

Research and Inquiry

Expanding the Cultural Lens: Implementing an Ongoing Online Professional Development During the COVID-19 Pandemic

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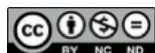
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Expanding the Cultural Lens: Implementing an Ongoing Online Professional Development During the COVID-19 Pandemic

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Abstract

The COVID-19 pandemic provided one of the more significant changes to education. Schooling at all levels (preschool to higher education) was required to pivot instruction while simultaneously realizing the significant disparities in access (Goudeau et al., 2021) that impaired students from being able to actively engage in the educational process. This qualitative study explored online teacher professional development (oTPD) offered to five novice teachers in a variety of schools within the Midwest during the height of the COVID-19 pandemic. The participants all attended the same undergraduate university where culturally relevant pedagogy was taught across the curriculum. Findings suggest that connecting culturally responsive teaching and culturally relevant pedagogy to teacher coaching enables participants to acquire the knowledge and support they need to effectively implement this approach in their classrooms, ultimately promoting equity and social justice in education. Overall, the participants showed growth throughout the instructional coaching and professional development sessions.

Introduction

COVID-19 provided one of the most significant changes in educational practice in the last 100 years. Schools at all levels (preschool to higher education) were required to pivot their instruction while simultaneously realizing the significant disparities in access (Goudeau et al., 2021) that impaired students from being able to actively engage in the educational process. This is part of the new normal that Brown et al. (2021) outline when discussing issues in equity that were overlooked or simply not considered by school administrators, teachers, and educators in general. Yet, as education changed to meet the needs of students, schools explored new and innovative methods to continually develop teachers through the pandemic. One such method is professional development (PD), which has long been a contractual requirement for teachers in many school districts across the United States (Kennedy, 2016). The focus of most school district PD is on continual development of teachers with an emphasis on teacher learning and providing training and support of new and innovative methods of instruction, while embedding direct connections to daily teacher responsibilities (Avalos, 2011; Hunzinker, 2011). Unfortunately, while districts have spent an incredible amount of

money on PD, teacher attitudes and dispositions have not reflected the focal ideas presented by educators, theorists, and researchers seeking to improve the educational outcomes of students (Gemedá et al., 2013). Hunzinker specifically notes that “one shot” and “sit and get” workshops are less effective today. This becomes amplified when professional development focuses on diverse learning perspectives that engage in discussions about race, ethnicity, and socioeconomic status (Milner & Howard, 2013; Romijn et al., 2021; Swanson & Welton, 2018). While districts have articulated the importance of embracing diversity and multiculturalism in schools, their actions are not aligned to promoting and evaluating this among teachers.

Educational equity has always been a critical issue in education. Jordan (2010) defines educational equity as “providing transformative learning experiences for students who require such experiences for social mobility, as well as social and cultural reproduction for students already on top” (p. 151). However, COVID-19 amplified educational inequities when students had to move to remote learning and teachers had to adjust instructional delivery to assist students with meeting key academic benchmarks for promotion to the next grade. The pandemic

exposed deep structural disparities in education as many students were unable to fully engage in remote learning due to limited access to reliable internet, appropriate devices, and academic support. As schools scrambled to adapt, concerns about diversity and inclusion were often pushed aside in favor of immediate logistical demands. However, this should have been at the forefront of educational practices long before the pandemic forced the world to see how inequitable education was and continues to be (Alvarez-Rivero et al., 2023). Teachers reported that their task was to focus on what students need to know as opposed to differentiating instruction to meet the diverse needs of their students or creating lessons that were responsive to the cultural practices and funds of knowledge of their students (Onyishi, 2022). It is important to note that even though teachers were to move all instructional practices online, they did not have the adequate support in place to make this change a seamless transition. Inevitably, this contributed to a greater education debt (Ladson-Billings, 2007) for students from economically marginalized communities and students of color, who faced compounded structural inequities.

Purpose of the Paper

This paper examines the online professional development offered to five novice teachers in a variety of schools within the Midwest during the height of the COVID-19 pandemic. The participants all attended the same undergraduate university where culturally relevant pedagogy was taught across the curriculum. Specifically, the PD focused on opportunities to enhance the teaching dispositions by addressing culturally responsive and relevant pedagogical practices. Additionally, this PD occurred solely online with group and individual sessions to guide teacher lesson development. The relevant questions for this research are:

1. How meaningful will an online professional development program be on participants' understanding of culturally responsive instructional practices?
2. How will participants modify their instructional planning to be culturally responsive in their teaching?

It is important to note that while culturally relevant pedagogy and culturally responsive teaching are used interchangeably throughout the paper, culturally responsive teaching was the focal perspective of the training. While both are important for teacher practice and dispositions, the first meeting required a greater emphasis be placed on culturally responsive teaching due to the lack of understanding that they are more than teacher tools; rather they are inherently a part of the teacher practice and their disposition.

