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# Toward Culturally Responsive Online Pedagogy: Practices of Selected Secondary Online Teachers

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**TOWARD CULTURALLY RESPONSIVE ONLINE PEDAGOGY:**

**PRACTICES OF SELECTED SECONDARY ONLINE TEACHERS**

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April Dawn Lawrence

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**Abstract**

Proponents of K-12 online learning claim that it can provide more equitable learning opportunities by offering access to courses that might not otherwise be available to students, and by providing personalized learning experiences. Despite the growth of online learning in K-12 public schools, very 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 can occur online. This study focused on the practices of four full-time online high school teachers. Using the methods of grounded theory research, I 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 (e.g., program structure and student enrollment) 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, did not emerge. A discussion of these results includes potential implications for educational leaders at the state, district, and program levels, as well as recommendations for future research on culturally responsive online pedagogy (CROP).

**TOWARD CULTURALLY RESPONSIVE ONLINE PEDAGOGY:**

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**Chapter One: Introduction**

Online learning is now ubiquitous in American K-12 public schools. The most recent data available on K-12 online learning from the National Center for Educational Statistics indicates that 45% of public schools have students enrolled in distance education, with 74% of those districts reporting plans to expand distance learning opportunities and enrollment (Queen & Lewis, 2011). State virtual schools, programs that are created, administered, or funded through legislation or a state education agency, operated in 24 states in the 2014-2015 school year. Virtual programs may offer part-time supplemental courses or fully online programs. Millions of students take supplemental fully online courses during their regular school day in their physical school setting (Watson, Pape, Gemin, & Vashaw, 2015). Thirty states now offer K-12 school options completely online (Watson, Pape, Murin, Gemin, & Vashaw, 2014).

Virtual schools and online learning have also been one of the fastest growing trends in K-12 education in recent years (Rose & Blomeyer, 2007). The number of American students enrolled in online courses grew from 45,000 to well over 1.5 million between 2000 and 2010 (Horn & Staker, 2011; Queen & Lewis, 2011; Watson, Murin, Vashaw, Gemin, & Rapp, 2010). By 2010, students in 48 states plus Washington D.C. had access to some type of online learning in their state (Watson et al., 2010). The 2015 report on *Virtual Schools in the U.S.* by the National Education Policy Center (NEPC) found that full-time virtual schools, schools or programs in which students may complete all of their courses online, are on the rise (Huerta, Shafer, Barbour, Miron, & Gulosino, 2015). Seventy-five percent of American school districts now offer some form of online course options to students (Watson & Murin, 2014). Five states now require high school

students to complete at least one online course in order to graduate from high school.

Online learning can take various forms. Supplemental teacher-led courses were the primary method of online instruction in 2004 (Watson et al., 2014). However, since then, blended learning has become popular. Online and blended learning may be differentiated by using the definitions outlined by The Clayton Christensen Institute for Disruptive Innovation:

> *Online learning*: Teacher-led education that takes place over the Internet, with the teacher and student separated geographically, using an online instructional delivery system. It may be accessed from multiple settings (in school and/or out of school buildings).
>
> *Blended learning*: A formal education program in which a student learns at least in part through online learning, with some element of student control over time, place, path, and/or pace; at least in part in a supervised brick and mortar location away from home. (Watson et al., 2014, p. 177)

The goals of online and blended learning may be somewhat different. Whereas online learning has tended to afford options that would not otherwise be available in students' schools, blended learning seeks "to replace existing classes already offered in the school by improving upon the existing traditional classroom experience" (Watson et al., 2014, p. 4). There is variation between the frequency and types of online and blended instruction available at different grade levels. Teacher-led online learning as defined above most frequently occurs at the high school level (Watson et al., 2014).

**Reasons for Online Options**

K-12 online learning has seen tremendous growth during a time when much of the

discourse in the educational community centers on transforming education.  The

discussion of online learning is often coupled with discussions of school reform (e.g.,

Horn & Staker, 2011; Picciano & Seaman, 2010).  Proponents of online learning note that

online course delivery can provide opportunities where they did not otherwise exist

(Watson & Murin, 2014).  Advocates have noted that online learning can provide access

to advanced placement (AP) and other high-quality courses for students who currently do

not have access to such opportunities (Barbour & Reeves, 2009).

K-12 online learning has even been lauded as a vehicle for student achievement

and accessibility on the national stage.  Advocates of online learning have asserted its

value as a platform that can provide equity and access for students who, due to socio-

economic circumstances, may not have otherwise had equal access to courses.  Online

learning is often cited as a "flexible" course delivery option for students who might

struggle in the more traditional school setting (Watson & Gemin, 2008).  However, a

U.S. Department of Education-sponsored meta-analysis of online learning found that

students enrolled in online learning performed "modestly" better than students enrolled in

traditional face-to-face courses, and that students enrolled in blended courses—courses

with a blend of face-to-face and online instruction—performed even better (Means,

Toyama, Murphy, Bakia, & Jones, 2010).

Picciano and Seaman (2010) interviewed district-level administrators in U.S.

schools and asked for the reasons they offer K-12 online and blended options to students

in their districts.  The most common reason stated was to provide courses when they

might not otherwise be available.  For example, online options may enable students to

study a World Language that is not offered in their own school.  District administrators

identified "meeting the needs of specific students" and "offering Advanced Placement" (Picciano & Seaman, 2010, p. 9) as the second and third most common reasons. The fourth most frequent reason selected by administrators was to allow students to retake a course. In fact, online learning is now widely used as a platform for providing credit recovery, "programs designed to assist students to make up courses that they did not complete or for which they received a failing grade" (Picciano & Seaman, 2010, p. 8), as well as for improving graduation rates (Barbour & Reeves, 2009; Blankenship, 2011; Hernandez, 2005; Picciano & Seaman, 2010; Roblyer, 2006; Watson & Gemin, 2008). The potential for students to individualize their course choices, and the potential for online teachers to provide one-on-one differentiated instruction, are frequently cited as ways to engage students in learning, and to customize education (Enyedy, 2014; Picciano & Seaman, 2010).

Online learning has also been connected with overcoming a lack of resources in rural communities and in underserved schools (Barbour & Reeves, 2009; Picciano & Seaman, 2010; Watson & Murin, 2014). Rural school districts faced with a lack of highly qualified teachers, minimal funding, and low student enrollments have used online learning as an opportunity to create new course opportunities and to increase student access to courses (Barbour & Reeves, 2009). Expanding educational access through providing course options that would not have otherwise existed in rural or underserved communities is probably the most often-cited benefit of online learning (Barbour & Reeves, 2009). However, the 2015 report from the National Education Policy Center expressed concerns over teacher quality for K-12 online learning, asking specifically, "Can sufficient numbers of qualified online teachers be recruited and trained to ensure

the ability of virtual education to offer new opportunities to rural or underserved populations?" (Huerta et al., 2015, p. 20).

**Online Learning as a Leveler**

Concern over high school graduation rates has been at the forefront of educational issues and policy-making over the last several years (e.g., National Governors Association, 2005). A 2006 report prepared for the Bill & Melinda Gates Foundation declared high school incompletion the "silent epidemic" of American schools (Bridgeland, Dilulio, & Morison, 2006, p. 1). The National Center for Education Statistics (NCES) began reporting on dropout rates and high school completion in 1988 (Stark & Noel, 2015). In 2012, 81% of students graduated on time (in 4 years) with a regular diploma (Kena et al., 2014). The NCES reported that high school completion was at an all-time high in 2012 with 91.3% of 18- through 24-year olds receiving either a high school diploma or an alternative credential.

While the high school completion rate has trended upward since 1980, there remain disparities in completion rates by race and ethnicity. During the 2011-2012 academic year, 85% of White students graduated on time with regular diplomas, compared to 68% of Black students (Kena et al., 2014). When alternative credentials are also considered, 94.6% of White students completed high school or an equivalent credential, compared to 90% of Black and 82.8% of Hispanic students (Stark & Noel, 2015). A bill introduced to the U.S. Senate in 2009 illustrates disparity in graduation rates between different groups of students:

> The graduation rates for historically disadvantaged minority groups are far lower than that of their White peers. Little more than half of all African-American and

Hispanic students will finish secondary school on time with a regular secondary school diploma compared to over three-quarters of White students.  (Every Student Counts Act of 2009

Online learning is now widely used to offer credit recovery opportunities for students who are at risk of not graduating on time.  The U.S. Department of Education reports that among the public school districts that offer distance education, 62% offer online credit recovery courses, making credit recovery the most prolific form of K-12 online learning (Queen & Lewis, 2011).  Urban high schools in particular appear to be embracing online credit recovery courses, although not without concern regarding quality of instruction and student dispositions toward online learning (Picciano & Seaman, 2010).  In a 2011 report prepared for the National Center for Education Statistics, Queen and Lewis found that 57% of districts reported that providing opportunities for credit recovery was a very important reason for having distance education courses.  When regions were considered (Northeast, Southeast, Central, and West), 65% of districts in the Southeast rated credit recovery as a very important reason for having distance education courses, as compared to 46% in the Northwest, 59% in the Central region, and 56% in the West.  When community type was considered, 81% of districts in cities rated credit recovery as a very important reason for having distance education courses, as compared to 66% in suburban, 60% in towns, and 49% in rural communities (Queen & Lewis, 2011).  Given the fact that there are large African-American populations in the Southeast region and in many U.S. cities, we might expect an overrepresentation of African-American high school students in online credit recovery courses.  However, there are not yet any demographic data to support this assumption.

**Demographics of Online Learning**

Despite the tremendous growth and national interest in online learning, states are not yet required to report student enrollment in online courses and virtual programs in any systematic way. While some school districts report the population and demographics of students and teachers enrolled in online learning programs, there are no existing national or state-level reporting systems or even criteria for collecting such data (Glick, 2011). Rose and Blomeyer (2007) recommended collecting descriptive data in order to ensure that online learning was serving students equally. Glick Consulting, in cooperation with the International Association of Online Learning (iNacol), collected descriptive survey data from iNacol members on both student and teacher enrollment and participation in online learning for the three consecutive years from 2008-2011(Glick, 2011). The National Education Policy Center explored the demographics of full-time virtual schools in their 2015 report on virtual schools (Huerta et al., 2015). The results of these two studies are outlined in the next two sections.

**Online enrollments.** Glick (2011) explored the demographics of enrollments in K-12 online learning for all program types (both supplemental and full-time). The sample included 175 responses representing 143 programs. Approximately 485,000 students were served by the programs represented in the sample. Glick (2011) found that the population of students enrolled in online learning differed significantly from the general population of K-12 students in the following ways:

- There is a significant overrepresentation of females in online learning. Males make up 50.2% of the national K-12 population, but only 44.35% of the K-12 students in online courses and programs population.

- There are significant, but not dramatic, differences in student enrollment for ethnic groups. White and Native American students are overrepresented in online learning, while Hispanic and Asian students are underrepresented. This underrepresentation may be "due to the severe lack of participation of English Language Learners (ELL) in online programs" (p. 4). ELL students make up 11% of the general K-12 population, but only 2.3% of online enrollment.

- There is a significant underrepresentation of special education students in online learning. Special education students make up 13.2% of the general K-12 population, but only 6.2% of online enrollment.

- Most dramatically, there is a severe underrepresentation of students who qualify for free and reduced-price lunch enrolled in online courses. Nationwide, 44.6% of students qualify for free and reduced-price lunch, compared to 21.7% of students enrolled in online courses.

Glick's (2011) findings suggest that online learning options may be privileging those learners who come from more affluent backgrounds, as well as those who come from homes where English is spoken.

**Full-time virtual schools.** Whereas Glick explored the demographics of all online programs (supplemental and full-time), the National Education Policy Center reported demographics for full-time virtual schools, which included no part-time or supplemental programs. Similar to Glick's findings, the 2015 NEPC report suggested that the potential opportunities and access that online learning can afford may not align to the demographic trends in enrollment. Compared with conventional public schools, full-

time virtual schools continue to serve relatively few Black and Hispanic students,

impoverished students, and special education students (see Figures 1 and 2).
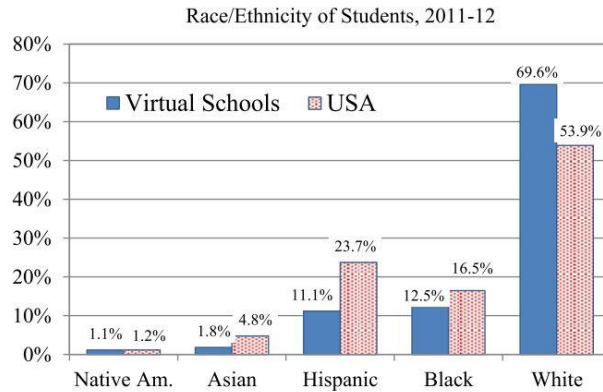


*Figure 1*.  Full-time virtual school and face-to-face enrollment by ethnicity.  Reprinted from *Virtual Schools in the U.S. 2015: Politics, Performance, Policy, and Research Evidence* (p. 68), by National Education Policy Center, 2015.  Copyright 2015 by the National Education Policy Center.
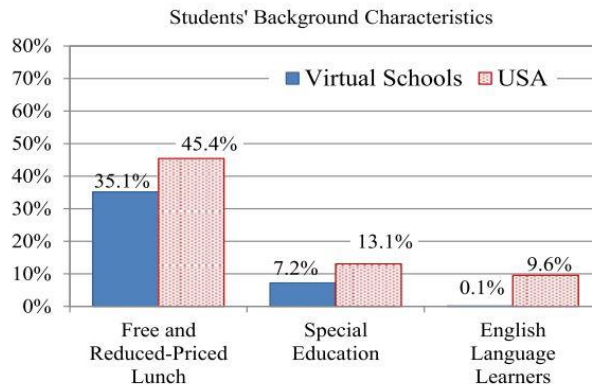


*Figure 2*.  Full-time virtual school and face-to-face enrollment by student background characteristics.  Reprinted from *Virtual Schools in the U.S. 2015: Politics, Performance, Policy, and Research Evidence* (p. 70), by National Education Policy Center, 2015.  Copyright 2015 by the National Education Policy Center.

During the 2011-2012 academic year, 70% of students enrolled in full-time virtual

schools were White.  During that same year, 51% of students enrolled in U.S. schools

were White.  Black students comprised 10% of virtual school full-time enrollment

compared to 17% enrollment in traditional public schools, and Hispanic students

comprised 11% of enrollments in full-time virtual schools compared to 27% enrollment in traditional school. Using similar reporting categories as Glick (2011), the 2015 NEPC publication also included data for gender, special education, free and reduced-price lunch, and ELL student enrollments. Girls are slightly overrepresented in K-12 full-time virtual schools in this report. Students who qualify for free or reduced-price lunch, students who are in special education programs, and students who are English-language learners are under-represented in full-time virtual schools (see Figure 2).

Taken together, the results of these two studies indicate that there may be some disparity between the general K-12 student population's demographics and the characteristics of students enrolled in K-12 online courses and programs. However, because there is still no systematic mechanism for reporting student enrollment in online courses, this is only a speculation. Similarly, the effectiveness of K-12 online learning is also an area that has not yet been fully explored. There are not yet national or state-level reporting systems for collecting data on student achievement on K-12 online learning programs across providers.

**Effectiveness of Online Learning**

A U.S. Department of Education sponsored study, *Evaluation of Evidence-Based Practices in Online Learning,* is widely cited as evidence of the effectiveness of online learning. Means et al. (2010) conducted a meta-analysis of 45 experiments and quasi-experiments that compared online and face-to-face learning conditions. As previously mentioned, the researchers found that students in the online conditions performed "modestly better, on average" (p. xiv) than those in the blended conditions "had a larger advantage relative to purely face-to-face instruction than did purely online instruction"

(p. xv).

The goal of the study was to provide research-based direction to educators and administrators on how to best implement K-12 online learning in K-12 schools and in teacher preparation programs (Mean et al., 2010).  However, of the 45 studies used in the meta-analysis, only five of the studies involved K-12 learners.  All other studies drew from higher education or adult learning contexts.  One unexpected finding from the study was the small number of rigorous K-12 studies comparing online and face-to-face learning conditions.  Thus, the authors cautioned readers about generalizing their findings to K-12 settings.

Moreover, the 2015 *Virtual Schools in the U.S.* report from the National Education Policy Center urged the education community to engage in research beyond comparisons of the delivery platform (online, face-to-face, and blended).  The report recommends that state and federal support of research initiatives include "how to identify good teaching and prepare good teachers for this context" (Huerta et al.,2015, p. ii).  Specifically, the report recommends an investment in teacher training and recruitment in order to provide a skilled pool of highly qualified K-12 online teachers, and recommends increased research in K-12 online learning in order to understand what skills and qualifications constitute effective online teaching (Huerta et al., 2015).

Whereas claims for the revolutionizing power of digital learning are rampant, research into the benefits and effects of K-12 online learning for diverse student populations is sparse.  Similarly, inquiry regarding promising instructional practices in online learning with regard to diverse and multicultural learners is also currently lacking (Ferdig & Kennedy, 2014; Goodfellow & Lamy, 2009).  Given the growth in K-12 online

learning and the assumption that with such growth schools can begin to provide opportunities for success where they did not exist before, it follows that educational researchers should evaluate existing online curriculum and instructional practices in order to gauge what works for diverse learners online.  For example, in the U.S. Department of Education-sponsored meta-analysis cited above, instructor-led online learning in which students worked together in cohorts showed greater effectiveness than online learning in which students worked independently (Means et al., 2010).  However, few other studies assessing the effectiveness of online curriculum and pedagogy have been commissioned.

**Toward Online Learning for All**

Former secretary of Education Arne Duncan posed the following scenario: "Imagine…an online high-school physics course that uses videogame graphics power to teach atomic interactions, or a second-grade online math curriculum that automatically adapts to individual students' levels of knowledge.  All of this will happen" (Duncan, 2011).  The public-private and non-partisan partnership called Digital Promise, authorized by Congress in 2008, was established by policy makers, entrepreneurs, and educators "to encourage the widespread adoption and use of effective, innovative digital approaches to improving education, teaching, and learning" (Duncan, 2011).

Similarly, the Next Generation Learning Challenges (NGLC), launched in 2010, is a network of educators, innovators, and technologists whose mission is to transform education through technology.  NGLC lists as its first guiding principle, "All people deserve an equal chance to succeed in learning and in life" (NGLC, 2011).  Led by EDUCAUSE, a nonprofit organization that supports digital technology and learning in higher education, and funded by the Bill and Melinda Gates Foundation and the William

and Flora Hewlitt foundation, NGLC explicitly referred to the role of technology in closing the achievement gap in its October, 2011 Request for Proposals (RFP): "NGLC seeks to dramatically improve college readiness and completion in the United States, maximizing student learning and closing achievement gaps, through the applied use of technology, particularly among low-income individuals" (NGLC, 2011, p. 1).

Though Glick (2011) and the National Education Policy Center (Huerta et al., 2015) found that low-income students were significantly underrepresented in online learning, initiatives such as Digital Promise and NGLC suggest that the enrollments of diverse students in online learning will increase (Watson et al., 2010). The assumption that online learning is an opportune platform to engage underserved students is widespread, yet the intersections of online learning with culture, gender, and socio-economic differences have not yet been fully explored.

**Inequities in Online Learning**

There is emerging evidence to indicate that cultural differences do matter online, in both instructor assumptions about learners, in learners' online experiences, and in their attitudes about online learning. In one study of librarians' responses on a virtual helpdesk, for example, users who were given more ethnic sounding names ("Latoya" and "Ahmed") received longer wait times for responses, as well as less supportive guidance from the online librarian, as compared to users with more Anglo-sounding names (Shachaf & Horowitz, 2006). Hanson (2002) suggested that the very field of online learning itself might have a gendered and raced nature, since most technologists and developers are White males.

Other studies suggest that a certain *type* of student tends to be more successful

online (Barbour & Reeves, 2009; Cavanaugh, Barbour & Clark, 2009). The type of student who tends to succeed online is highly motivated and self-directed. Yet in recent years, the focus of online learning in K-12 has grown from providing advanced placement and supplemental courses to providing opportunities for credit recovery and meeting the needs of at-risk populations (Repetto & Spitler, 2014). Students enrolled in online credit recovery programs may not be the type of students who have been identified as more likely to succeed online. Repetto and Spitler (2014) point out that student-related factors impacting students' decisions to drop out of school may include a dislike of school, poor school attitude, and poor work habits, among others (p. 111). As enrollment in online credit recovery increases, educators may need to move beyond identifying what type of student tends to be successful online to identifying what instructional techniques better engage online students who may not necessarily be highly motivated to learn in school.

Another inequity that can occur in online learning is access to the Internet at home. While nearly all K-12 schools are now connected to the Internet, there still exists a disparity among socio-economic student groups regarding Internet access at home. In a review of the literature on virtual schools, Barbour and Reeves (2009) noted that students' different capacity to access the Internet poses a challenge to virtual schools. In 2015, 84% of American adults reported using the Internet (Perrin & Duggan, 2015). Among racial groups, English-speaking Asian Americans report the highest Internet usage at 97%, followed by 85% usage for Whites, 81% usage for Hispanics, and 78% usage for African-Americans. Additionally, those in high-income households earning $75,000 or more are more likely to use the Internet than those with annual incomes less

than $30,000 (Perrin & Duggan, 2015). Additionally, more low-income families rely exclusively on their smartphones for their Internet connection (Smith, 2015). Moreover, even when access to equipment is equitable, students from high socio-economic families tend to have more experience with educational software as well as better media literacy when compared with their lower socio-economic peers (Warschauer, 2007). While Internet usage has increased during the last 15 years, disparities may still exist between the types of devices, platforms, and software that are used in students' homes. A student who has a home Internet connection through his or her smartphone, for example, will likely have more difficulty completing an essay or project assignment compared to a student using a laptop or family computer. Thus, it may be that students from low-SES families have fewer resources to support their success learning online when compared to students of high-SES families.

To date, very little research has been published regarding the effectiveness or experiences of online learning for students grouped by ethnicity, economic status, or gender. Okwumabua, Hu, Watson, and Watson (2010) found that African American students' attitudes toward online learning were inconsistent with their attitudes towards computers in general. Students noted differences in their attitudes between recreational and educational uses of technology. While African-American students reported favorable attitudes toward computers, they reported negative attitudes toward online learning:

- Eighty-eight percent of students indicated they would never like to be tutored online.
- Sixty-one percent indicated they are not "the type of student who might do well with online tutoring experiences" (p. 7).

- Fifty-six percent indicated they would not be able to learn new things from online tutoring.  (Okwumabua et al., 2010)

While more research into the experiences, dispositions, and achievements of ethnically, linguistically, and socio-economically diverse students in online learning is needed to understand student online experiences and perceptions, it is interesting to note, given the emergence of the notion of the *type* of student who tends to excel online, that the students in Okwumabua et al.'s (2010) study did not perceive themselves as "the type of student" who might do well with online learning.   Whereas policy-makers advocate online learning as a way to improve educational choice and to close achievement gaps (e.g., Duncan, 2011; NGLC, 2011), emerging demographic data suggest that low-income students may be underrepresented in online learning (e.g., Glick, 2011; Huerta et al., 2015) and that African-American students may have negative attitudes toward online learning (Okwumabua et al., 2010).  Thus, looking to multicultural education may help to inform research on online K-12 learning for diverse students.

**Looking to Multicultural Education**

In a 2015 report on educational equity, the National Educational Policy Center asserted that policymakers should promote culturally relevant curriculum, and that students must encounter "culturally responsive teaching in order to have equal opportunity" (J. K. Rice, 2015, p. 5).  Theories of multicultural education can provide lenses for examining instructional practices in online courses for diverse learners.  A primary goal of multicultural education has been to reform educational institutions so that students from diverse racial, ethnic, and social class groups will experience educational equity.  Banks (2016) identified five dimensions of multicultural education: content

integration, knowledge construction processes, prejudice reduction, equity pedagogy, and empowering school culture. Content integration pertains to "the ways in which teachers use examples and content from a variety of cultures and groups to illustrate key concepts, principles, generalizations, and theories in their subject area or discipline" (Banks, 1995, p. 392). Integrating cross-cultural examples into curriculum and instruction in order to demonstrate a concept is an example of content integration. Similarly, knowledge construction involves teachers making explicit how power struggles can influence the voices that emerge as dominant in a discipline. Prejudice reduction pertains to the teacher working actively to "help students develop more democratic racial attitudes and values," and according to Banks (1995), is most effective with younger groups of students (p. 392). Considering specifically the varied cultural and ethnic experiences of students in order to adapt instructional strategies that are culturally comfortable (for example, permitting students to write or express themselves in a native language or dialect) falls under Banks' notion of equity pedagogy. Finally, empowering school culture pertains to the recognition of the complex structural and organizational considerations that may need to be made in order to promote a supportive multicultural environment at the school or district level (Banks, 1995).

Culture and education are inextricable. Gay (2000) and Ladson-Billings (1994, 1995b) draw from research in multicultural education to provide a framework for pedagogical practices that are *culturally responsive* or *culturally relevant*. Such culturally competent instruction uses "the cultural knowledge, prior experiences, frames of reference, and performance styles of ethnically diverse students to make learning encounters more relevant to and effective for them" (Gay, 2000, p. 29). The practice of

providing instructional activities that are culturally responsive aligns with Banks' domain of equity pedagogy.  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, Yarzebinski, Vaughn, Ogan, & Cassell, 2013).  The move toward more culturally responsive and inclusive teaching practices begins by linking a student's experiences in school with her experiences at home (Gay, 2000; Ladson-Billings, 1995a; Pang & Barba, 1995).  For example, allowing students to "code switch," or to move back and forth between a comfortable linguistic register (such as African-American Vernacular English) and Standard English within a classroom is a practice indicative of equity pedagogy or culturally relevant and responsive pedagogy (Ladson-Billings, 1995a).

The framework for *equity pedagogy* relies on the willingness of the instructor to acknowledge, accept, and draw upon cultural and sociolinguistic differences during instruction.  Teachers must be willing to get to know their students.  Pang and Barba (1995) argue for culturally affirming instruction that uses the culture that students bring to the table as an integral part of concept and knowledge building, moving away from a deficit model that assumes "cultural disadvantage" for students who do not belong to the dominant culture.  This model suggests that teachers become familiar with the sociocultural context of students' lives so that they begin to include more culturally inclusive teaching practices in the realms of culturally familiar interactional (communication) patterns, learning strategies (specifically, cooperative learning and opportunities for alternative assessments), environment (the physical, or perhaps virtual

culturally "familiar" place), and content (culturally familiar analogies, themes, and concepts).

**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 descriptive inquiries are beginning to emerge exploring enrollments in K-12 online learning (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 does or may happen online. Recently, though, some educational researchers have begun to explore the intersections of educational technology and multicultural education (e.g., Camardese & Peled, 2014; Finklestein et al., 2011). Studies of accessibility indicate that the *digital divide* between those who have computers and regular high-speed Internet access and those who do not appears to be narrowing. According to the National Center for Educational Statistics, in 2008, 100% of U.S. schools reported having at least one computer with Internet access for student use (U.S. Department of Education, 2010). So, while the digital divide may no longer be an accessibility issue (insofar as accessibility at school is concerned) a divide seems to still exist in the learning activities that computer-based instruction supports (Gorski, 2005; Warshauer, 2007).

The digital divide may now refer more to the types of learning activities supported by technology in which different students are asked to engage, rather than to access to technology in school. Gorski (2005) found that schools with lower socio-economic status (SES) students and more students of color tend to utilize computer based-technologies for drill and practice exercises, whereas schools with higher-SES

students, and traditionally fewer students of color, tend to utilize computer-based technology for higher-order thinking activities like finding and evaluating research and creating media-rich products. Additionally, while schools tend to be "connected" to the Internet, disparity still exists between higher-SES and lower-SES families with regard to home Internet and computer access (Perrin & Duggan, 2015; Smith, 2015).

Other researchers are beginning to explore the intersections of culture and technology. Finkelstein et al. (2013) found that students showed greater achievement using web-based technology that used culturally relevant dialect. Camardese and Peled (2014) found that participation in a cross-cultural web project promoted a better understanding of and appreciation for diversity among students. These studies will be described in greater detail in Chapter 2. Research on the intersections of culture and online learning for adult learners is also beginning to emerge (e.g., Brown, 2009; Brown-Jeffy & Cooper, 2011; Farmer 2009; Goodfellow & Lamy, 2009; Mazur & Courchaine, 2010). However, research exploring the instructional strategies of effective K-12 teachers of underserved students is lacking (Huerta et al., 2015).

