

## **Teaching as Dialogue: An Emerging Model of Culturally Responsive Online Pedagogy**

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Despite the preponderance of online learning in K-12 public schools, still little is known about what constitutes good online teaching. The purpose of this interpretivist investigation was to learn about some of the ways in which culturally responsive teaching occurs online. This study focused on the practices of four full-time online high school teachers. Using the methods of grounded theory research, the author analyzed data generated through observations of online courses, interviews with teachers, and teacher-written narratives in order to learn how four instructors practiced culturally responsive online pedagogy in one state-supported online program. Results indicated that the teachers engaged in frequent and ongoing dialogue with their students. The teachers used multiple strategies to get to know their students, to build class community, to adapt instruction to students' learning needs and preferences, and to make learning relevant. Teachers also discussed contextual factors that impacted their practice. However, some characteristics of culturally responsive pedagogy, including infusing students' cultures into the curriculum and helping students to challenge power and hegemony were not identified.

## INTRODUCTION

Online learning is now ubiquitous in K-12 schools. The proliferation of K-12 online learning has coincided with claims from some educators, policy makers, for-profit businesses, and non-profits that virtual instruction can revolutionize learning by increasing educational opportunities and by facilitating student learning and engagement (Miron et al., 2013; Rose & Blomeyer, 2007; Selwyn, 2011). Advocates for increased online learning in K-12 contexts cite access, equity, and opportunity as reasons for expanding the reach of virtual learning (Brown, 2009; Carter, 2000; Larreamendy-Joerns, Leinhardt & Corredor, 2006; U.S. Department of Education, Office of Educational Technology, 2016). Whereas claims for the revolutionizing power of online learning are rampant, research pertaining to K-12 online learning and an increasingly diverse student population is somewhat sparse. Similarly, inquiry regarding promising instructional practices in online learning with regard to diverse and multicultural learners is also lacking (Ferdig & Kennedy, 2014; Goodfellow & Lamy, 2009; Huerta et al., 2015). The assumption that online learning is an opportune platform to engage underserved students is widespread, yet the intersection of online learning with culture, gender, and socio-economic differences has not yet been fully explored. Past research within the field of multicultural education can provide one conceptual framework for considering the ways in which online instruction and communication can be culturally responsive.

In this qualitative investigation, the researcher interviewed and observed experienced online educators who were identified as culturally responsive teachers in order to explore their patterns of responsive online instruction in order to build a grounded local theory of culturally responsive online pedagogy (CROP). This, and future investigations situated at the intersection of online teaching and equity pedagogy, may provide a new way to uncover and to better understand the promising, culturally responsive instructional practices of some K-12 online teachers.

### **Multicultural Directions for Online Learning**

Work in the field of multicultural education has traditionally taken place in physical classrooms and schools rather than in virtual spaces. While a few descriptive inquiries exploring enrollments in K-12 online learning exist (e.g., Glick, 2011; Huerta et al., 2015), there have not yet been studies in K-12 online instruction that seek to understand how culturally responsive pedagogy happens online. Some educational researchers, though, have begun to explore the intersections of educational technology and multicultural education (e.g., Camardese & Peled, 2014; Finklestein, Yarzebinski, Vaughn, Ogan, & Cassell, 2013).

Theories of multicultural education can provide lenses for examining instructional practices in online courses. James Banks (2016) identifies five dimensions of multicultural education: content integration, knowledge construction processes, prejudice reduction, equity pedagogy, and empowering school culture. Geneva Gay (2000, 2013) and Gloria Ladson-Billings (1994, 1995b, 2014) draw from research in multicultural education to provide frameworks for pedagogical practices that are *culturally responsive* or *culturally relevant*. Advocates of culturally responsive teaching recommend moving away from a deficit model of cultural consideration in the classroom and toward a more culturally inclusive model of education. A deficit model of instruction suggests that educators, often unwittingly, mistake cultural differences for student learning deficits (Finkelstein et al., 2013). The move toward more culturally responsive and inclusive teaching practices begins by linking students' experiences in school with their experiences at home (Gay, 2000; Ladson-Billings, 1995a, 2014; Pang & Barba, 1995). This marriage of home culture and school culture occurs when experienced teachers build supportive relationships with students and facilitate classrooms that value differences and invite cultural variations into the curriculum (Gay, 2004; Ladson-Billings, 1994; Moll, Amanti, Neff, & Gonzalez, 1992). According to a more culturally responsive pedagogy, teachers must be willing to get to know their students. This investigation strove to understand the ways in which this happens in K-12 online classes.

### **Culturally Responsive Pedagogy**

Culturally responsive pedagogy resides within the domain both Banks (2016) and Bennett (2001) call *equity pedagogy*. Ladson-Billings (1994, 2014) and Gay (2000, 2013) lead the research in classroom applications of equity pedagogy. In an attempt to best represent the exploration of effective online teaching practices for culturally diverse learners, the author of this study synthesized the terms *culturally responsive teaching* (Gay, 2000) and *culturally relevant pedagogy* (Ladson-Billings, 1994) into *culturally responsive pedagogy* (CRP) for two primary reasons. First, the term *responsive* denotes a desire to respond to the needs of all learners regardless of their ethnic, racial, religious, or socio-economic backgrounds, and is therefore more complex and profound than only making class relevant (although to be clear, instructional relevancy is indeed an integral component of CRP). Second, because this research focuses on online learning, the term *pedagogy* may better denote the instructional decision-making that occurs in different spaces and times within the progression of an online course (whereas the term *teaching* implies one teacher leading many students at the same time). Online instruction can occur collaboratively or individually,

synchronously or asynchronously, scheduled or self-paced, and a number of other possible configurations. The term *pedagogy* encompasses not only the live instruction, but also the communicative and curricular decisions that may be made in the planning or assessment steps of online instruction. Therefore, the term pedagogy was selected as opposed to *instruction*.

Undergirding culturally responsive pedagogy is the premise that learning should be relevant to students. John Dewey (1938) wrote extensively about the importance of experience in education, asserting that education should provide students with opportunities to make connections between school and their lived experiences in the world. Lev Vygotsky (1978) posited a similar constructivist approach to learning. Vygotsky's theory emphasizes the role of social and cultural interactions in learning, with an emphasis on the importance of language in cognition. In Vygotsky's conception, learning occurs in socially mediated spaces through communicative and collaborative exchanges. Taken together, Dewey (1938) and Vygotsky's (1978) work affirms the conceptual importance of socio-cultural learning. Through language, social exchanges with peers and teachers, and through connecting lived experience to new knowledge, learning is made relevant to the student. This social constructivist theory is the foundation for culturally responsive pedagogy (Villegas & Lucas, 2002).

As the K-12 student population has grown more diverse, implementing culturally responsive teaching practices has become increasingly emphasized. A 2015 brief from the National Education Policy Center calls for more culturally relevant curriculum and teaching in order to make learning experiences more equitable for K-12 students (Rice, 2015). In the 2014-2015 school year, for the first time ever, minority students made up the majority of public school students in the United States (Hussar & Bailey, 2014). In addition to shifting racial and ethnic demographics, the number of school children from low-income families is on the rise. In 2013, 44% of all school-age children in America lived in a low-income family, a 5% increase from the 39% living in low-income families in 2007 (Jiang, Ekono, & Skinner, 2015). The shifting demographics of American students underscores the need for teacher preparation programs that equip educators with skills and strategies drawn from socio-cultural learning theory that enable educators to more inclusively reach students with varied and different cultural, ethnic, religious, and socio-economic backgrounds (Brown-Jeffey & Cooper, 2011). CRP promotes instructional strategies that are more likely to encourage inclusive and non-judgmental teaching practices, thereby enabling teachers to reach more students in a diverse classroom (Bennet, 2001; Villegas & Lucas, 2002).

