likely to engage and transform. The fact that all respondents recognized their reflective nature could have helped those that did experience a transformation as indicated by their PT-Index scores.

The results of the Learning Activities Survey show that there are four indicators of transformation as outlined in Mezirow's theory. They are: (stage 1) a disorienting dilemma, (stage 2) self-examination with feelings of guilt or shame, (stage 4) recognition that one's discontent and the process of transformation are shared and that others have negotiated a similar change, and (stage 6) planning a new course of action. These four indicators were present in most responses and illustrate that each participant engaged in transformation during professional learning. Further, the other stages were present in responses, although to a minimal extent, as (stage 3) a critical assessment of epistemic, sociocultural, or psychic, (stage 5) exploration of options for new roles, relationships, and actions, (stage 7) acquisition of knowledge and skills for implementing one's plans, (stage 8) provisional trying of new roles, (stage 9) building of competence and self-confidence in new roles and relationships, and (stage 10) a reintegration into one's life on the basis of conditions dictated by one's new perspective all were present in two survey responses.

Analysis of the Teacher Interviews

Of the 18 respondents to the survey, five teachers agreed to an ethnographic interview. These interviews served to provide a rich description of the participants' experiences during the professional learning. Their demographic information is reflected in the table 6.

Table 6

Teacher Interview Participants

Participant	Gender Identity	Years Teaching	Subject Taught
Mrs. Peters	Female	24	English/Theater
Mr. Carter	Male	16	Social Studies
Mr. Frank	Male	19	Social Studies
Mrs. Jones	Female	17	Social Studies
Mrs. Carson	Female	22	Earth Science

Each interview participant answered the same 16 questions, with follow-up questions to clarify or expand on their answers (see Appendix B). Using deductive coding rooted in Mezirow's (1990) transformative learning theory and research on professional learning, the transcripts were put through three cycles of coding. The first open coding cycle identified four categories (transformation, general feelings about professional learning, aspects of the professional learning sessions, and outcomes) and corresponding codes and sub-codes. These categories, codes, and sub-codes are listed in table 6 (for a full list of codes, see Appendix C).

Table 7

Categories, codes, and subcodes

Categories	Codes	Subcodes
Transformation	Disorienting dilemma, self-examination, critical reflection, outside experience, transformation	Recognition of a disorienting dilemma. Indication of self-recognized transformation. Indication of non-self-recognized transformation.
Feelings about professional learning	Expectations, efficacy, value	Positive/negative expectations. Positive/negative feelings of value. Positive/negative feelings of efficacy.
Aspects of professional learning sessions	Efficacy of the facilitator, teaching methods used, administrative support	Positive/negative feelings about the facilitator. Positive/negative feelings about the teaching methods. Discussion of administrative support.
Outcomes	The definition of equity, implementation of equity in praxis	Displays mastery of the definition of equity. Does not display master of the definition of equity. Indicates successful implementation of equity in praxis. Indicates unsuccessful implementation of equity in praxis.

The participants all indicated some form of transformation they attributed to the training, as illustrated in table 8, below.

Table 8

Indicators of transformation in interview subjects

Participant	Disorienting Dilemma	Self-Examination	Critical Reflection	Outside Experience	Transformation
Mrs. Peters	✓	✓	✓	✓	✓
Mr. Carter	✓	✓		✓	✓
Mr. Frank		✓	✓	✓	✓
Mrs. Jones			✓	✓	
Mrs. Carson		✓		✓	✓

Results from the interviews illustrated several indicators of transformation on the part of each participant. As depicted in Table 8, each participant discussed how an outside experience affected their transformation, and four of the five participants indicated that they engaged in self-examination and transformation. While three participants discussed critical reflection, and two participants indicated the presence of a disorienting dilemma, as discussed above, the transformative process happens over time, and not all stages may be initially recognized by the learner until the entire process is complete.

While indicators of transformation emerged in the data, second cycle coding illuminated several themes that focused on the experiences of the participants. Each of the five participants discussed these three themes in various ways.

Theme 1: The facilitator is an important aspect of the efficacy of the sessions.

a. They need to cultivate a safe space where people feel comfortable being vulnerable.

b. They should know the culture of the school and work closely with admin to ensure that all actions are backed up by decisions at the institutional level.
c. The facilitator is less effective via Zoom.

Theme 2: The sessions themselves should include discussions and small group work.

a. This helps participants work through the transformation process in their own mind.
b. Seeing how others take in and react to new information helps one in the process.

Theme 3: Administrative support is essential.

a. Specifically support helps teachers feel confident while they implement their new learning.

Theme 1: The facilitator is an important aspect of the efficacy of the sessions

All participants discussed the facilitator in a positive way, attributing the successes of the training sessions to Dr. Madison. Many noted the environment of safety but discomfort that Dr. Madison cultivated. Mrs. Peters stated, “I was really engaged... she's not afraid to kind of push boundaries a little bit and maybe and see things and say things that might make some people uncomfortable and ask us to like, think about things that make us uncomfortable.” Mrs. Carson echoed similar sentiments, “but I just remember the [part Dr. Madison emphasized] about being okay with being uncomfortable because that happens a lot in the classroom.” Mrs. Jones also noted the environment Dr. Madison created, “I liked how Dr. Madison did things like if she knew she was saying something that created a little tension in the room. She owned that. And then worked through it. And I think that was the biggest takeaway for me...” Mr. Carter likened the safe environment to a college classroom, stating that Dr. Madison “makes people feel safe to

share and also the fact that she'll call somebody out if it's needed, and that's what a good instructor needs to do."

Mr. Frank discussed his feelings about Dr. Madison as a facilitator at length. He indicated that he was excited about learning with her and found her engaging. After meeting with her the first time, he "felt good about it...she had some good insight." He thought a lot about the first session after it concluded and stated that he went into the session feeling apprehensive, but Dr. Madison helped allay those feelings. Mr. Frank continued, stating that Dr. Madison came across as "super approachable, smart, and does really good things on campus."

Many interview subjects discussed the importance of the facilitator in working with the district to ensure that the messaging is uniform across all levels. Mrs. Jones stated that the training would be better received if messaging from administrators indicated that this was a systemic change and not just an educational buzzword. That includes ensuring all teachers are trained, not just those who want it. According to Mrs. Jones, "those of us who have an interest signed up for the equity training, those who did not sign up for [another type of training] ... so it's kind of like an echo chamber if you're not holding people accountable for the information." Mrs. Carson illustrated this point with a description of an event that occurred in her classroom that involved an accusation of racism towards a substitute. Mrs. Carson wanted administrative support for a restorative circle to address the event but was met with silence from her supervisor. She credited her ability to run the circle to Dr. Madison but emphasized that there was "a disconnect between what we've been told to do and what admin was expecting." Mrs. Carson suggests that having Dr. Madison train administrators and then having administrators co-facilitate the sessions would have helped convey a cohesive message.

This theme is supported by Jack Mezirow's work, which emphasizes the importance of a skilled facilitator who can guide learners through the transformative process. According to Mezirow, this facilitator must work alongside the learner in a supportive and caring manner and always ensure the transformation is discussed in a safe setting (Mezirow,1991). Cox (2015) also discusses the facilitator's role and how it changes throughout each phase of the transformative learning process. The facilitator must fluidly adapt to meet the evolving needs of the learner to support the transformation process and guide the learner through the stages of transformation (Cox, 2015).

Theme 2: The sessions themselves should include discussions and small group work.

All of the participants discussed the importance of small group discussion in the sessions. Mr. Carter stated that he "liked the open discussion part where people would share out...stories about equity and issues that kids had faced." He also connected this back to the success of the facilitator, in that learners felt safe and that everyone knew "she would shut something down if it wasn't correct or went awry." Mrs. Peters concurred, indicating that large groups were ineffective in learning this way, and that the small group aspect of the professional learning was one of the things that made it successful. She, too, tied this into the importance of the facilitator, that she was an "active listener" and helped develop the discussion.

Each respondent also highlighted the ineffectiveness of Zoom. Every respondent stated that their interest and engagement decreased when the sessions were conducted over Zoom. Mrs. Jones stated that having people break out over Zoom did not have the same effect as having Dr. Madison in person and circulating around the room. Mr. Carter agreed, stating that "it wasn't really effective over Zoom, if feel she was effective in person." Mr. Frank indicated that he

would feel disconnected and unengaged over Zoom, and that engaging with Dr. Madison in that format was a "total turn off, I got nothing out of that."

This theme is supported by the work of Cox (2015) who details the real-life process of transformation, as well as by Webster-Wright (2009) who illustrates best practices of professional learning. Cox highlights the importance of discussion in the transformation process and that the discursive process is connected to how humans learn (Cox, 2015). Webster-Wright posits that all effective professional learning must be social, include discussion, and be conducted in an environment that supports learning.

Theme 3: Administrative support is essential.

During each interview, each respondent indicated the need for administrative support during the equity development process. Mr. Frank discussed how important he felt it was for administrators to be engaged in the work so that there would be a uniform message across the district. He felt that having Dr. Madison as an intermediary working with both teachers and administrators would be the most effective. Mr. Carter stated that without administrative support and engagement in equity work, it was just a "dog and pony show," and that equity work looks merely performative.