**Purpose of Study**

While online K-12 learning has been lauded as a platform to offer more student-centered instruction (Picciano & Seaman, 2009) and as a platform to provide access and equity (Rose & Blomeyer, 2007), there has still been very little exploration of the instructional and pedagogical strategies that tend to promote student success and achievement online. Research in multicultural education for culturally responsive pedagogy can provide one conceptual framework for investigating what instructional and communicative practices work online for diverse learners. In this investigation, I studied

experienced online educators who were both identified and self-identified as culturally

responsive in order to explore their patterns of culturally responsive online instruction to

build a grounded local theory of culturally responsive online pedagogy (CROP).  CROP

will provide a lens for exploring the strategies employed by highly effective online

teachers in a diverse state-supported online program.  Such examination may provide a

new understanding or framework for promising, culturally responsive instructional

practices for K-12 online teachers.

# Chapter Two: Review of Literature

*"Pedagogical equality that reflects culturally sensitive instructional strategies is a precondition for and a means of achieving maximal academic outcomes for culturally diverse students"* (Gay, 2004, p.33).

In this review of relevant literature, I will first provide background to the issue of academic equity in U.S. schools. Next, I will explore multicultural educational theories as a basis for addressing academic inequity, gradually narrowing the focus to *culturally responsive pedagogy*. Specifically, I will outline Geneva Gay's (2000) model of culturally responsive teaching as a framework for considering equity in pedagogy. After, I will highlight trends in K-12 online learning, with particular regard to issues of equity. I will then review the literature on best practices in K-12 online instruction, and synthesize emerging best practices of K-12 online teachers with Gay's framework for culturally responsive teaching.

## Academic Equity in U.S. K-12 Schools: A Backdrop

In 1981, the U.S Secretary of Education created the National Commission on Excellence in Education in order to assess the state of the American public school system. The Commission's 1983 publication, *A Nation at Risk*, reported that American schools were failing students. Prefaced with the tenet that "All, regardless of race or

class or economic status, are entitled to a fair chance and to the tools for developing their individual powers of mind and spirit to the utmost*"* (Denning, 1983, p. 1)*,* the report cited indicators of declining literacy and achievement scores for Americans, making the fearful prediction that for the first time, the younger generation may not outperform their parents.  The report ended with a plea for reform initiatives based on standardization (Denning, 1983).  Standardization efforts included implementing agreed-upon state-level learning objectives and goals and enacting criterion-based testing to ensure that states were reaching all groups of students based on the agreed-upon standards.  The standards-based reform movement that followed sought to highlight and amend educational inequities in academic achievement.

*A Nation at Risk* called for increased teacher compensation, increased time in school, improved financial resources, more rigorous curriculum, and higher standards in public education.  In the decade following the publication of *A Nation at Risk*, federal legislation stipulated that states receiving federal funding for education have both academic standards and testing procedures in place (U.S. Department of Education, 2008).  State educators and administrators worked to develop local standards and testing measures in the 1980s and 1990s (U.S. Department of Education, 2008).

The state accountability system was expanded and the standards-based reform movement bolstered with the bipartisan passage of the *No Child Left Behind Act of 2001*. No Child Left Behind (NCLB) increased accountability by requiring that schools and districts use the same testing measures to compare the performance of different groups. At the core of NCLB is the intent to improve the "academic achievement of the disadvantaged," with specific reference to closing the "achievement gap…between high-

and low-performing children, especially the achievement gaps between minority and nonminority students, and between disadvantaged children and their more advantaged peers" (NCLB, 2002, Sec. 101). In a 2006 informational posting on NCLB from the U.S. Department of Education, former Secretary of Education Margaret Spellings wrote, "For the first time ever, we are looking ourselves in the mirror and holding ourselves accountable for educating every child. That means all children, no matter their race or income level or zip code" (U.S. Department of Education, 2006, p. 1).

The *achievement gap* refers to the disparities in academic performance that exist among different groups of students. High school graduation rates have risen nearly ten percentage points since the passage of NCLB, topping out at 81% for all students (Kena et al., 2013). Still, there is a gap between completion rates for students of different racial and ethnic groups. Eight-five percent of White students complete high school on time, compared to 76% of Hispanic students and 68% of Black students. While indicators like grades, graduation rates, and college entrance rates can be used to measure educational outcomes, the achievement gap is often measured through the comparison of standardized test scores between groups (Williams, 2003). According to the most recent data from the U.S. Department of Education (Kena et al., 2013), while White-Black and White-Hispanic achievement gaps have narrowed since 1971, there is still a difference of 20 percentage points or more between White students' scores and Black and Hispanic students' scores on National Assessment of Educational Progress (NAEP) 4th and 8th grade reading and mathematics assessments (Kena et al., 2013). While there have been improvements in student achievement, students of color still do not perform as well on standardized tests as their White peers (Hemphill & Vanneman, 2010; Vanneman,

Hamilton, Baldwin, Anderson, & Rahman, 2009;). Because low-performing minority

students are often located in urban areas, the achievement gap is sometimes viewed as an

urban issue, even though such gaps in achievement between groups are prevalent in

suburban and rural areas as well (Williams, 2003).

In 2009, President Obama authorized *Race to the Top*, a federal grant program for

which states could compete for funding. The goal of *Race to the Top* was to incentivize

states' efforts in implementing educational reforms that might work to close achievement

gaps (U.S. Department of Education, 2009). However, this program was met with

criticism from some educational reformers who argue that neither high-stakes testing nor

competitive incentives improve learning outcomes for diverse students (e.g., Ravitch,

2011a). Despite slow increases in student achievement and in high school graduation

rates, many educators and policy-makers, such as former Assistant Secretary of

Education Diane Ravitch, have spoken vociferously against NCLB, arguing that high-

stakes testing has not improved educational opportunities for children. Rather,

standardized testing has contributed to a diluted curriculum and a duplicitous testing

system (Ravitch, 2011b).

Undergirding criticisms of standards-based reform is the idea that gaps in

educational achievement among groups is a much more complex problem than can be

addressed by high-stakes testing alone. Some have suggested that more consideration be

given to the *opportunity gap* rather than to the achievement gap (J.K. Rice, 2015). The

opportunity gap refers to the idea that educational inequity exists for larger socio-

economic reasons that then may impact student achievement in schools. Gaps in

achievement may be linked to gaps in economy. Ravitch (2011a) argued that the

achievement gap begins well before students ever set foot in a classroom, recommending

widespread use of childhood nutrition, health, and literacy programs. Darling-Hammond

(2003) pointed to the economic disparity between urban and suburban schools,

recommending more equitable funding that would potentially attract more highly

qualified teachers into traditionally hard-to-staff schools, lessen class sizes in over-

crowded schools, and provide more equitable allocation of instructional resources like

equipment and curriculum materials. Inequalities in funding prevent urban and minority

students from having access to the same high-level and challenging academic courses

offered in more suburban affluent districts. More equitable funding, and the resulting

redistribution of resources would positively affect student-achievement in traditionally

low-performing schools and districts (Darling-Hammond, 2003).

Another criticism of standards-based reform is that the high stakes testing

movement does not take student background and culture into consideration. Williams

(2003) advanced the notion that cultural differences among groups have not been fully

considered in the school reform and achievement gap discussion. In *Closing the

Achievement Gap*, Trumbull, Greenfield, and Quiroz (2003) argued that instruction is

laden with cultural values and norms, and that teacher preparation in understanding

differing cultural values is key to the successful instruction of minority children. Others

have argued that gaps in student achievement may be narrowed when educators adopt

more inclusive teaching practices that value student backgrounds and promote cultural

diversity in the classroom (Brown-Jeffy & Cooper, 2011; Cohen, Garcia, Apfel, &

Master, 2006;).

The reform effort that began in the 1980s continues today (U.S. Department of

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Education, 2011).  The criticisms of *No Child Left Behind (NCLB)* and *Race to the Top* are rooted in the notion that the achievement gap is a complex societal issue with cultural ramifications (Ravitch, 2011b).  Certainly, no one program or policy can fix the economic and educational inequalities faced by poor or minority students.  Yet, the persistence of the discourse about educational reform and the achievement gap indicates persistence to explore educational research, programs, and opportunities that have potential to level the playing field for our students (Duncan, 2011; Picciano & Seaman, 2003; U.S. Department of Education, 2009).

**Multicultural Education**

One lens for viewing this complex issue is multicultural education.  Researchers and theorists in multicultural education have stated that educators should consider the cultural differences that exist not only among students, but between educators and their pupils (Darling-Hammond, 2003; Gay, 2004).  Several multicultural education theorists point to instructional, curricular, and institutional biases that are built into the current system of public education (Banks, 1995; Darling-Hammond, 2003; Ladson-Billings, 1994).  Recommendations for addressing educational inequity from the field of multicultural education include considering students' cultures not as deficits, but as lived experience that should become part of instruction.  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).

Multicultural education developed as a response to issues raised during the Civil

Rights Movement of the 1950s and 1960s (Bennett, 2001). The goal of multicultural education has been to create equitable educational opportunities to students from diverse racial, ethnic, cultural, and socio-economic groups (Banks, 2006). The field has many sub-disciplines, branches, and theoretical frameworks, including ethnic studies, curriculum studies, and critical race theory (Banks, 2006; Gay, 2004; Ladson-Billings, 1994, 2004). As in any complex area of research and discourse, there have been debates and contentions among evolving approaches and perspectives (Banks, 2006; Ladson-Billings, 2004). Yet, multicultural theorists have tended to agree epistemologically. Specifically, multicultural educational theorists see knowledge and learning as socially constructed, rather than objectively held phenomena (Banks, 2006; Gay, 2004). As such, theorists point to value structures apparent in curriculum and classroom practices. Students who are not members of the dominant culture can feel alienated when classroom practices stem from dominant cultural practices (Brown-Jeffey & Cooper, 2011). Thus, multicultural theorists tend to emphasize the importance of considering cultural values and norms, and thus issues of equity and power, as critical variables in the education of diverse students (Banks, 2006; Gay, 2004; Darling-Hammond, 2003; Ladson-Billings, 1994, 2004).

Banks (2016) conceptualized multicultural education into five dimensions: content integration, knowledge construction, prejudice reduction, equity pedagogy, and school culture and structure (see Figure 3). Knowledge construction refers to "the extent to which teachers help students understand, investigate, and determine how the cultural assumptions, frames of references, perspectives, and biases within a discipline influence the ways in which knowledge is constructed within it" (Banks, 2006, p. 204). Courses in

women's studies, for example, might explore the gendered nature of knowledge construction in the media. Prejudice reduction refers to the ways in which teachers can change their students' racial attitudes (Banks, 2006). For example, creating racially diverse groups can minimize student perception of group differences (Banks, 2006).



**Content Integration**

Content integration deals with the extent to which teachers use examples and content from a variety of cultures in their teaching.

**Knowledge Construction**

Teachers need to help students understand, investigate, and determine how the implicit cultural assumptions, frames of reference, perspectives, and biases within a discipline influence the ways in which knowledge is constructed.

**Equity Pedagogy**

An equity pedagogy exists when teachers modify their teaching in ways that will facilitate the academic achievement of students from diverse racial, cultural, gender, and social-class groups.

**Multicultural Education**

**Prejudice Reduction**

This dimension focuses on the characteristics of students' racial attitudes and how they can be modified by teaching methods and materials.

**Empowering School Culture**

Grouping and labeling practices, sports participation, disproportionality in achievement, and the interaction of the staff and the students across ethnic and racial lines must be examined to create a school culture that empowers students from diverse racial, ethnic, and gender groups.

*Figure 3.* Banks' dimensions of multicultural education. Reprinted from "Multicultural Education: Characteristics and Goals" (p. 18) by James A. Banks, 2016, in J. A. Banks & C. A. M. Banks (Eds.) *Multicultural Education: Issues and Perspectives,* Hoboken, NJ: John Wiley & Sons. Copyright 2016 by James A. Banks. Reprinted with permission.

A third dimension of Bank's conception of multicultural education is an empowering

school culture. This dimension pertains to the organizational climate of the school. An

empowered school culture is one in which students from diverse racial, ethnic, and socio-

economic groups are provided positive and equitable opportunities for academic

achievement. Content integration refers to the ways in which teachers use materials from

a variety of cultures in their teaching. During a unit of instruction on World War II, for

example, a teacher might include letters from African Americans who served in the war

or images portraying Japanese American experiences during the war. The final domain

in Bank's model is equity pedagogy. Equity pedagogy refers to the incorporation of

instructional strategies that reach students from diverse groups. Including opportunities

for students to communicate using dialect and to work cooperatively with their peers can

be forms of equity pedagogy (Banks, 2006).

This study focused on equity pedagogy, which is the notion that teachers can

utilize and adapt their teaching methods in order to appeal to, engage, and connect with

students of various cultural backgrounds. Equity pedagogy does not exist in isolation,

however. The interactions between equity pedagogy and Banks' other multicultural

education dimensions are complex and inextricable. For example, in Figure 3, *content

integration* is a distinct category. However, the process of choosing culturally responsive

curricular materials is inextricably linked to a teacher's lesson planning and classroom

methods. Thus, equity pedagogy cannot be considered without recognition of teacher-

selected instructional materials.

Whereas Banks (2016) identified five dimensions of multicultural education,

Bennett (2001) conceptualized four broad research clusters: curriculum reform, equity

pedagogy, societal equity, and multicultural competence.  Where Banks identified

Empowering School Culture and Prejudice Reduction, Bennett identified Societal Equity

and Multicultural Competence.  Bennett broke each of the four genres into sub-genres

(see Figure 4) and proposed that research in the equity pedagogy domain "addresses the

disproportionately high rates of school dropouts, suspensions, and expulsions among

students of color and students from low-income backgrounds" (p. 183).  She identified

three genres within equity pedagogy research: school and classroom climates, student

achievement, and cultural styles in teaching and learning.

Detecting Bias in Texts, Media, and Educational Materials

Historical Inquiry

Social Action

Demographics

Curriculum Theory

Curriculum Reform

Societal Equity

Culture and Race in Popular Culture

GENRES OF RESEARCH IN MULTICULTURAL EDUCATION

School and Classroom Climates

Ethnic Group Culture

Equity Pedagogy

Multicultural Competence

Student Achievement

Cultural Styles in Teaching and Learning

Ethnic Identity Development

Prejudice Reduction

*Figure 4.*  Bennett's conceptual framework of research genres in multicultural education. Reprinted from "Genres of Research in Multicultural Education," by C. Bennett, 2001, *Review of Educational Research, 71,* p. 175.  Reprinted with permission.

At the classroom level, each of the three characteristics of Bennett's model of equity pedagogy depends on the teacher. First, it is the teacher's job to create class climate by promoting positive interactions and by facilitating a safe and friendly environment. Bennett (2001) referred to social contact theory as a conceptual framework that supports this aspect of equity pedagogy (p. 183). Second, the teacher facilitates student achievement by incorporating instructional practices and communication patterns that promote motivation and that are effective with her set of student learners. Ladson-Billings's study (1994) of the instructional practices of effective teachers of African-American students is an example of this line of research (Bennett 2001, pp. 186-187). Finally, the teacher understands cultural styles in teaching and learning and can adapt teaching methods and styles based on the needs of her learners. Educational studies in code-switching (Finkelstein et al., 2013) or adjusting instructional practices to meet the needs of a culturally distinct group of learners (Au, 1980), for example, align to this focus for research. Bennett warns, though, that this type of research can be challenging as it can potentially lead to ethnic stereotyping.

In Figure 4, Bennett's (2001) *Curriculum Reform* takes the place of Banks' (2016) conception of *Content Integration*. Bennett's conceptualization of curricular reform focuses on detecting cultural biases in instructional materials and on making sure that historically marginalized voices are included in the curriculum. Bennett referred to *centricity*, or "using students own culture and history as a context for learning and helping them relate socially and psychologically to other cultural perspectives," as being the "heart" of curriculum reform (p. 176). As a model for categorizing the existing

research genres in multicultural education, classroom-level curricular decision-making may very well be suited to Curricular Reform or to Content Integration. However, as explained in the above discussion of Banks' model, a teacher's ability to select culturally relevant instructional materials is inextricably linked to equity pedagogy. Both equity pedagogy and the teacher's selection of instructional materials rely on the teacher's instructional and pedagogical planning, as well as on the teacher's communication patterns with students.

**Culturally Responsive Pedagogy**

A comparison of Banks (2016) and Bennett's (2001) conceptual models of multicultural education yields similar focus areas. Equity pedagogy arises in both models as a domain that encompasses instructional practices. Both Banks' and Bennett's notions of equity pedagogy stress the importance of the teacher's ability to differentiate instruction to appeal to his and her learners' preferences and contexts in order to bridge home culture with school content. Such explorations of culturally effective teaching practices have been given many designations: "culturally appropriate," "culturally congruent," "mitigating cultural discontinuity," "culturally responsive," and "culturally compatible," to name a few (Brown-Jeffey & Cooper, 2011, p. 67). Educational researchers Gloria Ladson-Billings (1994) and Geneva Gay (2000) 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, I 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

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*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

focused 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, I've chosen the term pedagogy as

opposed to *instruction*.

**Benefits of Culturally Responsive Pedagogy**

Undergirding CRP is the premise that learning should be relevant to students.

John Dewey (1938) wrote extensively about the importance of experience in education.

Dewey asserted that students made sense of the world through metacognition, making

connections between their lived experiences and knowledge base, and argued 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 CRP.

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 called for more culturally relevant curriculum and teaching in order to make learning experiences more equitable for K-12 students (J.K. 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). Despite the continually increasing diversity of students, classroom teachers remain largely White across all 50 states (Goldring, Gray, & Bitterman, 2013). 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

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classroom.

The term cultural congruence is sometimes used to discuss the characteristics of culturally relevant and responsive instruction (e.g., Boykin & Noguera, 2011; Finkelstein et al., 2013). 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). Specifically, culturally relevant and responsive instruction is intended "to help students who are members of low-status population groups to increase their academic achievement" (Banks, 2003, p. 6). 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.

Culturally responsive pedagogy may benefit all students. Gloria Ladson-Billings (1995a) shared that in response to her arguments for culturally relevant pedagogy, educators often respond with, "But that's just good teaching!" (p. 159). Similarly, Banks (1995) clarified the definition of multicultural education to encompass all students: "Multicultural education is an educational reform movement that tries to reform schools in ways that will give all students an equal opportunity to learn. It describes teaching strategies that empower all students and give them voice" (1995, p. 391). Ladson-Billings did question why culturally relevant teaching practices occur so rarely in classrooms populated by mostly African American students, but emphasized that

culturally relevant teaching benefits all students nonetheless.

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 the most important factor in closing the achievement gap, and this relationship 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 SES.

In *Creating the Opportunity to Learn: Moving from Research to Practice to Close the Achievement Gap*, Boykin and Noguera (2011) pull from years of empirical data in educational research to offer a set of best instructional practices for closing the achievement gap. Their recommendations include strategies that are intended to increase student engagement: High TSRQ, high teacher expectations, collaborative learning opportunities, and opportunities for culturally relevant instruction, to name a few. Boykin and Noguera define culturally relevant pedagogy as the opportunity for students to bring in pop culture, home experiences, and their own voices into the classroom. They place CRP in a separate, albeit related, category as interpersonal attributes like TSRQ. In their model for closing the achievement gap, Boykin and Noguera (2011) outline the positive effects of incorporating relevant learning and students' experiences into

curriculum and instruction, noting that pluralizing "the cultural conditions under which teaching and learning transpire" can improve learning for the most students (pp. 110-111).

**Gay's Model of Culturally Responsive Pedagogy**

Ladson-Billings (1994) and Gay (2000) are often seen as the leading scholars in CRP. Ladson-Billings (1994) first outlined a theory of *culturally relevant pedagogy*. In her seminal work *The Dreamkeepers: Successful Teachers of African-American Children*, she outlined characteristics of culturally relevant pedagogy based on classroom observations and interviews of successful teachers of African-American students. In a qualitative study of eight teachers, Ladson-Billings found that teachers who had been identified as effective teachers of African-American students tended to have a high perception of themselves and others, viewed themselves as a part of a community to which they were contributing, viewed teaching less as a technical skill and more as an art, believed that all students could succeed, created connections between students' cultures and school, and believed that students had valuable experiential knowledge to draw upon. Ladson-Billings's recommendations for culturally relevant schooling are threefold: 1. Encourage self-determination, 2. Support students' home cultures, and 3. Encourage students to see themselves as participants in changing the world for the better (pp. 137-139). These three tenets are widely regarded as characteristics of CRP. In practice, these recommendations premise utilizing concrete experience as part of classroom learning, facilitating dialogue—not only among students, but also between students and teachers, creating a caring environment, and stressing accountability (pp. 189-191).

Gay identified *culturally responsive teaching* as equity pedagogy in practice. In

*Culturally Responsive Teaching: Theory, Research, and Practice* (2000), Gay drew from

theory, educational research, personal experience, and creative narrative to outline four

major features of culturally responsive teaching: caring, communication, curriculum, and

instruction.  She conceptualized culturally responsive teaching as that which recognizes

the legitimacy of students' cultures, connects students' home cultures with school

cultures, employs multiple models of teaching that appeal to multiple learning styles,

lauds (and teaches students to laud) different cultural heritages, and integrates

multicultural texts, authors, experiences, and perspectives into curriculum.

     Both Gay (2004) and Ladson-Billings's (1994) recommendations for creating

culturally responsive pedagogy harken back to suggestions from educational theorist

Paolo Friere.  Friere (1970) asserted the importance of connecting student experience

with learning, and added dialogue as the critical element in a pedagogy that emphasized

the co-construction of knowledge between teacher and learner.  Rather than

conceptualizing students as banks into which educators deposit knowledge, Friere

advocated for a more open dialogue with students so that they become subjects rather

than objects in the educational process.  In this model, students might discuss their lived

experiences as a part of classroom dialogue and instruction, and teachers might offer

instructional and evaluative choices to students.  In this way, curriculum content becomes

relevant to the students.

     In an attempt to move from the theory of CRP to more observable classroom

behaviors in practice, I focused upon Geneva Gay's (2000) four domains of culturally

responsive teaching for the purposes of this study.  Compared to Boykin and Noguera's

(2011) model for closing the achievement gap, Gay's model more clearly situates the

function of communication and caring within the same domain as CRP. While Ladson-Billings's model stems from observations of teachers' instructional practices, her threefold conception of CRP includes characteristics that are situated in the internalized student experience, as well as in curriculum and instruction. For example, the first tenet of Ladson-Billings's (1994) conception of CRP, "provide educational self-determination" (p. 137), may be facilitated through culturally responsive teacher dispositions like conceiving of knowledge as fluid and evolutionary. This teacher belief can potentially influence student self-determination, although these beliefs and dispositions are more internal than external. Ladson-Billings's third tenet of CRP, that students see themselves as active participants in a world in which they can change, is similarly an internal belief that may nonetheless be cultivated by CRP. There is much overlap between Ladson-Billings (1994) and Gay's (2000) conception of CRP, but for a practitioner-researcher, Gay's framework provides four clear domains for classroom observation: *caring, communication, curriculum*, and *instruction* (see Figure 5).
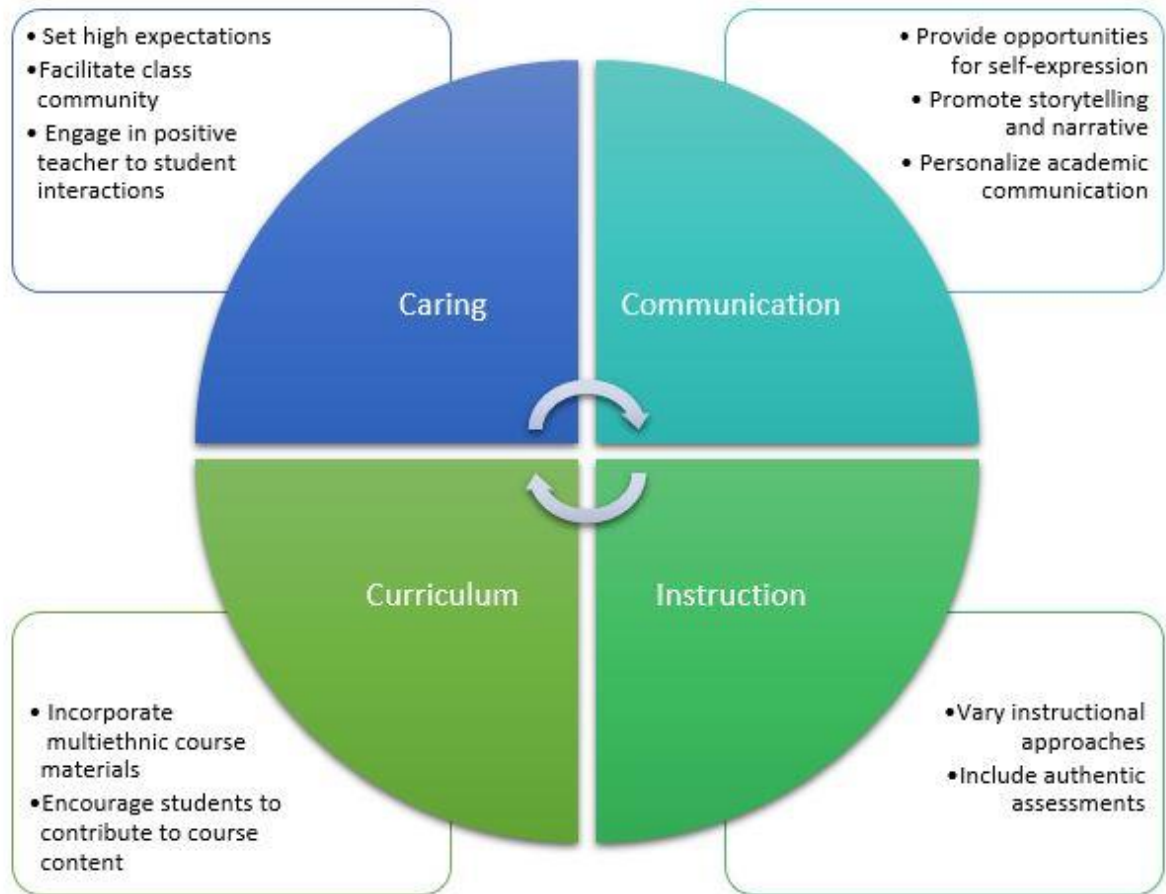
*Figure 5.* Visual interpretation and summary of Gay's (2000) model of culturally responsive pedagogy, with teacher indicators.

**Caring.** The first of Geneva Gay's domains is caring. Caring includes "teacher attitudes, expectations, and behaviors about students' human value, intellectual capability, and performance responsibilities" and the importance of facilitating "community" (Gay, 2004, p. 45). Each of these characteristics of CRP- respecting students as contributors, setting high student expectations, creating a positive class climate and community- are echoed throughout the literature on CRP (Boykin & Noguera, 2011; Gay, 2000; Ladson-Billings, 1995a, 1995b).

Both Gay (2004) and Ladson-Billings (1994) asserted the importance of the teacher as a caring facilitator and learning coach in a diverse classroom. Undergirding CRP is a teacher who expects that his or her students can achieve. Gay described this as creating a "culture of caring" in which teachers create "places and spaces in classroom interactions that need to be changed and to determine which aspects of caring will be most appropriate to expedite student achievement" (Gay, 2004, p. 53). In other words, creating a culture of caring is akin to setting high expectations for all students. Such caring avoids a deficit or "learned helplessness" model of working with diverse students. Rather, high teacher expectations are critical (Gay, 2004; Ladson-Billings, 1994; Brown-Jeffy & Cooper, 2011). In her study of eight effective teachers of African-American students, Ladson-Billings (1994) found that the first common characteristic among these successful teachers was that they viewed their students as capable of achieving. Teaching students that they can achieve is critical for diverse students who may have developed school behaviors or values that indicate otherwise (Bennett, 2001; Ladson-Billings, 1994).

Proponents of CRP suggest that teachers get to know their students by learning about their cultures (Bennett, 2001; Gay, 2004, Ladson-Billings, 1994). In Ladson-Billings's qualitative study, these teachers tended to see themselves as part of a community, even if they identified with a different ethnic group from their students (Ladson-Billings, 1994). Gay (2004) recommended that teachers explore "cultural self-awareness" (p. 71) in order to arrive at what Ladson-Billings terms "cultural competency" (Ladson-Billings, 1994, p. xi). This "we're all in this together" mindset is key in a CRP (Ladson-Billings, 1994, p. 65). For the teacher, the goal of self and student

cultural learning is to equip oneself with the knowledge required to construct a class environment which premises equitable social relationships and a "connectedness" among teachers and students (Ladson-Billings, 1994, p. 60).