Advocates of culturally relevant and culturally congruent instruction note that more inclusive teaching practices promote increased student engagement, increased student achievement, and decreased classroom infractions (e.g., Boykin & Noguera, 2011; Finkelstein et al., 2013). Boykin and

Noguera (2011) point out that focusing on student engagement may be more important for increasing academic achievement among diverse students than focusing on content or time on task. Looking across multiple studies, they found that low-achieving students get more instructional time, but less engagement time as compared to their higher achieving peers. The impact and influence of the classroom teacher in a culturally responsive classroom cannot be understated. The effectiveness of the classroom teacher is the single most important factor of student academic achievement (U.S. Department of Education, 2011), and this impact may be felt the most in culturally diverse classes (Boykins & Noguera, 2011). The teacher-student relationship quality (TSRQ) may be one of the most important factors in closing the achievement gap, and TSRQ is reported as having the most impact on learning by African-American students as compared to their White peers (Boykin & Noguera, 2011). In CRP, it is up to the teacher to build a positive classroom community, to interject instruction with opportunities for student input, to connect classroom learning with the real world, and to set high expectations for all students, regardless of their race, ethnicity, or socio-economic status (Bennet, 2001; Villegas & Lucas, 2002).

### **Best Practices in K-12 Online Teaching**

Despite having emerged as a viable supplement to face-to-face instruction in K-12 schools, research on the practice of online learning is a somewhat new, yet burgeoning field (Arnesen et al. 2019; Hu et al, 2019). Much of the scholarship pertaining to K-12 online learning is interpretive, and studies in teacher preparation for K-12 online learning lead the field of study (Arnesen et al., 2019). The qualities of effective teaching may be similar across online, blended, and face-to-face contexts, yet as Archambault and Kennedy (2014) point out, “the methods of implementation are different” (p. 227).

Some K-12 online learning researchers have noted that online teaching involves new or additional skills that may not automatically translate from face-to-face teaching (Barbour, 2014; Ferdig, Cavanaugh, DiPietro, Black, & Dawson, 2009). Barbour (2014) grouped the skills of K-12 online teachers into three roles that teachers must adopt: instructional designer, teacher, and course facilitator. Others have warned that the role of the online teacher may not be clearly defined, and may incorporate such roles as mentor, interactor, and telecommunications specialist, moving much beyond the traditional role of teacher (Ferdig et al., 2009). Kennedy and Archambault (2012) synthesized five widely regarded sets of standards for effective online teaching (e.g. SREB, iNacol, Quality Matters) in order to look for patterns of recommended skills and dispositions

of online teachers. Based on their examination, Archambault and Kennedy (2014) identified the following themes for successful online instruction: expertise in online pedagogy, instructional design, assessment of student learning, professionalism and ethics, and technical expertise.

DiPietro et al. (2008) identified 37 best practices of online teachers, grouped into eight categories: general characteristics, classroom management strategies, pedagogical strategies; assessment, pedagogical strategies; engaging students with content, pedagogical strategies; making course meaningful for students, pedagogical strategies; providing support, pedagogical strategies; communication and community, and technology. Ferdig et al. (2009) synthesized 13 documents that presented standards of quality for K-12 online teachers in order to identify best practices in K-12 online education for teacher education programs. They identified the practices which aligned more closely to non-teacher roles (like instructional designer and administrator), and then grouped the best practices for online teachers into one chart of 33 standards, divided into 6 categories: personal, communication, programmatic, pedagogy, classroom management, and course management. Borup, Graham, and Drysdale (2014) identified a new construct—*teacher engagement*—as a model for describing the practices of successful K-12 online teachers, identifying 6 elements of teacher engagement among effective K-12 online instructors: designing and organizing, facilitating discourse, instructing, nurturing, motivating, and monitoring. While we can begin to see trends across what constitutes best practices for online instruction, the existing research does not yet indicate which instructional strategies and supports work best for which students in varying contexts (Huerta et al., 2015).

### **A New Direction in K-12 Online Learning Research**

Taken together, there is some overlap between best practices in CRP and best practices in online teaching. At the same time, research into how CRP occurs in the K-12 online platform is still scant. From *Digital Promise* to the *National Educational Technology Plan*, there is clearly an expectation that online learning can deliver equitable and accessible courses to students regardless of their circumstances. Given the assumption that online learning can contribute to the narrowing of the opportunity gap and can provide engaging courses and curriculum for all students, it is imperative that more research investigating effective online teaching ensue.

In this study, the researcher sought to discover the ways in which culturally responsive teaching happens online, focusing on one state level program that offered teacher-facilitated cohort-based online courses to high school students in every school district within a racially and economically diverse state. The focus for this study was guided by the following

question: *How does culturally responsive online pedagogy happen in several teacher-facilitated, fully online courses?* Descriptive in nature, this research study investigated the practices of four selected culturally responsive online teachers.

## METHODS

### Design

The focus of this interpretive investigation was to discover how culturally responsive teaching happens online. The researcher interviewed four full-time online secondary teachers about their culturally responsive teaching practices and observed their recently archived courses. Teacher interviews, teacher-written narratives, and observation field notes were analyzed in order to explore how culturally responsive teaching happens online. Through employing the methods of grounded theory research, the author generated and analyzed data in order to understand the practices of these culturally responsive online teachers. Whereas this study is descriptive in nature and its results will be limited to describing the beliefs and practices of the participants involved, the emerging theory of culturally responsive online pedagogy may have potential utility for future research into K-12 online teaching and learning.

### Study Site

The pseudonym State Virtual School is used here to identify the study site. State Virtual School (SVS) is an online secondary program supported by the state department of education in a Southeastern state in the United States serving students in middle school through 12th grade. Students in every school district in the state may take courses at SVS. There are other K-12 online providers in the state, but many of them offer courses that are self-paced, meaning that students can work at their own pace with supervision from someone at their local school. Other providers in the state offer course content only, leaving the teaching to local district teachers who are often embedded in physical computer labs or distance learning classrooms. SVS offers fully online teacher-facilitated instruction. During this study, SVS faculty was comprised of over 70 highly qualified teachers, all licensed within the state.

SVS was intentionally selected for this study because the teacher-facilitated model aligned more closely to some of the best practices that emerge from the literature related to culturally responsive pedagogy. SVS students

work together in cohorts, or classes, rather than as solitary individual learners. Creating a sense of community undergirds the best practices in CRP, and a cohort model provides an opportunity for community-development online (Mazur & Courchaine, 2010). Notions of equity and access are embedded within the very mission of SVS, and the program is an option for all public school students in the state.

## Participants

This study employed purposeful sampling methods in an attempt to identify culturally responsive online teacher participants. First, State Virtual School administrators were given the Observation Protocol for culturally responsive pedagogy (Appendix A) and were asked to nominate teachers whom they believed to be culturally responsive educators. The administrators identified 33 full-time instructors. Next, a survey soliciting participation was sent to all 33 teachers asking them to self-identify as culturally responsive educators. In order to ensure that teacher participants had adequate technology training to effectively teach online, and in order to confirm that the delivery platform (synchronous and asynchronous online instruction within an LMS) was not an obstruction to pedagogical decision-making, participation was limited to teachers who had completed at least two full years of work with SVS. Six teachers responded to the survey self-identifying as culturally responsive educators. One teacher did not meet the requirement for having completed at least two full years of online teaching, and one teacher dropped out of the study. Four teachers who were identified by SVS administrators, and who also self-identified as culturally responsive teachers, participated in this study. A pseudonym was assigned to each teacher participant to be used in the discussion of findings (Table 1).