Although the current investigation focuses on an online PD initiative during the COVID-19 pandemic, this study is important and relevant to the growing body of research related to promoting middle-level teacher learning in today's educational climate. Specifically, ongoing PD sessions designed to promote teachers' understandings of culturally responsive instructional approaches benefit teachers' instructional planning, classroom practices, and student learning (Powell et al., 2017). Further, as in the current study, ongoing PD sessions provide multiple opportunities for joint planning of content-area instruction at the middle-level, implementation of targeted culturally responsive approaches, reflection, and feedback from an instructional coach, all relevant in today's middle-level classrooms.

Theoretical Framework

The current landscape of education looks to ignore the diverse perspectives present in the classroom. In fact, states (i.e., Texas and Florida, among others) developed legislation to ensure students receive instruction from a scripted curriculum devoid of opportunities designed to provide differentiated learning strategies that scaffold student learning based on their culture of origin or specific learning needs. This hinders learning for some because they are unable to connect key concepts in a variety of subjects; students do not see the relevance to their personal life, or they do not have a frame of reference making it easier to recall information on required assessments.

What Gay (2018) and Ladson-Billings (2022) offer teachers is the opportunity to understand the importance of using the culture of origin as a vehicle for learning. While culturally responsive teaching and culturally relevant pedagogy are

used interchangeably, there are some nuanced differences between them. Culturally responsive teaching relies heavily on making learning relevant to the students in your classroom. The focus is on teaching and instructional practice that incorporates individual students and their unique cultural perspective in what is taught. Culturally relevant pedagogy focuses on who you are as a teacher and how you work to identify and address biases in your teaching to ensure the success of all students. As such, the focus is on the dispositions and attitudes of teachers and the process of developing them over time through critical reflection.

Ladson-Billings (1995) outlines three tenets that undergird culturally relevant pedagogy: academic success, cultural competence, and socio-political consciousness. These tenets are essential to teachers' practices as they inform one another and work together. Academic success focuses on students choosing success, holding high and transparent expectations, and the idea that all students can learn. Cultural competence is demonstrated through the teacher's ability to use student culture as a vehicle for learning and socio-political consciousness focuses on how learning will transcend the classroom. Gay (2002) discusses the importance of cultural filters to ensure that learning is positioned in the lived experiences of students. While there are countless studies that explore the implementation and use of culturally relevant pedagogy and culturally responsive teaching, there is a dearth of research that connects these frameworks to educator PD. Currently, only two studies provide additional insight. West (2008) studied how teacher study groups assist with the implementation of culturally relevant pedagogy and Orosco and Abdulrahim (2017) investigated word-problem instruction in an ELL mathematics classroom with a teacher that received culturally responsive PD.

Research for Dispositional Change

According to Bishop and Harrison (2021), successful PD initiatives for middle-level educators are planned with goals of increasing content knowledge or improving school practices. Teachers who aim to meet these goals set for middle level education "must employ research-verified practices that challenge, motivate, empower, and nurture young adolescent learners" (Thornton, 2013, p. 2). Researchers have revealed changes

in teachers' practices that occurred because of ongoing PD (Cantrell et al., 2013; Powell et al., 2017). Further, some studies have shown that teachers participating in PD who experienced shifts in beliefs were more likely to appropriate changes in their instructional approaches (Cantrell & Hughes, 2009; Ross & Bruce, 2007; Tschannen-Moran & McMaster, 2009).

Online Professional Development

As issues related to the COVID-19 pandemic necessitated shifts to online instruction in P-12 settings, schools modified formats of PD for teachers to online opportunities (Bragg et al., 2021). Online teacher PD (oTPD) seeks to instruct teachers how to teach students in an online environment (Lay et al., 2020). Additionally, oTPD can provide high-quality training at a lower cost (O'Dwyer et al., 2007). By allowing PD opportunities online, teachers can access the training that is more flexible for their schedules while providing options for participants to attend from a variety of locations (Dash et al., 2012).

The most successful oTPD occurs when teachers are provided continuous organized support (Walsh et al., 2020). Bleach (2014) notes how ongoing PD enhanced teacher professionalism and higher quality of teacher practice in their respective environments. Helmer et al. (2011) discussed the significance of novice teachers being more adaptable to implementing instructional changes learned during the PD sessions as opposed to their veteran counterparts. This point is further supported by Hilton et al. (2016) who state that targeted and ongoing PD can make a difference in how students comprehend and understand relevant lessons and teaching. At the middle-level, effective PD opportunities "focus on school improvement practices or content knowledge" (Bishop & Harrison, 2021, p. 50). However, in honoring the research in middle level education that moves beyond best practices being developmentally responsive, we sought to create a virtual PD that would move teachers toward socially just and equity-oriented dispositions (Shockley & Ellis, 2022).

Although research findings related to virtual PD are limited, some studies reveal students' positive perceptions of online learning, including access to instructional materials in digital formats, flexibility and convenience of virtual learning,

and accessibility to video recordings of teaching sessions (Heirdsfield et al., 2011; Holmes & Prieto-Rodriguez, 2018).