The importance of community is embedded within Gay's (2002) notion of the caring domain of CRP. In her research on successful teachers of African-American children, Ladson-Billings (1994) found that each of the participating teachers, regardless of race, perceived themselves as a part of the same community as their students. For some this was quite literal: they may have shopped in the same stores or eaten in the same restaurants as their students. However, some teachers did not share neighborhoods with their students. Still, the teachers in Ladson-Billings's study did things like provide their personal phone numbers for parents and plan extra-curricular outings with their classes.

One promising practice that emerges from the literature on teacher caring is the importance of setting and maintaining high expectations for all students regardless of their academic placement or background. Gay (2004) argues that teacher expectations are mediated by cultural influences, and that "significant discrepancies exist in favor of European Americans in both quantity and quality of interactions uncaring teachers have with students" (p. 62). Boykin and Noguera (2011) found that the last 25 years have provided ample empirical evidence to support Rosenthal and Jacobson's (1968) claim that low teacher expectations have negatively influenced the academic performance of minority students. Mallinson and Charity-Hudley (2010) suggest that students may internalize these low expectations and therefore not perform to their full potential. Hinnant, O'Brien, and Ghazarian (2009) found that lower teacher expectations for Black

and Latino students are linked to lower reading achievement scores. To combat this systemic problem, Gay's (2004) model of CRP requires a caring teacher who believes that all students have the potential to achieve academic excellence, regardless of their race, ethnicity, gender, economic status, or academic standing. Ladson-Billings (1994) adds that in addition to setting high expectations, culturally responsive teachers perceive that they share the burden of getting students to achieve academic excellence. The CRP teacher is a "warm demander" (Boykin & Noguera, 2011; Gay, 2000) who exhibits "sternness (to the point of reprimanding students who don't live up to expectations) in a way that conveys compassion, unyielding support, and nurturance" (Boykin & Noguera, 2011, p. 76). This warm and demanding presence may be even more important for Black students who are more likely to attribute academic success to rapport with their teacher, as compared to their White peers who are more inclined to attribute academic success to themselves (Boykin & Noguera, 2011).

Another promising practice in Gay's caring domain of CRP is promoting positive and genuine interpersonal interactions between and teacher and students. According to Gay (2004), "the heart of the educational process is the interactions that occur between teachers and students" (p. 46). The interpersonal realm of student-teacher interaction is perhaps the most critical in improving student achievement (Boykin & Noguera, 2011). Gay (2000) noted that interpersonal bias may be expressed in classrooms in multiple ways:

> Students of color, especially those who are poor or live in urban areas, get less
> total instructional attention; are called on less frequently; are encouraged to
> develop intellectual thinking less often; are criticized more and praised less;

receive fewer direct responses to their questions and comments; and are

reprimanded more often and disciplined more severely. (p. 63)

Positive interpersonal interactions may positively impact student achievement. Stevens,

Olivárez, and Hamman (2006), for example, found that positive emotional feedback from

teachers is a strong predictor of math achievement. Recent research in attribution theory,

the belief that people attribute internal and external causes to events and consequences,

has indicated that when students' academic efforts are praised, they are more likely to

view themselves as academically able and are also achieve at higher rates (Boykin &

Noguera, 2011).

The impact of positive teacher feedback and student praise is so powerful that it

can even affect whether students believe intelligence is fixed or malleable. This notion of

intellectual malleability, also known as a *growth mindset* (Dweck, 2006) underlies

students' ability to learn and persist. Students who receive ability-focused praise e.g.,

"You must be really smart at math" are more inclined to view intelligence as fixed when

compared with students who receive effort-focused praise e.g., "You worked really hard

on that problem and I know you can do even better next time." Interestingly, students

who receive ability-focused praise have less desire to persist than students who receive

effort-focused praise (Boykin & Noguera, 2011; Mueller & Dweck, 1998). In addition to

their work on fixed versus malleable intelligence, Mueller and Dweck (1998) found that

overly critical student feedback from teachers negatively impacted student achievement.

In a review of "asset-focused factors," those practices, skills, or competencies which are

"likely to lead to gap-closing outcomes" (p. 69), Boykin and Noguera (2011) found that

positive TSRQ, which includes positive interpersonal interactions and providing positive

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student feedback, contributes to academic achievement, affects student engagement, and has been effective in narrowing the achievement gap in some classes. Many of these asset-factors can be situated within the caring domain in Gay's model.

**Communication.** The second domain in Gay's (2000) conception of CRP is communication. For Gay, communication entails the various communicative patterns that different groups bring into a classroom. Acknowledging that teaching is a mostly linguistic act, Gay argues that communication styles are embedded with cultural values, and that teachers must both be aware of and value communication styles that may be different from their own in order for effective communication to take place in the classroom.

Research in language variation also suggests that allowing students to express themselves in familiar dialects can strengthen their engagement and academic achievement (Mallinson & Charity-Hudley, 2010). The field of sociolinguistics points to the idea that students with linguistic variations that deviate from the dominant culture may be disadvantaged in the educational system, resulting in gaps in achievement for certain groups (Mallinson & Charity-Hudley, 2010). Gay (2004) also emphasizes the inextricable links among language, culture, and communication, arguing for more incorporation of student dialects into classroom discourse, even if the dialect is non-standard English. Strategies for welcoming language variation into the classroom might include having students translate a text into a dialect that is more comfortable to them. In an online environment, strategies for welcoming language variation may include providing opportunities for students to use more informal language (in chat or instant messages, for example) as well as opportunities for practicing with more formal language

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(in academic essays drafts and revisions, for example).

There are several examples of instructional practices that have linked students' home communication styles to school context and have resulted in increased student achievement (e.g., Au, 1980; Deyhle & Swisher, 1997). In addition to linguistic variation, Gay (2000) points out cultural preferences in modes of discourse among some groups. Storytelling, for example, is a mode that is familiar and preferred by some African-American students. Storytelling is a "topic-associative" approach to sharing information rather than the "topic-centered" approach, which is preferred by some European Americans and in academic school work (pp. 97-99). Gay suggests that teachers engage in storytelling as an instructional mode, as well as allow opportunities for students to share in stories.

An additional aspect of communicative variation pertains to how students relate their sense of self to the topic at hand. The dominant communicative pattern of argument construction in schools seats the author as an objective spokesperson or researcher. African-American students, especially those who identify most closely with their cultural heritage, more often present arguments as an advocate, taking a personal position on a topic (Gay, 2000). Boykin and Noguera (2011) suggest that more efforts on personalizing academic communication are likely to increase student achievement among students of color. For example, studies in math achievement indicate that students who work word problems with concrete personal pronouns (like '*you*') rather than abstract signifiers perform better on assessments. Similarly, computer mediated instruction which personalized questions based on student data (ex. first name, birth date) produces similar results (Boykin & Noguera, 2011).

**Curriculum.** The third domain in Gay's (2000) conception of CRP is curriculum. Specifically, Gay's conception of curriculum in CRP pertains to adding relevance by making a more ethnically and culturally diverse curriculum that invites student participation. She asserts that the quality of traditional textbooks are important in offering opportunities for diverse content into the curriculum, but that teachers, too, can make curricular choices to supplement and facilitate a culturally responsive classroom. The goal of a more culturally congruent curriculum is to offer more opportunities for students to build bridges between their lived experiences and their home experiences, thereby finding a way to contextualize new knowledge and find relevance within the classroom.

Certainly, educators should ensure that curricular materials are ethnically and culturally diverse and representative of multiple voices. However, in her discussion of culturally responsive curriculum, Gay includes elements of curriculum that often happen without input from the individual teacher. For example, textbook selection and district level curriculum development often occur with input from only a small number of teachers, or without teacher input at all. Because much of the curricular decisions are made outside of the individual classroom teachers' purview, and because this study focuses on instructional practices, I will limit the discussion of Gay's third domain to the instructional practices that fall within the curriculum domain.

One instructional practice for promoting cultural congruence in classroom materials is for the teacher to regularly supplement existing curricular materials with teacher-selected materials that are multiethnic and that "fill knowledge voids and correct existing distortions" (Gay, 2000, p. 142). Gay recommends that these materials represent

a wide range of types, including articles, literature, music, art, mass media, personal experiences, and images and posts from popular culture.  In addition to expanding types of materials used for learning, Gay says that teachers should model critical reading and analysis in order to question biases and perspectives, inviting students into the discourse about knowledge construction.  This critical questioning both makes the curricular materials more relevant, and also gets to the heart of what Ladson-Billings (1994) describes as the critical consciousness of CRP.

A second practice for promoting cultural congruence in the curriculum is implementing instructional strategies that draw from students' own culture and experiences.  Moll et al. (1992) advocated for drawing upon the "funds of knowledge" that students bring from their homes into the classroom.  An example of using cultural knowledge in the classroom might be to encourage narrative expression of storytelling that is linked to classroom content.  Other strategies include using autobiography in classroom discussions about education and supporting student authors whose voices may have a potential to reach a broader audience (Clark, 2002).  Teachers can invite student participation with relevant curricular materials, asking students to bring in examples from the news and from popular culture (Gay, 2000).

In one experimental study on self-affirmation intervention for African-American seventh graders, Cohen et al. (2006) found that students in an experimental group who wrote about values that were important to them performed better in the class than students in the control group. Researchers studying a unit on the Underground Railroad in third and fourth grade classes found that the use of culturally relevant computer software that included images, narrative and self-check opportunities increased student

engagement in classroom discourse, and that this engagement led to increased student achievement on the unit assessment (Leonard & Hill, 2007).  Students in culturally relevant classrooms identified the main benefit of such classes as facilitating connections between home and school (Howard, 2001).  Drawing upon students' contextual knowledge and cultural experiences can have positive impacts on literacy as well (Boykin & Noguera, 2011; Gay, 2004; Ladson-Billings, 2004).

**Instruction.**  The fourth and final domain in Gay's (2000) conception of CRP is instruction, which Gay calls the "praxis" of culturally responsive teaching (p. 148).  Culturally responsive instruction works to bridge, contextualize, and scaffold learning for students from diverse backgrounds.  Culturally responsive teaching strategies draw upon students' existing schemas to introduce new knowledge, offer opportunities for successes along the way, connect new knowledge with familiar content and contexts, and vary in approach.  Gay (2004) argued that "choice and authenticity are essential to learning" (p. 188), indicating that students might be involved in educational goal setting and audience selection.  Teaching strategies might include offering opportunities for collaborative or group work, or offering a set of choices for the forms of student products.  Strategies could also include allowing students to bring in artifacts, images, or digital media from their own experiences in order to make connections with the learning goals in school.

Gay (2004) described the process of connecting students' home cultures with school content as a move to achieve "cultural congruity" (p. 147).  Multiple studies support the premise that culturally congruent instructional practices promote increased student achievement (Boykin & Noguera, 2011; Gay, 2000).  Boykin, Lilja, and Tyler (2004), for example, found that Black 5th grade students who participated in more

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communal learning activities outperformed their peers who learned in more individualistic conditions. Movement expression within the classroom has also been correlated with increased academic performance for African-American elementary school students (Allen & Butler, 1996; Boykin & Cunningham, 2001). Students in culturally relevant classrooms identified the main benefit of such classes as facilitating connections between home and school (Howard, 2001).

There are several examples of instructional practices that have linked students' home culture to school context and have resulted in increased student achievement. For example, in one study of a Hawaiian reading program, Au (1980) found that Hawaiian children who participated in two years of a culturally relevant reading program—one in which they utilized the Hawaiian custom of the "talk-story"—showed improvements in reading comprehension scores. A second example comes from a ten-year ethnographic study of Navajo students. Deyhle and Swisher (1997) found that students who attended the more culturally familiar high school with more Navajo teachers and with opportunities for instruction in the Native language had a significantly lower dropout rate than students who attended the more culturally distant high school. A third study in multimedia integration among African-American elementary school children found that use of culturally relevant media in learning had positive effects on classroom engagement for both students and teachers (Leonard & Hill, 2007). Leonard and Hill (2007) found that integrating digital images into an elementary school discourse on the Underground Railroad increased student and teacher engagement, supported inquiry, and promoted learning in the affective domain.

Research in language variation also suggests that allowing students to express

themselves in familiar dialects can strengthen their engagement and academic achievement (Mallinson & Charity-Hudley, 2010).  The field of sociolinguistics points to the idea that students with linguistic variations that deviate from the dominant culture may be disadvantaged in the educational system, resulting in gaps in achievement for certain groups (Mallinson & Charity-Hudley, 2010).  Gay (2004) also emphasizes the inextricable links among language, culture, and communication, arguing for more incorporation of student dialects into classroom discourse, even if the dialect is non-standard English.  Strategies for welcoming language variation into the classroom might include having students translate a text into a dialect that is more comfortable to them.

Another culturally responsive instructional strategy is to implement real-life assessments in course work.  Rooted in experiential learning, these kinds of assessments can encourage students to complete "real-life" or performance tasks (Wiggins, 1990).  Authentic assessments may allow for students to engage in their learning by making choices about their topics and/or final products.  Clark (2002) suggested that instructors should ignore students' prior performance as indicated by standardized tests and course grades, focusing instead on alternative, more authentic assessments such as observation of student learning or student-written self-assessments.  Because these types of assessments can engage students in dialogues about their own learning and can foster student agency, authentic assessments are viewed by some as integral to multicultural education and critical pedagogy (e.g., Van Duinen, 2006).  Authentic assessments might include student portfolios, student performances, student self-evaluations, class debates, web development, or letters to the editor, to name a few (Darling-Hammond, Ancess, & Falk, 1995).

The following section includes a discussion of the trends and potential benefits of

K-12 online learning, followed by a synthesis of the characteristics of culturally

responsive pedagogy and best practices in K-12 online teaching, using Gay's model of

CRP as an organizing framework.

**K-12 Online Learning**

K-12 online learning is often promoted as a platform that provides equitable

educational opportunities for diverse students (e.g., U.S. Department of Education, Office

of Educational Technology, 2010). *Online learning* refers to learning that takes place

using a computer, supported by the Internet and use of collaborative digital tools. Online

learning is synonymous with virtual schooling and distance education. The *Handbook of*

*Research on K-12 Online and Blended Learning* defines online learning as learning that

"Delivers instruction and content primarily over the Internet. Used interchangeably with

Virtual learning, Cyber learning, e-learning. Students can participate in online learning

through one course (supplemental), or through a fully online school or program" (Watson

& Murin, 2014). In K-12 online learning, the online teacher is generally located at a

distance from the students' enrolled in the online course.

*Blended learning* is a term used to describe learning that combines face-to-face

and online instruction. The *Handbook of Research on K-12 Online and Blended*

*Learning* operationalizes blended learning as "a formal education program in which a

student learns at least in part through online learning; with some element of student

control over time, place, and/or pace" (Ferdig & Kennedy, 2014, p. 4). Watson et al.

(2014) noted that unlike online learning, in which a teacher teaches students who are at a

different geographic location using an instructional system on the Internet, blended

learning, which may comprise any blend of online and face-to-face instruction, can take different forms in different contexts.  Generally, blended learning incorporates digital tools or content in order to replace or supplement part of a traditional class (Watson et al., 2014).  This study focused on *online learning*, or learning which occurs via the Internet between students and an online teacher.  However, it should be noted that as technology and digital tools evolve, the terms *online learning* and *blended learni*ng are often discussed together.

Distance and distributed education models like correspondence courses have been in existence for some time.  However, it wasn't until 1997 that the first two K-12 virtual programs—the Virtual High School and the Florida Virtual School—emerged (Barbour & Reeves, 2009).  Online and blended education has grown rapidly over the last twenty years.  By the end of 2010, students in 48 states and the District of Columbia had access to online or blended learning opportunities (Watson et al., 2010).  Online learning is one of the fastest growing areas of education (Rose & Blomeyer, 2007).

K-12 online learning programs can take on various forms.  Virtual programs may be state-funded, regionally supported, or locally maintained (e.g., by individual school districts). K-12 online learning can take the form of full-time virtual charter or private schools, or part-time supplemental programs.  In addition to differences in fiscal and administrative supports, course designs and teaching models can vary greatly among virtual programs.  Courses may be fully online, with no face-to-face meetings between students and the teacher, or may follow a blended model, with a mix of face-to-face interaction, online communication and course work.  Some online learning programs may be self-directed, in which a student might work through a course at his or her own pace

without the help of an online instructor, such as NovaNET (Watson et al., 2010). Many

online courses, though, are teacher-led or teacher-facilitated. In teacher-facilitated

courses, students may have options to communicate with the teacher and classmates

asynchronously (not in real time, using discussion boards or email messages, for

example), synchronously (in real time, using phone conversations, instant messaging, or

Web conferencing), or a combination of the two (Barbour & Reeves, 2009).

**Trends in K-12 Online Learning**

K-12 enrollments in online learning programs have risen tremendously during the

past several years, and this growth trend is expected to continue (Horn & Staker, 2011;

Picciano & Seaman, 2010; Watson et al., 2010). There are currently more than one

million pre-collegiate American students enrolled in at least one online course.

Currently, all but four states have a state-supported online learning program, and five

states now require that students complete one online course as a requirement for high

school graduation (Watson et al., 2010). In a survey of school and district administrators,

the top reasons given for offering online learning to K-12 students include offering

courses that would not otherwise be available, meeting specific student needs, allowing

course retakes, reducing scheduling conflicts, and the inability to find experienced or

qualified teachers to teach some courses face-to-face (Picciano & Seaman, 2010).

In 2009, the U.S. Department of Education sponsored a meta-analysis of existing

quantitative studies pertaining to learning outcomes in face-to-face, hybrid, and purely

online learning. The meta-analysis found that online learning fared as well or modestly

better than face-to-face instruction in terms of students' learning outcomes. Additionally,

hybrid or blended models tended to show more significant gains in student learning, but

only when compared across studies; not as conditions within the same studies. The meta-analysis also found that as of yet, very few large-scale studies look for evidence-based indicators of online learning (Means et al., 2010).

The 2016 U.S. Department of Education's *National Educational Technology Plan* (NETP) outlines policy recommendations promoting the integration of online learning into more face-to-face K-12 classrooms. Some advocates for online and hybrid learning argue that current educational policy can serve as a roadblock to implementing K-12 online learning (e.g., Watson et al., 2010). However, the National Educational Technology Plan advocates for more implementation of online, blended, and other technology-enhanced learning opportunities. Specifically, the NETP recommends leveraging digital resources and online spaces in order to engage students and to facilitate individualized instruction that can be completed anytime and anywhere. Whereas students have historically been limited by their geography, the NETP suggests that online learning offers some students the opportunity to take courses that do not exist in their school or district, and that online mentoring holds potential for providing additional supports for struggling students. The plan recommends providing multiple pathways to learning (ex. face-to-face, blended, online, internship) so that students can individualize their learning experience and gain a sense of agency in selecting their own learning paths. The NETP also recommends that teachers leverage technology in order to design relevant instruction. For example, teachers might use online communities and social networking platforms to engage students in real-world research and problem-solving. The plan calls for increased professional development in online and blended learning for K-12 teachers:

institutions of higher education, school districts, classroom educators, and

researchers need to come together to ensure practitioners have access to current

information regarding research-supported practices and an understanding of the

best use of emerging online technologies to support learning in online and

blended spaces. (U.S. Department of Education, Office of Educational

Technology, 2016, p. 37)

Other federal initiatives such as the Obama administration's *Digital Promise* campaign

suggest additional indicators of the connections between the integration of digital tools

and increased student engagement and equitable access (Duncan, 2011).

**Online learning for struggling students.** In recent years, blended learning has

been lauded as a promising model for students who have been deemed *at-risk*. In the

hybrid or blended model of online learning, students work through online course content

that is facilitated by an online teacher or delivered through an online content provider.

This hybrid model emphasizes the importance of face-to-face class sessions with a

learning mentor or facilitator. The face-to-face mentor or facilitator (who may be a

teacher, instructional specialist, librarian, counselor, or para-professional) keeps track of

student progress and work to motivate, encourage, tutor, and remediate students in the

online content they encounter. This model is frequently used to reach students who may

be disengaged or who may be at-risk of dropping out of school (iNacol, 2011; Watson &

Gemin, 2008).

Moreover, recent state and national initiatives seeking to improve high school

graduation rates make online or blended credit recovery a popular alternative to

traditional forms of remediation. In a review of 40 schools or programs that offer

blended learning, Staker (2011) suggested that the recent escalation in use of blended learning could be attributed to three factors:

1. Diminishing budgets are forcing schools to find creative solutions for offering courses.

2. NCLB and the Common Core State Standards Initiative have created an environment in which school leaders must show willingness to seek out and offer increased access to course offerings.

3. For-profit online vendors have recognized a saturation point in the home-schooling market, and are now targeting brick-and-mortar schools.

The combination of market forces, the standards-based reform movement, and the potential that online learning seems to hold for making courses accessible and equitable make the current climate a "perfect storm" for swelling the growth of such course offerings.

**Online learning for increased opportunities.** At the other end of the spectrum, fully online K-12 learning has been upheld as a platform for offering Advanced Placement and elective courses to students who might not otherwise have access them (Picciano & Seaman, 2010; Rose & Blomeyer, 2007; Tucker, 2007; Watson & Gemin, 2008). In 2015, the U.S. Department of Education connected educational technology in schools to issues of equity explicitly in the presentation *Technology as a Tool for Equity* (Cullata, 2015). Richard Cullata, Director of the Office of Educational Technology in the U.S. Department of Education, noted five ways educational technology in U.S. schools can promote equity:

1. Equitable access to high quality digital learning materials,

2. Equitable access to expertise,

3. Personalized learning,

4. Support for planning higher education, and

5. Supporting accessibility.

Director Cullata specifically identified characteristics of personalized learning that align

with characteristics of culturally responsive pedagogy: adjusting the learning approaches

for individual students and tying learning to student interest and experience.  He even

invoked an October 2014 "Dear Colleague" Letter from the Office of Civil Rights which

asserted that the Office "evaluates whether all students, regardless of race, have

comparable access to the technological tools given to teachers and students, along with

how those tools are supported and implemented" (Lhamon, 2014, p. 18).  Within the

letter, Assistant Secretary for Civil Rights Catherine Lhamon identified unequal access to

AP courses and to high quality teachers as civil rights concerns.  These same two issues

are often raised by proponents of virtual courses as issues that virtual schooling can help

to overcome (e.g., Duncan, 2011; Picciano & Seaman, 2010; Rose & Blomeyer, 2007;

Tucker, 2007; Watson & Gemin, 2008).  In fact, virtual schools were even considered an

option for school choice under NCLB legislation: "A virtual school can be among

schools to which eligible students are offered the opportunity to transfer as long as that

school is a public elementary or secondary school as defined by state law" (U.S.

Department of Education, Office of Educational Technology, 2004, p. 13).

**Benefits of Online Learning**

Online learning holds the potential to provide access to high-quality teachers

and/or engaging and challenging curriculum for all students, especially for those students whose geographical circumstances and economic resources prevent them from having access to high-quality instruction.  Inequitable or restricted access to high-quality courses, curriculum, and teachers has been identified as an issue for poor and minority students in particular (Darling-Hammond, 2003; Gay, 2004; Ladson-Billings, 1994).

Berge and Clark (2005) identified four benefits of online learning.  First, virtual programs can expand educational access to students by offering courses that might not otherwise be available to students.  Many online programs, for example, provide Advanced Placement and specialized elective courses (Watson et al., 2010).  Second, online learning can provide high quality course and curriculum materials that may provide more opportunities for students with different or multiple learning styles (Barbour & Reeves, 2009; Berge & Clark, 2005).  Online learning allows students to access course material at any time and in any place, allowing for more flexible scheduling.  The asynchronous nature of communication in an online course can promote more thoughtful or reflective communications (Tinker & Haavind, 1996).  Online discussion boards, for example, allow each student an equal opportunity to participate in a discussion, and may hold particular benefits for students who are usually shy or reflective.

A third benefit of online learning is the potential to build skills and improve student outcomes through 21st century skills development (Barbour & Reeves, 2009; Berge & Clark, 2005; Picciano & Seaman, 2010).  In addition to the traditional content areas covered in schools, 21st century skills include four areas connected to learning and innovation: critical thinking, communication, collaboration, and creativity (Partnership

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for 21st Century Skills, 2011).  Online courses are often facilitated in a Learning

Management System (LMS) such as Blackboard, Desire to Learn or Sakai.  Tools

embedded within an LMS allow for communication and collaboration among students

who may be separated by geographic location.  For example, discussion boards allow for

threaded conversations, blogs allow for student-authored posts, and wikis allow for the

co-construction of content by two or more students.  The ability to collaborate with

students in different locations has the potential to raise awareness of and experience with

interacting with individuals from diverse backgrounds (iNacol & Partnership for 21st

Century Skills, 2006).  A fourth benefit of online learning is the opportunity for

educational choice.  Online learning allows students to choose courses and programming

more aligned with their interests, as well as programs that might provide a more flexible

schedule or setting (Berge & Clark, 2005; Picciano & Seaman, 2010).

Online learning has also been touted as a potential solution to many of the issues

raised by the educational reform movement:

> There has been no shortage of solutions for improving the nation's public schools.
> School leadership, teacher quality, standards, testing, funding, and a host of other
> issues have crowded reform agendas.  But an important trend in public education
> has gone largely unnoticed in the cacophony of policy proposals: the rise of a
> completely new class of public schools—"virtual" schools using the Internet to
> create online classrooms—that is bringing about reforms that have long eluded
> traditional public schools.  (Tucker, 2007, p. 1)

The notion that online learning can provide a solution to educational problems in

achievement, equity, and access is recurrent in the literature on K-12 online learning

(Picciano & Seaman, 2010; Selwyn, 2011; Staker, 2011).

In addition to providing opportunities for more accessible and equitable course offerings and curriculum, online learning can also provide students with more individualized attention and teachers with more opportunities to differentiate instruction (Staker, 2011; Sturgis, Rath, Weisstein, & Patrick, 2010; U.S. Department of Education, Office of Educational Technology, 2010). Differentiated instruction has been identified as the process of adapting curriculum and teaching methods to fit individual learner needs (Hall, Strangman, & Meyer, 2003; Van Garderen & Whittaker, 2006). Well-designed online courses are often offered in an LMS that offers learning analytics for both the students and the teachers' benefit. Learning analytics refers to the data that can be captured, measured, and reported within a learning environment. Time on task, question item analyses, and standards-based mastery are all examples of the different types of analytics that may be captured in the online environment. With better analytics, teachers can potentially make instructional decisions informed by analysis of student data.

The ability to differentiate and individualize instruction to fit learners' needs is also one of the goals and best practices of multicultural education (Brown-Jeffy & Cooper, 2011). Whereas curriculum objectives remain the same for all students, the instructional strategies or models of teaching that teachers use to reach individuals or groups of students may vary (U.S. Department of Education, Office of Educational Technology, 2010). Considering students' contexts in selecting the best match of instructional methods to learning needs is characteristic of *culturally relevant pedagogy*, one of the recommendations of multicultural education (Gay, 2004; Ladson-Billings, 1994).

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**Importance of the Online Teacher**

Perhaps the strongest connection between the literature of CRP and research on K-12 online learning is the importance of the role of the teacher in the classroom, whether that classroom is face-to-face or online. While there do exist online courses that are teacher-less, the bulk of existing literature on virtual schools and programs is focused upon teacher-directed or -facilitated instruction. In teacher-led online learning, the teacher is critical in providing individualized and differentiated instruction through monitoring and implementing formative and summative assessments (Barbour & Reeves, 2009). The teacher is also critical in promoting culturally relevant instruction in online learning:

> For online courses to be culturally responsive, instructors must be not only culturally competent themselves, but must also be able to teach cultural competence to learners so that they are able to build an environment of respect and understanding. Instructors need to model cultural competence for their students and provide opportunities for culturally responsive learning to occur. (Mazur & Courchaine, 2010, p. 2058)

Congruent with the existing literature on the importance of the instructor in online learning, one survey study of higher education online students and teachers found that while online *teachers* indicated that timely feedback and setting guidelines were the most important functions of the online teacher, online *students* rated the top seven functions of the online teacher as those that were centered around "interpersonal communication needs" (Dennen, Darabi, & Smith, 2007, p. 73). Interestingly, one comparative study between face-to-face and online versions of an Algebra course found that students

perceived more teacher support in the online course than in the face-to-face course (Hughes, McLeod, Brown, Maeda, & Choi, 2007). Shea, Li, and Pickett (2006) found that students enrolled in online college courses identified higher levels of learning and community when the online teacher exhibited a very active presence and facilitation in the online course. Teacher presence online has also been positively correlated with increased student satisfaction and with positive perceptions of learning (Palloff & Pratt, 2007; Picciano, 2002). Ninety-one percent of students surveyed at the North Carolina Virtual School identified instructor involvement as either important or very important to their online learning experiences (Dikkers, Whiteside, & Lewis, 2013).