**Table 1**  
Overview of Participants

Participant Name	Discipline	Course Observed	Years of experience online	Total years of experience teaching
Emma	English	AP English Literature	9	17
George	Social Studies	AP Human Geography	11	17
Phoebe	Social Studies	AP Psychology	11	14
Sam	Math	AP Statistics	7	14

Note: AP designates an Advanced Placement course.

## Strategy

The strategy employed for data generation and analysis was grounded theory. Grounded theory begins with inductively generated data, and through constant comparative methods for data analysis results in a local theory that is “grounded” in the data generated and analyzed (Charmaz, 2014). Grounded theory uses rigorous methods of data generation and analysis to explore theory-building, rather than testing theories which have already been established (Charmaz, 2014). The methods of grounded theory were appropriate for this study because there is still very little exploration of culturally responsive online teaching practices. As Cavanaugh et al. (2009) have indicated, studies in emerging fields tend to be descriptive in nature.

### *Data generation*

In order to triangulate findings from multiple sources, this investigation generated multiple data types. Data were generated through teacher narrative submissions, through observations of archived courses, and through two-semi-structured interviews with teacher participants. To generate the teacher narratives, the participants responded to the following prompts: *To what degree is creating a culturally responsive class environment important to you, and why? How do you facilitate cultural responsiveness online?*

The participants’ recently archived courses from the previous academic year were then observed over a period of 6 months. This data included all course content, news item posts, and discussion board conversations. Class observations were focused on communication between the teacher and students that were observable in the discussion board area, teacher posts in the news item area, and a review of the instructional activities in the content areas of each course. The author used the observation protocol (Appendix A) to ensure that course observations were similar and consistent.

Two open-ended interviews were conducted over the course of the study, one in August at the beginning of data generation and one in December or January after course observations. The interviews lasted from between 30 minutes to almost one hour in length. Participants were asked to describe the teaching strategies that they use to facilitate culturally responsive online instruction, informed by questions prompted from an interview guide. Each interview was transcribed, and summaries were sent to participants. Member checking was achieved informally during the interviews by asking questions to verify understanding, as well as more formally after the interview by providing participants with a written summary of the interview, and requesting that they check and correct, as necessary, the accuracy of the summary’s content.

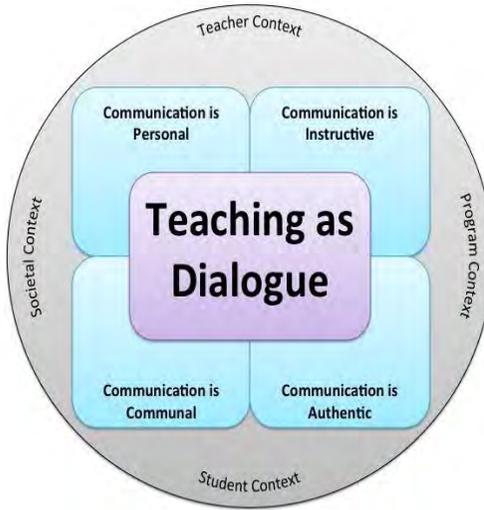
### *Data analysis*

Data were analyzed using the constant-comparison method of grounded theory research (Corbin & Strauss, 2008). Data analysis occurred both during and after data generation, as is often the case in grounded theory research (Charmaz, 2014). Data were stored, categorized, and accessed using the Dedoose (2016), a software platform for qualitative data analysis, to facilitate the coding process. Teacher narratives, interview transcripts, and field notes from course observations were also stored in and analyzed using Dedoose. The researcher employed a reflexive journal, and then Dedoose, to author and store memos related to data analysis.

The first step in data analysis was initial coding. Coding was open-ended, comparative, and provisional based on the researcher's interpretation of the data (Charmaz, 2014). Four a priori codes drawn from Gay's (2000) four domains of culturally responsive pedagogy were initially selected: caring, communication, curriculum, and instruction. During axial coding, code frequency charts were generated in order to determine which codes and categories seemed to appear more frequently in the data. Consulting code frequency charts helped to make decisions about which categories were larger categories and which were sub-categories. For example, at the beginning of axial coding the author was able to determine that "communication with students" was the most frequently occurring code with 270 instances, and that "dialogue" was the 16th most frequently occurring code with 83 instances. These codes were then merged into one category. Through grouping and comparing codes and categories, an initial conception of culturally responsive online pedagogy developed. The data were revisited a final time for selective coding based on the four main emergent categories. The Table of Emerging Findings, Categories, and Indicators was generated (see Appendix B) listing each of the domains of culturally responsive online pedagogy (CROP) with their associated categories and examples of indicators that were found in the data to represent each category.

## **FINDINGS**

Overwhelmingly, the teachers in this study described their teaching praxis in terms of constant dialogue with their students. They described online teaching as a form of communication, with that communication happening in four modes: personal, communal, instructive, and authentic. Although structural and contextual elements were not a focus of this investigation, all four teachers indicated that contextual elements such as the structure of their program impacted their ability to exhibit culturally responsive online pedagogy. The emergent findings of this investigation are depicted in Figure 1.



**Figure 1.** Emerging model of culturally responsive online pedagogy (CROP).

In this conceptual model, teaching as dialogue is represented as the center or core category, with the four subcategories or modes of communication that the teachers described. These modes of communication, however, are likely impacted by context, including the teacher's context, the student's context, the program's contexts, and societal contexts.

The teachers shared similar contexts: they were all experienced classroom teachers, they all resided in rural areas of an economically and racially diverse state, their students tended to be academically motivated, and the program they work for is free and open to all students in the state. Teachers described how they are flexible in their instruction in order to meet the needs of students from varying contexts. Each teacher also expressed feeling a sense of care for their students, and each teacher identified that they value cultural diversity and that they attempt to be culturally responsive in their teaching. These teachers were skillful in their ability to communicate in multiple and concurrent modalities. They provided dual feedback on student assignments, both to individuals and to the whole class, working simultaneously to both individualize instruction for their students, and to provide a sense of community and shared experience for their class. These teachers moved adeptly between different modes of communication, communicating with students personally, communicating with their online classes communally, accommodating students through adaptive instructive communication, and engaging students in authentic and relevant learning experiences. Each of these four modes of communication will be described below.

### **Communication is Personal**

The teachers in this study engaged in frequent individual dialogue with their students through email and instant messages, phone conversations, and through individualized feedback on student assignments. They strove to get to know their students and worked toward cultivating strong teacher-student relationships. George, Emma, Phoebe, and Sam all offered that individualized communication with students was not only the core of their responsibilities as an online teacher, but also one of the benefits of online learning. George made this telling comparison about the nature of online teaching: “When I taught in a face-to-face classroom, I taught five classes of 20 or six classes of 20 kids, and now I have one hundred classes of 1.” All four teachers stated that communication with students constituted the largest percentage of their time in a day. They also stated that it is up to the teacher to initiate and facilitate communication with students.

All four teachers deployed student surveys at the start of their courses in order to get to know their students, and all four teachers conducted welcome calls to students and their families. At least three of the teachers in this study kept notes on what they learned about students’ individual interests and backgrounds so that they could refer back to this information in feedback and in conversations with students. They relied on the personal connections they made with their students to keep their students motivated throughout the course. They often monitored, checked-in, and dialogued with students individually. All four teachers suggested that the primary way they engaged in dialogue with their students was by giving feedback on student assignments. Emma made this point clear when she said, “I view feedback as dialogue.” The teachers in this study believed that they get to know their students and responded to their students according to their needs and interests.