Mrs. Jones and Mr. Frank discussed how administrative support and communication would help tailor professional learning to the direct needs of the teachers and the students. Mr. Frank touched on the importance of the district's culture to be considered, including all stakeholders (teachers, administrators, parents, and students). Mrs. Jones agrees, and states that administrative support for professional learning shows that equity is a district-wide effort, and "not just a flash in the pan." She went on to say that buy-in from administrators creates buy-in

from teachers and improves the learning outcomes. Mrs. Carson highlighted the importance of administrative support and participation to avoid it “feeling like just one more thing.” Further, she touched on how administrative support would help remove the disconnect between what teachers “have been told to do, and what admin is expecting.”

This theme is supported by Paul Gorski’s (2023) work, which states that when organizations are working on equitable practices, people often wait and want positional authority (administration) to act. When those in authority positions do not act, those working under them often get frustrated and disengaged. Gorski goes on to discuss that those who end up leading the work in those cases are “passion leaders” and who may not have positional power. This type of leadership is unsustainable and can lead to burnout and disengagement from equity work altogether (Gorski, 2023). Thus, from the data and supported by literature in the field, meaningful transformative professional learning requires admin support. This does not mean development from a hierarchical position, but support through such things as funding, time for the professional learning to occur, and encouraging participation alongside listening to teachers’ experiences within the professional learning setting.

Student Surveys (quantitative)

Figure 5

The convergent mixed-methods approach answering research question two

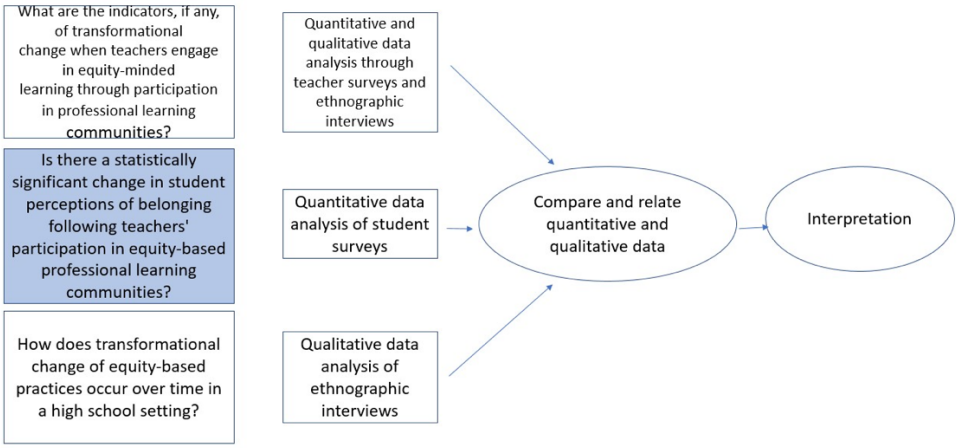


Figure adapted from Cresswell & Cresswell, 2018

To answer research question 2 (is there a statistically significant change in student perceptions of belonging following teachers' participation in equity-focused professional learning communities?), student survey responses were analyzed to determine if the class of 2025 cohort had a statistically significant change in feelings of belonging. Students responded to a six-question survey delivered via a web-based application, Panorama. While it was not possible to connect individual students and teachers who engaged in the professional learning without violating student anonymity, the student sample was limited to the class of 2025 cohort who attended Tiberius High School prior to the training (their ninth-grade year), during the training (their tenth-grade year) and the year following the training (their eleventh-grade year) (see Table 9). Further, sub-groups of Tiberius High School were also examined, focusing on students who identify as Hispanic/Latinx (see Table 10) and students who identify as Black (see Table 11). As

these two groups are historically marginalized and are the primary intended beneficiaries of culturally competent teachers, changes in feelings of belonging within these two subgroups is especially pertinent. Using Chi-squared analysis, the number of positive responses from the 2025 cohort from the survey given in 2021 were compared to the number of positive responses from the cohort in 2023. As these students were present at Tiberius High School during the entirety of the training sessions, measuring their change in belonging compared to that of students not in the building during the training should provide insight into the efficacy of the professional learning. Because individual students are not tracked based on their connections to teachers who engaged in the professional learning experience, it is not possible to make direct connections from the professional learning to the change in students' feelings of belonging. Indeed, there may be other factors that contribute to changes in students' feelings of belonging, such as school culture or structural changes that can enhance or prohibit belonging.

Table 9

Class of 2025 cohort number of positive responses by question

Class of 2025 Cohort			
Question	**2021 Number of positive responses (570 students)**	**2023 Number of positive responses (568 students)**	**Change**
Overall sense of belonging	342	381	+39
How well do people at your school understand you as a person?	308	335	+27
How connected do you feel to adults at the school?	182	312	+130
How much respect do students at your school show you?	456	443	-13
How much do you matter at this school?	319	375	+56
Overall, how much do you feel as though you belong at your school?	433	426	-7

Initial examination of the data for the entire class of 2025 cohort shows an increase in positive responses on four of the six questions. There was a decrease in positive responses to question four (how much respect do students show you at your school?) and question six (overall, how much do you feel as though you belong at your school?). The largest increase in the number of positive responses was noted in question three (how connected do you feel to adults at the school?), which is to be noted, as the intended outcome of equity-focused professional learning is to create positive experiences between teachers and students. The focus of training on adults, and the consequent increase of students' feelings of connectedness to adults is important. This data was then analyzed using a Chi-squared test to determine if there was a

statistically significant change in students' feelings of belonging. The observed data (the number of positive responses in 2023) was compared to the expected data (the same percentage of positive responses from the 2021 survey results) to determine a Chi-square. The results of this analysis indicated that there was a statistically significant change in students' feelings of belonging following teachers' participation in equity-focused professional learning, x^2 (5, N = 570) = 112.03, p <. 001.

Table 10

Class of 2025 cohort students who identify as Hispanic/Latinx percentage of positive responses by question

Students who identify as Hispanic/Latinx			
Question	**2021 Number of positive responses (346 students)**	**2023 Number of positive responses (346 students)**	**Change**
Overall sense of belonging	170	239	+69
How well do people at your school understand you as a person?	135	194	+59
How connected do you feel to adults at the school?	73	159	+86
How much respect do students at your school show you?	298	270	-28
How much do you matter at this school?	152	211	+59
Overall, how much do you feel as though you belong at your school?	204	232	+28

The number of positive responses by students who identify as Hispanic/Latinx increased in all questions except question number four (how much respect do students at your school show

you?). Here, too, there is the largest increase in the number of positive responses to the question about connectedness to adults. These results were analyzed through a Chi-squared test comparing the number of positive responses from this subgroup in 2021 to the number of positive responses in 2023. The Chi-squared analysis indicated that there was a statistically significant change in feelings of belonging among the subgroup of students who identify as Hispanic/Latinx following teachers' participation in equity-focused professional learning, x^2 (5, N = 346) = 184.48, p <. .001.

Table 11

Class of 2025 cohort students who identify as Black percentage of positive responses by question

Students who identify as Black			
Question	**2021 Responses (119 students)**	**2023 Responses (119 students)**	**% change**
Overall sense of belonging	67	76	+9
How well do people at your school understand you as a person?	60	55	-5
How connected do you feel to adults at the school?	35	61	+26
How much respect do students at your school show you?	15	100	+85
How much do you matter at this school?	76	77	+1
Overall, how much do you feel as though you belong at your school?	77	88	+11

The number of positive responses by students who identify as Black increased on all questions except question number two (How well do people at your school understand you as a person?). As with the other two groups, the largest increase in positive responses came from the question about connections to adults. These results were analyzed through a Chi-squared test

comparing the number of positive responses from this subgroup in 2021 to the number of positive responses in 2023. The Chi-square analysis indicates that there was no statistically significant change in feelings of belonging among the subgroup of students who identify as Black following teachers' participation in equity-focused professional learning, x^2 (5, N = 119) = 3.13, p = .68. Although there is not a statistically significant change in positive responses among this subgroup, there is evidence to show an increase overall, specifically improvement with connections with adults. While we cannot connect this increase specifically to the equity focused professional learning sessions, as there are also other district initiatives (as discussed in chapter 1) that could contribute to this increase. The lack of statistically significant change for this subgroup of students illustrates that there is more work to be done to increase feelings of belonging among students who identify as Black. Specifically, as Hussain and Jones (2019) indicate, Black students are impacted more by a negative climate than Latinx students, which could explain the lack of statistically significant change in feelings of belonging amongst this student group. Further, As Hussain and Jones (2019) posit, administrative support is essential for creating a climate of belonging. Taken together, the teachers' indication of the importance of administrative support, and the existing literature, perhaps increased administrative support could positively impact feelings of belonging among students who identify as Black.