In a report about the state of the nation's virtual high schools, Tucker (2007) identified student support (in the form of onsite mentors and teachers) as critical to those programs that are successful. Thirty-eight percent of students enrolled in one credit-recovery program indicated that the role of onsite human support was one of the benefits of the online delivery model (Harlow & Baenen, 2002). While both multicultural educational research and explorations into online and blended learning point to the teacher as a critical component in student success, not all online learning models adhere to this best practice:

> Among the worst offenders in this regard are some products and programs that call themselves "online." These are often programs that are low-cost, have very low levels of teacher involvement, and require very little of students. They are used primarily because they are inexpensive, and they allow schools to say students have "passed" whether they have learned anything or not. (Watson & Gemin, 2008, p. 15)

Research on the quality of student-teacher and peer interaction in K-12 online learning is sparse. The National Education Policy Center has recommended ongoing evaluation of K-12 online learning in order to assess the effectiveness of the online environment for facilitating social interactions that are expected as part of a quality educational experience (Miron et al., 2013).

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

Despite having emerged as a viable supplement to face-to-face instruction in K-12 schools and despite being lauded as an equalizer by national policies, there is still very little research on the practice of online teaching in the K-12 realm (DiPietro, Ferdig, Black, & Preston, 2008; Ferdig, Cavanaugh, DiPietro, Black, & Dawson, 2009; Miron et al., 2013; K. L. Rice, 2006). Many have noted that online K-12 teaching involves new or additional skills that do not automatically translate from face-to-face teaching (Barbour, 2014; Ferdig et al., 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 be not 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).

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.  The authors qualified their results by noting that their analysis has not yet been supported by other findings from educational research.  Barbour (2014) noted that even widely accepted standards for best practice like the *National Standards for Quality Online Teaching* (iNacol, 2011) have not been validated by research utilizing systematic measures or instruments.  The Ferdig et al. (2009) synthesis concludes with a call for more research on effective teaching practices in K-12 online education, noting that, "The field is currently lacking a strong body of research knowledge that investigates the elements of pedagogy and practice used by successful virtual school educators" (p. 480).

Borup, Graham, and Drysdale (2014) identified a new construct—*teacher engagement*—as a model for describing the practices of successful K-12 online teachers. The authors selected 11 teachers from an effective fully online charter school and conducted two 60-minute semi-structured interviews with each.  The charter school was selected because the overall student pass rates on criterion-referenced tests were 80%, exceeding the state average.  The charter school was also selected because the instructional model provided frequent student and instructor interaction.  Using the community of inquiry model (Garrison, Anderson, & Archer, 2000) as their theoretical framework, the authors focused on *teaching presence*, one of the 3 domains of the community of inquiry model.  The teaching presence domain consists of the instructor's role in the design and facilitation of an online course, which includes creating both instructional and social processes in order to make the learning experience meaningful and worthwhile (Garrison et al., 2000).  Borup et al. (2014) found that the Garrison et al. (2000) model needed more characteristics in order to fully describe the teaching presence they observed in K-12 online teaching.  They identified 6 elements of teacher

engagement among effective K-12 online instructors: designing and organizing, facilitating discourse, instructing, nurturing, motivating, and monitoring.

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. The purpose of this qualitative study of 16 teachers at one statewide virtual school was to produce evidence "aimed at understanding best practice in K-12 virtual schools" (p. 11). However, Barbour (2014) criticized this study for relying solely on teacher self-reports that were not validated through class observation or student performance. Still, the DiPietro et al. (2008) study remains one of the only explorations of perceptions of best instructional practices for K-12 online learning.

**Synthesis of CRP and Best Practices in K-12 Online Teaching**

Seven of the 37 best practices that emerged from DiPietro et al.'s (2008) investigation pertain specifically to teachers' technology skills and content knowledge, such as teachers being

- skilled with the basic uses of technology,
- interested in and enjoy exploring new technologies that have potential value for virtual school environments,
- have extensive knowledge and appreciation of their content areas, and
- extend their content and technological knowledge (p. 17-19).

However, 30 of DiPietro et al.'s identified best practices can be matched to elements in

Gay's (2000) framework for CRP. Table 1 lists 30 of DiPietro et al.'s (2008) 37 best

practices grouped into Gay's four categories for CRP: caring, communication,

curriculum, and instruction.

Table 1

*DiPietro et al.'s (2008) Best Practices Aligned with Gay's Framework for CRP (2000)*

| Domains for CRP | Best Practices in K-12 Online Teaching |
|---|---|
| **Caring** | -Go the extra mile to support student learning<br>-Flexible with their time<br>-Establish a presence in the course to motivate students<br>-Committed to the opportunities offered by virtual high schools<br>-Use strategies to address inappropriate or abusive behavior<br>-Monitor venues of public communication to identify students in personal crisis<br>-Establish strong relationships with school (on site) mentors<br>-Form relationships that support rich interactions with students<br>-Use strategies to connect with students<br>-Engage students in conversations about content and non-content related topics to form a relationship with each student<br>-Monitor student progress and interact with students to determine where gaps in knowledge may exist<br>-Facilitate the formation of community by encouraging content and non-content related conversations among students |
| **Communication** | -Have good organizational skills<br>-Motivate students by clearly organizing and structuring content<br>-Embed deadlines within the content structure to motivate students in self-paced courses to complete course requirements<br>-Encourage and support communication between students<br>-Interact with students using multiple channels of communication (telephone, IM, etc.)<br>-Provide students with quick feedback to maintain their motivation for completing the course<br>-Model what 'formal' online communication looks like in discussion boards and emails<br>-Effectively monitor their tone and emotion of their communications with students |
| **Curriculum** | -Have a deep understanding of the varying learning styles of their students<br>-Build in course components to reflect the interests of students enrolled in the course<br>-Provide students with multiple opportunities to engage content in ways that suit varying learning styles<br>-Seek out and make available a variety of supplemental support tools to meet the needs of diverse students<br>-Consider issues of student access to technology when integrating web based components into their course |
| **Instruction** | -Use student and course data, as well as other sources of information available to them to self-evaluate the pedagogical strategies they use<br>-Use multiple strategies to assess student learning<br>-Use alternative assessment strategies that allow students the opportunity to represent their knowledge in ways that are personally meaningful<br>-Use alternative assessment strategies to accommodate the varying learning styles of their students<br>-Are flexible in their use of pedagogical strategies to accommodate varying learning styles |

Note: Adapted from "Best Practices in Teaching K-12 Online: Lessons Learned from Michigan Virtual School Teachers," by M. DiPietro, R.E. Ferdig, E.W. Black, and M. Preston, 2008, *Journal of Interactive Online Learning, 7*, p.16-27, and from *Culturally Responsive Teaching: Theory Research and Practice* by G. Gay, 2000. Copyright 2000 by Teacher's College Press.

**Caring.** Gay (2000) identified both (a) teacher attitudes towards students and (b) the teacher's ability to facilitate a community as criteria in the caring domain of CRP. Twelve of the practices identified in DiPietro et al. (2008) fit with Gay's (2000) caring domain. Borup et al. (2014) identified nurturing as one of the six elements of teacher engagement. Nine of the 11 teachers in the study indicated that they "worked to develop and nurture caring relationships with students" (p. 800).

Valasquez, Graham, and West (2013) studied how teachers facilitated caring interactions in an online high school. The authors called the caring that happens in the online learning context *technology-mediated caring* (par. 18). They identified six characteristics of technology-mediated caring: continuous dialogue, teacher-student accessibility, promptness, initiating dialogue, shared experience, and vigilant observation. Teachers in the Valasquez et al. (2013) study engaged in frequent dialogue with students, often initiated by the teacher, in order to get to know their students. They provided prompt feedback to students through messaging, and also utilized chat and video technologies for engaging in synchronous just-in-time interactions. Teachers indicated that collaborative technologies like Google Docs helped to provide students and teachers with shared experiences, and that closely observing students' online interactions with other classmates helped them to learn about their students' needs and respond to them appropriately.

While there is a paucity of research published about K-12 online learning, studies on effective practices in K-12 online teaching are beginning to emerge (e.g., DiPietro, 2008). However, there is considerably more literature available about online learning in higher education. For example, in an effort to identify the best practices that facilitate

caring environments for online nursing students, Plante and Asselin (2014) wrote about the importance of creating social presence. They suggest that caring is expressed through social presence in an online environment. These authors identified 18 ways online nursing instructors can demonstrate caring online, including explicit teacher behaviors like providing prompt feedback, posting communications, using tones of affirmation, and engaging in frequent contact. Many of their strategies, like supporting others, encouraging interactions through teamwork, and promoting a safe environment are aimed at generating social presence. This social presence contributes to a sense of classroom community, a notion that has been identified as an integral component of effective online instruction (Palloff & Pratt, 2007).

*Caring learning communities.* Prior to use of the Internet for educational purposes, distance education occurred via correspondence courses or television satellite courses, in which students were tasked with reading and watching, and then submitted work to an instructor via surface mail (Brown, 2009; Watson et al., 2012). Distance learning was assumed to be an individual experience. However, as technological choices grew, and as predominant learning theories moved from a behavioral model to a constructivist model, an emphasis on the social construction of knowledge in distance education also emerged. Today, much of the literature on online and blended learning suggests that facilitating an online community of practice is fundamental to student achievement and positive experience in online education (Anderson & Dron, 2011; Ferdig & Kennedy, 2014; Palloff & Pratt, 2007).

To date, most of the research addressing community and social presence in online learning is situated within higher education, rather than K-12 schools. One common

finding across multiple studies in adult online learning is the importance of the instructor

in establishing and maintaining a culturally inclusive and supportive online learning

community (Farmer, 2009; Mazur & Courchaine, 2010; Picciano, 2002).  While the

concept of social presence has changed over the years as computer mediated

communication has evolved, Dikkers et al. (2013) suggest that social presence as a

research category "examines the connectedness that motivates participants to take an

active role in their own and their peers' construction of knowledge and meaning-making"

(p. 158).  The existence of social presence in online learning has been correlated

positively with students' perceived learning and course satisfaction (Picciano, 2002;

Richardson & Swan, 2003).  Multiple studies have indicated that that students who

perceived more social presence in an online classroom report higher levels of self-

reported learning and satisfaction with the course (Dikkers et al., 2013; Picciano, 2002;

Richardson & Swan, 2003; Rovai, 2002b; Sadera, Robertson, Song, & Midon, 2009).

Dennen et al. (2007) found that both students and instructors correlated course activities

that contributed to teacher-student social interactions with improved satisfaction with the

course.  Such perceptions are important components of online learning, though the online

instructor may need to be more deliberate in their approach than the face-to-face

instructor (Palloff & Pratt, 2007).  Whereas teachers in face-to-face courses can put

students in physical groups, the online teacher must be very organized and intentional

about how to stimulate group norms and collaboration in the online environment.  The

online teacher may need to be more deliberate than her face-to-face colleagues in creating

and facilitating learning activities and interactions that promote and cultivate a caring

online learning community.

*Coalescence* is the notion that members of an online community perceive themselves to be a member of a group (Palloff & Pratt, 2007). Others have described this same phenomenon as connectedness (Dikkers et al., 2013; Rovai, 2002b; Sadera et al., 2009; Shea et al., 2006). Rovai (2002b) found that a sense of community in online college courses was positively correlated with students' perceptions of their own learning. The author also found that this sense of connectedness also improved both cognitive learning and retention. While this research has not been replicated among K-12 students, it may have potential in addressing the needs of students taking online credit recovery courses. If feeling connected to a community improves retention in higher education settings, K-12 educators might consider the effect of community on those students who are at risk of not completing course requirements.

Rovai (2002a) also developed and field-tested the Classroom Community Index, a 20- item instrument for measuring students' sense of connectedness and community in online courses. In addition to Rovai's (2002b) own work, the Classroom Community Index has been used in other research studies on community in online courses (e.g., Ouzts, 2006; Shea et al., 2006). In an instrumentation study of 227 online college students, Ouzts (2006) confirmed that Rovai's Classroom Community Scale was both valid and reliable. In a study of 1067 online students from 32 colleges, Shea et al. (2006) found that students who reported high levels of community on Rovai's Classroom Community Index were more likely to report high levels of teaching presence in their online courses. In a book chapter on current and future directions for research about K-12 online facilitators, Borup and Drysdale (2014) suggested that grounding more K-12 online facilitator studies in existing theoretical frameworks could help to better

coordinate research efforts in this emerging field.  They recommended four frameworks

that have already been used in this line of inquiry, including Rovai's Sense of

Community framework.

**Communication.**  The second domain in Gay's (2000) framework for culturally

responsive teaching is communication.  As noted above, DiPietro et al. (2008) identified

eight best practices of online K-12 teachers that may fall within the communication

domain.  Borup et al. (2014) identified facilitating discourse, monitoring, and motivating

as elements of effective online teaching using the teacher engagement model.  Each of

these 3 elements pertains to teacher-to-student communication in an online course.

In addition to encouraging a variety of communication styles within the classroom

context, Gay (2000) also identified "protocols of participation in discourse" (p. 111) and

"patterns of task engagement and organizing ideas" (p. 112) as elements of the

communication domain.  Two of DiPietro et al.'s (2008) best practices of effective K-12

online teachers, (a) model what "formal" online communication looks like in discussion

boards and emails and (b) monitor tone and emotion, serve to provide the norms for

online communication within the online environment.  Three of DiPietro's et al.'s best

practices of online teachers, (a) have good organizational skills, (b) motivate students by

clearly organizing and structuring content, and (c) embed deadlines within the content

structure to motivate students, may encourage nonlinguistic opportunities for

communication.  For example, having good organizational skills in an online course can

include indicators like logging in consistently every day, checking and responding to

instant messages, organizing the discussion boards, and having explicit grading schemes

and criteria (p. 18).  Motivating students by clearly organizing and structuring content

may include indicators like graphic displays of sequences and learning activities. Embedding deadlines within the content structure to motivate students may include indicators like course calendars. Each of these examples potentially adds layers of non-linguistic communication that support student learning and motivation in the course. These practices reflect Barbour's (2014) suggestion that online teachers take on roles in excess of traditional teacher. Ensuring that material is clearly communicated to students aligns with Gay's (2000) notion of the patterns and organization of ideas.

At the heart of the communication domain is the idea that culturally laden communicative patterns are welcomed into the classroom. While the best practices identified in DiPietro et al.'s (2008) research do not specifically address the cultural aspects of language and communication, two of them—(a) encourage and support communication between students and (b) interact with students using multiple channels of communication (telephone, texting, etc.)—do allow for multiple voices and modes in the online classroom. The idea that educational technology platforms themselves may have cultural biases has only recently begun to be explored.

*Communication platforms in online learning.* Discussion boards are common areas in learning management systems that provide an area for asynchronous text-based discussion. Discussion boards provide a platform for interaction among students and between students and teachers, and provide space for engaging in dialogue about class topics and for negotiating roles and tasks in group learning activities (Collins, 1998; Hanson, 2002). Discussion boards may also be leveraged to provide opportunities for students to communicate informally about topics unrelated to the content of the class. Teachers can model best practices for online conversations and can also provide students

with opportunities to lead and facilitate class discussion (Palloff & Pratt, 2007). Students who are typically shy or reflective may find that the asynchronous discussion provides even more opportunity for participation than a synchronous discussion, which may be dominated by only a few (Brown, 2009; Carter, 2000). Taking turns facilitating threaded discussions is one way to model culturally responsive teaching in an online class (e.g., Mazur & Courchaine, 2010). For example, George Washington University's online bilingual special education course is based on a culturally responsive framework of instruction (Mazur & Courchaine, 2010). Within this course, culturally and linguistically diverse students take turns facilitating asynchronous discussions in groups of 6 students. The discussions are student-centered, and can be supplemented with any materials that students would like to select (ex. web links, images, and articles). Thus, students take turns sharing life experiences and examples that are personally relevant to them, and then make personal connections to the overall content of the course.

In addition to discussion boards, a typical LMS includes multiple tools for communication. These may include chat or instant messaging tools, email, blogs, wikis, journals, assignment areas, and collaborative group spaces. With a variety of available tools comes a number of opportunities for varied communication with and among students. However, some researchers are beginning to question whether the tools and learning platforms themselves contain cultural biases (e.g., Finkelstein et al., 2013; Heemskerk, Brink, Volman, & Dam, 2005). For example, in his dissertation study, Brown (2009) suggested that the online learning platforms and educational technologies used by the study's participants might have a male European slant, based on the backgrounds of designers and engineers. Brown argued that courses delivered online

draw heavily from mass media sources, and that and that instructional content therefore may be unintentionally biased toward Western male worldviews. Brown (2009) suggests that instructors who are cultural insiders may "be more aware of stereotypes and be able to detect when White knowledge construction has framed what is considered truth" (p. 28).

In an attempt to discover the extent to which people are beginning to research this intersection of educational technologies and socioeconomics, Heemskerk et al. (2005), through an extensive review of literature, found 50 educational studies from a 10-year period that explored these topics. They found that researchers were beginning to ask research questions about inclusivity and educational technologies, and grouped the studies into three main research strands: inclusive content, inclusive visual and audio interface, and inclusive structure. Based on this grouping, the authors developed an index for inclusiveness of educational tools, which includes representing different groups and perspectives in course content, representing different groups and group values in the course interface, and incorporating a variety of instructional strategies.

*Communication styles.* Other researchers have begun to explore the impact of technology-enhanced, culturally relevant communication styles on student achievement. Finkelstein et al. (2013) studied a virtual peer program in which students were partnered with an online peer. They found that culturally congruent technologies had a positive impact on the academic performance for low SES African-American elementary school students. The program was designed with a series of audio recordings intended to help students with science concepts. All students in the study spoke African-American Vernacular English (AAVE) to varying degrees. Students were randomly assigned a

virtual peer mentor in one of 3 conditions: the peer mentor spoke Mainstream American English (MAE); the mentor spoke AAVE; the mentor code-switched between AAVE and MAE. Researchers found that students who were partnered with the virtual peer mentor who spoke AAVE exhibited Strong Scientifically Reasoned Arguments (SSRA) as compared to students who were partnered with a mentor who spoke MAE. The results of this study may indicate that culture and dialect should factor into the design of educational technologies. Culture may indeed matter even in online environments.

Others have noted that digital communication tools can improve literacy, but the implementation of digital tools into the curriculum may be inequitable (e.g., Warschauer, 2007; Warschauer, Knobel, & Stone, 2004). According to Warschauer (2007), laptop and digital technologies hold great promise in K-12 literacy instruction, although socio-economic barriers persist. In a multi-site case study of one-to-one laptop programs, Warschauer found that providing students with constant access to a laptop changed the nature of literacy instruction:

> Literacy practices in the laptop classroom became more autonomous, with students having greater control over content and pacing. Practices became more public, with greater opportunities for students and teachers to see student work, and were more frequently authentic in purpose and audience, as opposed to being produced for the sake of a grade. (p. 160)

The characteristics that Warschauer (2007) observed, student choice, public audience, and authentic learning, are also characteristics of culturally responsive pedagogy. However, in an earlier study, Warschauer et al. (2004) found inequities in the ways in which instructional technology was implemented for learners in low-SES schools versus

learners in high-SES schools. The authors found that students in low-SES schools were more likely to use educational technologies for drill-and-practice activities, while students in high-SES schools were more likely to use educational technologies for analyzing and creating student products. Thus, while digital tools and technologies hold potential for supporting characteristics of CRP into a classroom as indicated by Warshauer's (2007) study of one-to-one districts, it is possible that the implementation of digital tools remains inequitable for different socio-economic groups.

However, with careful implementation and/or with deliberate facilitation from an instructor, online communication tools have potential for allowing students to interact in meaningful ways with students from different backgrounds. For example, Camardese and Peled (2014) found that a carefully facilitated online project helped to bridge cultural differences between students. In a qualitative study of an international book-sharing program (IB-SP) between students from Israel and the United States, the researchers found that teachers, students, and principals all agreed that participation in the IB-SP promoted a better understanding and appreciation of diversity between students. In this case, students use the platforms afforded by technology, both online discussions and live video-conferencing, to complete a collaborative project with international peers.

Whereas the Finklestein et al. (2011) study delves into the cultural communication underpinnings of technology design, the Camardese and Peled (2014) study highlights how facilitated online communication and interaction can impact cultural understanding. In K-12 online learning, effective teachers are expected both to communicate frequently with their students and to facilitate effective communication amongst their students (iNacol, 2011). While teachers may be able to clearly track the

frequency of their communications with students, it may not be as easy to tease out the cultural underpinnings of the communication that happens in K-12 online learning.

**Curriculum.** Gay's third domain, curriculum, pertains to the content and media that are selected as texts and resources for students to use within a class. Specifically, Gay (2000) advocates for the incorporation of content and materials that represent diversity. One of the goals of integrating more culturally responsive curricular materials—identified by Banks (2016) as content integration—is to make course materials more relevant for more students. More diverse content integration can occur through teacher-selected course materials as well as through student-selected materials and resources. Teachers could supplement a unit on The Roaring 20s, for example, by bringing in texts from the 1920s written by authors outside of the dominant culture. Students could be asked to bring in lyrics from their favorite songs or authors to analyze during a poetry unit. Borup et al. (2014) found that all but one teacher participant in their study of K-12 online teacher engagement noted that they consistently modified curriculum for their online learners in order to make the learning more relevant. They also found that effective online teachers enjoyed being involved in the course design and material selection process, and that those online teachers who were not involved in the course design process expressed frustration about the courses they taught.

Five of DiPietro et al.'s (2008) best practices of K-12 online teachers may fall within the curriculum domain, including (a) building in course components to reflect the interest of the students and (b) seek out and make available a variety of support tools to meet the needs of diverse students. If curriculum is defined here as the integration of culturally relevant course materials, building in course components that reflect the

interests of the students is reflective of CRP. A 2015 National Education Policy Center

report on finding equity in K-12 education recommended that incorporating culturally

responsive curricular materials into teaching is key to achieving educational equity: "The

content of the curriculum should be affirming and relatable for all students, and teachers

should be prepared to engage in culturally-responsive teaching practices that account for

language, culture, and socio-emotional perspectives of their students" (J.K. Rice, 2015, p.

9).  Teacher participants in DiPietro et al.'s (2008) study describe the importance of

providing different types of tools and resources to meet different learning needs.  One

teacher mentioned having multiple resources curated in her Blackboard (an LMS course

area so that she could point different students to different resources depending on their

interest and needs.  Supplementing a course with a variety of tools and materials to meet

the needs of different students is one way to work toward a more culturally responsive

pedagogy.

   ***Universal Design for Learning.***  Research in online education is just beginning to

indicate the importance of making course content and instructional methods culturally

relevant.  One framework that has emerged as a potential platform for developing more

relevant content and curriculum is Universal Design for Learning (UDL).  Born out of the

need to provide accessible and engaging learning activities for students with disabilities,

UDL has gained popularity as a design framework that decreases barriers and promotes

variability in learning, thereby reaching more students, such as students with disabilities,

English language learners, and students from diverse socioeconomic and cultural

backgrounds.  UDL is grounded in brain-based research, which indicates that learning

takes place in three networks within the brain- recognition, strategic, and affective.  UDL

guidelines are aligned to these three networks.  Principle 1, that teachers should provide

multiple ways of representing knowledge and content, aligns to the recognition network.

Principle 2, that teachers should provide multiple ways for students to express their

understanding of new knowledge, is based on the strategic network.  Principle 3, that

teachers should find multiple ways to engage students in learning, is tied to the affective

network (CAST, 2011; Israel, Ribuffo, & Smith, 2014).  The more educators can offer

multiple ways of engaging students in each of these 3 domains, the more likely they will

be to reach more learners, according to the UDL framework (Israel et al., 2014).

UDL has gained considerable attention from policy makers and program

administrators.  The framework is referenced within the *Higher Education Opportunity*

*Act of 2008*, the *National Standards for Quality Online Teac*hing, and in the *National*

*Educational Technology Plan* (NETP) from the U.S. Department of Education as a

framework for providing equitable educational experiences for diverse learners.  The

NETP recommends that new digital learning resources be based on UDL principles in

order to support multiple means of representation of course content.  One example of

UDL in practice is the Virtual History Museum (Bouck, Courtad, Heutsche, Okolo, &

Englert, 2009).  The Virtual History Museum (http://vhm.msti.edu) is a Web-based site

for teachers to create, curate, customize, and share historical exhibits with their students.

The Virtual History Museum (VHM) aligns to the UDL framework because it provides

teachers with a way to collect and curate multiple texts, artifacts, images, audio files, and

web links in any given social studies exhibit.  Students can access these varied resources

either through text or through text-to-speech technology.  Thus, the variety of content

options supports the multiple ways of representing knowledge, UDL Principle 1.  The

VHM includes multiple learning activities that teachers can mix and choose from; for

example- diary entries, short questions and answers, and compare and contrast charts, in

order to give students multiple ways of expressing their knowledge, UDL Principle 2.

Finally, teachers can set up individual, whole-class, or small group learning experiences,

and the exhibits can be accessed anywhere there is an Internet connection—at school, at

home, or elsewhere.  Students have the option to work at their own pace, and to role play

as historians or social scientists.  Each of these features supports the third principle of

UDL, multiple means of engagement.  Thus, the Virtual History Museum not only

facilitates content curation and customization, but also provides multiple learning

activities and scenarios for students to engage and to show their learning.

UDL is one framework for supporting inclusive student learning that holds

promise.  However, despite its presence in policy and legislation, there is still scarce

research that investigates use of the UDL framework in K-12 online education.

Researchers conducting an evaluation of K-12 Algebra I online courses from six well-

known online course providers found that the courses "regularly present students with

opportunities to interact with more than one kind of media," (Bakia et al., 2013, p. 4).

However, only one of the six courses contained multiple means of engagement, and none

of the six included multiple means of expression.  The authors recognized that course

developers are in the early stages of adopting UDL (Bakia et al., 2013).  Still, it may be

that the teacher rather than the content and structure of the course itself can better

facilitate multiple opportunities for student engagement and expression.

Others are looking to UDL to support culturally responsive instruction.  A

consortium of 34 community colleges in Washington State used a universal design

framework for redesigning culturally targeted online courses (Hai-Jew, 2008). As part of the Enduring Legacies Reservation-Based Project, this course redesign project attempted to build culturally responsive online English courses for Native American students. However, the author's description of universal design was broadly defined as "barrier-free" learning, rather than the more common three-principled approach outlined in this literature review and in much of the K-12 literature (e.g., Bakia et al., 2013; Bouck et al., 2009; CAST, 2011; Israel et al., 2014). While the culturally sensitive redesigned English courses were not tested for efficacy, anecdotal student reaction to the courses was generally positive (Hai-Jew, 2008). Van Garderen and Whitaker (2006) argue that while the principles of UDL and multicultural education are often discussed synonymously as frameworks for supporting student learning for diverse learners, practitioners have difficulty implementing these models in the classroom. Indeed, concrete examples of UDL in practice are difficult to find (Bouck et al., 2009).

Thomas Tobin (2014), Coordinator of Learning Technologies at Northeastern Illinois University, offers strategies for making online courses more aligned to UDL standards, including providing students with multiple paths through the curriculum, allowing them to choose which medium and methods to use to express themselves, breaking content into sequential chunks, and selecting technologies that are open and accessible for all students. A study of one online undergraduate teacher education course revealed that students rated course design components highly that were aligned to UDL principles (Ye, 2014). UDL shows promise as a framework that promotes multiple voices, modes, and forms of expression both in the online and face-to-face classroom. But, UDL is missing a critical component of multicultural education: the formation and

facilitation of a learning community.  In addition to that, UDL is based on the premise of accessibility for all learners, but is most often considered with reference to students with disabilities.  While the framework is certainly a valuable starting point for considering culturally responsive online pedagogy, considered alone, it may unwittingly support a deficit model of education.  Because the framework emerges from work with students with disabilities, relying on UDL alone to support culturally responsive pedagogy implies that culture may be a barrier in the classroom.  However, proponents of culturally responsive teaching practices consistently point to the need to celebrate the assets that culturally diverse students bring to the classroom, rather than consider them as obstacles to overcome.  Additionally, UDL has been identified as a framework for promoting individualized and personalized learning (Bakia et al., 2013).  Instead, CRP seeks to welcome and celebrate diverse perspectives within the classroom by engaging students in critical participation, which may include the co-construction of content and curriculum (Banks, 2006; Gay, 2000; Ladson-Billings, 1994).