Learning about students’ lives is at the core of culturally responsive teaching (Gay, 2000; Ladson-Billings, 1994). When online teachers actively engage in frequent and continuous conversations with their students, they are able to forge the same sort of teacher-student relationship they might cultivate in their face-to-face courses. This finding aligns with Velasquez, Graham, and West’s (2013) research about how caring happens in one online high school. The teachers in their study also engaged in continuous dialogue with their students to in order to facilitate caring. Similarly, in their study of the best practices of online teachers, DiPietro et al. (2008) found that teachers “engage students in conversations about content and non-content related topics to form a relationship with each student” (p. 22). As stated previously, the teacher-student relationship quality (TSRQ) may be the most important factor in closing gaps in achievement (Boykins & Noguera, 2011). Thus, this domain of CROP, personal communication, suggests that online teachers get to know their students individually, and maintain caring relationships with them throughout the course.

### **Communication is Communal**

The teachers in this study utilized whole class communication in order to facilitate community in their online classes. Each teacher expressed that creating a sense of class community was important to their praxis. Yet, they also suggested that communities did not emerge organically in their online courses. Rather, it took the intentional facilitation of the teacher to cultivate that community. Still, the efforts were worth it. According to Emma, it is important to help students “feel like they’re part of a class and that we’re working together with a goal in mind rather than just 150 of us who might appear in a class list working separately.”

Through frequent news item posts, academic and non-academic conversations on discussion boards, group emails, and live supplemental synchronous sessions, these teachers worked to create inclusive and communal environments in their online classes. They provided both individual and whole-class feedback on group assignments in order to create for students the semblance of a virtual classroom, one in which the students were aware of one another and of how they were working together as a class toward common learning goals. They helped students with similar interests make connections with one another so that there were opportunities for social connectedness, for those students who were interested in connecting with their online classmates. All of the teachers in this study reported that they believed that they were able to cultivate a sense of online community in their classes.

In addition to responding to and understanding people in their context, Gay (2000) identifies facilitating a positive class environment as another way that culturally responsive instructors express caring in their classrooms. A caring and inclusive class community is an indicator of a culturally responsive classroom (Gay, 2000; Ladson-Billing, 1994). The ability to develop and facilitate online learning communities has been identified as a best practice of online teachers (DiPietro et al., 2008; Palloff & Pratt, 2007). Learning in online communities has often been deemed one of the affordances of online education (Anderson & Dron, 2011; Ferdig & Kennedy, 2014; Palloff & Pratt, 2007). Several studies have reported that students who perceive community or a sense of social presence in their online courses also report higher levels of satisfaction and learning (e.g., Dikkers, Whiteside & Lewis, 2013; Picciano, 2002; Richardson & Swan, 2003; Rovai, 2002b; Sadera, Robertson, Song, Midon, 2009). Online communities do not develop organically. Rather, it is the deliberate facilitation of class discussion and interactions by the teacher that contributes to the development of an inclusive learning community (Farmer, 2009; Mazur & Courchaine, 2010; Picciano, 2002). The SVS teachers in this investigation were deliberate in the ways in which they communicated to the whole class.

Their goal was to create a welcoming and positive class environment in which all students felt a sense of belonging. Thus, this domain of CROP, communal communication, suggests that online teachers engage in frequent and encouraging whole class communication in order to cultivate welcoming and inclusive online learning communities.

### **Communication is Instructive**

The teachers in this study described various ways that they communicate instructively in their online teaching praxis. Each of the teachers in this study mentioned working on course content as part of their regular instructional day. They discussed creating a variety of learning activities in order to appeal to varying student learning preferences. Teachers communicated instructively by revising their online course content and instructional activities based on collective student progress in their course, by creating customized remediation and extension assignments to meet the needs of specific students, and by providing supplemental synchronous sessions for either one-on-one tutoring, whole class direct instruction, or both. Sam, for example, has created approximately 3,000 instructional videos for his students. Not all of these videos can be reused because they are specific to particular students or to particular problems on homework assignments. George reported that a well-designed course is never completed; it is always a work in progress. He suggested that his course in particular, AP Human Geography, must be updated constantly to reflect changing demographics. George cited the unrest in Syria and the changing U.S. Census data as examples. These teachers did not perceive the modification of content or curriculum as separate from their daily teaching duties, but rather as an integral aspect of their instruction.

Above all, the teachers described the way in which they operate in the instructive domain as *flexible*. Every teacher stressed that they must be flexible in their instruction in order to better meet their students' needs. Emma reported that SVS teachers often adjusted their goals for the day in order to be more flexible and responsive: "In a face-to-face school you live and die by a schedule of bells... Whereas in an online environment, you...have to surrender yourself to the flexibility." Flexibility included adjusting pace or due dates in the course for one or more students, redesigning course content and reconfiguring instructional activities, or a combination of making adaptations and adjustments. Flexibility has been identified as one of the affordances of online learning (Berge & Clark, 2005; Picciano & Seaman, 2010; Robyler, 2006). DiPietro et al. (2008) found that effective online teachers were flexible with their time and were flexible in adapting pedagogical strategies in order to meet the needs of different learners. Similarly, Borup et al. (2014) found that engaged online teachers were in a constant state of

curriculum revision in their courses. Each of the SVS teachers in this study described course and content development as a part of their instructional day, often in response to student performance in the course.

Gay (2000) described the methods by which teachers connect or bridge their students' home experiences to the new knowledge-building that takes place in school within the instruction domain. Offering a variety of learning activities and drawing from multiple instructional strategies are inherent in both Gay's (2000, 2013) and Ladson-Billings's (1994, 2014) models for culturally responsive instruction. The teachers in this study reported that they varied learning activities, and that they included different instructional approaches in their teaching. However, they did not report that they altered instructional approaches or activities to meet the specific cultural needs of a student. In this way, Gay's (2000) instruction domain and the instructive communication domain identified in this investigation differ. Embedded in both is the teacher's ability to be responsive and flexible with their instruction. However, the teachers in this investigation did not equate flexibility and adaptive instruction with culture.

### **Communication is Authentic**

The teachers in this study felt that their communication with students was authentic. The 2011 *National Standards for Quality Online Courses* (iNACOL, 2011) recommended that quality online courses include "authentic learning experiences" which "engage students in active learning" (p. 10). In the context of this investigation, data related to authentic learning experiences or authentic ways of communicating emerged as one of the four major ways in which teachers communicate in their praxis. They expressed authentic communication through providing real-world learning activities, through including relevant examples as well as opportunities for choice in their content and instruction, and through perceiving that online instruction is a legitimate and effective platform. While cultural language variation was not noted in this study, preferences for informal versus formal language were. The teachers in this study varied in their acceptance of informal language use in their classes.

Gay (2000, 2013) suggested that culturally responsive teachers implement instructional strategies that draw from students' own culture and experiences. Implementing activities that engage students in storytelling, autobiographies, and popular culture are examples of strategies that can draw upon students' cultures and backgrounds (Clark, 2002; Leonard & Hill, 2007; Moll et al., 1992). The instructional activities observed in this study were quite varied. Students had opportunities to work individually or collaboratively, to tell stories, and to make and share observations from their own locations and contexts. Emma, George, Phoebe, and Sam all believed

that making online instruction relevant to their students was an integral part of their praxis. However, making adjustments or modifications based on teacher understanding of student culture or background was not observed. Teachers did, though, provide opportunities for student choice and multiple ways to engage with course material. Teachers included activities and assessments that were based on real-world data, current events, and on their students' local contexts. Indicators of CRP include instructional activities that are relevant to students' lives (Darling-Hammond et al., 1995; Gay, 2000; Ladson-Billings, 1994). Engaging students in authentic learning experience did emerge as a part of these teachers' praxis; however, the ways in which instructional activities were relevant to student culture did not surface.