How transformational change happens over time

Figure 6

The convergent mixed-methods approach answering research question three

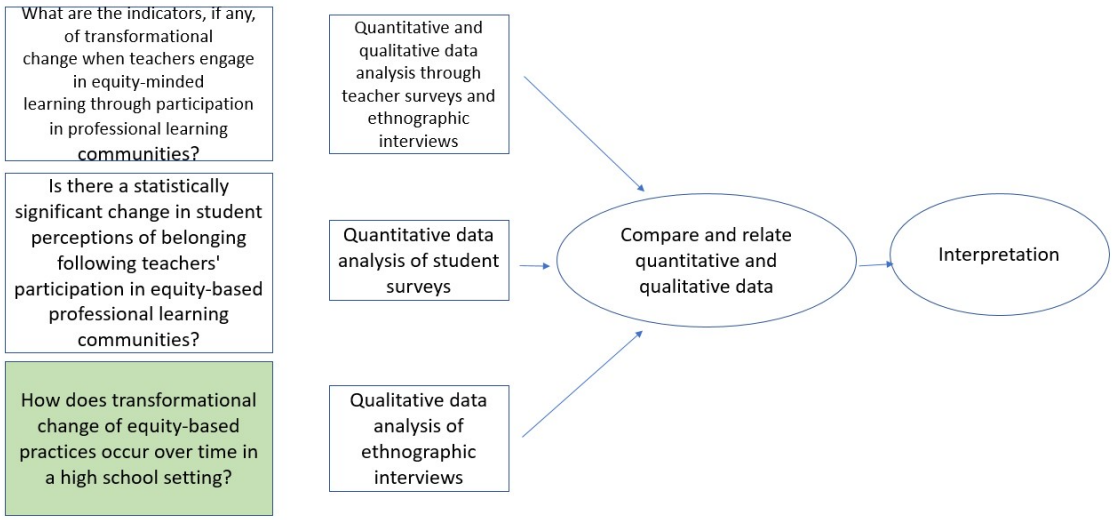


Figure adapted from Cresswell & Cresswell, 2018

Interview Results

To answer research question number three (how does transformational change of equity-based practices occur over time in a high school setting?), the qualitative data from the teacher interviews and interviews with the director of the Office of Teaching and Learning (OTL) as well as the was examined to provide a rich description of teachers' experiences of transformation. The interview responses from the director of OTL and the facilitator were analyzed to determine chronological steps in the planning and execution process. This method of graphic elicitation, aptly named timelining, allowed the alignment of the interview responses to round out the picture of the nature of transformational change (Lyublinskaya & Du, 2022). When all the data is coded and analyzed to answer research question number three, what emerges is a

series of flashpoints conveyed by the participants. Flashpoints are defined by Kraehe and Lewis (2018) as "a heightened occasion, arising from the activation of power that disturbs a seemingly fixed relationship (as cited in Travis, 2020, p.17). In other words, aspects of the participants experiences have materialized and have become linking events in their internal narratives. Combining these linking events into one holistic timeline provides a view of the transformational professional learning process.

What emerged was a quilted version of events from the perspective of all participants that illustrates how transformational change of equity-based practices occurs over time in a high school setting. Each step in the transformational process is rife with individualization and nuance. Table 12 outlines the integrated steps in chronological order. The rows in pink are actions taken by the director of OTL, those in blue are actions taken by teachers, and finally those in yellow are actions taken by Dr. Madison, the facilitator of the professional learning.

Table 12

Timeline of transformational change of equity-based practices over time in a high school setting

Timeframe	Event	Quotes
2021-2022 school year	Initial idea for professional learning. This idea can come from the superintendent's office, teacher feedback, state requirements, or the office of OTL.	"I often talk to the teachers themselves to see what they need." "I look at student data." "Those of us who plan professional development sit at the middle level of management in that hierarchy, there's people above us that who also have thoughts...so there's competing visions and competing time."
February, 2022	Once a goal of professional learning is established, members of the office of OTL research the	"I turn to literature, I look at research, but what I find is that there isn't a great crossover between people who do the research and then they're not coming in and doing keynotes.

	topic, identify resources that are an ideal fit for the learning environment.	Dr. Madison was a sort of unicorn in that she is doing research, and she does trainings."
March, 2022	Dr. Madison meets with the school/district leaders to identify goals of the session and align them with the school/district's mission.	"It's about navigating them to really the point where we're targeting the area that really needs to be the focal point of the work."
March-April, 2022	Dr. Madison analyzes school/district data and reviews patterns with school leaders.	"I ask for demographic data from the past ten years and then analyze them for trends, then I ask how their practices have evolved to align with those trends?"
April, 2022	Members of the OTL meet as a team to decide on the exact goals, outcomes, delivery, and data collection for the professional learning.	"Good PD doesn't necessarily happen in the PD session." "We strive for the 'I do, we do, you do' structure."
April - July, 2022	Dr. Madison assesses results from meetings with school/district leaders and develops a plan for the professional learning.	"I draw from a body of research that I've cultivated for 30 years, and we tweak the practice according to who's in front of us." "We work to have real conversations...understanding who we are."
August, 2022	Teachers prepare for professional learning and form expectations based on previous experiences.	"I thought this would be the same old nonsense we've dealt with before...more meaningful training always involves kids." (Mr. Frank) "I'm just always hoping that it's something useful, but preparing for it not to be." (Mrs. Peters) "Dr. Madison's session was the only one that sounded legitimate, the only one that felt like it was actually real." (Mr. Carter) "We've had trainings from people that were not in house and they went horribly."

August, 2022 – May, 2023	Dr. Madison delivers professional learning sessions.	"I work hard to create a safe space...I bring my authentic self into the space and using my lived experience." "I want us to feel comfortable with the silence, build community...encouraging participation and engagement."
August, 2022 – May, 2023	Teachers engage with the facilitator through direct instruction, discussion, and reflection.	"I thought she [Dr. Madison] was fantastic." (Mrs. Jones) "I thought that this person was not afraid to push boundaries a little bit and maybe see and say things that might make people uncomfortable." (Mrs. Peters) "I liked her no-nonsense approach" (Mr. Carter) "[Dr. Madison] seems super approachable and smart." (Mr. Frank)
August, 2022 – May, 2023	Office of OTL collects data during the sessions.	"There's the initial success...what are teachers saying as they leave?" "You can just tell by the vibe whether or not it was good."
August, 2022 – May, 2023	Dr. Madison reflects on the teaching experience during the professional learning.	"I'm constantly in self-reflection."
August, 2022 – May, 2023	Teachers leave the session and reflect on their experiences. Outside experiences trigger reexamination of previously held beliefs.	"She [Dr. Madison] provided a pathway for people who don't know what to do and feel stuck, it helps them figure out the next steps." (Mrs. Jones)
December, 2022 – July, 2023	Teachers voluntarily follow up with Dr. Madison to discuss new learning.	"I've had several teachers from Tiberius High School reach out to me to unpack things." (Dr. Madison)
December, 2022 – July, 2023	Teachers apply new learning.	"I was like, 'I don't have this experience, so I'm not going to assume that I can tell the story in an accurate way." "I think that [the PD] really helped me and honestly it was useful to me in my job." (Mrs. Peters)

May, 2023	OTL directors collect lagging data in the form of surveys, student data, teacher feedback.	"Am I seeing the proof in the pudding?" "When I'm talking to kids, or we're doing our student focus groups, am I hearing about it?" "The lagging indicator is, is it impacting students?"
June – July, 2023	OTL meets back as a team, reflects on the process, and adjusts accordingly for the next session.	"This office reads them all [teacher feedback surveys] ...we're making changes to the learning pathways next year because of the feedback."

Key Takeaways

Taken together, the analysis of the teacher, OTL director, and facilitator interviews creates a picture of transformation of equity-based practices in a high school setting. This transformation is complicated by the multiple parties involved in the planning and delivery of the professional learning sessions. Further, a shortage of time, competing demands for PD, and the individual nature of transformation together create a messiness that can occlude the transformation process. Finally, the results show that that there is no set-timeline for transformation, and that the overall experience is highly individualized.

Timeline for transformation

Interview responses indicated that some participants experienced transformation within the first few months of engaging in the professional learning community. Mrs. Peters shared that she felt the impact right away, and she applied that new learning to her approach to planning the school's musical for that year. Mrs. Carson also used her new learning shortly after the end of the first session where she addressed an issue in the class through a restorative circle and used much of the language echoed by Dr. Madison Mr. Carter indicated transformation in practice by

the end of the school year, as he began to look at student names differently and making a concerted effort to always pronounce all student names correctly, even if students say they are unbothered by mispronunciations. Mrs. Jones and Mr. Frank did not indicate any transformation as of the interviews. Table 13 illustrates the timeline of transformation by participant.

Table 13

Time to transformation indicated in teacher interviews

Participant	Time to transformation indicated
Mrs. Carson	Within one month after the first session
Mr. Carter	Between 6-10 months
Mr. Frank	Not at all
Mrs. Jones	Not at all
Mrs. Peters	Within one month after the first session

Individualized nature of the transformational experience

Transformation in everyone varies significantly. As one of the stages of Mezirow's theory includes outside experiences, this notion is a reasonable one (Mezirow, 1990). Individuals have varied outside experiences that impact their transformation. These experiences cannot be controlled within professional learning and will affect transformation in diverse ways. Mrs. Peters and Mrs. Carson both had outside experiences within their praxis that connected new learning and encouraged transformation. Mr. Frank, Mrs. Jones, and Mr. Carter did not indicate any significant outside experiences. Further, as transformational change is rooted in constructivist theory, a schema is created in a highly individualized manner (Mezirow, 1990). Therefore, changes to schemata would also be highly individualized. Taken together, the combination of unique schema and varying outside experiences explains the distinctive nature of transformation.