A well-designed online course can offer multiple ways to access course content (e.g., text, video or audio), multiple options for self-expression, and multiple opportunities for students to share their own images, links, and media.  Farmer (2009) recommended that culturally responsive online courses include easy navigation, images and concept maps, self-checks for understanding, opportunities for student-choice, clear directions and expectations, and a varied resources and materials.  Gay (2000) recommended that culturally responsive teachers engage in critical analysis of texts, images, and documents in order to be better equipped to engage students in culturally responsive curriculum.  Some have proposed that the very medium of online learning has

the potential to align with the goals of multicultural education.  Carter (2000), for example, suggested that tools included within the LMS like discussion boards allow students to engage in critical yet non-threatening discussions and debates, and therefore have emancipatory potential.  Additionally, the Web interface of online courses allows students to easily add their own content into a course area, via Web link, file, image, multimedia project, or collaboratively authored digital works, for example; thereby promoting what some have deemed the *participatory* potential of digital learning (Jenkins, Clinton, Purushotma, Robison & Weigel, 2009; U.S. Department of Education, Office of Educational Technology, 2010).

   ***Transformative curriculum.***  At the same time, others warn about the over-promise of education technologies as tools of emancipation and transformation (Selwyn, 2011).  Selwyn (2011) likened contemporary digital technologies to the adoption of the radio and the television into schools.  At one time, radio and television were thought to hold the potential to revolutionize education, perhaps even making it possible to ultimately replace the need for classroom teachers.  Neither radio nor television had such an impact on public education.  Selwyn (2013) noted that the claims of educational technologies are often "inspirational and exhortative" and that "educational technology is as much a focus for wish fulfillment as it is a focus for accurate forecasting and reasoned analysis" (p. 10).  Others have noted that the contemporary claims of personalized learning harken back to an old rhetoric of educational technologies from the 1980s, a rhetoric that was not substantiated with research then or now (Enyedy, 2014).

   Still, there have been educational technology programs based on culturally responsive curriculum that have inspired transformation (e.g., Scott & White, 2013).

COMPUGIRLS is an NSF-supported program aimed at providing economically disadvantaged girls of color with engaging experiences with computers and educational technologies in a two-year, voluntary after school experience. While the content of the program is centered on technology, the curriculum is based on the tenets of multicultural education and CRP: asset-building, reflection, and connectedness. After completing the two-year program, the COMPUGIRLS, many of whom had no experience with computers or technology prior to participating in the program, expressed confidence in their future potential of becoming technologists and innovators. The authors and project directors suggest that the success of the program is based on the culturally responsive approach to curriculum rather than on the technology instruction.

Online courses should certainly include opportunities for choice as part of their designs; however, it is up to the online teacher to facilitate varied and alternative assessments based on the needs of his or her students. The success of the COMPUGIRLS program can be attributed at least in part to the role of assessment in the program (Scott & White, 2013). At the start of the program, girls are asked to select a research topic that is relevant to them. They refine this topic as they progress through the program, but by the end of the second year, they have multiple projects to share based on their selected topics. So, before they begin any technology-facilitated learning, COMPUGIRLS are "hooked" by the authenticity of the problem to be solved or issue to be researched.

Providing opportunities for students to contribute their ideas and interests as part of class instruction seems to be an integral aspect of culturally responsive online pedagogy. Culp, Honey, and Mandinach (2005) advise that it is time to move beyond

making online content accessible and to move toward exploring ways to make the content and teaching methods relevant and meaningful to the learner. Thus, in addition to considering culture in instructional design, online teachers may need to find online teaching strategies to connect with their students' cultures and experiences.

**Instruction.** Five of the best practices of online K-12 teachers identified by DiPietro et al. (2008) may be categorized within Gay's (2000) final domain of CRP, instruction. Borup et al. (2014) also identified instruction as one of the six elements of teacher engagement. Teachers in the Borup et al. (2014) study reported providing direct instruction online through one-on-one tutoring sessions and through providing "constructive feedback" on student submissions (p. 800). Six indicators of instruction emerged in the Borup et al. (2014) study: tutoring students, providing feedback, teaching technological skills, teaching study skills, and providing whole group instruction (p. 801). The praxis of culturally responsive online pedagogy lies within the instruction domain.

One of the promising practices that emerged in both the literature on culturally responsive pedagogy and the literature on effective online teaching is flexibility and variety in instructional strategies in order to accommodate the needs of learners. Thus, online learning should be adaptable and personalized based on student performance and learning preferences. The National Educational Technology Plan (U.S. Department of Education, Office of Educational Technology, 2016) recommends that states and districts adopt digital technologies and policies that allow for more flexible instruction and assessment in K-12 schools. Flexibility has been identified as one of the characteristics of effective online credit recovery programs (Robyler, 2006). Flexibility in this sense does not necessarily mean self-paced (although that is an option in many virtual

programs), but rather flexible in learning path, assessment choices, and learning activities.  Providing students with choice is one example of a flexible instructional approach.  However, DiPietro et al. (2008) found that flexibility for online teachers also means that teachers are flexible with their own time.  In other words, flexible teachers were willing to schedule last minute meetings or check-ins, often going the extra mile to accommodate student learning.  Finally, the online platform itself can accommodate flexibility in a teacher's instructional methods, from synchronous class meetings to asynchronous discussion board facilitation, to individualized synchronous tutoring sessions.

Another overlapping practice in the literature on culturally responsive pedagogy and effective online teaching is the importance of including a variety of instructional strategies in order to accommodate the needs of the learners.  The *National Standards for Quality Online Courses* include criteria for "multiple learning paths…that engage students in a variety of ways" (iNacol, 2011, p.11).  Teacher participants in DiPietro's (2008) study identified the importance of using a variety of instructional methods as an integral part of their online teaching, noting that different methods worked for different students: "In an online environment, you have many ways to be able to assess a student, discussion boards...[are] really good for students who may not be good test takers but [*sic*] are able to talk about what they are learning" (DiPietro et al., 2008, p. 21). Providing opportunities for student choice in an online course can also promote the incorporation of varied instructional approaches within an online course.  The appeal of educational choice is noted as one of the major benefits of online learning (Barbour & Reeves, 2009; Berge & Clark, 2005).  Barbour (2005) recommended that online course

designers should incorporate more instructional activities related to students' real-life experiences into online courses. Indeed, instructional activities that are relevant to students' lives are indicators of culturally responsive pedagogy (Darling-Hammond et al., 1995; Gay, 2000; Ladson-Billings, 1994).

Three of the strategies identified in DiPietro's (2008) best practices for instruction pertain to assessment. These include using multiple strategies for assessing learning, using alternative assessment strategies that help students find personal meaning in new knowledge, and using alternative assessment to accommodate varying learning styles. Jeanne McCarthy (2014), a former virtual school principal, stated that quality online programs engage students in authentic forms of assessment. Tools and technologies like blogs, wikis, discussion boards, collaborative documents, and quizzing applications can help to support a variety of assessment types in online courses. For example, blogs and wikis potentially allow students to author or create products for a public audience. The learning management system quiz tools allow teachers to construct informal surveys, guided reading practices, formal exams, and a number of other possible question and answer activity types. In a report of recommendations for at-risk online students, Sturgis et al. (2010) recommended meaningful assessments and just-in-time formative assessments as motivators for over-aged, under-credited students in online credit recovery. Just-in-time formative assessment provides students and teachers a way to check student learning (through the use of quizzes, self-checks, surveys, or other activities) during or near the very same time that the learning is taking place.

The ability for online teachers to track and monitor student progress has been lauded as one of the affordances of online learning (K.L. Rice, 2014). Most learning

management systems track large amounts of data on student performance and access. Dickson (2005) and Borup et al. (2014) both found that effective online teachers monitor student progress through analytics provided through learning management systems. Dickson (2005) found that higher numbers of clicks within Blackboard correlated with higher student achievement. In other words, students who clicked the most may have been more actively engaged in the class, and also had higher grades and scores. Online teachers can monitor both student logins and content access, and reach out to students who may be falling behind or working ahead. Borup et al. (2014) found that while all teacher participants in his study used analytics, teachers also indicated that data and analytics were no replacement for teacher-student interaction. Teachers reported using other methods to check for understanding and to motivate students, including verbal check-ins and video meetings. Online teachers can leverage the learning analytics to follow student performance in order to intervene and modify instruction as needed. However, sophisticated analytics are still no substitution for student-teacher interaction, according to online teachers in the studies cited above.

### New Research in K-12 Online Learning

Taken together, there is much overlap between best practices in CRP and best practices in online teaching. A synthesis of both bodies of work makes those connections more explicit. At the same time, research into how CRP occurs in the K-12 online platform is still scarce. The 2015 report from the National Education Policy Center on Virtual Schools in the U.S. recommended that much more research is needed in order to determine what skills, qualifications, and dispositions are associated with effective online teaching. Recognizing that state and local policies promoting online learning are out-

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pacing the knowledge based on K-12 online teaching, the report suggested that "the academic realm may need to take the lead—without legislative mandate—on conducting effective research to better understand these questions surrounding online teachers" (Huerta et al., 2015, p. 22).

Much of the existing empirical research has been completed in higher education settings. The research in K-12 online learning is greatly lacking (Barbour & Reeves, 2009; Goodfellow & Lamy, 2009; Rose & Blomeyer, 2007). Cavanaugh et al. (2009) identified four areas for research in K-12 online learning:

1. Explore the best instructional strategies and practices for online learning.
2. Determine the qualities of students that tend to be successful in online learning and provide supports for those students who may lack those characteristics.
3. Find ways to increase communication between brick and mortar and virtual classmates.
4. Examine the quality of student learning experiences in online learning, "especially those of low-performing students" (p. 13).

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).

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 achievement gap and can provide engaging courses and curriculum for all students, it is imperative that more research into what works for

culturally diverse students be done. The potential benefits to the field of online learning and teaching are great. Even greater are the potential benefits for those students who are enrolled in the growing numbers of fully online and hybrid K-12 courses. This study focused on culturally responsive pedagogy, but some suggest that implementing culturally responsive teaching practices will actually end up benefitting all students (Clark, 2002). Thus, the results of this study may benefit not only culturally diverse learners, but also all learners enrolled in fully online classes, as well as the teachers who instruct them. Teachers can potentially learn from their colleagues in the field about the types of instructional strategies that best facilitate a culturally responsive online course. This study sought to discover the practices of culturally responsive online teachers. Before we know what these practices are, we cannot claim with certainty that online learning can be facilitated by an equitable and culturally relevant pedagogy.

**Chapter Three: Methods**

K-12 online learning has emerged as a potential vehicle for educational reform, 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). In 2010, the U.S. Department of Education reported that online learning is as effective as face-to-face teaching (Means et al., 2010). By 2014, five states required that high school students complete at least one online class as a part of those states' graduation requirements. Advocates for increased online learning in K-12 contexts often 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). At the same time, research on best practices in K-12 online education is lacking. There have been few studies investigating the curricular and instructional choices that promote culturally responsive online pedagogy.

In this study, I sought to discover the ways in which culturally responsive teaching happens online. I focused 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.

**Research Focus**

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 teacher dispositions and practices of selected culturally responsive online teachers.  The study was thus situated in an interpretivist research paradigm (Rossman & Rallis, 2003).  By conducting interviews and course observations, and by analyzing the data using the methods of grounded theory, I was able to discover the ways in which four full-time online teachers practiced culturally responsive online pedagogy in their online secondary courses.

 **Research Design**

The research paradigm for this study was interpretivist.  A paradigm is the lens through which the researcher views the world (Erlandson, Harris, Skipper, & Allen, 1993).  Paradigms connect the researcher's epistemology, or way of knowing, with research frameworks and methods that align to the researcher's epistemology (Glesne, 2006; Rossman & Rallis, 2003).  The epistemological underpinnings of the interpretivist paradigm rest on the assumption that knowledge is subjective, and that reality and human understanding are socially constructed (Glesne, 2006).  Interpretivists seek to "understand the social world as it is (the status quo) from the perspective of individual experience" (Rossman & Rallis, 2003, p. 46).  Interpretivism is grounded in social constructivism (Creswell, 2013).

Social constructivism is the theory that reality is socially constructed, but individually held, and therefore likely differs from individual to individual. Whereas

positivist researchers rely on the assumption that reality is objective and can be approximated through scientific inquiry, social constructivists foreground the role of human experience in the construction of reality; realities which are thereby mediated through language, mores, and individual experiences and perceptions (Creswell, 2013). As such, social constructivism is situated within a relativist ontology. Ontology refers to the nature of reality. A relativist ontology is the belief that reality is subjective. Premising the role of context in the creation of reality, this relativist perspective undergirds the interpretivist research paradigm, which "often addresses the processes of interactions among individuals" and results in "the researchers mak[ing] an interpretation of what they find" (Creswell, 2013, p. 25).

The interpretivist paradigm does not seek to change or transform the social world, but rather to "construct the meaning of a situation, a meaning typically forged in discussions or interactions with other persons" (Creswell, 2013, p. 25). The interpretivist paradigm was appropriate for this study because I interpreted the resulting data and constructed meaning about the experiences and contexts of selected secondary online teachers. Because there is a paucity of research on online instructional practices in K-12, the interpretivist paradigm provided an appropriate starting place for investigating the practice of culturally responsive online teaching. The study was descriptive in nature, as is much of the existing literature on K-12 online learning (Cavanaugh et al., 2009). When little is known about an issue, descriptive research is "indicative of the foundational descriptive work that often precedes experimentation" (Cavanaugh et al., 2009, p. 2). The interpretivist paradigm provided a lens for constructing the practice of culturally responsive online pedagogy in some teachers' virtual classrooms. In addition

to providing a lens and research framework, the interpretivist paradigm was appropriate

for translating the conceptual framework for this line of inquiry, drawn from

multicultural educational theory, from theory into practice.

**Culturally Responsive Pedagogy Framework**

Multicultural educational theory comprises a number of varying conceptual

schemas and perspectives (Banks, 1995).  Despite having varying conceptualizations and

approaches, there is some consensus about the major goal of multicultural education,

which is, "to reform the school and other institutions so that students from diverse racial,

ethnic, and social class groups will experience educational equality" (Banks, 1993, p. 3).

Much of the literature in multicultural education is rooted in critical theory.  Whereas

studies situated with an interpretivist research paradigm seek to construct the meaning out

of what *is*, the critical research paradigm seeks to transform the status quo by

investigating how power structures imbue issues of race, class, and gender in education.

Indeed, it is the transformational potential of multicultural education that undergirds

much of the work of researchers and theorists in multicultural education (e.g., Banks,

1995; Gay, 2000; Ladson-Billings, 1994).   Still, some multicultural theorists have argued

that the proliferation of research in multicultural education has outpaced the application

of multicultural education in practice (Banks, 1995).  I chose to situate this study in an

interpretivist paradigm rather than a critical paradigm in order to generate a description of

culturally responsive online teaching practices.  The goal of this research was not to

examine power and privilege in K-12 online learning, although this is certainly an area of

research that needs to be explored.  Rather, as a practitioner, my research focused on

interpreting the perspectives and practices of effective online educators in order to

construct a grounded, local theory of culturally responsive pedagogy. Thus, I

incorporated elements of multicultural education, specifically, culturally responsive

pedagogy, in order to provide a theoretical framework for my interpretivist inquiry into

what culturally responsive online pedagogy looks like.

Recall from Chapter 2 Banks' (2016) five domains of multicultural education:

content integration, knowledge construction, prejudice reduction, equity pedagogy, and

empowering school culture. Banks argued that research must be undertaken in each of

the five domains if multicultural education is to be impactful. In online education, it may

be difficult to parse content (or curriculum) from instruction because both content and

curriculum are embedded within instructional activities. The extent to which teachers are

directly involved in the online content development greatly varies by schools and school

districts (Cavanaugh et al., 2009). Since the course content and the online teacher's

facilitation of that content are inter-related and observable, it would be difficult if not

impossible to observe one in isolation. Both Gay (2000) and Ladson-Billings' (1994)

conception of CRP included room for content and curriculum (for example, incorporating

readings from diverse authors and using images and media from popular culture that are

representative of a diverse population). Of Banks' five domains of multicultural

education, the inextricable nature of the facilitation of an online course with its associated

course content aligns most closely with the content integration and equity pedagogy

domains.

Bennett (2001) conceived of four domains of research in multicultural education:

curriculum reform, equity pedagogy, multicultural competence, and societal equity. In

Bennett's model, equity pedagogy includes using culturally responsive instructional

methods and creating positive school and classroom climates. Bennett's conception of curriculum reform includes detecting and eliminating bias in textbooks and other educational materials. Thus, this study was most closely situated within two of Bennett's domains as well: curriculum reform and equity pedagogy. Bennett's notions of curriculum reform and equity pedagogy align closely with Banks' notions of content integration and equity pedagogy. Taken together, these curriculum and instruction domains serve as a theoretical primer to culturally responsive pedagogy.

In attempts to operationalize CRP, both Gay (2000) and Ladson-Billings (1994, 1995a, 1995b) provided examples of practices that reside primarily within Banks' (2016) and Bennett's (2001) equity pedagogy domain. Still, curriculum, or course content, cannot be parsed from the practice of equity pedagogy in an online course even though teachers have varying levels of participation in curriculum development. Cavanaugh et al. (2009), for example, noted that there is a continuum of course development responsibility in K-12 online learning. In some cases, teachers make all of the content and design decisions. In others, all content is developed by a course or curriculum vendor. Ladson-Billings (1994, 1995a, 1995b) outlined several areas of practice for moving toward equity pedagogy: providing opportunities for student success, scaffolding learning by creating bridges between student understanding and new knowledge, facilitating a class community, and offering opportunities for multifaceted and authentic assessments.

Ladson-Billings (1994) noted that the goal of CRP was three-fold:

1. to provide opportunities for academic success,

2. to provide culturally competent instruction, and

3. to promote critical consciousness in students.

Gay (2000) wrote that the goal of CRP was to improve trends in achievement for marginalized students of color. She described the ways in which culturally responsive pedagogy occurred within four domains: caring, communication, curriculum, and instruction. Examples of strategies in each of Gay's four domains were provided in a graphic representation in Chapter 2 (see Figure 5). Strategies within the instruction domain include varying activities and incorporating authentic assessments. Strategies within the curriculum domain include incorporating multiethnic course material and inviting students to contribute to course content. With the communication domain, Gay (2000) suggested that teachers provide opportunities for self-expressions, and personalize academic communication. Finally, within the domain for caring, Gay suggested that teachers set high expectations, facilitate class community, and engage in positive interactions with students.

Ladson-Billings and Gay are often taken together as the leading theorists and advocates of CRP (Brown-Jeffey & Cooper, 2011). I used Gay's framework to guide the research for this study. Gay's model rests within the Banks' (2016) and Bennett's (2001) domains of equity pedagogy and content integration/curriculum. Gay (2000) references and builds upon the observations of Ladson-Billings (1994, 1995b), so Ladson-Billing's tenets are subsumed within Gay's model. From a pragmatic perspective, Gay's theoretical framework of four domains of practice provided a mechanism for organizing, generating, and analyzing data. Gay's four domains provided a starting place for a priori coding of the data generated within this study.

**Selection of Participants**

This study employed purposeful sampling methods in order to identify culturally responsive online teacher participants. Purposeful sampling occurs when the researcher selects sites and/or participants because they can purposefully inform the study (Creswell, 2013). Participants for this study were selected from State Virtual School (SVS), an online secondary program supported by the state department of education in a Southeastern state in the United States. The five largest state virtual schools in the country are all located in the Southeastern region (Watson et al., 2015). The selected state is both racially and economically diverse. During the academic year that this study occurred, minority students made up the majority of students enrolled in public schools in the state, for the first time.

SVS was the first provider of K-12 online learning in the state. SVS offers fully online courses that are facilitated by a teacher at a distance. 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 home school. Other providers in the state offer course content only, leaving the teaching to local district teachers. 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 an appropriate selection for this study because the teacher-facilitated model aligned more closely to some of the best practices that emerge from CRP. 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 the cohort model provided an opportunity for community-development online (Mazur &

Courchaine, 2010).  Much like the connections between K-12 online learning and issues

of access and equity outlined in Chapter 2, 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.  Most often, SVS students enroll in Advanced Placement and World

Language courses.  However, all courses needed for high school graduation were offered

by SVS.  Most often, SVS students work on their courses from their school's computer

lab, media center, or distance learning classroom at a designated time and as a regular

class in their course schedule.  However, some students work on their SVS courses in the

evening hours.

 **Teacher selection.**  Participants for this study were selected using purposeful

sampling methods.  Purposeful sampling was appropriate for this study in order to

"purposefully inform an understanding of the research problem and central phenomenon

in the study" (Creswell, 2013, p. 157).  In her study of successful teachers of African-

American students, Ladson-Billings (1994) used purposeful sampling to identify study

participants.  She asked school administrators to identify those teachers who were

considered effective at teaching students of color.  I employed a similar strategy.  I asked

two SVS administrators to identify teachers whom they consider to be culturally

responsive online teachers.  I provided them with the Observation Protocol I would be

using to observe courses (see Appendix A) in order to provide administrators with some

indicators of culturally responsive teaching.  They identified 33 full-time instructors.  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, I limited participation to teachers who had at least two full years or four

semesters of work with SVS. Four teachers who were identified by SVS administrators,

and who self-identified as culturally responsive teachers, participated in this study. All

participants completed and submitted a participant consent form at the start of the study

(see Appendix B).

**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). The constant comparative method is the

"process of comparing different pieces of data for similarities and differences" (Corbin &

Strauss, 2008, p. 65). In grounded theory, "our data form the foundation of our theory

and our analysis of these data generates the concepts we construct" (Charmaz, 2014, p.

3). 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 ten to be

descriptive in nature. There are currently scant research studies exploring the nature of

culturally responsive online pedagogy. Thus, through data generation and analysis, a

local grounded theory for culturally responsive online teaching emerged.

**Data generation.** Grounded theories can arise from analysis of rich data

comprising a variety of diverse data types, including interviews, observations, field notes,

and information gleaned from reports (Charmaz, 2014; Corbin & Strauss, 2008). Some of the more frequently used data generation types in qualitative research about online learning include surveys, interviews, observations, and learning analytics (Lowes, 2014). Investigations into culturally responsive pedagogy (e.g., Gay, 2000) have employed similar strategies, as have investigations into the practices of effective online teachers (e.g., Borup et al., 2014; DiPietro et al., 2008; Ferdig et al., 2009). In their case study research on the experience of online at-risk students, Barbour and Siko (2013) employed semi-structured interviews and video observations. In their grounded theory exploration of the best practices of online K-12 teachers, DiPietro et al. (2008) utilized semi-structured interviews to generate all of the data.

In order to triangulate findings from data types and sources, data in this investigation were generated using multiple data types. Data were generated through teacher narrative submissions, through observations of archived courses, and through two-semi-structured interviews with teacher participants. These data types will be described in detail below.

**Teacher narratives.** I asked teacher participants to submit a written response to the following prompt:

Please draw from your life experience, personal teaching philosophy, and/or your experience as a teacher to answer the following two questions:

- To what degree is creating a culturally responsive class environment important to you, and why?

- How do you facilitate cultural responsiveness online?

While the focus of this study was to uncover the practices of culturally responsive online pedagogy, allowing teachers to reflect on their own conception of this term provided narrative data on the values and predispositions shared by culturally responsive online teachers. Such use of "elicited documents" in qualitative research "may elicit thoughts, feelings, and concerns of the thinking, acting [participant] as well as give researchers ideas about what structures and cultural values influence this person" (Charmaz, 2014 p. 47). Participants submitted responses to the narrative prompt via email submission. One teacher participant did not submit a narrative response, despite repeated solicitations. However, this participant participated in both interviews and offered a course for course observation.

**Course observations.** In this investigation, I observed selected archived courses for each participant. In their study of 6th grade virtual language teachers, Murphy and Coffin (2003) observed recordings of synchronous sessions and compiling course communications via email, discussion boards, and blogs in a learning management system. In his doctoral study on multicultural curriculum development in online courses, Brown (2009) also utilized an online observational strategy. In his design, Brown observed online courses by logging into the online course area as an observer. In my investigation, I was granted access to archived courses from the previous academic year. This enabled me to see most of the course content, news item posts, and discussion board conversations without being in a live course area with active students. 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. I did not have access to

private email or assignment feedback communications between the teacher and students. I used an observation protocol (Appendix A) organized around Gay's (2000) conception of CRP to ensure that course observations were similar and consistent. Informed by the *Culturally Responsive Instruction Observation Protocol* (Rightmyer et al., 2008) and the *Culturally Responsive Teaching Self-Efficacy Scale* (Siwatu, 2007), the observation protocol includes a list of 16 "look-fors" four for each of Gay's domains of CRP. I used a spreadsheet application to take field notes on each course. I created a separate page in a workbook for each course, and divided each into four sections representing Gay's model of CRP: communication, caring, instruction, and curriculum. I then uploaded each workbook with field notes into Dedoose, a software for storing and analyzing qualitative research. Course observations allowed me to carefully review the types of instructional activities within each course. I also used course observations to triangulate findings from teacher interviews, and to generate follow-up interview questions for the second teacher interview.

**Interviews.** Many grounded theorists rely on interviews as their primary data type. Intensive interviewing has become the most common type of qualitative data (Charmaz, 2014, p. 18). I conducted two open-ended interviews, 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, and both were structured by interview guides. Intensive interviewing facilitates "an open-ended, in-depth exploration of an area in which the interviewee has substantial experience" while "providing the interactive space and time to enable the research participant's views and insights to emerge" (Charmaz, 2014, p. 85). All interviews were conducted online

using a variety of platforms based on the interviewee's preference. Interviews were

audio recorded. 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. An interview guide is a list of topics or questions that

researchers use to guide an interview. Charmaz (2014) recommends that new researchers

develop a detailed yet flexible interview guide in order to learn how to gather data and

how to ask questions. The interview guide for the initial interview in this study included

the following general topics to address:

1. How long have you been teaching online?

2. How long have you been teaching altogether?

3. Which courses and subject areas do you teach?

4. Describe a typical day as an online instructor

5. Pedagogical practices

    a. If you connect with students online, how do you do so?

    b. If you attempt to make learning relevant, how do you accomplish

       this?

    c. If you try to motivate your online students, how do you do this?

6. How do you create and adapt learning activities in your course?

7. If you facilitate an online community, how do you do so?

8. How do you know about the demographics of the students you teach?

9. What are your beliefs and values pertaining to online teaching and diversity?

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.

A second follow-up interview occurred at the end of course observations. The interview protocol for the second interview was informed by course observations and themes that emerged in the first interview that needed further development. The interview guide for the second interview included the following questions and general topics to address:

1. How has your academic year been so far?

2. Do you feel like you have developed a sense of community with your students? If so, how can you tell?

3. What are some indicators of community in your class?

4. How do you think your job might be different if you taught general education online rather than Advanced Placement?

5. Can you talk about your use of feedback in your teaching? How do you provide feedback, and why?

6. In the previous interview, each of you mentioned the importance of having a dialogue or running conversation with your students. Why is that important, and how do you do it?

7. Are you aware of other models of online instruction other than the teacher facilitated cohort-based model? If so, what are your thoughts regarding those other models?

8. Do you allow students to use informal language in the online classroom? Why or why not?

9. Have you ever had to confront any instances of discrimination in any of your online classes?

10. Do you think it's possible to demonstrate an ethic of care for your online students? If so, how does this happen?

11. I've noticed that teachers spend a lot of time revising their course content. Can you talk a little bit about why that is?

12. Do you think the general public has any misconceptions about K-12 online learning? If so, what are they, in your opinion?

13. Did your students bring up the election at all in your online classes? If so, how did you mediate that?

14. Do you have any final thoughts or anything else you'd like to share about culturally responsive online instruction?

I also asked participants to talk about specific activities, posts, or discussion boards that I had questions about based on my course observation notes. Each interview was transcribed a summarized, and summaries were sent to participants for member checking.

**Reflexive Journal**

A qualitative researcher should be reflexive in his or her approach to research. Reflexivity in qualitative research is the notion that the researcher is aware and

thoughtful about the biases, experiences, and values that he or she brings to the study, and is aware of how such biases might inform the study (Creswell, 2013). While reflexivity may occur subconsciously on some level (Corbin & Strauss, 2008), some qualitative methodologists recommend keeping a reflexive log during data generation and analysis in order to bring those thoughts to the surface (Rossman & Rallis, 2003). The researcher and the research participants are engaged in a social exchange, which may be imbued with values, thoughts, and new ideas. I maintained a reflexive journal during this investigation. Keeping reflexive documentation provides not only a method for keeping track of and justifying research decisions, but provided an initial platform for reflecting on the data. I found the reflexive journal particularly helpful during the data analysis process (see Appendix C). I recorded initial ideas and decisions related to grouping and sorting codes, and relied on the reflexive journal to keep track of decisions as well as the reasons for those decisions, during data analysis.