Gay (2000) suggested that culturally responsive teachers regularly supplement existing Eurocentric curricular materials with teacher-selected materials that are multiethnic; for example, selecting materials that are representative of African American, Asian American, Latinx, and Native American perspectives and voices. The teachers in this study regularly supplemented the existing course content with material that they deemed as relevant to their students. The supplemental materials they provided were sometimes multiethnic, but certainly not overwhelmingly so. Rather, the supplemental materials they provided were more often related to current events and popular culture. Sam, for example, pulled from live sports data to inform his investigative task assignments. George pulled from current world events to supplement his content in Human Geography. Only Phoebe explicitly spoke about including multiethnic images in her courses. She described, for example, that she was aware of the need to post images that represent diverse groups of people. A review of Phoebe's news items indicated that the humans depicted in her posted cartoons and images were indeed a diverse representation of race and gender. Emma's course, the AP English Literature course, provided perhaps the most explicit of multiethnic materials in the texts listed for students to read or to choose from. In addition to the traditional Western canon, texts from African-Americans, Hispanic Americans, and Asian and Middle Eastern authors were included as texts that students may select.

The teachers in this study believed that better learning occurred when the content and activities were personally relevant to students. They supplemented their courses with materials that they believed to be relevant to teenagers, although supplemental materials were not necessarily representative of diverse cultures. Supplementary materials sometimes included assignments and assessments that allowed students to engage in real-world learning. Teachers used communication and student feedback to understand what assignments and materials worked for students, and which did not. Two of

the teachers allowed students to engage in informal social interactions within the course discussion boards and chat areas. Even though Phoebe did not prefer that her students use references to social media in their course discussion, students posted memes, hashtags, and emojis in the discussion board area of her course. Only Sam prevented students from engaging in non-academic discussions in his course, yet he himself posted non-academic news items every Friday in order to convey a sense of humanness to his students. Finally, the teachers in this study used the same language they use to describe face-to-face teaching when they describe online teaching. They felt that “online teaching is teaching.” There was an authenticity in their ways of communicating in and about their instruction.

## DISCUSSION

The primary finding of this investigation is that the praxis of four selected culturally responsive online teachers is rooted in dialogue and communication that occurs for multiple purposes in multiple ways. Both Gay (2000) and Ladson-Billings (1994) identified dialogue between students and teachers as well as between students and students as one characteristic of a culturally responsive classroom. The act of teaching as dialogue presumes that teachers listen and respond to their students’ perspectives as a part of the learning process. Rather than talking *at* students, this dialogic pedagogical approach implies that teachers talk with their students. Teaching as dialogue, then, may lessen the transactional distance between the teacher and the student, thereby inviting students to engage more actively in the instructional process. Some refer to this type of co-construction of knowledge as cogenerative dialogue. Engaging students in cogenerative dialogue can generate more equitable learning experiences for traditionally marginalized students, because teachers learn about their students’ learning needs as well as their social needs and can adapt instruction to meet those needs (Beltramo, 2017). Thus, care, listening, and reciprocity are implicit in cogenerative dialogue.

The idea that dialogue is an important aspect of quality online teaching is supported by other studies of online teaching. DiPietro et al. (2008) identified the act of engaging students in conversations about content and non-content topics as one of the practices of effective online teachers. DiPietro et al. (2008) found that through engaging students in conversations, effective online teachers were able to find ways to make their course personally meaningful to students. In another investigation into how caring occurs in an online high school, Valasquez, Graham, and West (2013) found that online teachers created a caring environment for students by initiating and engaging in constant dialogue with their students. Valasquez et al. (2013)

indicated that caring online teachers who prompted ongoing dialogue with their students were able to have shared perspectives with their students, were able to provide prompt feedback and instruction, and became attentive observers of their students' discussion posts and grades. In an investigation of the ways in which K-12 online teachers are engaged in their teaching, Borup et al. (2014) found that facilitating discourse with and among students, providing a nurturing online environment, and designing and modifying instruction were some of the ways teachers engage in K-12 online teaching. In a review of the literature on how instructors demonstrate caring behaviors in online nursing courses, Plante and Asselin (2014) found that engaging in open communication and dialogue about learning experiences promoted both social presence and a sense of caring in the online classroom. Some of the best practices they recommended for engaging in caring dialogue with students included using caring language in all communicative exchanges, using an appreciative tone throughout the course, encouraging students to express their perspectives, and providing prompt feedback. Thus, in teacher-facilitated online learning, engaging students in dialogue is connected to providing a caring classroom and an effective learning experience.

The four teachers in this study responded to their students' needs by providing personal feedback, by facilitating a virtual community, by providing varied learning activities, and by updating their courses to keep content relevant to their students. These teachers learned about their students' cultural backgrounds by initiating dialogue on the phone and by working to draw out their stories. However, there was no evidence of adapting instruction to be more culturally congruent with their students. Rather, they provided varied activities and opportunities for student choice.

The four teachers exemplified some of the characteristics of Gay's (2000) domains of culturally responsive teaching (caring, communication, curriculum, and instruction), yet communication and caring were observed most frequently. While the teachers adapted curriculum and instruction to meet students' individual needs and contexts, they did not seem to do so in ways that were intentionally more culturally congruent, nor in ways that challenged power, privilege, racism, or hegemony. Both Gay (2000) and Ladson-Billings (1995a, 2014) discussed the importance of critical consciousness-raising and the potential transformative nature of culturally responsive teaching. However, explicit efforts of teachers to help raise students' abilities to question power and hegemony were not found in the results of this study. George's course, AP Human Geography, contained the most opportunities for students to share and reflect on their cultural experiences. Comparing cultures and understanding cultural diffusion and cultural differences were embedded into the learning goals of the AP Human Geography course. While the content in AP English Literature, AP Psychology,

and AP Statistics at times pertained to culture, the learning goals in these three courses were not as explicitly related to understanding culture and cultural trends. Thus, it may be that the discipline or content area of their courses impacted the extent to which these teachers expressed explicit cultural competence and responsiveness.

While all four teachers self-identified as culturally responsive teachers, they also all attributed the structure and organization of SVS for making cultural responsiveness possible in their online classrooms. The program allowed all students across the state to enroll in supplemental high school courses, thereby drawing from student populations from diverse districts. Thus, the teachers in this study believed that students in their courses represented multiple ethnicities, and often referred to their diversity in terms of socio-economic and geographic differences.

### LIMITATIONS AND RECOMMENDATIONS

The nature of this study was descriptive, which is an appropriate method of inquiry when very little is known about a subject. However, there are clear limitations to this investigation. First, the results of this study are not generalizable to larger populations. While these findings provide insight into strategies employed by specific teachers who have been identified and who self-identify as culturally responsive, their online teaching strategies should be tested across multiple populations and contexts. Second, while the teachers in this study believe that the students they serve are diverse, it was impossible to identify student race and ethnicity in this research. Furthermore, all four participants of this study were white. Notably, there does not yet appear to be any major reporting on the demographics of online teachers in the research literature. Each teacher in this study suspected that their students were racially, ethnically, and economically diverse, but they had different strategies for making these assumptions. Sam used the results on the student survey to infer socioeconomic status (e.g., some students could not get access to graphing calculators). Phoebe assumed that because her students were geographically diverse, from multiple school districts across a diverse state, that they must also be diverse in race and socioeconomic status. Only George had any real evidence of student diversity since in his class, AP Human Geography, he asks students to investigate their own culture. George was able to report that his classes included Asian, African, European, Hispanic, and Middle Eastern American students, as well as multiracial students. Still, without available demographic data, we cannot make assumptions about the characteristics or demographics of the students who are served by the program. Third, some elements of culturally responsive pedagogy were not observed

in this study. There was no evidence that teachers were adjusting instruction based on their students' cultures, nor was there ample evidence, perhaps with George's AP Human Geography course as the exception, that teachers sought to expand the sociopolitical consciousness of their students or to disrupt hegemony. Thus, it may more appropriately be noted that these teachers are moving their praxis *toward* a more culturally responsive one rather than that they fully exemplify culturally responsive pedagogy.