In addition, findings of some studies suggest that successful online learning experiences are enhanced by considerations of participants' technology and computer-related skills (Holmes & Prieto-Rodriguez, 2018). Although these studies indicate teachers' positive perceptions of virtual PD, there is a dearth of research related to virtual PD that focuses on practices regarding equity and diversity. Therefore, this study of online coaching for middle-level teachers provides important implications for planning PD opportunities that address the diverse needs of all students.

Methods

This study employs a qualitative case study research design to explore the experiences and practices of five novice middle-level teachers participating in an online PD program focused on culturally responsive teaching (CRT) and culturally relevant pedagogy (CRP). Case study methodology is particularly suited for this research as it allows for an in-depth, contextualized examination of a bounded system—in this case, the oTPD program and its impact on teachers' instructional practices (Merriam & Tisdell, 2016; Yin, 2018). According to Yin, case studies are ideal for investigating contemporary phenomena within their real-life contexts, especially when the boundaries between the phenomenon and context are not clear. This aligns with the goals of this study, which seeks to understand how novice teachers adapt their instructional planning and teaching dispositions within the specific context of an online PD program during the COVID-19 pandemic.

The case study approach also allows for the use of multiple sources of evidence, including field notes, lesson plans, and participant feedback, which strengthens the validity of the findings through triangulation (Tisdell et al., 2025; Yin, 2018). As Tisdell et al. note, case studies are particularly effective in educational research because they provide rich, detailed descriptions of complex processes, such as teacher learning and the implementation of culturally responsive practices. In this study, the bounded system is defined by the eight-month online oTPD program, which included monthly group sessions, individual

coaching, and lesson plan reviews. The focus on a small group of participants (five novice teachers) allows for a deep exploration of how these teachers engaged with and applied CRT principles in their classrooms, providing insights into the potential of online oTPD to foster culturally responsive teaching practices.

Furthermore, this study aligns with Merriam's (2009) emphasis on the instrumental case study approach, where the case (oTPD) is examined to provide insight into a broader issue—in this case, the effectiveness of oTPD in promoting equity-oriented teaching practices. By focusing on the experiences of novice teachers, who are often more adaptable to new instructional approaches (Helmer et al., 2011), this study contributes to the growing body of research on how PD can support the development of culturally responsive teaching practices in diverse educational contexts.

Participants

This case study involved five novice middle-level teachers from a variety of schools in the Midwest, all of whom graduated from the same undergraduate program where they were introduced to culturally responsive practices. The participants, whose identities are protected, were selected based on their teaching assignments and their exposure to culturally responsive pedagogy during their preservice training. Table I provides an overview of the participants, including their years of experience at their current schools and their teaching assignments.

Table I
Professional Development Participants

Participant	Years at Current School	Current Teaching Assignment
1	3	7th grade / Math
2	2	7th and 8th grade / Math
3	3	8th grade / Science
4	2	8th grade / Science
5	1	5th grade Science / Language Arts

The participants taught in diverse school settings, ranging from urban to rural contexts, with varying

student demographics. Table II outlines the demographic data for each participant's school, including student enrollment, the percentage of students eligible for free or reduced lunch, and attendance rates. For example, Participant 3 taught in a school with 77% of students eligible for free or reduced lunch, reflecting broader patterns of economic marginalization, while Participant 5's school had only 14.7% of students in this category, indicating a more affluent student population. Attendance rates also varied, with Participant 2's school reporting a 90.1% attendance rate, compared to 78.1% at Participant 4's school.

Table II
School Demographic Data

Participant	School Student Enrollment	Free/Reduced Lunch %	Attendance Rate %
1	873	43.5%	85.5%
2	476	39.7%	90.1%
3	591	77.0%	79.1%
4	495	69.7%	78.1%
5	704	14.7%	88.8%

Table III provides further detail on the racial and ethnic composition of the student populations at each participant's school. The schools represented a range of diversity, from Participant 2's school, where 92% of students identified as White, to Participant 3's school, where 64.8% of students identified as African American.

Table III
Student Race & Ethnicity at Participants' Schools

Participant	White	African American	Hispanic	Asian	Other
1	56.4%	14.8%	11.8%	*	11.5%
2	92%	*	*	*	*
3	16.4%	64.8%	10.8%	1.8%	6.2%
4	79.0%	9.5%	8.7%	1.8%	9.1%
5	75.7%	13.5%	3.4%	1.7%	5.7%

The participants' teaching assignments included a mix of STEM and language arts subjects, with

three participants teaching math or science at the middle school level (grades 7 and 8) and one participant teaching both science and language arts at the 5th-grade level. This diversity in teaching assignments allowed for a broad exploration of how culturally responsive practices could be applied across different subject areas and grade levels.