Converging the Data

Figure 7

The convergent mixed-methods approach merging quantitative and qualitative data to answer all three research questions

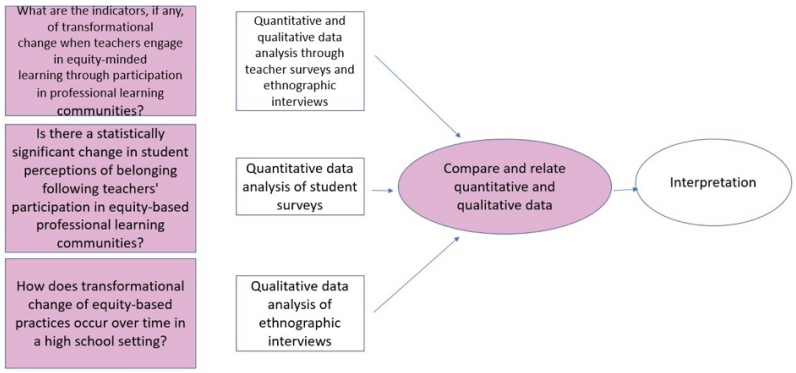


Figure adapted from Cresswell & Cresswell, 2018

Taken together, this data converges to create a detailed picture of equity-minded professional learning in a high school setting. While messy, the transformative process has consistent flashpoints that are supported by the literature surrounding the transformational process. As transformative change associated with equity-focused professional learning is initiated, created, evaluated, and experienced by various groups of stakeholders, these interests compete, conflict, and sometimes synergize to complicate the process of transformation.

The goal of all professional learning is to impact praxis and therefore students and as equity-focused professional learning is transformational, critical reflection is necessary to impact practice (Guskey & Yoon, 2009; Ngounou & Gutiérrez, 2019; Webster-Wright, 2009). During this study, there was evidence of critical reflection on the part of the teachers, as well as some aspects of transformation as indicated in the teacher interviews. However, teachers only indicated four of the ten stages, stages one (disorienting dilemma), two (self-examination with

feelings of guilt or shame), four (recognizing one's discontent), and six (planning a new course of action). While teachers expressed some indicators of transformation in the survey, the transformative process is linear and signals that teachers may not be aware that they are engaging in transformation at all, hence no mention of stages three or five. Integrating metacognitive aspects into equity-focused professional learning could help to illustrate the transformative process, and thus increase critical reflection on the part of participating teachers. Increasing critical reflection impacts practice, and therefore can lead to increased student feelings of belonging.

The impact on students was evident in the 2025 cohort as well as students who identify as Hispanic/Latinx, but not in students who identify as Black. There is enough evidence from the existing literature to support from the notion that equity-focused professional learning can improve students' feelings of belonging (Cobb & Krownapple, 2019; Darling-Hammond, 2010; Hussain & Jones, 2019; Sipperstein et al., 2022). Indeed, as students who identify as Black are more likely to be affected by negative culture and increased feelings of disconnection in majority-White institutions, research shows that administrative efforts to improve the culture of diversity, equity, and inclusion are essential to improving feelings of belonging among those students (Hussain & Jones, 2019). Administrative support is vital not only to positively affecting the culture of the school, but also to helping teachers continue in their transformation, as an institutional collaboration will ensure that teachers feel safe and supported to engage in this process. As illustrated in the timeline, administrators work diligently to plan and execute professional learning. They curate data points to make decisions, and assess efficacy. Further complicating this process is the overwhelming nature of an administrative position. Administrators must deal with constant demands on their time, and so professional learning often

must take a back seat to the immediate needs of students. Finally, measuring transformation, such as what is entailed in equity-focused professional learning is ephemeral, and not as concrete as math or literacy standards. Administrative dedication of resources, removing the identified barriers to a full commitment to equity, and a long-term plan for professional learning can help to increase efficacy and therefore positively impact all students, but especially historically marginalized student groups.

The transformative process is highly individualized, and does not develop on a standardized timeline. Teachers experience transformation because of a combination of a skilled facilitator, discussion-based small-group learning, and outside experiences. Existing literature supports this, as evidenced by the work of Cordova, et al. (2019) which identified that a caring, authentic facilitator who can create an environment of trust and personal reflection is essential to the transformative process. This process allows teachers to reframe their existing schema to incorporate new (liberatory) views of the world. While teachers may not always see their transformation, indicators exist as evidence of stages in the transformative process. Careful attention to the role of the facilitator, discussion, and safe spaces is key to supporting teacher transformation. Time for teachers to collaborate, discuss, and critically reflect are essential, and must be supported by administrative action to create an environment that nurtures a positive culture of diversity, equity, inclusion, and therefore belonging.

In chapter five I will extend the discussion around this data. I will outline the compelling findings that emerged from the data. I will discuss the implications for practice, policy, and future research. Finally, I will address how limitations can be ameliorated in future studies. These will be connected to the body of literature surrounding the major themes discussed in this study.

Chapter 5: Findings and Discussion

In the spring of 2023 as I was diving head-first into survey data and beginning teacher interviews, many colleagues would stop in to ask how my research was unfolding. My colleague, Aaron, came in to see me one morning to check in and to vent; he was irate. Aaron is normally calm and collected, unflappable. And yet, he was steaming mad. It turns out that cap and gown distribution for our seniors had been scheduled. It was scheduled based on last name at various points throughout a school day. Seniors were only to come to school at their assigned timeslot to get their cap and gown, and then return home.

"What if they don't have a car? What if their parents work, and they don't have a ride? What if they live far away from the high school and can't walk? What if they have a job and can't come during that time?" he bellowed, almost exhausted with anger. He continued, "we can't always build systems based on our own understanding of the world, we're all White, middle-class adults. That's not fair to kids who don't experience what we knew growing up, how are they supposed to get their caps and gowns?" He stormed out without even waiting for my response. He walked into the principal's office and demanded that alternate transportation or distribution be arranged so that ALL students can receive their graduation attire. And that's when I realized that equity-focused professional development is essential in transforming teachers' views, and has a tangible impact on students.

Summary

This study employed a convergent mixed-methods approach to answer the following research questions:

(1) What are the indicators, if any, of transformational change when teachers engage

in equity-minded learning through participation in professional learning communities?

(2) Is there a statistically significant change in student perceptions of belonging following teachers' participation in equity-based professional learning communities?

(3) How does transformational change of equity-based practices occur over time in a high school setting?

Teacher surveys, ethnographic teacher interviews, student survey data, and interviews with the professional learning facilitator and the director of the Office of Teaching and Learning were analyzed separately and then converged to illustrate a detailed and holistic picture of equity-focused professional learning in a high school setting. Teacher surveys provided quantitative and qualitative data regarding indicators of teacher transformation. To provide a rich description of the teachers' experiences, the survey was followed by ethnographic interviews, which provided insight into the transformative experience. Student surveys provided quantitative data analyzed to determine if there was a statistically significant change in students' feelings of belonging while teachers engaged in equity-focused professional learning. Finally, to create a timeline of transformation, interviews were conducted with the facilitator of the professional learning sessions, and the director of the Office of Teaching and Learning who plans and implements professional learning in the West Jersey School District.

From this data emerged a series of flashpoints illuminating the transformation process that teachers experience while engaging in equity-minded professional learning. Like the transformation process itself, these findings are nuanced and individualized. In the next section, I

will discuss the major findings and how they can be applied to increase the efficacy of equity-focused professional learning.

Compelling findings

Compelling finding one: The role of the facilitator

From the data analysis, several aspects of the professional learning sessions were identified. Based on teacher interviews, the facilitator played a significant role in the transformation process, and the teaching methods employed during the sessions were also important, with discussion in small groups being the key to teacher transformation. All participants also added that when sessions were conducted via Zoom, the efficacy dropped significantly. From these findings, one can posit that one-shot workshops delivered to a large group of teachers is not effective in helping teachers engage in equity-minded transformation. Instead, this type of professional learning must be done in person, in small groups, each with their own facilitator. The systemic obstacles that exist in public schools often make this difficult. As Dr. Powell discussed in her interview, there are competing factors for professional learning time. State requirements, standardized test analysis and other requirements vie for precious teacher professional learning time. If a district is to commit to true transformation, they must make this type of learning a priority and invest the appropriate resources to ensure efficacy.