With these limitations in mind, there are two recommendations for future research. First, this initial exploration was designed using an interpretive and descriptive paradigm. When the teachers in this study spoke about culture, they rarely spoke about race. Ladson-Billings (2004) warned that "attempts to be all things to all people seem to minimize the effective impact of multicultural education as a vehicle for school and social change" (p. 57). Thus, future research on the intersection of culture and online learning would benefit from studies that use a critical paradigm. Second, a lack of available student enrollment and demographic data is common among statewide virtual programs (Molnar et al., 2017). K-12 online learning is often portrayed as a platform for creating equity in American schools by creating educational opportunities where they may not otherwise exist (e.g., Cullata, 2015; Picciano & Seaman, 2010; Rose & Blomeyer, 2007; Watson & Gemin, 2008). The SVS model is just one of many models of online and blended learning available to students. The credit-recovery model, or online learning targeted *toward* helping students achieve credits for courses they have previously failed, has gained traction in recent years for meeting the needs of populations who may be considered "at-risk" (Repetto & Spitler, 2014). Future research exploring the enrollments and demographics of students in supplemental virtual programs, full-time virtual programs, and in online credit recovery programs would provide important information for better understanding equity in student access and enrollment at the state level.

## CONCLUSION

The results of this investigation may indicate that it is not necessarily the technology that makes online learning culturally responsive, but rather the humanness that is possible within this platform. The teachers in this study spoke more about their communication and relationship building skills than about their technical or design skills. For these teachers, it is not the platform of online that makes their teaching worthwhile, but rather the experience of connecting with students, of creating caring learning communities, and of creating instruction that is relevant to their students. These teachers care for their online students, and they feel that their instruction provides their students with new skills and opportunities.

An emerging model for a more responsive online pedagogy may provide guidance for online teachers on the ways in which they may facilitate more culturally responsive online learning experiences for their students. While more research exploring what constitutes effective K-12 online teaching is recommended (e.g., Molnar et al., 2017), this and other studies indicate that the heart of online teaching resides within communication between the teacher and the student. As educational leaders consider the ways in which online courses may provide equitable learning opportunities for the students, they should not underestimate the role of the online teacher in creating that experience. By sharing strategies for facilitating culturally responsive online instruction, teacher educators and program administrators can provide new online teachers with a variety of methods for communicating so that they can facilitate relevant and responsive learning experiences for their students.

## References

- Anderson, T., & Dron, J. (2011). Three generations of distance education pedagogy. *The International Review of Research in Open and Distance Learning*, 12(3), 80-97. Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/890/1663>
- Archambault, L. & Kennedy, K. (2014). Teacher preparation for K-12 online and blended learning In R.E. Ferdig & K. Kennedy (Eds.), *Handbook of research in K-12 online and blended learning* (pp. 225-244). Pittsburgh, PA: ETC Press.
- Arnesen, K. T., Hveem, J., Short, C. R., West, R. E., & Barbour, M. K. (2019). K-12 online learning journal articles: Trends from two decades of scholarship. *Distance Education*, 40(1), 32-53. doi:10.1080/01587919.2018.1553566
- Banks, J. A. (2016). Multicultural education: Characteristics and goals. In J. A. Banks & C. A. M. Banks (Eds.), *Multicultural education: Issues and perspectives* (pp. 2-23). Hoboken, NJ: John Wiley & Sons.
- Barbour, M. K. (2014). Multiple roles of the teacher in the K-12 online learning environment: Cautions for teacher education. In M. Seanson & M. Ochoa (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2014* (pp. 1521-1526). Chesapeake, VA: Association for the Advancement of Computing in Education (AACE).
- Beltramo, J. L. (2017). Developing adaptive teaching practices through participation in cogenerative dialogues. *Teaching and Teacher Education*, 63, 326-337 doi:10.1016/j.tate.2017.01.007
- Bennett, C. (2001). Genres of research in multicultural education. *Review of Educational Research*, 71(2), 171-217. doi:10.3102/00346543071002171
- Berge, Z. L., & Clark, T. (Eds.). (2005). *Virtual schools: Planning for success*. New York, NY: Teacher's College Press.
- Borup, J., Graham, C. R., & Drysdale, J. (2014). The nature of teacher engagement at an online high school. *British Journal of Educational Technology*, 45(5), 793-806. doi:10.1111/bjjet.12089
- Boykin, A. W., & Noguera, P. (2011). *Creating the opportunity to learn: Moving from research to practice to close the achievement gap*. Alexandria, VA: ASCD.

- Brown, W. J. (2009). *Multicultural curriculum development in online courses: Practices from Washington State community colleges* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database. (UMI No. 3370465)
- Brown-Jeffy, B. S., & Cooper, J. E. (2011). Toward a conceptual framework of culturally relevant pedagogy: An overview of the conceptual and theoretical literature. *Teacher Education Quarterly*, 38(1), 65-85. Retrieved from <http://files.eric.ed.gov/fulltext/EJ914924.pdf>
- Camardese, B., & Peled, Y. (2014). Using technology to bridge cultural differences. *Delta Kappa Gamma Bulletin*, 80(2), 21-34. Retrieved from <http://www.readperiodicals.com/201401/3187688671.html>
- Carter, L. O. (2000). *Integrating multicultural education and computer-mediated communication: Opportunities and challenges* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database. (UMI No. 9977314)
- Cavanaugh, C. S., Barbour, M. K., & Clark, T. (2009). Research and practice in K-12 online learning: A review of open access literature. *International Review of Research in Open and Distance Learning*, 10(1), 1-22. Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/607/1182>
- Charmaz, K. (2014). *Constructing grounded theory* (2nd ed.). Los Angeles, CA: Sage Publications.
- Clark, C. (2002). Effective multicultural curriculum transformation across disciplines. *Multicultural Perspectives*, 4(3), 37-46. doi:10.1207/S15327892MCP0403\_7
- Corbin, J., & Strauss, A. (2008). *Basics of qualitative research*. (3rd ed.). Los Angeles, CA: Sage Publications.
- Cullata, R. (2015, March 3). *Technology as a tool for equity* [Video file]. Available from <https://www.youtube.com/watch?v=6m-eMFz0iZI>
- Darling-Hammond, L., Ancess, J., & Falk, B. (1995). *Authentic assessment in action: Studies of schools and students at work*. New York, NY: Teachers College Press.
- Dedoose (Version 6.1.18) [Web-based software]. Los Angeles, CA: SocioCultural Research Consultants, LLC.
- Dewey, J. (1938). Experience and education. In R. F. Reed & T. W. Johnson (Eds). *Philosophical documents in education* (pp. 134-144). White Plain, NY: Longman Publishers.
- Dikkers, A. G., Whiteside, A. L., & Lewis, S. (2013). Virtual high school teacher and student reactions to the social presence model. *Journal of Interactive Online Learning*, 12(3), 156-170. Retrieved from <http://www.ncolr.org/jjol/issues/pdf/12.3.4.pdf>
- DiPietro, M., Ferdig, R. E., Black, E. W., & Preston, M. (2008). Best practices in teaching K-12 online: Lessons learned from Michigan Virtual School teachers. *Journal of Interactive Online Learning*, 7(1), 10-35. Retrieved from <http://www.ncolr.org/jjol/issues/pdf/7.1.2.pdf>
- Farmer, L. (2009). Culturally sensitive e-learning practices for career and technical education. In V. Wang (Ed.), *Handbook of research on e-learning applications for career and technical education: Technologies for vocational training* (pp. 144-154). doi:10.4018/978-1-60566-739-3.ch011
- Ferdig, R. E., Cavanaugh, C., DiPietro, M., Black, E. W., & Dawson, K. (2009). Virtual schooling standards and best practices for teacher education. *Journal of Technology and Teacher Education*, 17(4), 479-503. Retrieved from <http://eric.ed.gov/?id=EJ880563>