**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) 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. I first used the reflexive journal, and then Dedoose, to author and store memos related to data analysis. Memo writing is integral in the grounded theory process because "it prompts researchers to analyze their data and to develop their codes into categories early

in the research process (Charmaz, 2014, p. 343).  Memo writing helped to facilitate the development of codes into categories.

**Coding.**  The first step in data analysis was initial coding.  Initial coding involved organizing the data "into small categories of information…and then assigning a label to the code" (Creswell, 2013, p. 184).  Grounded theory coding occurs in at least two segments: 1) assigning a name to each utterance or unit of words, and 2) sorting, organizing, and synthesizing the codes into themes or larger emergent codes (Charmaz, 2014).  Grounded theory methods promote the inductive process of theory-making at the start of analysis.  Thus, coding is open-ended, comparative, and provisional based on the researcher's interpretation of the data (Charmaz, 2014).  I began with a list of a priori codes, or codes selected before the data are analyzed, based on Gay's (2000) four domains of culturally responsive pedagogy: caring, communication, curriculum, and instruction.  A brief definition of each term is provided here:

1. Instruction- Actions that fall within the instruction domain can include decisions related to assessment, differentiation, language variation, and relating students' home experiences to learning.

2. Caring- This domain includes actions and interactions that indicate a culture of caring.  These may include providing encouragement, sharing positive student feedback, setting high expectations, and learning about students' interests and communities.

3. Curriculum- This may include supplementing course content with culturally diverse course materials or inviting students to add course content that is culturally diverse or personally relevant to them.

4.    Communication- This may include offering multiple opportunities for

different types of communication, including offering opportunities for

language variation for informal communication within the class.

The observation protocol was also organized around Gay's (2000) four domains, and

therefore served as a natural starting point.  A priori coding provided a beginning to data

analysis, but other codes emerged that did not neatly fit within one of the four codes.  For

example, each participant described multiple methods and ways of providing feedback on

student assignments.  Thus, student feedback initially occurred within both the

communication and instruction code, and a new code, "student feedback" was also

created.

During initial coding, each discrete was compared to another, and those that were

similar are grouped under a higher-level descriptor (Corbin &Strauss, 2008).  After all

data generated were coded, I ran a co-code occurrence in Dedoose.  I was able to identify

codes that needed to be merged, and some that needed to be re-coded.  For example, I

was able to identify that sometimes when I assigned the code "personalized," I meant

"individualized"; while other times I assigned the code "personalized," I meant human.

After merging and edits initials codes using the co-code occurrence report in Dedoose, I

identified 124 codes after initial coding.  I revisited the data to begin comparing codes to

one another.  I ran code frequency reports in Dedoose, and was able to begin grouping the

124 codes into like groups.  Thus, categories began to emerge.

The process of gathering more data to compare to data that have already been

generated is known as theoretical sampling (Charmaz, 2014).  Theoretical sampling may

inform the next round of data generation, or may involve recoding the existing data, or

both. Theoretical sampling is the process of seeking out new information in order to refine the categories and themes that emerge from data analysis. Theoretical sampling allows the researcher to deepen the properties of the emerging categories and themes "by sampling to develop the properties of your categories until no new properties emerge" (Charmaz, 2014, p. 193). After the initial interviews were transcribed, I noted in my reflexive journal that it seemed like teachers were stressing the importance of having conversations with their students, and that all teachers spoke about the importance of providing student feedback. I was therefore able to structure the second set of interview questions go further explore the notions of dialogue and feedback in order to deeper my understanding of the how these teachers were associating the process of providing students feedback with dialogue.

During axial coding, I ran code frequency charts in order to determine which codes and categories seemed to appear more frequently in the data. Consulting code frequency charts helped me make decisions about which categories were larger categories and which were sub-categories. For example, at the beginning of axial coding I ran a code frequency and 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. I was later able to merge these codes into one category. Once codes were merged into categories, I used post-it notes to create aid in grouping categories. Through grouping and comparing, codes and categories, I developed an initial understanding of culturally responsive online pedagogy that contained dialogue with students at its core, and contained four main categories or ways of communicating with students: personally, communally, instructively, and

authentically. Finally, I revisited the data once again and selectively coded the data based on the four main emergent categories. I created a results table (see Appendix D) listing each of the emerging domains of CROP with their associated categories and examples of indicators that were found in the data to represent each category. Thus, a local grounded theory for culturally responsive online pedagogy emerged.

**Quality Criteria**

Glaser and Strauss established the first criteria for evaluating the quality of grounded theory research: fit, work, relevance, and modifiability (as cited in Charmaz, 2014, p. 337). While some researchers have adhered to Glaser and Strauss's quality criteria, others have established their own criteria for evaluation (Corbin & Strauss, 2013). Creswell (2013) showed that perspectives on assessing the validation qualitative research in general have greatly varied between 1984 and today. Charmaz (2014) notes that quality criteria in grounded theory research may differ by different disciplines of study. Rossman and Rallis (2003) recommend that all qualitative research designs be judged by three guiding questions: "Does the study conform to standards for acceptable and competent practice?"; "Is the study credible?"; and "Is the study systematic and rigorous?" (pp. 65-66). Charmaz (2014) recommends four criteria for quality in grounded theory research that begin to address the questions posed by Rossman and Rallis: credibility, originality, resonance, and usefulness (pp. 337-338). In this study I followed the quality criteria outlined by Charmaz.

**Credibility**. Credibility refers to the strength of the theory that will emerge from analysis as supported by the data and the methods of analysis. The quality of the research study rests on the quality of the methods and the data. Thus, data should be rich,

descriptive, and thorough (Charmaz, 2014). Credibility in this study was attained through following the rigorous methods of grounded theory research and through conducting ethical and trustworthy interpretation of the resulting data.

Rossman and Rallis (2003) stipulated that quality for qualitative research lies in systematic and rigorous research methods. Three types of data generation (narrative sample, interviews, and class observations) generated with multiple participants ensured not only ample data to support the resulting claims, but also triangulation. Triangulation is the act of providing multiple and different data sources and types in order to provide "corroborating evidence" in the study (Creswell, 2013, p. 251). Thus, including multiple data types (narratives, interviews, and observations) from 4 participants provided ample triangulation in this study.

Corbin and Strauss (2008) say that the very act of memo-writing also adds a level of credibility to the results. Given the amount and depth of data in qualitative research, a researcher will not be able to recount all of the analysis decisions on his or her own. Thus, memos provide evidence of the analysis process. Credibility in this study was established by following the constant-comparison grounded theory analysis strategy and by memo-writing. Constant-comparative coding and memo-writing have been identified as cornerstones of grounded theory methods (Charmaz, 2014; Corbin & Strauss, 2008). Thus, documenting memo-writing and the constant-comparison method in both my reflexive journal and in Dedoose helped to ensure that this study meets the expectations of credible grounded theory research.

Conducting an ethical and trustworthy study also contributes to the credibility of the research. During this investigation, all interviews were transcribed and summarized

and sent to participants for member-checking, the process of taking interpretations back to study participants for verification.  One of the tasks of a qualitative researcher is to "render an account of participants' worldview as honestly and fully as possible" (Rossman & Rallis, 2003, p. 65).  Member-checking helped to ensure that the researcher's interpretations accurately convey the participants' experiences and perspectives.  Additionally, maintaining the reflexive journal provided an archive of research decisions and reflections.  Revealing the research decision-making process and following methodological strategies from established research approaches adds credibility to a qualitative research study (Rossman & Rallis, 2003).  Revealing the research decision-making process through the reflexive journal adds transparency to the study.  Thus, the researcher, methods, and results may be considered trustworthy.

**Originality.**  Originality refers to the extent to which the research offers new insights, as well as to the social significance of the research (Charmaz, 2014).  As elucidated in Chapter 2, there is much rhetoric surrounding the potential benefits on K-12 online learning, with specific emphasis on opportunity, accessibility, and equity.  Yet there has been very little research into effective teaching practices of K-12 online teachers.  The most recent report on virtual schools from the National Education Policy Center (Molnar et al., 2017) identifies critical areas for future research in K-12 online learning.  One of those four areas is how to identify good online teaching.  Thus, the need for research into effective teaching practices of K-12 online teachers has already been identified as necessary.

Since the intersection of culturally responsive pedagogy and online instruction is one that has not yet been explored (or has been minimally explored at best), the results of

this study are likely to be original.  Studies rooted in grounded theory are appropriate

when there is not yet a theory to explain or understand a process or phenomenon

(Creswell, 2013).  The resulting local theory for this study provides a description for and

a deeper understanding of culturally responsive online pedagogy.  Charmaz (2014) also

notes that originality can lie in the social significance of a research study.  With an

emphasis on equity pedagogy in education, culturally responsive pedagogy is both

relevant and significant given the current emphasis on digital learning opportunities as

educational levelers.

        **Resonance.**  Resonance pertains to the strength of the theory that emerges from

data analysis.  A high-quality grounded theory study will ideally result in a theory that

resonates with the participants of the study, and offers them "deeper insights about their

lives and worlds" (Charmaz, 2014, p. 338).  When research is found to "meaningfully

reverberate and affect an audience," resonance also occurs (Tracy, 2010, p. 844).  In

particular, a study achieves resonance when it brings to the surface hidden assumptions or

taken-for-granted meaning (Charmaz, 2014).  According to Tracy (2010), resonance can

be achieved through aesthetic merit, naturalistic generalizations, and transferability.  A

study does not need to achieve all three in order to achieve resonance, and not every

study will achieve resonance in the same way (Tracy, 2010).  Aesthetic merit may be

achieved through the beauty of the text or presentation of research, so much so that

readers are moved to feelings of empathy.  Naturalistic generalization can occur when

readers intuit some understanding from the study that apply to their practice.  Tracy

(2010) noted that resonance is not the same as making statistical generalizations, but

rather occurs when readers of the qualitative research are able to apply or transfer the

findings to their contexts.  The teacher participants in this study indicated that they enjoyed participating in this study and reflecting on their own practice.  The results described in the next chapter tell their story.  The emerging local grounded theory for culturally responsive online pedagogy will likely resonate with the study participants, but may also resonate with instructional designers and with educational leaders who work to make schools and learning more culturally responsive.

**Usefulness.**  Usefulness refers to the degree to which the study's results may be utilized in practice, and the extent to which the research contributes to a knowledge base. Since the intersection of culturally responsive pedagogy and K-12 online learning has not yet been explored, the resulting theoretical concept has the potential to inform our understanding of online teaching, and may potentially be used as a scaffold for conducting other types of research in this field.  Cavanaugh et al. (2009) found that much of the existing research on K-12 online education "is based upon the personal experiences of those involved in the practice of virtual schooling" which is "indicative of the foundational descriptive work that often precedes experimentation in any scientific field" (p. 2).  Developing a theory about culturally responsive online pedagogy may be useful in building a foundation upon which to explore further research in the field of K-12 online education.  Additionally, those practices that have been identified as indicative of culturally responsive online pedagogy may provide guidance for training and professional development for online teachers.  Whereas much of the initial training for online teachers is focused on the technology used for teaching and learning, sharing the strategies of CROP may help online educators in creating and/or facilitating more inclusive virtual classrooms.

**Conclusion**

Through employing the methods of grounded theory research, I generated and analyzed data in order to understand the practices of culturally responsive online teachers. Descriptive in nature, the goal of this investigation was to understand how culturally responsive pedagogy happens online. Through generating data from multiple data types for 4 teacher participants, I used the rigorous methods of grounded theory research to carefully code, compare, categorize, sample, and group emerging categories into findings. A local grounded theory based on the practices of 4 for culturally responsive online instructors emerged. Whereas this study is descriptive in nature and its results will be limited to describing the beliefs and practices of the participants involved, the resulting theory of culturally responsive online pedagogy may have potential utility for future research into K-12 online teaching and learning.

# Chapter Four: Results

The focus of this investigation was to discover how culturally responsive teaching happens online. In this study, I interviewed and observed four full-time online secondary teachers about their culturally responsive teaching practices. Using the methods of grounded theory, I analyzed teacher interviews, written narratives, and observations of recent archived courses in order to explore how culturally responsive teaching happens online. This chapter will provide a brief overview of the four teacher participants, and will then report the study's findings. Findings will be supported with summaries, quotes, and illustrative examples from teacher interviews and class observations.

## State Virtual School

State Virtual School (SVS) is a state-supported online program for students in Grades 9-12. SVS serves students from across the state in a diverse Southeastern state in the United States. Students in every school district in the state may take courses at SVS. SVS primarily offers supplemental online Advanced Placement, World Language, and elective courses to students who may not otherwise have access to such courses in their home schools. At the time of this study, SVS employed 33 full-time teachers, as well as number of part-time adjunct teachers.

**Teacher Participants**

All four participants are full-time online teachers in a statewide online program in the southeastern United States. The program is available to students enrolled in every school district in the state, as well as to home-schooled and to some out-of-state students. Participants were selected based on recommendations from their supervisors, the administrators of the statewide program, and on self-identification as culturally responsive teachers. All participants have prior experience teaching in face-to-face high schools, and all participants are residents in the state in which they teach.

Table 2 provides an overview of the participants. It includes each participant's content expertise, and the specific courses observed during this study. Table 3 also includes the number of years each participant has taught online full-time, as well as the total number of years of teaching experience, including both face-to-face and online teaching.

Table 2

*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.

As Table 2 indicates, Emma, George, Phoebe, and Sam all teach Advanced Placement courses online. However, their content areas vary. George and Phoebe are both secondary Social Studies teachers. Emma is a secondary English teacher, and Sam is a secondary math teacher. All four participants have many years of teaching experience, in both online and in face-to-face teaching. Their experience with online teaching ranges from seven to 11 years. Phoebe and Sam both have been teaching for a total of 14 years, while Emma and George each have a total of 17 years of teaching experience.

**Emma.** Emma is a full-time online English teacher. She teaches both AP English Language and Composition and World Mythology online. She has taught a number of high school courses during her career, including AP Literature and Composition, Dual Enrollment English, Journalism I-V, Newspaper and World Mythology. She has also taught literature and composition college courses. Emma is currently pursuing an endorsement in K-12 administration, and is working as an instructional supervisor as well as a teacher in the state online program. Emma has a Master's degree in Comparative Literature. She lives in a college town in a mostly rural area of the state.

**George.** George is a full-time Social Studies teacher. He teaches AP Human Geography online. George is also pursuing an endorsement in K-12 administration, and is currently working as an instructional supervisor we well as a teacher in the state online program. George has a Master's degree in Instructional technology. He lives in a mid-sized city located in a mostly rural area of the state.

**Phoebe.** Phoebe is also a full-time Social Studies teacher. She teaches AP Psychology online. Phoebe has taught AP Psychology, U.S. History, Government, and Law. Prior to teaching, Phoebe worked in the corporate world. She decided to leave the corporate world to pursue her passion for teaching. Phoebe has a Master's degree in History. She lives atop a mountain in a very rural area of the state. Her nearest neighbors are over a mile away.

**Sam.** Sam is a full-time Math teacher. He teaches AP Statistics and Geometry online. Sam has taught AP Statistics, Algebra I, Algebra II, Geometry, Pre-calculus, Statistics, and Logic. In addition to his duties as a math teacher in a virtual program, Sam is currently engaged in leading professional development efforts with math teachers across the state. Sam has a BA in Mathematics Education. He lives within a mostly rural county, which includes one town.

**Shared Experiences**

By comparing codes from the teacher narratives, the set of semi-structured interview transcripts, and memos based on the course observations, I was able to determine that each of the four teacher participants shared common experiences and dispositions. All four teacher participants are White, and all four reside in mostly rural and predominately White areas of the state in which they teach. All participants have multiple years of teaching experience, both in traditional face-to-face teaching and in online teaching. The term *teacher leader* refers to practicing teachers whose influence extends beyond the scope of their classroom to the school or district, often through formal roles like lead teacher or literacy specialist (Danielson, 2006). The participants in

this study have all been teacher leaders at some point during their careers, with two of them currently serving in dual teacher and administrator roles in their program.

During the course of this study, Emma and George began new roles as instructional supervisors in the statewide online program (in addition to their roles as full-time online teachers). In addition to his role as a full-time online Math teacher, Sam was also working on statewide professional development initiatives for math teachers. In one of her course area Discussion Boards, Phoebe mentioned to her students that she had been a gifted coordinator at one point in her teaching career. All four teachers were also involved in online course and curriculum development, and all were instrumental in either the development or redesign of the AP courses under observation during this investigation.

**Context**

Before considering the daily teaching strategies these teachers employ, it is important to understand that they share similar contexts and beliefs about their students and about SVS. It is possible that these shared understandings or contexts serve as preconditions or dispositions for culturally responsive online pedagogy, at least for these four teachers in this statewide program.

Participants described at least two levels of shared context. The first is structural, or what Porras-Hernández and Salinas-Amescua (2013) describe as the meso level of context. Meso level context includes the leadership of school administration, as well as the social, cultural, and organizational conditions of communities. All four teachers in this study believe that the students they teach are culturally diverse, and all perceive that the program they teach for creates opportunities for students to learn. The second level of

shared context is at the micro level. Micro level context includes beliefs and goals of teachers (Porras-Hernández & Salinas-Amescua, 2013). Participants in this study expressed shared beliefs and dispositions. All shared similar values about culturally responsive pedagogy. I will describe these shared understandings and dispositions here briefly.

**Teaching diverse students.** I asked the four teacher participants whether they knew if their online students were diverse. Sam, the mathematics teacher, told me that he is not immediately aware of students' demographics, but that he can discern socioeconomic status from students' responses on the initial student survey. Students who do not have a calculator or textbook, for example, may be from a lower SES district. He believes that the diversity he has in his online students is about the same as the diversity he had in his face-to-face school. Sam did not immediately offer any insight into the racial and ethnic background of his students. However, in the follow-up interview, Sam shared his understanding of the demographics of his online students:

> A lot of times I don't have a whole lot of variety of students in my course. I
> usually have a few Indian, not very many Hispanics, I rarely have Hispanics. I
> have Indians, Asians, and African-Americans and then Hispanic Whites. Those
> are really it. I rarely have Hispanics.

Sam also believes that his students are underserved: "We focus on students that really need the courses that don't have them offered in their regular school, so we're meeting a need with students that are underprivileged."

Emma responded to the question about student demographics by referencing the geographic diversity she notices in her online classes. She teaches children of migrant

workers, children from rural farms, and children from affluent suburbs in the same classes. Emma believes that it is her duty to establish a personal connection with her students. She thinks it's important that students know from the beginning of class that she reads and responds to all of their emails, calls, texts, and assignments so that they are comfortable engaging in conversation with her. She comes to know students' backgrounds by engaging them in conversations and by making personal connections. She refers to her online courses as a "sort of melting pot culture in a classroom."

George, the AP Human Geography teacher, has an understanding of his students' backgrounds by talking to them on the phone. Here, George summarizes the demographic makeup of his course:

> I don't have the specifics on demographic breakdown, but what I do know is that you can do a lot of that by names, right? I mean, I have a lot of South Asian kids, a lot of Pakistani kids, Indian kids. These are kids, a lot of them are from Greenville. Their parents work at the medical center there as sort of the path to a green card for a doctor is often through rural hospital work. So I have a lot of them. Muslim kids, a lot of Hispanic kids in the Mountain Region and the Farm Coast…and a lot of Asian kids from Statesville- Chinese, Filipino, [and] immigrants there.

George says that he engages families in conversations about who they are and where they're from when he calls homes at the start of a new course. He notes that language is generally the first indicator that a student is from a culturally diverse family. Once he identifies variety in language, he asks a question, "'How long has your family lived in,

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you know, in North Town?' And then from there, if they want to, they can tell me their story."

Phoebe thinks that at least 60% of her students belong to a minority culture. She believes that her online classes are quite diverse as compared to her surrounding area within the state:

We do get a huge diversity. What I love about my classes is down here in South Mountain, we're very isolated and we have the opportunity to engage with others. To them, it's a completely different culture kids. Rural kids, the inner-city kids, you know this is the most leveling class that they'll ever take because it does, it brings in all these different type students that they never had a chance to talk to someone from Vietnam or a student from India or all these different cultures. I think it helps my isolated kids more than it does my really diverse ones because they're used to it, kind of have been in that situation in their face-to-face schools.

Here, Phoebe describes that a benefit of having a culturally diverse class may be in exposing isolated students to students with whom they would never otherwise interact.

Since SVS is a statewide program, data on student demographics is held by individual districts rather than by SVS. In fact, the program director shared that SVS administrators have no reliable data on student demographics at SVS. A lack of available student demographic data is indeed common among statewide virtual programs (Molnar et al., 2017). At the same time, each of the teacher participants in this study reported that the students they serve are somewhat culturally diverse. However, their conceptions of demographics differ.

Sam noted the economic diversity within his courses, and stated that many of his students are "underprivileged." Emma reported on geographic diversity, noting that her students vary between suburban, rural, and migrant populations. Phoebe also noted geographic differences among her students, emphasizing how having geographically diverse students may benefit the rural and isolated students. George, the AP Human Geography teacher, noted some of the specific cultural backgrounds of his students who may come from immigrant families. Interestingly, only Sam mentions race when asked about the demographics of his students. Whether diversity is conceived of as economic, geographic, racial or ethnic, these teachers view their students as a culturally diverse sampling of students from across the state.

**Creating opportunities to learn.** The "opportunity gap" is the idea that gaps in student achievement are linked to larger socioeconomic conditions that provide unequal access to educational opportunities for different groups of American children (J.K. Rice, 2015). In some way, each of the teacher participants in this study referred to the structure of the SVS program itself as creating opportunities for diverse students to learn. Recall that the SVS is a non-profit service of the State Department of Education that is legislated to exist in order to provide courses for underserved students. This purpose is written in the SVS's Mission Statement. In the examples that appear below, the four teacher participants provide examples that echo the mission statement of their program. They view their program as one that offers opportunities where they might not otherwise exist.

Sam described how face-to-face schools might track and segregate students based on ability and past performance. He sees the program at SVS as an opportunity for students who may not be considered "in the AP track" in their home districts. If they are

willing to try, there is room for them at SVS, according to Sam: "In State Virtual School, we don't have that. There's none of that segregating, there's none of that grouping. It's everybody in the same pot." Because of this, Sam recognizes that the program services "a wide range of diverse students and a wide range of skill levels." He thinks that the fact that SVS has enabled smaller rural schools can now offer the same AP and elective courses as more affluent districts is a great opportunity maker for students. He called it "equal opportunity." Phoebe concurred that the SVS provides opportunities for students. Both she and Sam seemed to agree that many students do not get the same opportunities SVS affords from their home districts:

They've been told at their school they can't take AP classes...This is their first opportunity and they come in and they work their tails off. It's the hardest thing they've ever done but they wanted to try it and boy I appreciate those kids because they're eager and they spend a lot of time. I've got to think it has really helped them to be challenged so much, but also to be accepted. I really feel like what we do serves a purpose for a great many of our students who don't have the opportunity to take Advanced Placement courses at their school or to be exposed to these other students that are similar to them.

Both teachers view the SVS as an opportunity for equal access to advanced courses.

Emma also views the program as providing an opportunity for diverse students to learn. She thinks that the combination of structure and flexibility that the program offers an affordance for many students. She used the student of a migrant worker as her example:

What we're able to offer those kids is sort of a sensitivity to their

own…experiences that maybe they are not going to find as accommodating in a

face-to-face classroom.  So, it helps for us to be able to…respond to these cultural

diverse needs that they might have, like the migrant worker would obviously be a

very different experience than a student who is anchored in one particular

community, but we're able to…welcome them and to make them feel a sense of

community.

Emma sees that the program offers students not only an opportunity, but also a structure

that may better fit the needs of their families' lifestyle.

**Teacher values.**  All four participants in this study are White teachers living in

mostly rural areas of a diverse state.  Yet each of these teachers described valuing

culturally responsive instruction.  Emma described her attraction to the SVS:

What I love most about online learning is it's so diverse.  It's not very exciting to

me to teach a group of students that are a homogenous group…Sometimes it's a

cultural group that is very defined by one school within one district within one

geographical location…What I really like is having the ability to see all of

the diversity in my classroom, and I mean multiple diversity, not just racial or

cultural or socio-economic.

Other participants also expressed that student diversity may be more than cultural.

George and Phoebe, for example, both discussed students' sexual orientation as examples

of diversity that should be valued and acknowledged.

Sam believes that students should feel a sense of acceptance, belonging, and

connectedness to learning and that incorporating "cultural topics, issues, and interests"

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can increase learning.  Phoebe said that "a culturally responsive class environment is very important" to her.  She said that "the material has to apply to their lives and they need to see their culture reflected in what they are learning.  Students should not feel they are standing on the outside looking in."  Finally, George values culturally responsive teaching not only as a connection to his content area, but also as a strategy for improving his practice:

> If I simply taught in a way that felt comfortable to me, I would alienate students and miss opportunities to teach them in ways that recognize the contributions they can make to the classroom.  Teaching geographically and socially diverse students has made me a better teacher and made my work much more interesting.

Here, George acknowledges that culturally responsive teaching invites student contributions from diverse perspectives into the classroom, even if those perspectives differ from the teacher or the text.  Indeed, culturally responsive teachers value the contributions that diverse students bring to the classroom and draw upon students' knowledge and experiences to build instruction (Gay, 2004; Ladson-Billings, 1994; Moll et al., 1992).

**Teaching as Dialogic**

The overarching finding of these culturally responsive online teachers' practices began to emerge early on in the investigation.  Teachers described their online teaching in terms of dialogues, conversations, and communications with their students.  They discussed the different complex layers and levels of communication (e.g., whole group vs. individual; individual vs. private) along with their pedagogical reasons for selecting different communication modes.

The term "dialogic" implies that the communication between teacher and students is two-way, rather than one-way. Think, for example, of a traditional class lecture in which students are sitting and receiving information. This would be an example of a one-way transmission of information. Dialogic implies that students participate in the communication with their teacher about their learning, and that their instructor listens, or responds, to the students' words and perspectives. The importance of teaching as dialoguing with students is perhaps most made famous by educational theorist Paolo Friere (1970) in his critique of the banking model of education. This concept will be explored more fully in Chapter 5.

During the data analysis phase of this investigation, I was able to confirm that communication with students was by far the most frequently occurring action in all of the data, and that communication, or more specifically teaching as dialogue, emerged as the overarching finding. All four teachers described that the typical day as an online teacher revolves around communication. Emma noted, "the most common thing that you can probably trace through a day of an online instructor is communication. Your day starts with communication, and the ending of your day is based around some type of communication." George described his online teaching as "just having this running conversation" with his students. Sam said that the typical day of an online teacher is "a lot of grading, it's a lot of feedback, it's a lot of emails and a lot of phone calls during the day." Phoebe described her typical day as "grading and giving feedback, checking in on discussion boards, interacting with the students in that manner...in psychology there's something in the news almost every day. We try to keep those very timely. And mostly

communicating." Emma said that her goal as a teacher is to facilitate communication on multiple levels:

> I try to help maintain that dialogue throughout the entire year in different ways. To help them know that I know they're there and I know they're visible and to engage with each other and to engage with me and to create an online community...I think it's an ongoing effort in both the teacher's part and really helping to foster any returned communication from a student in that interaction.

The teachers collectively expressed that facilitating both individual and group communication in the online environment is the primary job of the online teacher.

While the overarching finding of communication with students emerged early on in the investigation and was later verified through code frequencies the ways in which communication happens online and the pedagogical reasons for these strategies were more complex. George, Emma, Phoebe, and Sam seemed to view their pedagogy through the lens of communication. The ways in which they described, for example, facilitating culturally aware learning communities, getting to know their students, and modifying instructional activities all seemed to relate to different modes and strategies of communication. Through comparing codes to one another and through grouping like codes, I was able to identify four ways that these online teachers deploy dialogic teaching online. Their communication with their students is personal, communal, instructive, and authentic. The following sections will describe in detail the ways in which these teachers communicate with their students personally, communally, instructively, and authentically.