Compelling finding two: Changes to the delivery of equity-focused professional learning can increase efficacy

Considering the existing barriers most public schools face when delivering equity-minded professional learning, creative and novel ways of ensuring teacher transformation must be employed to ensure efficacy. As this type of learning is social by nature, tapping into the social

fabric of a school could help to boost the success of equity-minded professional learning, and in turn, to improve transformation and reciprocal transfer to students. Schools could begin with a few small groups of teachers to pilot equity-focused learning in professional learning communities. However, the groups of teachers should be carefully selected, and should focus on what Malcolm Gladwell in *The Tipping Point* calls connectors, mavens, and salesmen (2000). Gladwell explains that change happens because of the influence of these three types of people, those who know people in many different areas (connectors), those who are experts and whose knowledge is respected (mavens), and those who have persuasive power (salesmen). Teachers in the pilot program would then spread the word and increase support for future PLCs through their natural social connections and persuasion. Taken together, small groups of these three types of people within a school piloting a program focused on equity could have the power to begin a cultural change within the school and set off a chain reaction of transformation.

Compelling finding three: The transformational process

The data showed that participants recognized transformation in stage six, but not the previous stages. Transformation happens in a linear manner, and learners progress through them sequentially (Mezirow, 1990). Why, then would learners see indicators of stage six, but not stages one through five? Those who engage in the transformative process may not be aware of how they are experiencing transformation. They may not recognize certain stages of the process in themselves only because they aren't looking for it. Respondents were not told that the professional learning in which they were engaged was transformative, no direction was given that the learning would require reflection, discussion, new ways of thinking, or even extended time. Perhaps engaging participants in the metacognitive aspect of the transformative process, which in turn would increase critical reflection (Mezirow, 1990). Further, although the individual

transformative process is linear, the combined institutional transformation process (as revealed by the timelining analysis) produces flashpoints that are non-linear and sometimes synergistic.

Compelling finding four: Successful equity-focused professional learning

Upon convergent data analysis, what materializes is a structure for effective equity-focused professional learning. This learning is piloted in one year with several small groups of teachers, carefully selected to ensure that those participating have the social power, persuasion, and respected knowledge to spark cultural change within the school (Gladwell, 2000). Professional Learning Communities should meet consistently in person throughout the first year and should be guided by a skilled facilitator who engages the group in dialogue, reflection, and critical thinking (Cordova et al., 2019; Cranton, 2016; Dufor et al., 2021; Guskey & Yoon, 2009).

While a statistically significant increase in students' feeling of belonging among the class of 2025 and students who identified as Hispanic/Latinx occurred following the professional learning, students who identify as Black did not show the same increase. Focusing on the successful aspects as illuminated by the data could help increase feelings of belonging among students who identify as Black (Hussain & Jones, 2019). Further, adding in administrative support can engage the faculty and students in a culture of belonging, delivered through successful and effective professional learning (Hussain & Jones, 2019).

Limitations

One of the biggest limitations of this study is its short duration (Rossman & Rallis, 2017). The transformative process is highly individualized and follows no set timeline. Therefore, the one school year duration of this study does not allow for the full evolution of transformation in

the participants. A study that follows participants for several years with multiple interviews would provide a fuller picture of the transformation process.

Further, the reciprocal transfer of the professional learning would be clearer if there was a direct and documented connection between specific students connected to the teachers who engaged in the professional learning. While this was not possible without violating the anonymity of the students, a study that ensured anonymity while also tracking these connected students and teachers would provide more robust support for the efficacy of the professional learning. The quantitative data available through Panorama was limiting. The application does not provide individual student answers, so it was not possible to determine changes in those answers. The quantitative student data that was analyzed does not provide a clear view of the direct impact of the professional learning on students.

This study was conducted in one suburban school, with only 81 teachers participating in equity-minded professional learning. This small sample size does not allow for ease of generalizability. A study that included many schools, including those located in urban, suburban, and rural areas, as well as a larger sample size of teachers would provide more generalizability for the results. The increased number of schools and the larger sample size of teachers would also allow for a more diverse group of teachers, as those interviewed for this study all identified as White. Despite these limitations, there is transferability of this work into various settings. The nature of qualitative research differs from quantitative research in that generalizability looks and feels different. In quantitative research, the researcher generalizes from a sample to a population using statistics (Herr & Anderson, 2015). However, Stake (1986) morphs this idea into naturalistic generalization, which is where results are not generalized, but transferred into similar

contexts (as cited in Herr & Anderson, 2015). Considering the significant similarities of many districts around the country, this data can be easily transferable, and therefore valuable.

Implications for future research

As some of the major limitations were the short-term nature of this study, the small sample size, and the lack of direct connection between students and teachers, future research that extended the data collection period, included more schools, and directly tied to students and teachers engaged in equity-focused professional learning would garner more accurate and illustrative results. These results could have the power to show a correlation between teachers' transformation along the equity spectrum, to an increase in students' feelings of belonging. Examining specific students and teachers would also allow for an addition of the students' perspective to the transformation timeline. The increased timeline would also provide a more accurate picture of the transformative process, and a larger sample size would create a more detailed account of the experiences of teachers as they transform.

Additionally, this research generated questions regarding the transformative process among teachers. Specifically, are certain types of people more prone to transformation? Are teachers more likely to be reflective, as reflection is a key aspect of effective teaching? Future research could focus on teachers as a subgroup of transformational learners and compare those results to adults in other fields engaged in the same type of workplace learning. Teasing out personality traits that may make a person more likely to engage in transformation could help to inform the structure and delivery of equity-focused professional learning in all fields.

Finally, the data revealed that there was not a statistically significant change in feelings of belonging among students who identify as Black. Future research could explore this

phenomenon to identify why those students did not feel an increased sense of belonging, what could be done to bolster that, and what factors acted as barriers to belonging as a group. Qualitative data from students could help to identify barriers and possible solutions.

Implications for practice

While the body of research shows that equity-minded professional learning for teachers has reciprocal transfer to all students, and not just historically minoritized students, this research is often not conveyed to teachers. The nature of professional development as a deficit-approach to leading teacher learning is often top-down and isolated. Engaging teachers in the "why" of professional learning is essential to its success. What decades of educational research shows is best practices for teaching students also applies to teaching teachers. Ensuring buy-in, establishing a purpose for learning, social learning centered around discussion, and creating a safe environment are not just best practice in classrooms with students, but also best practice in conference rooms with teachers.

Following the conclusion of this study, I reconnected with the director of OTL, and the facilitator of the sessions. I shared my qualitative and quantitative data with them to identify next steps. I plan to use the data from this study as evidence to support the inclusion of an African-American Studies class to the social studies department. This is one small step to helping improve the sense of belonging among the Black student population. This study has sparked discussions about ways to improve outcomes for all students, but particularly Black students in the West Jersey School District. It should be noted that in a time of tremendous push back against DEI initiatives in many places like Florida, Texas, and numerous districts in Pennsylvania, the administration of West Jersey School District took a brave step in organizing training sessions for teachers in the name of equity for all students. Dr. Madison was interested

in the findings as well, as the data supports her success in the field, both with students and teachers. Future collaborations with Dr. Madison may result in workshops and/or presentations on this data.

I plan to use the findings from this study to advocate for changes to professional learning moving forward. Although this study focused on equity-minded professional learning, it applies also to any professional learning that requires transformation. The emergence of successful aspects of the professional learning can, and should, be considered when planning and implementing future professional learning. Ensuring that teachers feel safe, and are provided with a skilled facilitator to guide discussion in small groups will be essential to assisting in the transformative process. As a leader in my district, I have some influence in the planning process of professional learning experiences for teachers. I hope that this data will bolster my impact and positively affect teacher growth and, ultimately, improved outcomes for students.

Implications for Policy

In recognition of the importance of equity-focused professional learning, the Pennsylvania Department of Education (PDE) has created the Culturally-Relevant and Sustaining Education (CR-SE) Program Framework Guidelines to help educators become culturally competent (Pennsylvania State Department of Education, 2022). To develop cultural competency in all teachers, PDE has required districts to incorporate the CR-SE framework into professional learning in the 2023/2024 school year. However, there is no directive from PDE for what this type of professional learning looks like, how it is delivered, or how districts can measure its effectiveness. State-wide educational policy that supports culturally relevant/sustaining pedagogy is one step in the right direction, but without proper guidance or, most importantly, funding to deliver this in an effective way, this policy falls short. If PDE wants

to do more than just check a box, they must invest in properly-structured and effective professional learning that can be rolled out to all districts free of charge. This could be implemented through Intermediate Units, and would not be dependent on budgets, or school board votes for funding. This research highlights the importance of ensuring effective professional learning is delivered to in-service teachers, and is bolstered by the evidence of impact on students.

Conclusion

This study examined teachers' experiences of equity-minded professional learning through the theoretical framework of Jack Mezirow's transformative learning theory (1990). Data analysis reveals several strengths and weaknesses in the structure of the professional learning sessions that help or hinder transformation in teachers. This research serves as a starting point for the discussion of best practices for engaging teachers in equity-focused learning that could initiate change in schools that results in an increase in students' feelings of belonging, and ultimately improved student outcomes overall. Throughout this process, my transformation has been focused on the ways I analyze and experience my own professional learning. I have begun to always ask, what is the intended outcome of this learning, and (most importantly) am I actually experiencing the intended outcome, or is this merely just "checking a box?"