- Ferdig, R. E., & Kennedy, K. (Eds.). (2014). *Handbook of research on K-12 online and blended learning*. Pittsburgh, PA: ETC Press. Retrieved from <http://press.etc.cmu.edu/content/handbook-research-k-12-online-and-blended-learning-0>
- Finkelstein, S., Yarzebinski, E., Vaughn, C., Ogan, A., & Cassell, J. (2013). The effects of culturally congruent educational technologies on student achievement. In H. C. Lane, K. Yacef, J. Mostow, & P. Pavlik (Eds.), *Artificial intelligence in education*, 7926, 493-502. Berlin: Springer. doi:10.1007/978-3-642-39112-5\_50
- Gay, G. (2000). *Culturally responsive teaching: Theory, research, and practice*. New York, NY: Teachers College Press.
- Gay, G. (2004). Curriculum theory and multicultural education. In J. A. Banks & C. A. M. Banks (Eds.), *Handbook of research on multicultural education* (2nd ed., pp. 30-49). San Francisco, CA: Jossey-Bass.
- Gay, G. (2013). Teaching to and through cultural diversity. *Curriculum Inquiry*, 43(1), 48-70.
- Glick, D. (2011). *The demographics of online teachers and students in the US: 2010-2011*. Maplewood, MN: David B. Glick and Associates, LLC.
- Goodfellow, R., & Lamy, M. (2009). Conclusion: Directions for research in online learning cultures. In R. Goodfellow & M. Lamy (Eds.), *Learning cultures in online education* (pp. 170-183). London, UK: Continuum Books.
- Hu, H., Arnesen, K., Barbour, M.K. & Leary, H. (2019). A newcomer's lens: A look at K-12 online and blended learning in the *Journal of Online Learning*. *Journal of Online Learning*, 5(2), 123-144.
- Huerta, L., Shafer, S. R., Barbour, M. K., Miron, G., & Gulosino, C. (2015). Virtual schools in the U.S. 2015: Politics, performance, policy, and research evidence. Boulder, CO. Retrieved from National Education Policy Center website: <http://nepc.colorado.edu/publication/virtual-schools-annual-2015>
- Hussar, W. J., & Bailey, T. M. (2014). *Projections of education statistics to 2022* (Report No. NCES 2014051). Washington D.C. Retrieved from National Center for Education Statistics website: <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2014051>
- iNacol. (2011). *National standards for quality online courses*. Retrieved from <http://www.inacol.org/wp-content/uploads/2015/02/national-standards-for-quality-online-courses-v2.pdf>
- Jiang, Y., Ekono, M., & Skinner, C. (2015). *Basic facts about low-income children: Children under 18 years, 2013*. New York, NY: Columbia University. Retrieved from National Center for Children in Poverty website: [http://www.nccp.org/publications/pdf/text\\_1100.pdf](http://www.nccp.org/publications/pdf/text_1100.pdf)
- Kennedy, K., & Archambault, L. (2012). Design and development of field experiences in K-12 online learning environments. *Journal of Applied Instructional Design*, 2 (1), 35-49. <http://www.jaidpub.org/wp-content/uploads/2012/08/KennedyArchambault-3.pdf>
- Ladson-Billings, G. (1994). *The dreamkeepers: Successful teachers of African-American children*. San Francisco, CA: Jossey-Bass.
- Ladson-Billings, G. (1995a). But that's just good teaching! The case for culturally relevant pedagogy. *Theory into Practice*, 34(3), 159-165. doi:10.1080/00405849509543675
- Ladson-Billings, G. (1995b). Toward a theory of culturally relevant pedagogy. *American Educational Research Journal*, 32(3), 465-491. doi:10.3102/0002831203200346

- Ladson-Billings, G. (2004). New directions in multicultural education: Complexities, boundaries, and critical race theory. In J. A. Banks & C. A. M. Banks (Eds.), *Handbook of research on multicultural education*, (2nd ed., pp. 50-65). San Francisco, CA: Jossey-Bass.
- Ladson-Billings, G. (2014). Culturally relevant pedagogy 2.0: A.k.a. the remix. *Harvard Educational Review*, 84(1), 74-84.
- Larreamendy-Joerns, J., Leinhardt, G., & Corredor, J. (2005). Six online courses: Examination and review. *The American Statistician*, 59(3), pp. 240-251. doi:10.1198/000313005X54162
- Leonard, J., & Hill, M. L. (2007). Using multimedia to engage African American children in classroom discourse. *Journal of Black Studies*, 39(1), 22-42. doi:10.1177/0021934706292296
- Mazur, A., & Courchaine, T. (2010). Best practices for culturally responsive online instruction. In J. Herrington & C. Montgomerie (Eds.), *Proceedings of EdMedia: World Conference on Educational Media and Technology 2010* (pp. 2049-2084). Waynesville, NC: Association for the Advancement of Computing in Education. Retrieved from <https://www.edutlib.org/p/34921>
- Miron, G., Horvitz, B., Gulosino, C., Huerta, L., Rice, J. K., Shafer, S. R., & Cuban, L. (2013). *Virtual schools in the US 2013: Politics, performance, policy, and research evidence*. Boulder, CO. Retrieved from National Education Policy Center website: <http://nepc.colorado.edu/publication/virtual-schools-annual-2013>
- Moll, L. C., Amanti, C., Neff, D., & Gonzalez, N. (1992). Funds of knowledge for teaching: Using a qualitative approach to connect homes and classrooms. *Theory into Practice*, 31(2), 132-141. doi:10.00405849209543534
- Molnar, A., Miron, G., Gulosino, C., Shank, C., Davidson, C., Barbour, M. K., Huerta, L., Shafter, S. R., Rice, J. K., & Nitkin, D. (2017). *Virtual schools report 2017*. Boulder, CO. Retrieved from National Education Policy Center website: <http://nepc.colorado.edu/publication/virtual-schools-annual-2017>
- Pang, O., & Barba, R. (1995). The power of culture: Building culturally affirming instruction. In C. Grant (Ed.), *Educating for diversity: An anthology of multicultural voices* (pp. 341-358). Boston, MA: Allyn & Bacon.
- Palloff, R. M., & Pratt, K. (2007). *Building online learning communities: Effective strategies for the virtual classroom* (2nd ed.). San Francisco, CA: Jossey-Bass.
- Picciano, A. G. (2002). Beyond student perceptions: Issues of interaction, presence, and performance in an online course. *Online Learning*, 6(1), 21-40. Retrieved from <http://www.anitacrawley.net/Articles/Picciano2002.pdf>
- Picciano, A. G., & Seaman, J. (2010). *Class connections: High school reform and the role of online learning*. Retrieved from Babson Survey Research Group website: <http://www.onlinelearningsurvey.com/reports/class-connections.pdf>
- Plante, K., & Asselin, M. E. (2014). Best practices for creating social presence and caring behavior online. *Nursing Education Perspectives*, 35(4), 219-223. doi:10.5480/13-1094.1
- Repetto, J. B., & Spitzer, C. J. (2014). Research on at-risk learners in K-12 online learning. In R. E. Ferdig & K. Kennedy (Eds.), *Handbook of research on K-12 online and blended learning* (pp. 107-134). Retrieved from <http://press.etc.cmu.edu/content/handbook-research-k-12-online-and-blended-learning-0>
- Rice, J. K. (2015). *Investing in equal opportunity: What would it take to build the balance wheel?* Boulder, CO. Retrieved from National Education Policy Center website: <http://nepc.colorado.edu/publication/balance-wheel>