**Personal communication.** The first mode of communication for these four culturally responsive online teachers is through individual and personal communication with the student learner. George, Emma, Phoebe, and Sam all offered that individualized communication with students is not only the core of their responsibilities as an online teacher, but also one of the benefits of online learning. Gay (2000) identified teacher attitudes toward individual students as one of the necessary components of culturally responsive pedagogy. She wrote "the heart of the educational process is the interactions that occur between teachers and students" (p. 46). During this investigation, 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."

Each participant noted that one on one communication between teacher and student is one of the benefits of teacher facilitated online learning. The teachers in this study have frequent personalized communication with their students in multiple ways. In the following sections, I will describe how these teachers communicate with individual students, the ways in which they dialogue with students, the ways in which they express care for individual students, how they cultivate the student-teacher relationship, and finally, how they use their established relationship and individual communication skills to motivate their students.

*Communicating with individual students.* Teachers in this study identified multiple mechanisms for communicating individually with students, including telephone, email, live synchronous web sessions, feedback on assignment submissions, and text

messaging.  The teachers view the personal attention that each student receives as an affordance of the online program at SVS.

Students new to online learning may not initially be used to such frequent and individualized communication with their teachers.  Emma, George, and Phoebe discussed the instructor's responsibility to set the norms for this individualized communication between the teacher and student:

The teacher needs to be proactive in making sure kids know that they can reach out to you when they have questions.  One of the first things I would tell students at the very first check in call I do is to remember that I can't look out to see if you're confused.

Similarly, Emma noted that it is the instructor's responsibility to facilitate open communication between the teacher and student:

It does take work just like it would in the building of any relationship that you're going to try to achieve in life.  You have to make the effort and you have to be willing to initiate it as the teacher.  Because I think that it's true of any teenager that you are going to have to make yourself open and accommodating in order to receive that back from a kid, whether that's in face-to-face or online.  There's no difference with that.  But I think in the online environment initially up front when you're laying the foundation to help bring your kids into your course into the classroom community, you have to be a visible presence for the students.

The teachers agree that communication with students constitutes the largest percentage of their time spent teaching online, and that it is up to the teacher to initiate and facilitate this communication with students.

*Welcome calls.* The first way that the teachers reach out individually to students is by making a welcome call by telephone to their homes. Teachers use this as an opportunity to welcome their students to the course, to encourage students to ask questions throughout the course, and to start to get to know their students. In her narrative response, for example, Phoebe writes, "Beginning with the welcome call, I try to understand my individual students' cultural backgrounds and keep notes on sensitive areas, ESL, refugee status, etc." In a follow-up interview, Phoebe conveyed that she is aware that she has several students who come from non-English speaking homes. Phoebe feels that it is important to pronounce students' names correctly, and she uses the welcome call as an opportunity to get the pronunciation correct. She asks parents and students directly how to properly pronounce their names, "'Am I saying your name…correctly? Would you help me here?' Because I've got this hillbilly accent, this Texas cross hillbilly. So, I just, just put yourself out there. You know, I say, 'Exactly how do you say it?'" Phoebe acknowledges that some folks might be offended by asking for clarification on pronouncing names, but then wonders, "How else are you going to learn how to really say their name?" She notes that in a traditional face-to-face class, she would just ask students the correct pronunciation of their name in a classroom. In the online environment, she asks them on the phone.

A potential affordance of these individual conversations with students is the absence of potential social pressures that may be present in a face-to-face classroom. George says, "They feel so much less social pressure and anxiety… It's just you and that student talking…Kids are more open and honest I think a lot of times online than they feel like they can be in a classroom." Two of the four teachers in this study relayed

anecdotes of gay students coming out to them in their online courses.  George shared this

story of an Asian student struggling with his homosexuality:

> He said, 'I come from an Asian family.  It will not be accepted.  I've already got it
>
> figured out that I'm going to go to college and in my junior year I'm going to tell
>
> them after I've left the house and it won't be an embarrassment to them.'  And my
>
> response was… 'I think you've really thought about this'…'Thank you for telling
>
> me.  I guess you figured out from my general tone in the class that I don't care'…
>
> 'Just be careful'.  And you know, we never talked about it again.

Similarly, Phoebe observes that the absence of social pressure that students may feel in

their face-to-face schools may work to increase the level of what is disclosed between

student and teacher in the online class:

> I feel like it's easier for them to talk with me because they don't have to look me
>
> in the eye necessarily.  It's too emotional and upsetting to reveal this to a teacher
>
> through your school who may also go to their church or something like that where
>
> they keep their guard up more in the face-to-face situation than in the online
>
> situation.

These examples indicate that some students may find it easier to disclose personal

information to their online teachers.

   While some students may be willing to share personal information with their

teachers over the phone, others are not as open to phone conversations.  In each of the

four courses in this study, I observed activities in each course area that required students

to telephone their instructor.  However, the frequency with which students speak to their

instructors on the phone seems to vary greatly.  Phoebe thinks "Kids are allergic to the

phone" because "they really just don't use them anymore." Phoebe still calls every student and family:

> You know, how many teachers call home? I still have so many parents that are so appreciative that someone would call just to welcome them to class. Some haven't talked to teachers in years, and so it's quite shocking when a teacher is calling home because they think it's bad news, but it's not.

Sam spends a lot of time on the phone at the beginning of a semester, often calling students twice a week during the first few weeks of class. George and Emma also reach out to their students during those first couple of weeks of school, although George admits that some students do not prefer the phone as a means of interaction with their teachers: "I would say that the vast majority of my kids I only speak to every six weeks when they are required to call me." Sam admits that online, it is possible for students to try to avoid communication:

> They can put up a little wall and keep their distance whereas in the classroom, you know, if they're uncomfortable with me I can simply just walk over to their desk and goof off with them and force that interaction. But in the online world if they don't answer their phone or respond to email or they're not that active in the course, there's not that much more I can do. So that is a challenge.

All four teachers indicated that email, text messaging, and text feedback in assignment and course areas were additional ways that they engaged in personal communication with their students.

*Student surveys*. The teachers in this study also utilize surveys as a way to learn more about their students. In each course, students are asked to complete a survey in

order for teachers to collect information in areas like parental contacts, after-school commitments, and computer and Internet access.  Sam uses information from students' initial student survey responses as indicators of demographic information.  He reported that he is not aware of his students' demographic backgrounds, but uses information he learns from them to make some determinations:

> I typically can pick up on that because I know which schools are in those [low SES] areas, but then they also take a survey from me at the very beginning.  Just a Google survey.  And I find out really quick if they have fast cable or if they are on satellite and that's a big indicator.  And then they also tell me which kind of calculator they have, whether they have the new Inspire or if their school is making them use the older model.  And so that's another indicator, too.  And also if they have a textbook or not.  If they don't have a textbook and it's taken them weeks, that could mean they're in a rural situation.

Each year George revises his student survey to try to get to know his students a little better.  This year, he added a question asking students what they wish their teachers knew about them.  One student indicated that he wished he knew more about the college process.  George contacted the counselor at the student's face-to-face school and asked if he or she could call the student in to go over the college application process.  The counselor was more than happy to oblige.

Teachers also use surveys to gauge how their students feel about the classes that they're taking online.  In at least two of the classes I observed, teachers launched mid-semester surveys to get student feedback on their experience in the course.  Teachers also use surveys or similar activities to get student feedback on the course at the end of the

year.  The mid-year and end-of-year student surveys provide students with opportunities to provide their teachers with anonymous feedback on the course.  Thus, even students who might be uncomfortable sharing their likes and dislikes about the course with their teacher have an opportunity to voice their perspectives in a completely non-threatening platform.  Surveys may provide students who may not be as inclined to voice their opinions on a class discussion board or in an email exchange with their teacher with an opportunity to provide feedback and input on the class.

  ***Dialoguing with students.***  Three of the teachers in this study described their communication with individual students as dialogues or running conversations that occur throughout the academic year.  Friere (1970) argued that dialogue is a pedagogical strategy for collaboratively engaging students in their education.  Rather than making education something that happens *to* students, the Frierean model of dialogical or conversational education stresses that education should be something that happens *with* students.  Gay (2000) found that culturally responsive teachers "consider critical and reciprocal dialogue and participatory engagement as central to the acquisition and demonstration of learning" (p. 44).  Thus, engaging students in ongoing dialogue and continuous conversation is culturally responsive pedagogical strategy for inviting students to actively participate in the learning process.

  The primary way Emma, George, Phoebe, and Sam engage in dialogue with their students is by giving feedback on students' assignments.  Emma makes this point clearly when she says, "I view feedback as dialogue."  For Emma, the feedback she provides is the beginning of a conversation with her students:

[Feedback is] more than just an assessment, and I think as an online teacher you

have to be sensitive to looking at feedback as not the end of the assessment itself

but it's the beginning of a dialogue and interaction with your students that you

continually revisit.

Emma believes that effective feedback is more than telling students "what they did

wrong" and "what they did right." Instead, more effective feedback is being able to

explain to students what they did in a way that invites further conversation. Emma uses a

math example to make her point. Instead of telling a student that he or she struggled on

number 5, a more effective type of feedback to the student might explain in a

conversational tone:

'Well, I see what you've done on question 5, and I'm seeing here in your equation

that you're doing that maybe you're falling into the trap of this when maybe you

should think about that'. That sort of feedback that's very specific and really a

conversational style with the student takes a lot of time to do.

Emma includes reflexive questioning within her feedback to students in order to engage

them in the conversation:

It's more than just providing them guidance on an assignment. It's more than just

providing them my opinion about an assignment. It is more of an invitation for

them to continue a conversation about it. And what I want to try to help the

students see is that education is a process. Learning and growing in the activities

I give you have purpose.

Whereas Emma describes providing feedback as dialoguing with her students,

George describes providing feedback as having running conversations with his students.

George hopes that his students have heard his voice so many times via phone, live sessions, and his instructor created videos that when his students read his feedback, they can nearly hear him saying it. George views this feedback loop as a conversation, "the way I'm looking at it is that I'm talking to them through my feedback and I'm trying to help them out." Like Emma, he encourages student reflexivity in the feedback loop:

> I always tell them, you can respond to my feedback, you can give me feedback on my feedback. 'I don't understand why. I read your feedback and I still don't understand this'. Then we can have a conversation about that.

Both Phoebe and George indicated that one of the benefits of their learning management system is the ability to view all of the feedback they have provided to any individual student all at once. They can view the feedback any one student has received from the beginning of the year to the end. Thus, George uses this view to review student progress and to make necessary adjustments in the feedback he provides:

> One of the beauties is when I can look at the progress of a student and I can see my feedback to them. So…this kid has struggled with free-response writing from week three to week twelve and clearly I'm giving feedback but it's not getting through, so let me send the kid an email and see if that solves the problem. And if that doesn't solve the problem, let's have a phone conversation. Let's refer them to a video I've made about what I'm looking for in free-responses, or whatever it might be.

In this way, teachers can review the ongoing dialogue that has taken place throughout the year with individual students, and thus personalize their feedback and responses in order

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to identify and meet the instructional needs of individual students. This method of dialogue allows for personalized instruction in the online classroom.

Since George and Emma describe the feedback they provide as evidence of ongoing conversations with students, it follows that the students must also be somehow engaged in these conversations. While I did not have access to individualized student-to-teacher or teacher-to-student communications during this study, through the teacher interviews, I was able to learn some of the ways that students engage in dialogue with their online teachers. George and Emma both described that they explicitly encourage students to respond to the feedback they receive on their course work. Students may respond with an email question or, when the teacher allows, with a revised assignment submission. Emma provides feedback that prompts students to reply:

> I try to also maybe ask them reflexive questions that would require them to really
> reflect and revisit some of the things that they were thinking, and maybe to
> encourage them to think about it in a different way, or to explain it to me. And a
> lot of them do. A lot of them will say, 'Hey I read your feedback on this
> assignment and I really appreciate it and you asked me this, and this is what I
> meant to do. Can we follow this up in a conference?'

Emma provides students with feedback on how they have grown throughout the writing process. In doing so, she is able to recognize that students are reading her feedback and are responding through their revisions. Emma also described engaging in one-on-one synchronous sessions with her students during which students engage in audio conversations with her. She conducts individual writing conferences, and also offers personal consultation sessions on writing the college application essay. George ends his

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AP Human Geography course by asking students to respond to the prompt, "If I could give one piece of advice to my teacher, it would be…" I found similar end-of-course activities that elicit student perspective in each of the courses. Conceptualizing communication with students as dialogue assumes that both student and teacher are engaged in the conversation. If both parties are indeed engaged, this also implies that both parties are receptive to one another. In other words, if online teachers are engaging in dialogue, it follows that they must find ways to listen to their students. Ladson-Billings (1994) described how one of the successful teachers of African-American children in her study respected and listened to her children. Gay (2000) described this teacher's listening as an example of care.

   ***Expressing caring.*** Recall from Chapter 3 that caring is one of Gay's (2000) four domains of culturally responsive teaching. Gay (2000) asserted that caring is manifested through teacher attitudes towards students. Teachers who maintain high expectations for students, who engage in genuine and positive interactions with students, and who facilitate community are examples of caring culturally responsive teachers, according to Gay. In this section, I will focus on the ways in which the teachers in the study expressed care through their communication with individual students. The way these teachers facilitate community will be discussed in a subsequent section.

   When I asked George if he cared for his online students, he reminded me that all good teachers care for their students: "Any good teacher cares about their students, whether you're online or whether you're face-to-face. I think a good person cares about other people so, I just think you do it because…why wouldn't you be compassionate?" Each of the four teachers in this study indicated that they felt care for their online

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students, yet they expressed this care toward students differently. George expressed caring by modeling kindness in his courses, and Phoebe showed caring by setting norms and by letting students know what the rules are. Sam expressed care by responding to students in a timely manner:

> The biggest action I have that shows them I care is to respond as quick as possible. Whether it be text message or email, to let that drag on for days and to not respond shows that I don't care.

Emma expressed care by checking in on her students and asking them about non-academic events:

> I do a lot of check-ins where I'll say, 'Hey, I notice that you guys had some bad weather in that area of the state. Everybody OK? You guys doing OK over there?' And then that begins a communication and a dialogue. I try to help maintain that dialogue throughout the entire year in different ways.

Thus, the dialogue that was begun through welcome calls and by providing feedback on student work becomes increasingly personalized throughout the year.

*Warm demanders*. Culturally responsive teachers have been called "warm demanders" (Boykin & Noguera, 2011; Gay, 2000). They provide a warm and encouraging environment for their students, and at the same time hold high expectations for each of their students. According to Gay (2000), holding individual students to high esteem is an example of caring. The teachers in this study use encouraging and reassuring language with their students. However, since I did not have access to individual teacher-student communications but did have access to more public course areas, I will describe this encouraging language in more detail in the later section on

class-wide communication. Through teacher interviews, however, I was able to uncover some evidence that these teachers hold high expectations for their students. Sam, for example, lauded the inclusive structure of SVS for allowing students of any ability to enroll in AP level courses. He compares this to his experience as a face-to-face teacher, where he describes students being "segregated" by ability. SVS, however, allows all students who enroll the opportunity to excel:

There's none of that segregating, there's none of that grouping, it's everybody's in the same pot. We're all in this AP course. You're going to either make it and bust your tail and get it done or you're not, but you're going to try and give it your best.

Phoebe similarly describes how her students who are new to advanced level courses are able to excel by putting forth the effort:

I have kids who this is their very first AP course. They've been told at their school they can't take AP classes. They're just not able, or whatever it is they've been told. This is their first opportunity and they come in and they work their tails off. It's the hardest thing they've ever done but they wanted to try it and boy I appreciate those kids because they're eager and they spend a lot of time. I've got to think it has really helped them to be challenged so much, but also to be accepted.

Neither Phoebe nor Sam believes that their online courses are easy. They both appreciate the students for whom AP level coursework may be new territory, students for whom SVS is providing an opportunity. In different ways, Sam and Phoebe both expressed that any student who puts forth the effort can achieve in their courses.

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*Genuine personal interactions.*  Another way culturally responsive teachers may express caring is through engaging in personal and genuine interactions with their students (Gay, 2000).  Each of the teachers in this study engages in personal and informal communication in an attempt to make connections with their students.  Sam, for example, rarely shows his face on any of his thousands of instructional videos.  However, he posts a personal and non-academic news item every Friday during his course, often including personal and family photos.  His students enjoy these personal Friday posts.  I asked him how he knew they liked them.  Sam is able to discern that students enjoy personal non-academic posts based on their reaction:

> I get feedback.  They just send little messages, like 'Cool dawg' or 'Cool kid' or
> 'Thanks Mr. _.  that was a fun video'.  You know, I mean if I miss a Friday,
> when I don't think that it really matters, if I skip one, then I hear back about it.
> They do enjoy those.

George employs a similar strategy.  He noted that while not all of his online students may want to be cared for, he still finds the value of cultivating a personal relationship with students important enough to share personal information:

> I definitely think for those who want it, there's a lot of room to be caring to your
> students and to let them know that's the kind of person you are.  And I will share
> things on news items, "Hey, I'm not going to be here tomorrow because my
> mom's having an operation" or something great just happened with my wife or
> whatever.  And they will then often reach out either with an email or they'll put a
> note in our Random File, which is sort of the student random discussion board
> where they can share things.  And, I definitely think if you're the kind of person

who is open to that from your students, they're more than willing to be caring and be cared for in an online course.

In these two examples, Sam and George attempted to create personal connections with students, and students responded positively to their personal posts. In these examples, the teachers allowed their online students to get to know them a bit more.

Teachers discussed the importance of keeping track of their students' interests as a way to show care for their students. These teachers value students' interests and experiences. One of the strategies employed by at least three of the teachers is taking notes on students' personal information. Phoebe, for example, makes notes of students' personal information when she reads their journal entries in AP Psychology:

> [The journal] gives me a talking point with them for my notes. As a I read my journals I have a list of my students' names and I may put down, their father passed away or this child is living with a grandparent, or something so that when I talk to them later, I can make it very personal and they know that I really know them and care about them. It's just a way for me to connect with them.

Phoebe uses her notes to create personalized news item every time a student has a birthday and shares that birthday announcement in the news area of the course. She does this for every student who has a birthday during the academic year. George also employs a similar note-taking strategy:

> That idea of that conversation, remembering little things about individual kids- this kid's a swimmer, this kid runs track, you know this kid lives at home and takes care of his grandmother and works a full-time job. Knowing those things about students and making notes in our student information system so I can refer

back to them when I am speaking to the kids really builds the rapport a lot more, too.

Emma said that she also refers back to students' personal information in order to make personal connections with students as part of her instruction. When I asked her how she demonstrated care online, she shared that care emerges from creating relationships with students. This emerges from prompt responses to student questions, even if it's 1:00 in the morning sometimes, according to Emma. Emma explained that answering personal questions from students, such as "Hey, I see that you lived in Greenville and my brother's going to go to Greenville State…where's a good place for us to go get coffee?" is an example of demonstrating care to her online students.

When I asked Phoebe, the AP Psychology teacher, how she was able to care for students she has never met in person, she began to tell a story of one of her current students in crisis. She proceeded to narrate, and to sift through her email in order to read some verbatim email exchanges. One of Phoebe's students had recently been relocated from her mother's home to her grandmother's home to a foster care facility. The student's mother had mental health issues. The student had been working to keep up with her online assignments and activities, and Phoebe has been working to make accommodations for the student. Phoebe read an excerpt from the student's email, written from within the foster care facility:

> I found this course has helped me immensely. I learned so much. It's easier to
> see what my mom deals with and how it affects her mood and personality. I'm so
> happy to have taken AP Psychology because I know how to handle these

situations a little better.  I'm torn between a nursing career and a psychiatric

career.  Thank you for the kind words you've given me.

This, to Phoebe, is illustrative of the way in which caring can happen online.  Phoebe

says, "I think that we do make a difference.  This student knows that I genuinely care

about her and that I hurt for her and what she's going through."

Phoebe maintains relationships with many of her former online students: "I stay in

touch with kids I had 10 years ago…and they're teachers now, and one's a doctor, and

that was such a stressful year for everybody.  And so I think it's not terribly different than

a face-to-face situation." If the location is within a reasonable driving distance, Phoebe

attends the graduations of her students who serve as valedictorians in order to "tell them

how proud I am of them and hopefully that makes a difference." Finally, Phoebe shared a

story of a former online student who contracted sepsis, a potentially life-threatening

condition.  Phoebe went to visit her in the university hospital ICU and also visited with

her dad, even though the student was not conscious.  Sadly, the student succumbed to her

condition, and this weighed heavily on Phoebe.  From attending high school graduations,

to visiting a gravely ill student, to assisting students experiencing displacement, Phoebe

sees each of these as examples of ways in which she cares for her online students.  In one

of our interviews, Phoebe reminded me that teachers never really know what students are

going through unless they get to know them.  She believes that online teachers can

exhibit care: "I think that we do make a difference.  This student knows that I genuinely

care about her and that I hurt for her and what she's going through."  Phoebe said that she

wanted her students to know that "someone is in their corner."  Gay (2000) uses this

same phrase as a descriptor of a culturally responsive teacher (p. 53).

***Cultivating the teacher-student relationship.*** Another reason that the teachers in this study spend so much time communicating with individual students is to cultivate teacher-student relationships. Gay (2000) identified the interpersonal exchanges between teachers and students as being at the heart of culturally responsive teaching. According to Gay, sociocultural factors such as bias for European American students from their teachers, can impact interpersonal interactions between teachers and students. Thus, non-White students can be at an instructional disadvantage:

> Students of color, especially those who are poor and live in urban areas, get less total instructional attention; are called on less frequently; are encouraged to continue to develop intellectual thinking less often; are criticized more and praised less; received fewer direct responses to their questions and comments; and are reprimanded more often and disciplined more severely. (p. 63)

Culturally responsive teachers, however, work to facilitate positive interpersonal interactions with their students. Indeed, a high teacher-student relationship quality (TSRQ) has been identified in empirical studies as an important predictor of academic success and may be the most important factor in narrowing the achievement gap (Boykin & Noguera, 2011).

Emma was worried about how teacher-student relationships might be impacted when she first became an online teacher:

> I was worried about that because as a teacher that relationship that you build with your students is one indicator of how successful you feel as a teacher, an effective teacher in a classroom. So, when I first decided to make that transition to online learning, that was a very big concern for me.

Emma reported that to her surprise, she has been able to maintain strong relationships with her students by being responsive, by reading and responding to the tone in their communications, and by engaging in playful, non-academic banter with her students when it is appropriate. According to Emma, it takes about two weeks of ice-breaking in an online course before she is able to really start cultivating those relationships. After that, she says the relationship building between she and her students is no different than it was in her face-to-face classroom.

Like Emma, George and Phoebe also utilize humor as a means to strengthen that teacher-student connection. Emma noted the importance of playfulness in relationship-building with her students:

> It's important that you sort of play with them when they want to engage that part of your personality and they demonstrate theirs, that you play with that and you pick up on that and you engage them in that way, too. They enjoy that and they want to sort of seek you out and see your opinion on things when they see that you're willing to play back with them, too.

George does not mind creating and sharing funny images of himself. He has one photo of himself on his cell phone making a mean face and pointing his index finger at the camera. He adds a dialogue bubble and adds satirical statements about staying on task that he posts to the news area of his course. One year one of his students made that image the screen saver on every computer in the distance-learning lab in his school. Phoebe posted frequent funny images and cartoons in the news item area of her course, including a self-deprecating post about "Hillbilly Medical Definitions" (Phoebe stated that she knows that she sounds like a hillbilly to some of her students). Phoebe also

utilized cartoons to make points related to the content of her course. She said that she likes to use a lot of jokes in her teaching because she thinks humor helps students remember important information.

Phoebe and Emma both discussed the importance of cultivating trust with their students. Phoebe says that she is able to develop trust for her students, "By reading what they're writing and by looking at the quality of the work they're turning in and you know, it's not about test scores and things, but you know, it's little things they've told me." Here, Phoebe alludes to the personal communication she has with students as the way in which trust is developed online between teacher and student. She uses her note-taking system to make sure she includes personally relevant information when communicating with her students. When I asked Emma how she knew that she taught diverse students, she responded that her students are open with her about themselves because she has developed a sense of trust with them: "they are willing to share this information with you because they trust you…they feel a sense of accomplishment in a community that they're able to allow any sort of any self-consciousness about it to sort of fall away."

Cultivating trust, using humor, and engaging in interpersonal interactions may help teachers and students feel that they are getting to know one another. Such exchanges also likely increase the sense of teacher presence in an online course. Teacher presence refers to the extent to which the teacher makes his or her presence known to students through, for example, managing instruction, focusing discussions, and making students to make meaning (Garrison et al., 2000). Teacher presence has been positively correlated with increased student satisfaction and with positive perceptions of learning (Palloff & Pratt, 2007; Picciano, 2002). In an investigation of the reasons for high

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attrition rates among rural K-12 students in online Advanced Placement courses, some students reported a lack of teacher presence as one of the reasons they dropped out of the course (Varre, Irvin, Jordan, Hannum, & Farmer, 2014). The examples that the teacher participants in this study shared included strategies for making their presence more relatable, more personable to their students. Their goal seems to be getting to know their students, and forging strong teacher-student relationships. These teachers in turn draw from these relationships as a way to motivate their online students.

*Motivating students.* All four teachers in this study employed similar strategies for motivating students. The teacher participants all said that the students at SVS are generally high achievers and are therefore easily motivated by grades. However, sometimes the teachers in this study leveraged the teacher-student relationship as a means to motivate their online students. George said his first attempt at motivating students is to communicate with them, often utilizing humor. He compared collecting papers in a face-to-face classroom with collecting papers online, noting that as the online teacher he needs to let his students know that he sees what they do and what they do not:

> You know in an online class, they don't see me. I'm not standing there to collect
> their paper. So, you have to be that standing there collecting their paper guy
> virtually. Which means, 'Hey I noticed you didn't turn this in. Everything ok?'
> And sometimes something's not OK.

George uses his teacher presence to let students know that he sees them, and that he is concerned, albeit it in a humorous and non-threatening tone.

Sam reported that he uses his "personal connection" to motivate students: "When they know I'm willing to work with them or give them an extension, or help them catch

up with a pace recovery plan, anything like that where it's a personal attention that tends to motivate them." Pace recovery plans are personalized assignment schedules designed to help struggling students catch up in the course. Sam admitted that they take a lot of work and effort by the teacher to create and manage, but he finds that the personal attention he exerts on students' behalf is generally a motivator, "especially when they feel like it was too late. Like it was a lost cause. When they see there's still a light at the end of the tunnel they kick it in gear and they can make it work."

Emma and Phoebe spoke about how they use their relationship and communication skills to motivate students in their courses. Emma said, "If I start noticing them maybe slacking off because they are not motivated, I'll end up asking them first usually. Saying hey what's going on?... Are you needing some help trying figure out what's going on?" Phoebe reported using a similar strategy. After she updates her grade book, she sends students an email asking them how she can help them. They generally say they do not need assistance. Still, Phoebe pointed out that "if we phrase it that way, you know 'I'm here to help', and leave the ball in their court, then they have to think about what is going on." Her strategy is to leverage her relationship and communication skills to ultimately have students take accountability for their assignments. Emma added that she uses specific feedback as a motivator as well. She spends a lot of time trying to provide focused feedback on her students' writing:

> I do it because I like for the students to be able to see the value in what I'm providing them that makes them more motivated to read my feedback but also to submit their essays to see what feedback I'm going to give them. So I'll point to, 'Hey, I noticed that you grew in areas of this. And this is really good, I noticed

from the last essay you did this and now you are doing this'. And so I provide

like almost a conversation for them to where they want to see what I'm saying.

And…I tell them a lot of times, I can tell you read my feedback because I'm

seeing this. And so I'm working it into a way that they want to see my response

about things. Because they're seeing that I'm really taking a vested interested in

what they are writing and in what they are doing.

Phoebe and Emma both use their communication and relationship building skills as mechanisms for student motivation in their online classes.

All four teachers also discussed the importance of monitoring student progress in their online courses. George likes to keep an updated grade book. Unless there is an essay or a major assignment, George ends his workday by making sure all student submissions have been graded and returned. Thus, George said, "You know I wake up in the morning and kids miss their deadline, you know they get an email from me immediately." This is true of each of the teachers in this study. Emma said that, "You have to really be on top of who's logging into your course and whether or not you've received assignments within a timely manner from a student." Sam also reported that updating the grade book and following up with a communication to students is a great motivator: "I usually follow up with an email if the assignment can still be turned in for credit. I'll let them know, Hey the grade book has been updated, you've still got till Friday to turn in that late work." Each of the teachers in this study discussed the importance of keeping track of student progress and updating grades frequently in order to share up-to-date grades and progress with students and families at any time. All four teachers also discussed making phone calls to homes and to schools as forms of external

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motivation when necessary, but their go to motivation tactic is to communicate individually with students.  Bourup et al. (2014) similarly identified that engaged online teachers used available analytics, but relied mostly on personal interactions to motivate their students.