References

Adams, K. (2022, March 21). To close the educational equity gap, teachers have to understand their position of power. EdSurge. https://www.edsurge.com/news/2022-03-21-to-close-the-educational-equity-gap-teachers-have-to-understand-their-position-of-power

Alim, H.S. and Paris, D. (2017). What is culturally sustaining pedagogy and why does it matter? In D. Paris and H.S. Alim (Eds), *Culturally Sustaining Pedagogies* (pp.1-21).

Annamma, S.A., Jackson, D.D., Morrison, D. (2016). Conceptualizing color-evasiveness: Using dis/ability critical race theory to expand a color-blind racial ideology in education and society. *Race Ethnicity and Education.* 20(2), pp. 147-162. doi: 10.1080/13613324.2016.1248837.

Arellano, A, Cintrón, J., Flores, B. & Berta-Alva, M. (2016). Teaching for critical consciousness: Topics, themes, frameworks and instructional activities. In A. Valenzuela (Ed), *Growing critically conscious teachers: A social justice curriculum for educators of Latino/a youth* (pp. 39-66).

Brown, K.D. (2017). Why we can't wait: Advancing racial literacy and a critical sociocultural knowledge of race for teaching and curriculum. *Race, Gender & Class.* 24(1-2), pp. 81-96.

Bush-Mecenas, S. (2022). The business of teaching and learning: Institutionalizing equity in educational organizations through continuous improvement. *American Educational Research Journal.* 59(3), pp. 461 – 499.

Choi, Y.W. (2022). *Sparks into fire: Revitalizing teacher practice through collective learning. Teachers College Press*

Cobb, F. and Krownapple, J. (2019). *Belonging through a culture of dignity: The keys to successful equity implementation.* Mimi and Todd Publishing.

Cordova, A.J., Garza, E., Jr. And Niño, J.M. (2019). Experience of transformation: Educator perspectives. In A.E. Lopez & E.L. Olan (Eds.), *Transformative pedagogies for teacher education: Critical action, agency, and dialogue in teaching and learning contexts* (pp. 87-102). Information Age Publishing.

Cox, E. (2015). Coaching and adult learning: Theory and practice. *New Directions for Adult Learning and Continuing Education.* (148) pp. 27-38.

Cranton, P. (2016). *Understanding and promoting transformative learning: A guide to theory and practice* (3rd ed.). Stylus Publishing.

Creamer, E.G. (2020). Visualizing dynamic fully integrated mixed method designs. *International Journal of Multiple Research Approaches*. 12(1) pp. 65-77.

Crenshaw, K. (1989). Demarginalizing the intersection of race and sex: A Black feminist critique of antidiscrimination doctrine, feminist theory and antiracist politics. *University of Chicago Legal Forum.* 1(8) pp. 139-167.

Cresswell, J.W. (2022). *A concise introduction to mixed methods research*. Sage

Cresswell, J.W. & Cresswell, J.D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches.* Sage.

Darling-Hammond, L. (2010). *The flat world and education: How America's commitment to equity will determine our future.* Teachers College Press.

Datnow, A., Yoshisato, M, Macdonald, B., Trejos, J, and Kennedy, B.C. (2022). Bridging educational change and social justice: A call to the field. *Educational Researcher.* 52(1), pp. 29 – 35.

DuFour, R., DuFour, R. Eaker, R., Mattos, M., & Muhammad, A. (2021). *Revisiting professional learning communities at work: Proven insights for sustained substantive school improvement.* Solution Tree Press.

Easton, L.B. (2008). From professional development to professional learning. *Phi Delta Kappan*. 89(10), pp. 755 – 759 and 761.

Ehrenfeld, N. (2022). Framing an ecological perspective on teacher professional development. Educational Researcher. 51(7), pp. 474-450.

Esposito, J. and Evans-Winters, V. (2022). *Introduction to intersectional qualitative research.* Sage Publications.

Flensner, K.K. & Von der Lippe, M. (2019) Being safe from what and safe for whom? A critical discussion of the conceptual metaphor of 'safe space', Intercultural Education, 30:3, 275-288, doi: 10.1080/14675986.2019.1540102

Freire, P. (2000). *Pedagogy of the oppressed*. Continuum.

Gladwell, M. (2000). *The tipping point: How little things can make a big difference.* Back Bay Books/Little Brown and Company.

Gorski, P., Zenkov, K., Osei-Kofi, N., Sapp, J. (2016). Introduction. In P.C. Gorski, K. Zenkov, N. Osei-Kofi and J. Sapp (Eds.) *Cultivating Social Justice Teachers*. (pp. 108 – 125). Stylus Publishing.

Gorski, P. & Swalwell, K. (2023). *Fix injustice, not kids: And other principles for transformative equity leadership.* ASCD.

Guskey, T.R. (2000). *Evaluating professional development.* Corwin Press.

Guskey, T.R. & Yoon, S.K. (2009). What works in professional development? *The Phi Delta Kappan*, 90(7), pp. 495-500.

Herr, K. & Anderson, G.L. (2015). *The action research dissertation: A guide for students and faculty.* Sage.

Howard, G.R. (2016). *We can't teach what we don't know: White teachers, multiracial schools.* Teachers College Press.

Howard, T.C. (2020). *Why race and culture matter in schools: Closing the achievement gap in America's classrooms.* Teachers College Press.

Hussain, M. & Jones, J.M. (2019). Discrimination, diversity, and a sense of belonging: Experiences of students of color. *Journal of Diversity in Higher Education.* 14(1), pp. 63-71.

Hutchinson, M. and Hadjioannou, X. (2019). Fidelity of practice: The challenge of transformative change in teacher professional development. In A.E. Lopez & E.L. Olan (Eds.), *Transformative pedagogies for teacher education: Critical action, agency, and dialogue in teaching and learning contexts* (pp. 87-102). Information Age Publishing

Institute of Education Sciences. (2023). *The importance of student sense of belonging.* Institute of Education Sciences: Regional educational laboratory Midwest. https://safesupportivelearning.ed.gov/sites/default/files/RELMW-6-2-3-4-StudBelong-508.pdf

Kazemi, E., Resnick, A.F., Gibbons, L. (2022). Principal leadership for school transformation of elementary mathematics teaching: Why the principal's conception of teacher learning matters. *American Educational Research Journal.* 39(6), pp. 1051-1089.

Kendall, F.E. (2103). *Understanding white privilege: Creating pathways to authentic relationships across race.* Routledge.

King, J.E. (1991). Dysconscious racism: Ideology, identity and the miseducation of teachers. Journal of Negro Education. 60(2), pp. 133-146.

King, K.P. (2009). *Handbook of the evolving research on transformative learning: Based on the learning activities survey* (10th anniversary ed.). Information Age Publishing.

Ladson-Billings, G. (1995). Toward a culturally relevant pedagogy. *American Educational Research Journal*, 32(3), pp. 465-491.

Lau, N. (2009). Cultivation of mindfulness: Promoting holistic learning and wellbeing in education. *International handbook of education for spirituality, care, and wellbeing.* Springer.

Leo, A. (2023). Toward a class-conscious approach to cultural responsiveness. *Educational Researcher*. 52(4), pp. 230-237.

Lund, D.E. and Carr, P.R. (2013) Disrupting denial and White privilege in teacher education. In P.C. Gorski, K. Zenkov, N. Osei-Kofi and J. Sapp (Eds.) *Cultivating Social Justice Teachers*. (pp. 108 – 125). Stylus Publishing.

Lyublinskaya, I. and Du, X. (2022). Annotated digital timelining: Interactive visual display for data analysis in mixed methods research. *Methods in Psychology*. 8(2023), pp. 1-9.

Manglitz, E., Guy, T.C., Merriweather, L.R. (2014) Knowledge and emotions in cross-racial dialogues: Challenges and opportunities for adult educators committed to racial justice in educational settings. *Adult Learning*. 25(3), pp.111-118.

McIntosh, P. (2007). White privilege: Unpacking the invisible knapsack. *Race, class, and gender in the United States: An integrated study*, 177-82.

Merhtens, D.M (2012). Transformative mixed methods: Addressing inequities. *American Behavioral Scientist*, *56*(6), 802–813. https://doi.org/10.1177/00027642114337

Mezirow, J. (1990). Conclusion: Toward transformative learning and emancipatory education. In Merriam, S.B. (Eds.) *Selected Writings on Philosophy and Adult Education.* (pp. 123-136). Kreiger Publishing.

Mezirow, J. (2003). Transformative learning as discourse. *Journal of transformative education,* 1(1), pp. 58-63.

Milner, H. R. (2014). Culturally relevant, purpose-driven learning & teaching in a middle school social studies classroom. *Multicultural Education*. 21(2), pp. 9-17.

Moir, E. (2013, May 23). *Evolving from professional development to professional learning. EdSource.* https://edsource.org/2013/evolving-from-professional-development-to-Professional-learning/32586#:~:text=Professional%20development%20is%20typically%20single,the%20students%20and%20school%20community

Monchinski, T. (2010). Chapter Four: Critical Pedagogies and an Ethic of Care. *Education in Hope: Critical Pedagogies and the Ethic of Care. Counterpoints Vol. 382.* (pp. 85-135). Peter Lang AG.