Overall, the participants represented a range of experiences and teaching contexts, providing a rich foundation for examining the impact of online PD on their understanding and implementation of culturally responsive teaching practices. Their varied backgrounds and school settings underscore the importance of tailored PD that addresses the specific needs of teachers working in diverse educational environments.

Procedures

Participants were enrolled in PD sessions focused on culturally responsive approaches for middle-level content area teachers through the virtual PD initiative. Participants received instructional coaching throughout the process. Instructional coaching is a PD approach in which a trained coach provides ongoing support and guidance to teachers as they work to improve their practices. This support can take many forms, including one-on-one meetings, feedback and guidance on specific teaching strategies and approaches, lesson plan revisions, etc. The instructional coach in our study was qualified to provide coaching because of his extensive educational background and experience preparing preservice teachers. Additionally, the instructional coach has developed ongoing PDs for administrators, teachers, and community liaisons in face-to-face, hybrid, and online options and currently teaches and designs courses for preservice teachers around equity and diversity.

By providing teachers with support and guidance in implementing CRT, the instructional coach helped teachers to better understand and apply CRT approaches in their classrooms. PD sessions included supporting teachers in identifying and incorporating the cultural backgrounds and experiences of their students into the curriculum, as well as providing guidance on strategies for engaging and supporting students from diverse backgrounds during the pandemic.

The online PD initiative took place from January through August of 2021 via videoconference. For these eight months, the instructional coach (i.e., the first author) held monthly group sessions (60 minutes each), one-on-one meetings with teachers (60 minutes each), reviewed teachers' lesson plans, and received teacher feedback from the coaching sessions. The instructional coach reviewed field notes from these meetings and elements of CRT practices were noted and utilized to plan future coaching meetings. For example, the coach pushed participants to incorporate what they knew about their students in their lesson development while seeking opportunities to enhance cultural competence. Teachers' lesson plans submitted to the instructional coach prior to each individual coaching session provided additional evidence of teachers' implementation of CRT practices related to classroom relationships, family collaboration, instruction, assessment, discourse, and critical consciousness (Powell et al., 2017).

Data Collection and Analysis

The data collection and analysis for this study were designed to provide a comprehensive understanding of how novice teachers engaged with and implemented CRT practices during the online PD program. The primary data sources included field notes from group and individual coaching sessions and lesson plans submitted by the participants. These sources were chosen for their ability to capture the nuanced, contextualized experiences of the teachers as they navigated the PD program and applied CRT principles in their classrooms. CRP provided further analysis to determine dispositional changes of the participants.

Field Notes

Field notes from monthly PD group sessions and individual coaching meetings were transcribed and analyzed using the qualitative process of inductive coding. Following methods outlined by Miles et al. (2014), the first author used an inductive coding procedure to examine field notes from the PD group sessions and individual coaching meetings. The first author assigned codes to components of classroom practices mentioned on the field notes. Field notes were reexamined in detail looking for themes and patterns across teachers' data to create

categories, using the method presented by Miles and colleagues.

Lesson Plans

To analyze participants' lesson plans, we used the CRT framework and focused on key components of effective lesson planning. The components were engaging and varied instructional strategies, "high student expectations, positive teacher relationships with families and community, cultural sensitivity, active teaching methods where the teacher serves as facilitator and students control of portions of the lesson" (Schmidt, 2005, p. 1), effective student grouping, explicit differentiation, and assessment. Special attention was given to engaging and varied instructional strategies and differentiation. The lesson plan ought to include a range of instructional strategies that were engaging and effective at promoting learning, and it must have considered the diverse needs and abilities of students. By analyzing teachers' lesson plans using a CRT framework that focuses on these key components, it was possible to identify strengths and areas for improvement and provide feedback and support teachers in their practice.

Feedback

We examined the teachers' feedback related to the coaching sessions from a more informal and practical angle. The instructional coach used the feedback to improve the ongoing PD. By focusing on improving practice and promoting teachers' learning, the coach created procedures for assessing the knowledge and skills of individual teachers, but it also created systems of support that turned into continuous improvement of the coaching sessions.

While other data sources, such as Zoom video recordings or surveys, could have been used, they were not selected for the following reasons. Although video recordings could provide a detailed record of interactions, they were not chosen due to practical and ethical considerations. Transcribing and analyzing video data is time-intensive, and the presence of recordings might have inhibited open discussion among participants. Additionally, obtaining consent for video recording in an educational setting can be complex, particularly when sensitive topics like race and equity

are discussed. Surveys could have provided quantitative data on teachers' perceptions of the PD program, but they were not selected because this study prioritizes qualitative, in-depth insights into teachers' practices and experiences. Surveys often lack the depth needed to capture the complexities of how teachers implement CRT in their classrooms.

Data Analysis

The data analysis process was guided by the principles of inductive coding, as outlined by Miles et al. (2014). Field notes were transcribed and along with the feedback were coded to identify themes and patterns related to teachers' understanding and implementation of CRT. Lesson plans were analyzed using a CRT framework, focusing on key components such as cultural sensitivity, differentiation, and student engagement. This dual approach to analysis—combining field notes and lesson plans—allowed for triangulation, enhancing the validity and reliability of the findings (Yin, 2018).