- Richardson, J. C., & Swan, K. (2003). Examining social presence in online courses in relation to students perceived learning and satisfaction. *Journal of Asynchronous Learning Networks* 7(1), 68-88. Retrieved from <http://hdl.handle.net/2142/18713>
- Rightmyer, E. C., Powell, R., Cantrell, S. C., Powers, S., Carter, Y., Cox, A. & Aiello, R. (2012). *Culturally responsive instruction protocol* [Observation protocol]. Lexington, KY. Retrieved from Collaborative Center for Literacy Development website: <https://sites.google.com/site/culturallyresponsiveliteracy/criop>
- Roblyer, M. D. (2006). Virtually successful: Defeating the dropout problem through online school programs. *Phi Delta Kappan*, 88(1), 31-36 doi:10.1177/003172170608800107
- Rose, R., & Blomeyer, R. (2007). Access and equity in online classes and virtual schools. Retrieved from International Association for K-12 Online Learning website: [http://www.inacol.org/wp-content/uploads/2015/02/iNACOL\\_AccessEquity\\_2007.pdf](http://www.inacol.org/wp-content/uploads/2015/02/iNACOL_AccessEquity_2007.pdf)
- Rovai, A. P. (2002b). Sense of community, perceived cognitive learning, and persistence in asynchronous learning networks. *The Internet and Higher Education*, 5(4), 319-332. doi: 10.1016/S1096-7516(02)00130-6
- Sadera, W. A., Robertson, J., Song, L., & Midon, M. N. (2009). The role of community in online learning success. *Journal of Online Learning and Teaching*, 5(2), 277-284. Retrieved from [http://jolt.merlot.org/vol5no2/sadera\\_0609.pdf](http://jolt.merlot.org/vol5no2/sadera_0609.pdf)
- Selwyn, N. (2011). *Education and technology: Key issues and debates*. London, UK: Continuum Books.
- Siwatu, K. O. (2007). Preservice teachers' culturally responsive teaching self-efficacy and outcome expectancy beliefs. *Teaching and Teacher Education*, 23(7), 1086-1101.
- U.S. Department of Education. (2011). *Our future, our teachers: The Obama administration's plan for teacher education reform and improvement*. Retrieved from <http://www.ed.gov/teaching/our-future-our-teachers>
- U.S. Department of Education, Office of Educational Technology. (2016). *Future ready learning: Reimagining the role of technology in education* (Report No. ED-04-CO-0040/0010). Retrieved from <http://tech.ed.gov/files/2015/12/NETP16.pdf>
- Velasquez, A., Graham, C. R., & West, R. E. (2013). An investigation of practices and tools that enabled technology-mediated caring in an online high school. *The International Review of Research in Open and Distributed Learning*, 14(5), 277-299. Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/1465/271>
- Villegas, A.M., & Lucas, T. (2002). Preparing culturally responsive teachers. *Journal of Teacher Education*, 53(1), 20-32. Retrieved from <https://journals.sagepub.com/toc/jtea/53/1>
- Vygotsky, E. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Watson, J., & Gemin, B. (2008). *Using online learning for at-risk students and credit recovery*. Retrieved from iNacol website: <http://files.eric.ed.gov/fulltext/ED509625.pdf>

## APPENDIX A OBSERVATION PROTOCOL

Observation “look-for’s” based on the *Culturally Responsive Instruction Protocol* (Rightmyer, Powell, Cantrell, Powers, Carter, Cox, & Aiello, 2008); *Culturally Responsive Teaching Self-efficacy* (Siwatu, 2007); and *Culturally Responsive Teaching* (Gay, 2000).

### Caring

- Demonstrates an ethic of care
- Communicates high expectations for all students
- Creates an environment in which students and teachers respect and connect to one another
- Confronts instances of discrimination

### Communication

- Facilitates student interaction and a community of learners
- Posts announcements and updates that reflect a variety of cultures
- Communicates with students and parents about students’ educational progress
- Provides students with varied opportunities for self-expression

### Curriculum

- Assesses student learning using various types of assessments
- [Revises instructional material to include a better representation of cultural groups]
- [Critically examines the curriculum to determine whether it reinforces negative cultural stereotypes]
- Integrates mass media into instructional content

### Instruction

- Uses a variety of teaching methods
- Adapts instruction to meet the needs of students
- Uses students’ prior knowledge, interests, and cultural background to make learning meaningful
- Implements cooperative learning activities for those students who like to work in groups

**APPENDIX B**  
**TABLE OF EMERGING FINDINGS, CATEGORIES, AND INDICATORS**

Emerging Findings	Categories	Indicators
Communication is Personal ("Getting to know your students")	Communicating with individual students	-email -phone -survey
	Dialoguing with students	-continuous conversations -listening to students
	Expressing caring	-providing encouragement -setting goals -taking notes on students
	Cultivating student teacher relationship	-personalized feedback -nonacademic exchanges -building trust -humor -images
	Motivating students	-monitoring progress -personal connection with student
Communication is Communal ("Creating an inclusive learning community")	Communicating with the class	-Live sessions -news items - Class feedback
	Discussion board activities	-student-to-student interaction -creating connections
	Facilitating a culturally aware community	-groups -students sharing experiences
	Promoting an inclusive class environment	-setting norms -virtual class climate -positive environment -modeling acceptance
	Communicating with families and schools	-administrators -counselors -mentors -parents -conversations with other teachers

**APPENDIX B, CONTINUED**

Emerging Findings	Categories	Indicators
Communication is Instructive (multi-modal, adaptive)	Importance of feedback	<ul style="list-style-type: none"> <li>-grading</li> <li>-rubrics</li> <li>-the most important element of instruction</li> <li>-group vs individual feedback</li> <li>-ongoing dialogue</li> <li>-opportunity for revision</li> </ul>
	Importance of flexibility	<ul style="list-style-type: none"> <li>-responding to student needs</li> <li>-differentiation</li> <li>-responsive</li> <li>-pacing plan</li> </ul>
	Instruction is multi-modal	<ul style="list-style-type: none"> <li>-teacher created videos</li> <li>-interactive activities</li> <li>-audio/multimedia/text</li> </ul>
	Varied learning activities	<ul style="list-style-type: none"> <li>-individual</li> <li>-group</li> <li>-tests, quizzes, essays</li> <li>-journals</li> <li>-projects</li> <li>-opportunities for collaboration and group work</li> <li>-peer review</li> </ul>
	Curriculum and content development are a part of instruction	<ul style="list-style-type: none"> <li>-constant revision</li> <li>-responsive to student achievement</li> <li>-responsive to current events</li> <li>-responsive to content areas</li> <li>-teacher connection to course</li> <li>-teacher created resources</li> <li>-teacher curated resources</li> </ul>
	Clear structure and sequence to learning	<ul style="list-style-type: none"> <li>-teaching technology</li> <li>-clear directions</li> <li>-warm language in 1st and 2nd person</li> <li>-tutorials</li> <li>-advanced organizers</li> <li>-multiple points of access</li> <li>-student supports</li> </ul>

**APPENDIX B, CONTINUED**

Emerging Findings	Categories	Indicators
Communication is Authentic	Online teaching is teaching	-teaching is teaching, whether face to face or online -teachers see more similarities than differences between f2f and online -clearing up misconceptions
	Incorporating real world learning	-culminating group projects -service learning -peer review -field experiments
	Making learning relevant	-connect to student experience -current events
	Providing student choice	-agency -opportunities to select text -opportunities to select activity -opportunities to select discussion prompt
	Formality of language	-informal vs formal language in the online classroom -modeling language -asking for input from students -tone
Context Matters	Creating opportunities to learn	-structure of program -mission and vision
	Teaching diverse students	-student demographics -anecdotes of diverse students
	Valuing cultural diversity	-teacher values and beliefs about culture and diversity -positive impact on rural student