National Center for Educational Statistics. (2022). *School directory information.*

Ngounou, G.N. & Gutiérrez, N.B. (2019). The value of interracial facilitation of racial equity training. *Ph Delta Kappa International.* 100(8), pp. 56-61.

Noddings, N. (2013). *Caring: A relational approach to ethics and moral education.* University of California Press.

Nuri-Robins, K.J., Lindsey, D.B., Lindsey, R.B, Terrell, R.D. (2012). *Culturally proficient instruction: A guide for people who teach.* Corwin Press

PanoramaEd.com. (2020, May 19). *How was Panorama's student survey built?* https://academy.panoramaed.com/article/548-how-was-panoramas-student-survey-built

Parkhouse, H., Bennett, E., Pandey, T., Lee, K., Wilson, J.J. (2022). Culturally relevant education as a professional responsibility. *Educational Researcher*. 51(7), pp. 474-450.

Pennsylvania State Department of Education (2022). *Culturally-relevant and sustaining education program framework guidelines.* https://www.education.pa.gov/Documents/Teachers-Administrators/Certification%20Preparation%20Programs/Framework%20Guidelines%20and%20Rubrics/Culturally-Relevant%20and%20Sustaining%20Education%20Program%20Framework%20Guidelines.pdf

Pennsylvania Educator Diversity Consortium (2023). *About: Southwest region.* https://www.paeddiversity.org/about.

Research for Action. (2022). The need for more teachers of color. https://www.researchforaction.org/wp-content/uploads/2022/04/RFA-TheNeedforMoreTeachersofColor.pdf

Richardson, S.P. (2023). *Physical therapy faculty with historically marginalized or minoritized identities and their experiences regarding discrimination: A qualitative study* (Publication No. 2861533675). [Doctoral dissertation, College of Saint Mary]. ProQuest Dissertations and Theses Global.

Romano, A. (2017). Transformative learning: A review of the assessment tools. *Journal of Transformative Learning.* 5(1), pp. 53 – 70.

Rossman, G.B. & Rallis, S.F. (2017). *An introduction to qualitative research: Learning in the field.* Sage Publications.

Saldaña, J. (2021). *The coding manual for qualitative researchers.* Sage.

Seale, C. (2022). *Tangible equity: A guide for leveraging student identity, culture, and power to unlock excellence in and beyond the classroom.* Routledge.

Sensoy, O. and DiAngelo, R. (2017). *Is everyone really equal?: An introduction to key concepts in social justice education.* Teacher's College Press.

Sheridan, J., Chamberlain, K., and Dupuis, A. (2011). Timelining: Visualizing experience. *Qualitative Research*. 11(5), pp: 552-569.

Siperstein, G.N., Ballard, S.C., Jacobs, H.E., Rodriquez, J., and Shriver, T.P. (2022). "A place for everybody": Students' perspectives on inclusive behavior in school. *Educational Researcher,* 51(6), pp. 387-398.

Siwatu, K.O. (2007). Preservice teachers' culturally responsive teaching self-efficacy and outcome expectancy beliefs. *Teaching and Teacher Education.* 23(2007), pp.1086-1101.

Sleeter, C. & McClaren, P. (2000). Origins of Multiculturalism. *Rethinking Schools.* 15(1). https://rethinkingschools.org/articles/the-origins-of-multiculturalism/.

Spradley, J.P. (1970) *The ethnographic interview.* Waveland Press.

Stuckey, H.L., Taylor, E.W., & Cranton, P. (2013). Developing a survey of transformative learning outcomes and processes based on theoretical principles. *Journal of Transformational Education.* 11(4), pp. 211 – 228.

Thapa, A., Cohen, J., Guffey, S., Higgins-D'Allesandro, A. (2013). A review of school climate research. *Review of Educational Research.* 83(3), pp. 357 – 385).

Travis, S. (2020). Flashpoints of artist identity formation. *Art Education*. September (2020), pp. 16-25.

Valenzuela, A. (1999). *Subtractive schooling: U.S.-Mexican youth and the politics of caring.* State University of New York Press.

Webster-Wright, A. (2009). Reframing professional development through understanding authentic professional learning. *Review of Educational Research.* 79(2), pp.702-739.

Yin, R.K. (2018). *Case study research and applications: Design and methods.* Sage.

Zeichner, K.M. (2009). *Teacher education and the struggle for social justice.* Routledge.

Zeichner, K.M. & Flessner, R. (2009). Educating teachers for social justice. In K.M. Zeichner, Teacher education and the struggle for social justice (pp. 24 – 43).

Appendix A: Teacher Survey Questions

Teachers' Experiences of Culturally Responsive Teaching Professional Development

This survey has been adapted from Kathleen P. King's 2009 Learning Activities Summary

* Required

1. 1. Thinking about your experiences in the Culturally Responsive Teaching professional development in the 2022/2023 school year, check off any statements that may apply *

Check all that apply.

- [ ] I had an experience that caused me to question the way I normally act.
- [ ] I had an experience that caused me to question my ideas about social roles. (Examples of social roles include what a mother or father should do or how an adult child should act)
- [ ] As I questioned my ideas, I realized I no longer agreed with my previous beliefs or role expectations.
- [ ] Or instead, as I questioned my ideas, I realized I still agreed with my beliefs or role expectations.
- [ ] I realized that other people also questioned their beliefs.
- [ ] I thought about acting in a different way from my usual beliefs and roles.
- [ ] I felt uncomfortable with traditional social expectations.
- [ ] I tried out new roles so that I would become more comfortable or confident about them.
- [ ] I tried to figure out a way to adopt these new ways of acting.
- [ ] I gathered the information I needed to adopt these new ways of acting.
- [ ] I began to think about the reactions and feedback from my new behavior.
- [ ] I took action and adopted these new ways of acting.
- [ ] I do not identify with any of the statements above.

2. 2. Since you have been enrolled in the Culturally Relevant Teaching pathway, do you believe you have experienced a time when you realized that your values, beliefs, opinions, or expectations had changed? *

Mark only one oval.

- ◯ Yes (if yes, please go to question #3 and continue the survey)
- ◯ No (if no, please go to question #7 to continue the survey)

3. 3. Briefly describe what happened:

_____

_____

_____

_____

_____

4. 4. Which of the following influenced this change? (Check all that apply)

Check all that apply.

- ☐ Another teacher in the pathway's support
- ☐ An administrator's support
- ☐ A challenge from the facilitator
- ☐ The facilitator's support
- ☐ No person influenced this change
- ☐ Other: _____

5. 5. What lesson/activity/reading influenced the change? (check all that apply

Check all that apply.

- [ ] Facilitator presentation
- [ ] Assigned reading
- [ ] Personal reflection
- [ ] Resources suggested by the facilitator
- [ ] Personal journaling
- [ ] Deep, concentrated thought
- [ ] Structure of the course
- [ ] Conversations with a colleague
- [ ] Activity during the presentation
- [ ] Other: _____

6. 6. Was there a significant change in your life that influenced the change you experienced? (check all that apply)

Check all that apply.

- [ ] Marriage
- [ ] Birth/adoption of a child
- [ ] Moving
- [ ] Divorce/separation
- [ ] Death of a loved one
- [ ] Change of job
- [ ] None
- [ ] Other: _____

7. 7. Thinking back to when you first realized that your views or perspective had changed, what did your participation in the pathway have to do with the experience of change?

8. 8. Would you characterize yourself as one who usually thinks back over previous decisions or past behavior? *

Mark only one oval.

- Yes
- No

9. 9. Which of the following have been part of your experience as part of this professional development pathway? (check all that apply) *

Check all that apply.

- [ ] A colleague's support
- [ ] The facilitator's support
- [ ] An administrator's support
- [ ] Structure of the workshops
- [ ] Personal journaling
- [ ] Workshop activity/activities or exercise/exercises
- [ ] Deep, concentrated thought
- [ ] A challenge from a colleague
- [ ] A challenge from an administrator
- [ ] A challenge from the facilitator
- [ ] Verbally discussing your concerns
- [ ] Assigned reading
- [ ] Personal reflection
- [ ] Other: _____

10. 10. Which of the following occurred while you attended the pathway? (Check all that apply) *

Check all that apply.

- [ ] Marriage
- [ ] Birth/adoption of a child
- [ ] Moving
- [ ] Divorce/separation
- [ ] Death of a loved one
- [ ] Change of job
- [ ] Other: _____

11. Gender *

Mark only one oval.

- ◯ Male
- ◯ Female
- ◯ Non-binary
- ◯ Prefer not to answer

12. Marital Status *

Mark only one oval.

- ◯ Single
- ◯ Married
- ◯ Divorced/Separated
- ◯ Partner
- ◯ Widowed

13. Race *

Mark only one oval.

- ◯ White, non-hispanic
- ◯ Black, non-hispanic
- ◯ Hispanic
- ◯ Asian or Pacific Islander
- ◯ Other: _____

14. Level of education *

Mark only one oval.