Trustworthiness and Validity

To ensure the trustworthiness of the data and findings, we employed several strategies consistent with qualitative case study research (Lincoln & Guba, 1985; Tisdell et al., 2025). Credibility was addressed through prolonged engagement with participants over the eight-month PD period, which allowed for sustained interaction and deeper understanding of their evolving instructional practices. Member checking was used informally during coaching sessions, as participants provided clarifications and reflections that helped refine interpretations.

Triangulation was achieved by drawing on multiple data sources (field notes, lesson plans, and feedback) to examine participants' learning from different angles. These varied sources supported convergence of evidence across time, allowing us to identify consistent themes. Dependability was supported through clear documentation of the coaching structure, session activities, and coding processes. The first author maintained extensive notes consisting of detailed analytic memos and iterative code lists during the inductive analysis process (Miles et al., 2014). This allowed for transparency in how interpretations

were developed over time. Confirmability was enhanced using analytic memos to record the researcher's reflexivity and evolving understanding of participants' engagement with culturally responsive teaching. These memos helped guard against researcher bias and supported the alignment of interpretations with the data. Finally, transferability was addressed through rich, thick descriptions of the participants, their school contexts, and the coaching processes. These details enabled readers to assess the relevance of our findings to their own settings (Lincoln & Guba, 1985).

Findings

During the initial meeting, each participant provided general demographic data about their school, the subjects they taught, and their general understanding of CRT and CRP. From the onset, four of the participants indicated that each was a part of the teacher toolkit that can be used when necessary. This informed the direction of the PD and guided specific topics of discussion during our group and individual sessions. As such, it is imperative to review a variety of components across themes. Table IV displays the codes and themes derived from the analysis.

The Role of Group Sessions in Shaping Understanding

One of the most obvious differences during our sessions was the inability to effectively interact at an interpersonal level to develop a deeper and richer understanding of the topics covered for the oTPD. It became imperative that each session involve a more interactive approach to facilitate the work needed to address individual bias toward their students, the communities, and families. As an incentive for being a part of this study, participants received compensation for their time, and at the beginning, extrinsic motivation drove them. During our initial session, comments such as, "My school is not very diverse so I do not have the opportunity to teach from a culturally responsive perspective" and "I feel that this may not be relevant for everyday teaching. I can use it when necessary" guided the attitudes of the participants. Four of the five participants indicated that CRT was a teaching tool that they used as necessary.

Table IV
Codes and Themes Guiding the Findings

Overarching Theme	Themes	Codes	Sub-themes
Equity and Social Justice in Education	Transformation of Teacher Dispositions	“Culturally responsive teaching as a tool”	Initial Perceptions of CRT
		“Not relevant to everyday teaching”	
		“Use when necessary”	
		“From toolkit to disposition”	Shift in Understanding
		“Understanding cultural relevance”	
		“Connecting culture to learning”	
	The Role of Group Sessions in Shaping Understanding	“Interactive discussions”	
		“Media representations of CRT”	
		“Guest speaker influence”	
		“Peer feedback and sharing”	
	The Impact of One-on-One Coaching	“Lesson plan revisions”	
		“Incorporating student culture”	
		“Engaging students through inquiry”	
		“Building relationships with students”	
	Challenges of the Pandemic	“Reflective practices”	
		“Recognizing biases”	
		“Continual growth mindset”	
		“Applying CRT in lesson planning”	
	Student-Centered Teaching	“Increased student participation”	
		“Relevance to student lives”	
		“Cultural connections in lessons”	
	The Importance of Ongoing Professional Development	“Ongoing professional development”	
		“Scaffolded learning”	
		“Modeling CRT practices”	
		“Adjusting sessions based on feedback”	

From there, the instructional coach developed each session to scaffold their learning. Session one focused on reintroducing CRT and CRP and included activities to facilitate a discussion about teacher dispositions. Participants were asked, “What do culturally relevant teachers teach, and what should culturally relevant teachers teach?” At first glance, the participants focused on teaching that provided surface explanations of culturally relevant teachers. One participant noted culturally relevant teachers, “make learning fun.” While learning can be fun, these initial discussions indicated that participants were still grappling with clearly defining culturally relevant and responsive teaching and how it relates to their instructional practices.

For session two, the instructional coach shifted the focus of the discussion and provided media representations of culturally responsive education in action. Participants explored the journey of a superintendent (in their state) who embarked upon transforming a school district. The participants were amazed by her tenacity and drive to improve the lives of her students and community. From there, they began to draw parallels between their communities, their schools, and the highlighted district from the media presentation. One participant stated, “Until I watched this video, I was having a difficult time understanding how we need to connect to the students’ community and families. This provided a more in-depth picture of what it means to engage students beyond the classroom.” Another participant noted, “This superintendent did not let the statistics define the students.” This provided a rich discussion about her disposition and how she had her biases in check to develop meaningful relationships with students, faculty, staff, parents, and the community at large. Participants began to understand and discuss the importance of teaching beyond the surface.

For session three, a guest speaker discussed culturally relevant STEM education. Considering all the participants indicated that they were teaching a STEM related subject at some point during their day, it was critical to bring in an expert to discuss cultural relevance of teaching STEM. During the session, participants were encouraged to bring examples from their own lesson development. STEM educators have often pushed back on CRT and CRP because of the

emphasis on teaching facts, formulas, and theories (Dodo Seriki, 2018). However, participants were provided the opportunity to expand their perspective in STEM related teaching through discussions with a STEM expert that provided empirically based evidence to enhance STEM learning from a culturally responsive perspective.

For sessions four and five, the participants began to display the understanding that culturally relevant and responsive teachers actively engage with students, communities, and families to enhance student achievement and learning. Participants actively discussed and shared what they were doing in their classroom and provided feedback to support their colleagues. One participant noted, “I have noticed that my students seem to be more engaged in what I am teaching. I have also spent time working with them more closely to understand who they are and what excites them about learning.” During this session, there was an observed difference in what they thought about culturally responsive and culturally relevant teaching. At the beginning of the sessions (in January), four of the five participants viewed culturally relevant and culturally responsive teaching as a tool that teachers use when necessary. By April and May, four of the five participants began to understand the importance of continual growth and development to address their own bias in teaching and how that impacted their lesson development. Additionally, each of the four began to think about their teaching differently.

For the final session in August of 2021, each participant expressed changes that have significantly impacted their teaching for the upcoming year. While four of the five participants showed tremendous growth in their understanding of culturally relevant and culturally responsive teaching, the fifth participant finally made significant connections to their teaching disposition. The participant noted, “There has been a shift in the students that are in my class; they are more diverse. Now that we are back in school and face-to-face every day, I am glad I can apply what we learned to my lesson development.” Of note is the fact that this participant’s hesitance stemmed from 1) district pressure to meet grade-level expectations due to the loss of instructional time; and 2) the lack of diversity within the district (high income, primarily homogenous student

population) that the participant felt did not warrant full exploration of culturally responsive and relevant practices. Each participant clearly indicated that their classrooms have changed, and now that they were back in the classroom with students, it became imperative to understand who their students were and how that information could inform their teaching.

The Impact of One-on-One Coaching

A significant part of this project was working with the participants to develop culturally responsive lesson plans. Participants scheduled a meeting once a month for individual coaching to discuss their lesson plans. Prior to these meetings, participants provided a copy of an upcoming lesson to discuss during the coaching session. Through the review of lesson plans and initial discussions of classroom dynamics, the revelation about the impact the pandemic had on their teaching effervesced. From the initial group session, the comment, “I feel that this may not be relevant to my everyday teaching” took on a different meaning. The participants readily admitted their administrative directives were to ensure students performed at grade-level to be promoted to the next grade and demonstrate academic growth on state standards. Therefore, they were focused on standards and objectives as opposed to differentiated instruction and meeting the diverse needs of their students. The lessons were very scripted in nature and did not provide a great deal of flexibility. As such, our initial coaching sessions focused on how to engage students, how to get to know students, how their students learned, and how to use the community as an extension of the classroom.

Coaching sessions emphasized identifying and challenging deficit narratives, encouraging teachers to hold high expectations while contextualizing content in students’ lived experiences. With each session, participants were asked to take the aforementioned foci and reimagine their lesson. One clear theme that emerged was the participants did not know their students. The pandemic made it difficult to learn more about their students due to social distancing requirements and the use of hybrid methods of teaching that included face-to-face and Zoom instruction. While schools were meeting the needs of students as best they could, it did not provide

the participants an opportunity to fully engage with their students. Each participant indicated that it was hard to teach beyond the standards and objectives because they did not feel that they knew their students and they were limited by what they could do in the classroom. Through coaching, participants began to explore opportunities to use student culture and background in lesson development through general inquiry. Participants were encouraged to ask students questions, schedule one-on-one meetings with students to learn more about them, provide opportunities for students to discuss meaningful topics in class, and be observant of students all while exploring the school community and incorporating what they learned in their lessons. Teachers incorporated elements of student identity by integrating cultural artifacts, community-based examples, and student voice into lessons. One participant said, “Once I incorporated the strategies that we discussed in group sessions and the last coaching session, I noticed that my students were more engaged. I did not realize it would be that easy to make the lessons more relevant to their lives and culture.” This was echoed by each participant during our coaching sessions as they actively sought to incorporate student culture in their lesson development.