- ◯ Bachelors degree
- ◯ Masters degree
- ◯ Doctorate
- ◯ Other: _____

15. Would you be willing to participate in a followup interview about your experiences related to this professional development? If so, please provide your email address for contact. *

Mark only one oval.

- ◯ Yes
- ◯ No

16. Email address for interview

_____

Appendix B: Teacher Interview Protocol

Hello, my name is Melissa Moxley and I am interested in learning more about how teachers experience equity-based professional development. I am going to ask you a few questions about your experiences with the training you received throughout the 2022/2023 school year. All of your answers will be kept strictly confidential, and this information will be used for a dissertation through Kutztown University. Is it ok if I record this interview?

1. Thinking about your previous experiences, what are some examples of times when you valued professional development sessions?
    a. What in particular made those sessions valuable?
2. In your own words, how would you define equity?
3. Have you had any prior experience with equity-based professional development prior to the training you received at Emmaus?
    a. If yes: can you describe what that experience was like?
4. What are your thoughts on where you are in the process of developing your lens of equity?
    a. What experiences in your personal life or professional career helped you get to that point?
5. What ideas did you have about the training sessions prior to attending them?
    a. What made you feel that way?
6. What were your feelings going into the training sessions?
    a. What made you feel that way?
7. What outcomes did you expect from the training sessions?

8. Was there ever a point in the training sessions that made you go “aha”, or see things in a different way?
9. Can you describe the teaching methods that were used in the training?
10. What was the role of the presenter?
    a. How did he/she make you feel?
11. What were your feelings during the sessions?
    a. Follow-up questions would be asked here, depending on the answers, to get more detail on teacher feelings during the training sessions.
12. Did the teaching methods effectively convey the expected outcomes? Why or why not?
13. What were your takeaways from the training sessions?
    a. Were any of these takeaways surprising to you?
14. In what ways have you applied what you learned in your classroom?
15. Looking back at the expected outcome and the methodology used in the training sessions, what thoughts do you have about the training overall?
16. Is there anything else you would like to share about your feelings or experiences about equity-based professional development?

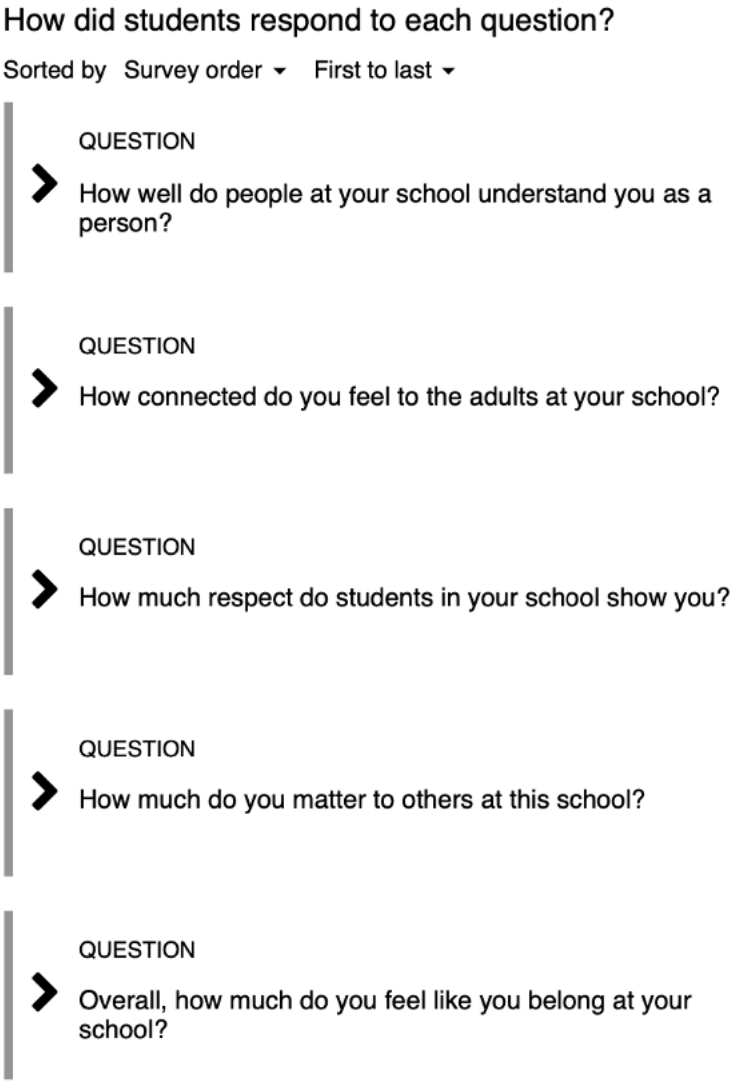
Thank you for your time, I will be transcribing your answers and will check back with you to ensure that I have accurately represented your thoughts. If you have any questions or concerns, do not hesitate to reach out to me.

Appendix C: Code Book

Category	Code (Label)	Subcode	Definition	Example
Aspects of Equity PD	Facilitator (F)	Fpos and Fneg FSS (safe space)	How the subject relates to the facilitator (negative and/or positive) and the creation of a safe space by the facilitator.	Dr. Madison was a pleasure to work with
	Teaching Methods (TM)	Discussion (TMD), small groups (TMSG), direct instruction (TMDI), application (TMA), Zoom (TMZ)	The delivery methods used in the PD, specifically discussion, small groups, direct instruction, application.	Dr. Madison asked us to discuss the topics.
	Improvement (IM)		Subject suggests ways to improve delivery	Having more time in small groups would have helped me.
	Administration (Ad)	Adpos (administration supports learning), Adneg (administration does not support learning)	Subject indicates administrative support or neglect has impacted professional learning.	Without the support of administration to look at the inequities in our system, I feel defeated.
Category	**Code (Label)**	**Subcode**	**Definition**	**Example**
Feelings about PD	Value (V)	Vpos and Vneg	The value the subject attaches to the PD, either positive or negative.	I have never learned anything useful from PD
	Efficacy (E)	Epos and Eneg	The connection between delivery methods and intended outcomes of the PD, whether positive or negative.	The process of trying things as a group helped me understand how to integrate new learning into my classroom
	Expectations (Ex)	Expos and Exneg	The expectation of experiences and outcomes the subject expresses (positive and negative) and the expectations of follow-through by the district.	I didn't expect to enjoy the PD
Category	**Code (Label)**	**Subcode**	**Definition**	**Example**

Outcomes	Implementation (I)	Implementation by the teacher (IT) and Implementation by the district (ID)	The teacher has implemented new learning into their classroom. ALSO, the teacher's expectation of the district implementing equity.	I thought about the sessions when I began the work on the musical.
	Equity definition (ED)		The subject indicates that they have a working understanding of the definition of equity.	Every student is different and requires different things from us to be successful.
	Fragility (Fr)	Frs (fragility in self) Fro (fragility in others)	Subject indicates that there was some tension in themselves or other participants about the topics discussed.	Hearing people react to the things they were being told was shocking, people were really upset.
Category	**Code (Label)**	**Subcode**	**Definition**	**Example**
Transformation	Disorienting Dilemma (DD)		An event or experience that causes the subject to rethink existing beliefs	Once I thought about that, I questioned what I had done in the past
	Self-examination (SE)		The subject indicates that they reflected on previously held beliefs or actions.	I thought about when I mispronounced students' names.
	Critical reflection (CR)		Reflecting upon social or structural impacts on equity and historically marginalized students.	The fact that students who might not have a car or a ride to pick up their cap and gown stood out to me.
	Outside experience (OE)		Subject indicates that some other experience outside of the trainings helped in the transformation.	I learned that from a workshop I went to on my own.
	Transformation (TR)		Subject indicates some sort of transformation.	I used to think that I didn't see color, now I know that's absurd.

Appendix D: Student Survey Questions



Appendix E: Facilitator Interview Questions

1. How have you developed your approach?
2. What kind of pre-work do you do before you begin a session with a school or organization?
3. What information are you looking for to help you shape your presentation?
4. When you are asked to lead more than one session with an organization, how do you approach that? What type of reflection do you do in between sessions?
5. How do you adapt your presentation based on the setting?
6. Has your approach changed over the past few years?
    a. If so, what caused that change?
7. What indicators do you look for during training sessions to gauge learning?
8. Have you ever had a training session go off the rails?
    a. If so, how did you handle that?
9. Have you ever had a training go so well that you could push the learners more than you anticipated?
10. Have you had learners follow-up with you? If so, could you provide any examples that make you especially proud?

Appendix F: Office of Teaching and Learning Interview Questions

1. When you begin to plan professional development for teachers, what indicators do you look to that inform your decisions regarding the topics and delivery of professional development sessions?
2. How do you set goals for PD?
3. How do you find outside consultants, and how do you determine if they would be able to help teachers meet the goals of the PD?
4. How do you assess the success of PD?
5. What do you look for in a successful PD session?
6. What indicators tell you when PD is not successful?
7. How have you worked to align the delivery of equity-based PD with the district's equity statement?
8. What are the next steps in the continuation of equity-based PD?