The Importance of Ongoing Professional Development

During each session it was important to check how students were understanding what was being discussed and how it was impacting their instructional practice. At the conclusion of each session, the instructional coach led a discussion that provided a precursor to the upcoming session and asked leading questions to adjust the sessions accordingly. This feedback led to the invitation of a STEM scholar and modifying the session to incorporate some of the discussions gleaned from the one-on-one session. The instructional coach made it a point to do status checks with each participant to ensure that they received the support necessary to do this work. Additionally, it was imperative to model what it meant to be a culturally responsive instructor. Therefore, including discussion points and references shared by the participants only serve to enhance the sessions.

Taking Up the Tenets of Culturally Relevant Pedagogy

Teachers enacted academic success by adopting strategies like differentiated instruction and formative feedback loops that responded to students' varied learning needs. Cultural competence emerged in lessons that used students' languages, histories, and community references as anchors for learning. Sociopolitical consciousness was less consistently enacted but surfaced when the participants began viewing the transformative nature of their teaching. More precisely, they began thinking about how their teaching would transcend the classroom and extend to the students' community and beyond. More importantly, the participants began to understand the importance of being culturally relevant and responsive versus doing culturally relevant and responsive. Ladson-Billings (2007) clearly articulates that the being will inform what we do in the classroom. She reiterates that culturally relevant pedagogy is a disposition as opposed to a list of strategies and steps that must be adhered to show that you are culturally relevant and responsive.

Conclusion and Discussion

Overall, connecting CRT and CRP to teacher coaching helped to ensure that teachers acquired the knowledge and support they needed to effectively implement this approach in their classrooms, ultimately promoting equity and social justice in education. The participants showed growth throughout the instructional coaching and PD sessions. They explored more opportunities to enhance learning using student culture. In exploring our research questions, we found:

1. Ongoing PD is necessary for teachers' continual engagement in culturally responsive and relevant practices, and
2. One-on-one coaching enhances learning opportunities for students as teachers actively engage in reflective practices that meet students' needs and learning objectives.

How meaningful will an online professional development program be on participants' understanding of culturally responsive instructional practices? Through the group

sessions and individual coaching, participants were able to modify their own perspectives of how to be more responsive in their teaching. Most notably was the notion that they almost needed permission to explore these options due to the pandemic restrictions and administrative expectations of teachers. Many of the participants initially indicated that this work was not relevant to their teaching and that they would use it as necessary. The most critical component of the group sessions and one-on-one coaching was the idea that they needed to understand the importance of this meaningful work without being inundated with lectures discussing why it should be important to them. Rather, each group and coaching session specifically sought to model this through presentations that built on previous knowledge while incorporating participants in the session themes and guiding questions. Participants were able to understand the meaning of culture and how it is applicable to learning and lesson development.

The oTPD was a shift from the traditional PD in that activities and discussions had to be modified to connect and engage participants through electronic media presentations and technology. While not perfect (some sessions were interrupted by issues with Zoom), the group and coaching sessions worked to reinforce CRT and provided the coach an opportunity to scaffold the sessions based on what was learned in each session and how future sessions must build on this new knowledge. Participants did understand the importance of CRT, which is closely related to the modeling by the coach and the opportunity to discuss how the participants would be applying what they were learning in their lesson development and instruction. Further, meeting across eight months as opposed to a *one-and-done* session provided guidance to doing this work effectively.

How will participants modify their instructional planning to be culturally responsive in their teaching? Participants were initially hesitant to modify their instruction because of the pressure to help students get caught up, as we were still in year one of the pandemic, and schools had just opened and were using the hybrid format in many cases. During the initial coaching sessions, participants supplied the lesson plan and took notes of the suggestions and modifications the coach recommended. They discussed how to implement

lesson modifications and how they could use them for other lesson plans. However, as the coaching sessions continued, the participants would provide their lesson plans and have their own ideas to make them more relevant to their students. The coaching sessions were discussions that were reminiscent of mentor/mentee relationships. Participants were seeking guidance as they actively navigated what it meant to be a culturally responsive teacher. More importantly, participants began to see culturally responsive instruction as an important component of teaching as opposed to a tool that teachers can use from the toolbox.

Inevitably, the premise of this project was to develop a model of PD that can be used with teachers to expand their cultural lens to enhance the learning outcomes of their students. What COVID-19 did was force educators to reimagine instructional delivery and how technology can enhance how PDs are administered. However, the focus on culturally responsive instructional practices was a unique opportunity. The instructional coach expressed hesitation because of the numerous sessions conducted that were *one-and-done* opportunities that faculty and staff from various school districts and settings did not take seriously. The difference in this PD was the developed levels of support through group and one-on-one sessions that took place over the period of eight months. This reinforced Hilton et al. (2016) assertion that ongoing PDs must be targeted to improve student achievement. While there was growth amongst the participants, there is potential to enhance the study by offering a yearlong PD opportunity for novice and experienced teachers. There is also the opportunity to offer more equity-based PDs to facilitate the ongoing development of teacher dispositions that expand student learning to be more relevant to student experiences and connected to students' schools, communities, families, and life beyond school.

The findings of this study highlight the importance of CRT and CRP as foundational frameworks for addressing equity in education, particularly in the context of online PD for novice teachers. The theoretical work of Ladson-Billings (1995) and Gay (2018) provided a critical lens for understanding how teachers can leverage students' cultural backgrounds to create more inclusive and engaging learning environments. Ladson-Billings'

three tenets of CRP—academic success, cultural competence, and socio-political consciousness—were particularly evident in the ways participants began to reframe their teaching practices. For example, teachers shifted from viewing CRT as a “toolkit” to understanding it as an essential part of their teaching disposition, reflecting the cultural competence tenet. Similarly, Gay's emphasis on cultural filters resonated with participants' growing awareness of how to make learning relevant to students' lived experiences, particularly in STEM subjects, where culturally responsive practices are often overlooked. While CRP and CRT are often used interchangeably, we used both theoretical frameworks in this study to explore teaching and dispositions. Moreover, our goal was to honor the individual work of Gay and Ladson-Billings as opposed to combining the terms to analyze teaching and teachers (Chang & Viesca, 2022).

The study also aligns with research on teacher dispositional change through PD. As Cantrell et al. (2013) and Powell et al. (2017) have shown, ongoing PD can lead to shifts in teachers' beliefs and practices, especially when it is structured to provide continuous support and reflection. The combination of group sessions and one-on-one coaching in the current study allowed participants to engage in critical reflection and apply CRT principles in their lesson planning, reinforcing the importance of ongoing, scaffolded PD (Helmer et al., 2011; Hilton et al., 2016). This approach not only enhanced participants' understanding of CRT but also empowered them to take ownership of their instructional practices, moving beyond the *one-and-done* PD model that has been widely criticized in the literature (Hunzinker, 2011; Gameda et al., 2013). Additionally, this study implemented the online PD framework outlined by Brown et al. (2021).

Theoretical Integration

The changes observed in participants' instructional practices reflected the foundational theoretical frameworks of this study. Ladson-Billings' (1995) three tenets of CRP (academic success, cultural competence, and sociopolitical consciousness) served as both a guide and a benchmark for participants' growth. Academic success was evident in participants' shift toward differentiated instruction and formative assessment practices

designed to meet students where they are. Cultural competence came through in the incorporation of students' cultural references, languages, and family histories into lesson content. Although sociopolitical consciousness was less fully developed, several participants began to explore it through lessons on media representation and demographic data, suggesting early engagement with this critical tenet.

Gay's (2018) concept of cultural filters also informed how participants reflected on their own positionality. Through ongoing coaching, teachers were encouraged to examine how their assumptions shaped classroom decisions. These reflections, documented in field notes, led to shifts in how teachers approached planning, engagement, and content selection. The PD model itself was grounded in these theories, particularly in its emphasis on sustained reflection, iterative feedback, and teacher identity development.

By integrating theory into both the structure of the PD and the analytic lens of the study, we were able to track not only what changed in teacher behavior but how and why these changes aligned with broader equity-focused pedagogical goals. These connections between theory and practice underscore the potential of thoughtfully designed PD to transform dispositions and support more just and responsive teaching.

Limitations

While this study offers valuable insights into the potential of online PD to foster CRT, it is not without limitations. First, the small sample size of five novice teachers limits the generalizability of the findings. Although the case study approach allowed for an in-depth exploration of participants' experiences, future research should include a larger and more diverse group of teachers, including veteran educators, to better understand how PD impacts teachers at different stages of their careers. Second, the study was conducted during the COVID-19 pandemic, which introduced unique challenges, such as the shift to hybrid teaching and the pressure to address learning loss. These contextual factors may have influenced participants' engagement with the PD program and their ability to fully implement CRT practices. Finally, the reliance on field notes and lesson plans as primary data sources, while appropriate for this

study, may have missed some nuances that could have been captured through additional methods, such as independent classroom observations, student data, and pre/post measures.

Future Research Directions

Given the current political climate and the unprecedented changes occurring in education (i.e., dismantling Diversity, Equity, and Inclusion initiatives, attacks on culturally responsive teaching practices, state legislative measures, critical race theory in education, etc.), it becomes necessary for us to become the embodiment of Giroux's (2024) transformative intellectuals. These individuals are teachers and educators who work as change agents to address educational inequity and use their voice to speak out on behalf of their students. Therefore, future research should build on this study by exploring the long-term impact of culturally responsive PD on both middle-level teacher practices and student outcomes. For example, longitudinal studies could track how teachers' implementation of CRT evolves over time and how it affects student engagement and achievement. Additionally, future studies could investigate the role of school leadership in supporting culturally responsive practices, as well as the impact of district policies on teachers' ability to implement CRT. Finally, there is a need for more research on online PD models, particularly in the post-pandemic era, to identify best practices for engaging teachers in meaningful, equity-focused professional learning.

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