Personal communication is one of four ways of communicating that emerged in the findings of this study.  These teachers use a variety of the strategies described above to engage in personal and individualized communication with their students.  They utilize these personal lines of communication to engage in dialogue with their students, to express caring toward their students, to cultivate the teacher-student relationship, and to motivate their students.  In the next section, I will discuss how these teachers engage in community and group communication as a part of their praxis.

**Communal communication.**  The second mode of communication for the four teachers in this study is communal. George, Emma, Phoebe, and Sam each discussed the reasons and strategies they employ for communicating to the class as a whole and to the schools and families of the students enrolled in their courses.  It is within this domain that the online teachers work at facilitating the building and maintenance of an online community.  Gay (2000) identified the teacher's ability to foster a community as a criterion of culturally responsive pedagogy.  Ladson-Billings (1994) describes "connectedness" (p. 65) and the notion that "we're all in this together" (p. 60) as characteristics of a culturally responsive classroom.

Each of the four teachers in this study expressed that community was important to them.  By the second teacher interview, which occurred near the end of the semester, each of the four participants felt they had established a sense of community in their

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current courses. However, online communities in courses like the ones that Emma, George, Phoebe and Sam teach do not emerge automatically. It takes hard and intentional work on the part of the teacher. But these efforts are worth it, according to Emma, in helping students to "feel like they're part of a class and that we're working together with a goal in mind rather than just, you know, 150 of us that might appear in a class list working separately." In this section, I will describe the ways in which these teachers communicate with the class, their various methods for utilizing discussion boards, the ways in which they promote a caring and inclusive class environment, how they facilitate cultural awareness, and how they extend their communal communication beyond the scope of their classroom to their students' families and schools.

*Communicating with the class.* The teachers in this study employ multiple channels for communicating with the class as a whole, including news items, Blackboard Live sessions, and whole class feedback. Whereas the majority of their day is spent in communication with individual students, these teachers see that their online courses are virtual classes, and as such they work to create a sense of virtual class community. The teachers believe that cultivating community is one of the responsibilities of the online teacher. In their perspective, a sense of online community does not emerge on its own organically, but is rather facilitated by the intentional work of the teacher. Emma, for example, stated that one of the responsibilities of her position is, "To help them know that I know they're there and I know they're visible and to engage with each other and to engage with me and to create an online community rather than, 'Here's your assignment dropbox.'" All four teachers, though, admitted that it takes a few weeks for that community to develop.

*News items.* News items is an area in each course that provides a place for teachers to post messages to the entire class. The news item area of each course at SVS serves as the entry point to the course. It is the first page that students see when they enter their online class. Phoebe likened the news item area in her course to a bulletin board: "A news item is kind of like my bulletin board. When you walk in, I'm there with my information I greet my students and then my news item is the bulletin board that would be in a face-to-face classroom." Similarly, George sees the news item area as the front door to his classroom, and says that it should be "dynamic, changing all the time." George described the news item area as the first thing students see when they enter a course. Therefore, George attempts to post relevant graphics and messages, and interesting bits of information related to Human Geography.
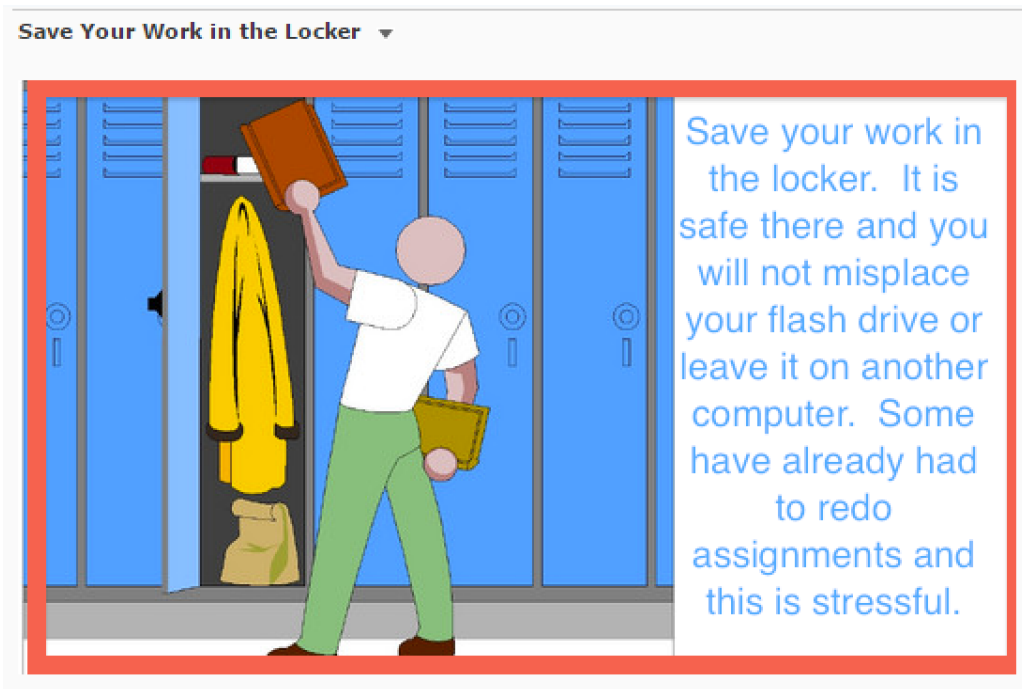


*Figure 6.* News item from Phoebe's AP Psychology course.

Most often, news items are a mixture of graphic and text information. For example, Figure 6 shows a typical news item from Phoebe's AP Psychology course. In

this example, the locker refers to a tool in the learning management system that serves as

a cloud-based file repository for students.  News items are generally helpful and

instructive in this way.  Teachers tend to begin the week by posting the week's activities

and assignments in the news area.  Later in the week they post helpful messages like the

one above.  In AP Literature, Emma often posted encouraging messages with tips for

staying organized, and often makes references to popular culture.

Emma, George, Phoebe and Sam all utilized the news item area of their courses as

one place for keeping their courses relevant.  Often, they included in a current event or

something related to their course from the media.  Phoebe, for example, posted multiple

"Read the Latest" news items pulling in articles and posts that relate to the field of

psychology.  George said that he tries to keep his news posts light and funny, but he often

slips in a piece of interesting information that relates to his course content: "I also slip in,

'Hey, did you ever think about why we use this kind of map?' or, 'Why North American

is always in the center of every map…look at this map…and notice that Czechoslovakia

is in the middle.'" Phoebe spoke very specifically about using the news area of the course

to post content that she considers inclusive:

> I have students tell me they're refugees from Ethiopia, or they've been
>
> displaced…they're just a lot of different cultures out there.  I've talked to parents
>
> who don't speak English.  In Psychology, what's really neat is that we do look at
>
> collectivist cultures versus individualistic cultures… so they get pretty exposed to
>
> that.  I bring in quotes from Buddha and different people that are more
>
> encompassing.  And then in the images I use in my news items and in my videos

and things, I try to be very aware of not just gender, you know putting girls in

there, but also of different ethnic backgrounds.

These four teachers utilize the news area of the course as a way to communicate to the

class as a whole.  They post what they see as helpful tips and relevant connections to their

course content.  And, sometimes, they post non-academic greetings.  Emma, for example,

often has fun Friday messages or greetings related to upcoming holidays or breaks.

Often, the teachers and students end the week with fun and personal posts as Sam has

described above.

At least one instructor uses the news area of her course as a mechanism for

sharing information about the students in the course with one another.  As highlighted in

the above section about communication with individual students, Phoebe posts birthday

greetings for her students in the news area of her course.  In addition to that, she uses this

area to make connections to events that are happening to students in different regions of

the state.  For example, she has posted about how people recover from hurricanes when

there have been local storms.  She posts news items about local and regional football

games being played by the various schools represented by her students.  Phoebe even

uses the news area of the course to highlight the activities that her students participate in:

And then in the news items, if someone is doing something significant, …maybe

the Beta conference is coming up and I'll say, you know if you're going to the

conference maybe you guys can touch base with each other.  You know, …the

state football championship game is coming up and I have a lot of kids that are at

that school or match…Kids have told me they're going to the state one act play or

something so I wish them good luck and let everybody know to try to make it fit

our community even though they are at different schools.

Phoebe continued by describing that many of her only students really value these

connections, and look for opportunities to meet their virtual classmates. However, she

qualified this with acknowledging that just as in the face-to-face classroom, not all

students are looking to make social connections in their online class. George and Sam

also commented that despite their best efforts to create a sense of community in their

online classes, there are always going to be some students who are not interested in the

community aspect of the course. Still, each of these teachers works to find ways for their

online students to make connections with one another.

*Synchronous sessions.* All four teachers in this study also discussed using

synchronous sessions to cultivate community. They also referred back to this tool

frequently when they were discussing how they were able to gauge the experience of

community in their classes. SVS uses a tool called Blackboard Collaborate to conduct

live web-based meetings. Blackboard Collaborate allows instructors and students to

share video and audio via their computers. Teachers can also share their screens or

presentations. The teachers in this study often referred to the Blackboard Collaborate

sessions as simply "live" sessions. Sam required that his students either attend or view

the recordings of the live sessions. Emma incorporated an assignment into her course

that requires students to complete a presentation using the synchronous tool.

Synchronous sessions appeared to be optional, but recommended, in George and

Phoebe's courses. All teachers offered live sessions as options for office hours and for

one on one tutoring and assistance. Moreover, though, the live sessions are teacher led

instructional meetings that multiple students from across the state attend.  When I asked

the teachers how they were able to tell that they were developing a sense of community in

their courses, at least two of them referred back to interactions they have with students in

these live sessions.  Sam, who offered two live sessions per week during the first few

weeks of school, said he could see evidence of an emerging community in the

Blackboard Collaborate sessions that he offers:

> I can really only tell in the Blackboard sessions when we meet for reviews
>
> because there's, at this time of the year, a couple of students have seen by now the
>
> benefit of attending those live.  And so we start in August or September and
>
> they're all excited, everybody starts with the first one.  And then in September or
>
> October it's kind of hit or miss.  You know, I'll have 8, 10, 15 students show up.
>
> And by this time of the year, I'd say that between 80 to 90% of my students are
>
> showing up for the live sessions.  And so they make it a point to try to be here.
>
> They like to ask questions, the like to see what other people are posting, and they
>
> like to be there live.  And that trickles over into the second semester.  And so as
>
> far as that sense of community—yes.

Sam gauges active attendance and participation in these live sessions as an indicator of

emerging class community.

*Whole class feedback*.  In the previous discussion of how teacher communicate

personally with their students, I described how these four teachers use feedback to engage

in dialogue with their students.  At the same time, these teachers also expressed the

importance of providing whole group or class feedback, in addition to the personalized

individual feedback they provide.  In this section, I will describe how and why these teachers provide communal whole group feedback.

The teachers in this study used whole class feedback as one method of communicating to the class and facilitating the emergence of a virtual class community. Emma, George, Phoebe and Sam are all extremely intentional about the ways in which they provide feedback on student assignments.  Each of them provides both individual and class feedback on assignments.  On one level, they view individual student feedback as a means of engaging students in a running dialogue about their learning that lasts throughout the duration of the course.  On another, they view whole class feedback as a means of engaging the class in group learning, and as a way of cultivating community.  In fact, these teachers see it as their duty to provide class feedback as a way of letting students know how they're doing in relation to one another and as a way of building community.  Emma described some of the whole class feedback she provides after an essay submission, for example.  She addresses the class as a whole, and uses the news item area or a class email to let the class know what they are collectively doing well on, and what they could collectively improve.  Emma said that online teachers should contextualize assignments and student performance so that students can understand how they are doing in relation to their peers:

> I think a lot of times they get really nervous because they don't have those visual cues from their classmates when I hand out a stack of papers and they can see that oh wow we're all pretty much doing the same thing, it's not just me.  And I try to reemphasize that too in our live class sessions so that they'll see, this is something that we're all inclusively doing, it's not just exclusive to my situation.

Emma reported that she can observe in students' tone that the whole class feedback and follow up synchronous sessions helps to stave student anxiety about their writing in her course. Emma iterated that without teacher facilitation, without the teacher bringing out in the open how the class is performing as a whole, her students would have no idea how they are doing in comparison to one another. This class feedback, then, becomes a strategy for facilitating communication with the class community. All four teachers in this study provide both personal and class feedback on their assignments.

*Communicating in discussion boards.* Teachers in this investigation most often talked about the discussion boards in relation to community building in their courses. Discussion boards are areas where students generally reply to a prompt or a question set by the instructor. Discussion posts are threaded which means that students can easily engage in a text-based discussion with their teacher and with their classmates. Discussion boards also allow for peer-to-peer interaction in the online classroom. When asked how they know when community is emerging online, all four teachers referred back to their discussion boards. All four teachers in this study utilize discussion based learning activities; however, the ways in which they engage in and with their students in these discussion areas varies.

All courses in SVS include a course introduction discussion board on which students introduce themselves to their teacher and their classmates. Students post where they are from, what their interests are, and why they are taking an online course at SVS. At least two of the teachers in this study use the information that students post on the introductory discussion board to try to facilitate connections between students. For

Phoebe, the introductory discussion is her first opportunity to start cultivating community in her course:

> I start out with our welcome discussion board where the kids tell a little bit about
> themselves and then they connect with each other and I try to facilitate a student
> connection. 'Well, you know I run cross country,' and I'll say, 'Oh that's great,
> so does _____ you know.' 'So and so plays tennis, and so and so runs.' Kind of
> make them connect with those names they might see when they might go to a
> tennis match or something. We have a lot of people in class and I help them make
> the connections because they're not going to spend the time going through 120
> posts looking for students that like the same things as they do. Or maybe they
> say, 'I like playing video games' and I have another you know gamer in the class,
> I'll pop in there just to say, 'Hey so and so also likes to do that.'

In addition to the required course introductions discussion board, other teachers also maintain a purely non-academic board for students to post to throughout the year. George's "Random File" is another example. Like Phoebe, George uses the Random File discussion area to facilitate community.

> When kids go to Model U.N. or you know a Forensics competition or whatever, I
> always say, 'Hey, if you ever wear a nametag, put State Virtual School on the
> corner so that your classmates can find you…. I'll also say, 'Hey are you on the
> cross-country team?' And then they start going back and forth with each other.

Students may also use non-academic discussion boards to initiate conversations with one another. In Phoebe's course, for example, I observed students posting about being nervous taking their first online course. In George's class, I observed students debating

their favorite flavors of frozen yogurt. George shared that in the spring, students post not only their college acceptances on the Random File, but also their college rejections. He says that the class enjoyed sharing and consoling one another about their rejection letters.

However, not every teacher in this study maintained a non-academic discussion board area. Sam said the he has tried it in the past, but that he does not have time to manage and monitor a non-academic discussion area in his course. In the past, Sam observed that many of the girls in his course spent way too much time socializing on the non-academic area of his discussion board. While he still includes a place for students to introduce themselves, he no longer allows a purely social discussion board area to persist throughout the course. Still, Sam reported that he could observe a sense of community developing in his more academic discussion board areas. At the beginning of the year, students in Sam's class tended to interact with other students from their physical school on the discussion boards. After several weeks, Sam noticed that students started to engage and connect more frequently with one another, including with students who they did not know prior to entering Sam's course. So, even though he does not maintain a social space in his course, Sam, like Emma, George, and Phoebe, referred to the communication he observes on discussion boards as an indicator of community.

All four participants see that it is the teacher's duty to properly monitor discussions on the discussion boards. Their courses each contain a clear set of discussion expectations, and guidelines for "netiquette," or appropriate etiquette for web-based communication. I asked the teachers if they had ever witnessed examples of discrimination on discussion boards, such as posts or communications containing insults, bigoted language, or suggestive content, at any time during their tenure at SVS. All four

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said no.  George suggested that modeling kindness might help to stave off discriminatory or inappropriate student posts on discussion boards:

> I've heard of other online places where they have a lot of trouble in discussion boards and kids doing inappropriate things.  And I can count on one hand really in the last 10 years when anybody did anything that seemed mean-spirited… By modeling kindness, they respond to that.

While the teachers at SVS have not observed any blatant discriminatory posts, they are still vigilant about intervening in discussion boards so that they continue to be welcoming spaces for all students.  Emma shared that sometimes teachers have to use their "insider knowledge" in understanding what is actually happening on a discussion board.  Like Sam, Emma has observed that students from the same school or district tend to communicate with one another on the discussion board.  However, Emma has observed that sometimes these discussions with friends become a venue for students to playfully tease or poke fun of one another.  She said, "I as their teacher know that they have a prior relationship or history, but other students in the class may not be aware of that." In these situations, Emma intervenes in order to let the friends know that while she as the teacher knows that they likely have a prior relationship, the other online students in the class do not.  Therefore, they could potentially misunderstand their playful banter as bullying, and thus not engage as much on the discussion board.  Emma reaches out to students privately through emails or phone calls to explain her concern.  She says that students generally understand, and will delete their more playful discussion board posts and adjust their communication style on the class discussion board.  In this example, Emma is monitoring

the discussion boards not only for what students post, but also for how the posts may be perceived by other students in the class.

The extent to which these teachers posted to and facilitated discussion board conversations varied. In fact, they had differing opinions about how and why teachers should or should not intervene in student discussions. George and Emma, the two teacher administrators at SVS, both felt that teachers should be active participants in the discussion boards. George said that students should know that teachers are reading everything they are posting. Emma suggested that visible teacher facilitation in the discussion board area is important for facilitating community:

> You have to go above and beyond to demonstrate that you are not only reading what they are asking and communicating with each other in an online forum or discussion board, but that you're engaged and focused on them enough to be able to continue the conversation, to make this personal connection, and then refer back to them in other areas that you might encounter in the classroom.

Phoebe was an extremely active participant in her discussion boards at the beginning of the year, but then her participation seemed to wane as the year progressed. In her course introduction discussion board, Phoebe replied to every student post in the forum, most often with an individualized reply based on that student's interests, thoughts, or concerns. However, as the year went on, Phoebe's presence on the discussion boards seemed to become less and less. In speaking with Phoebe, it became clear that this gradual tapering off was intentional:

> When we get to the second discussion board...I don't do it in a public forum. I'm never going to publicly criticize or talk about something there. I will do a general

posting.  You know, 'You guys are doing great, have you thought about this?' Or

kind of a landscape post.  You know, 'There's been some good ideas about this,

this, and this, but what about this, this and this?' to kind of stimulate it, but I try

not to pick anyone out particularly in a public forum.

Phoebe went on to explain that the subsequent personal feedback on student discussion

board posts she provided occurred in the private grading and feedback area of the course.

Like Phoebe, Sam asserted that the private grade and feedback area of the course

was a more appropriate place to share his input on student discussions.  Sam's response

indicated that the different ways in which teachers facilitate discussions is an ongoing

debate at SVS.  While the administrators of SVS recommend that teachers actively and

frequently participate in discussion board discussions, Sam suggested that teacher

intervention can be perceived as impartial by the students:

Students are scared to death when a teacher replies to them on a discussion board

unless it's like full of praise and positive.  Well, then another student that wants

that same praise and positive rapport feels left out if they didn't get the same

thing.  So, I argue with Admin on that all the time.

Sam elaborated that his job is to author and monitor discussion board topics that initiate

thought-provoking student discussions, and suggested that too much teacher facilitation

could actually stifle a student discussion.  Sam and Phoebe are both keenly aware of

student perceptions that may form based on public teacher comments in the discussion

board area.  For Sam, the decision not to intervene in student discussions is also a

pedagogical one.  He sees the discussion boards as spaces where students can be free

from teacher intervention and be more collaborative.  Sam referred to his discussion

boards as "protected" areas "where students need to feel free to express themselves and learn from each other."

Despite their different approaches to discussion board facilitation, all four teachers agree that discussion boards are indicators of community in their online classrooms. At the same time, they also agree that not every student who comes through their virtual door is looking for an online community. Phoebe says that some of her students hate the discussion board activities. She says that these students really just prefer not interacting with other people. George share the results of a recent anonymous survey in his AP Human Geography course in which students indicate that, for the most part, they enjoyed the discussion board communications. Still, "Not all of them do enjoy discussion boards. Some of them just do it to do it. I mean, I just get the sense that we've established as much community as the kids want to have." There does seem to be some consensus that while building an online community is ideal, there is no one size fits all model of secondary online learning. While the majority of students seem to respond to opportunities for peer-to-peer interaction and for social engagement, there are always going to be those who prefer a more solitary online experience. At the same time, multiple studies have indicated that the social and learner-to-learner interactions that occur within a course area like a discussion board help to promote student satisfaction and engagement in the course, as well as a sense of community among the course members (e.g., Picciano, 2002; Rovai, 2002b; Yeboah & Smith, 2016).

***Promoting a caring and inclusive class environment.*** I have already discussed how these online teachers express care toward students individually. These teachers also express care communally. All of the teachers in this study stated that it is important to

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create a caring and inclusive online class environment.  The concept of equity pedagogy

rests upon the notion that equitable teaching practices contribute to safe and inclusive

learning environments or classrooms (Banks, 2016; Bennett, 2001).  Facilitating caring

learning environments is at the core of Gay and Ladson-Billing's conception of culturally

responsive pedagogy (Gay, 2000; Ladson-Billings, 1994).  The teachers in this study

used words like "accepting," "safe," and "welcoming" to describe their class

environment.  In his narrative submission, in response to the question "To what degree is

creating a culturally responsive class environment important to you?", Sam replied,

"Aside from content and assessments, I would rank the class environment and overall

tone/feel right up there towards the top of the list.  This is how students connect, feel

welcome, and develop a sense of 'I can do this.'"  He wrote of the importance of students

of feeling sense of belonging in their online courses, not only for culturally inclusivity,

but also for enrollment retention.

   *Monitoring communal spaces*.  While none of the teachers in this study could

identify any examples of blatant discrimination that occurred within their online classes,

they were able to provide examples of promoting more inclusive class environments.

Phoebe, for example, shared that some of her students in the past have written on class

discussion boards that they were going to pray for another classmate, often in response to

another student's religion or sexual orientation:

>    I've had to explain to some of my students you cannot tell someone…that they're
>
>    going to go to Hell and you're praying for them...I try to explain to them why that
>
>    is offensive. To them, they're not meaning to be offensive, but when you tell

somebody you are praying for them you're essentially telling them there's something wrong with them that needs to be fixed.

In this example, Phoebe walks a fine line between helping her student understand that this type of post can be offensive and infringing the students' own belief system. All of the teachers in this study talked about the importance of the teacher's role in facilitating an inclusive class environment. In this example, Phoebe monitored the communal area, the discussion board, and responded privately to the offending student in an email so as not to call attention to either student. Valasquez et al. (2013) found that vigilant observation of communal spaces was one indicator of caring online teachers. The example provided by Phoebe illustrates the importance of monitoring communal spaces so that all students feel welcome and respected in the virtual class.

*Welcoming tone.* Plante and Asselin (2014) noted that using tones of affirmation was one way that nursing faculty expressed caring in online classes. Insofar as can be observed from discussion boards and course content, all four teachers use encouraging words and language when communicating with students. I did not have access to individual teacher-student communications in this study. I did, however, observe warm and encouraging language in each of their courses. Phoebe included her reason for teaching in the welcoming message to her course:

I teach because of my students who inspire me. I believe in you and will do everything I can to see that you succeed. Some students have expressed trepidations about an online class. I will be available and easier to reach than your 'normal' teachers. Remember the only stupid questions are the ones you don't ask. I am here for you and look forward to an exciting year.

The text in all four courses is written in a warm and conversational tone, often in second person. This enables students to envision themselves as the primary listener or learner. Take, for example, these encouraging words from Emma's AP Literature course:

> Instead of seeing yourself as a single person on a computer completing
> assignments and preparing yourself for the exam, you should picture yourself
> amid a group of other students just like you who are working for the same
> goal...To meet these goals you must remain an active learner rather than a passive
> one. Active learners take responsibility, pride, and initiative in how and what
> they learn... I expect you to work hard, think critically, and I fully expect that we
> will also laugh hard this year, too!

All four teachers also posted warm and encouraging news items consistently throughout the year. Each of the teachers in this study expressed that facilitating caring and inclusive learning communities was important to their praxis. In addition to inclusivity, these teachers also conveyed the importance of cultivating a culturally aware community of learners.

***Facilitating a culturally aware community.*** The teachers in this study believe that their students are diverse learners who represent multiple cultures. To varying degrees, the teachers also expressed that the content of their courses contain curricular connections to learning about cultural awareness. In her framework for culturally relevant teaching, Ladson-Billings (1995a) states that one of the necessary roles of CRP is to instill in students a socio-political awareness. Students should leave school understanding that they are participants in the world who can impact change. Strategies and attempts to raise students' socio-political consciousness or to help students learn

ways in which they can challenge hegemony did not emerge in the findings of this study. While instilling a critical student consciousness was not expressed explicitly by any of the four participants in this study, these teachers did see connections between courses and the notion of cultural *awareness*. Each of the four teacher participants works toward facilitating culturally aware learning communities in their courses, albeit in different ways.

George stated that his course, AP Human Geography, contains topics related explicitly to culture. He summarized his role as an online AP Human Geography teacher and as a "teacher of kids who often have limited exposure to people who are different than them, that we build awareness of the world around them and empathy for other people's situation." At one point in his course, he prompted his students to reflect on their own religions, asking them specifically to discuss how and why they practice their religion. George noted that most often, students become aware that they were simply born into their religion. George jokes that he apologizes to families in advance by telling them their student may become "a Buddhist Anthropology major" as a result of taking his course. George is explicit in his goal of helping students to become aware of the larger context and world around them. At the time of the follow up interview, George was facilitating a discussion about world religions. The directions required students to select two religions, and to list a pro and con for each one, ending with a judgment of whether religion has been a force for good or bad in the world. George worried when he originally assigned this discussion that there would be heated student discussion. However, in 12 years of assigning and facilitating this discussion topic, George has never received any negative feedback from a student or parent. George believes that part of the

reason may be that by the time they get to this assignment, he has spent nearly a full

semester modeling awareness and inclusive language in the course:

> I make sure they know, 'We have Hindus in this class.  We have Muslims in this
>
> class. We have Mormons in this class.  So, we're not judging any of that.' And I
>
> am amazed how they'll ask each other.  If a kid's having trouble with what the
>
> important things are to a Hindu or to a Muslim or whatever, they'll ask each
>
> other. You know, 'Is it true, do you really pray five times a day?' All of those
>
> things come up. It's really interesting.

George is explicit in letting his students know that their virtual class is diverse.  However,

embedded in his comment is the idea that non-Christian students might be judged by their

classmates.  There is a sense that non-Christian students may be somehow different than

the majority of [Christian] students in the class.  At the same time, George sees it as his

duty as a social studies teacher to make connections between the multiculturalism within

his course community and culture in the global community: "I have students from… so

many different backgrounds, that I would be missing a huge opportunity if I didn't…talk

about the value of all the different cultures that are both in my classroom and outside of

it."

Whereas George attempts to make direct connections between the content of his

course and his students' individual backgrounds on discussion board activities, Sam and

Emma try to make more general cultural connections to course content.  Sam, for

example, often pulls real world statistical data for his students' investigative tasks.  He

draws from multiple data sets that pertain to education, gender, race, world markets,

sports, and marketing.  He also pulls data sets from multiple countries or cultures.  Sam

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has noticed that certain groups in his courses seem to appreciate data sets that come from their culture:

> Probably the biggest ones that appreciate the cultural diversity the most are the Indians. They love it when I pull data from their culture and… if I look at India, Indonesia, Philippines, anything over there in that Southern Asia portion of the continent, when I look at the data of the history,… economy, or if I pull stats from their shipping industry, importing, exporting, the technology…manufacturing… they usually make a comment or are interested in finding out more.  And so they'll ask me…Hey Mr.  S, where'd you find that?

As a literature teacher, Emma sees it as her job to help students make more general connections between the literature they're reading and the human experience.  Emma provides an example of how her students were able to make a more specific connection between Shakespeare's Othello and the Black Lives Matter movement.  Emma warns, though, that teachers need to be mindful of wandering into the realm of politics:

> We were talking about…how Shakespeare might have been attuned to…the cultural stereotypes that would have reinforced the…sense of an outsider that Othello may be experiencing…And then that led into…Black Lives Matter…and how…any culture might perceive itself as part of a stereotype…You want to make sure that you don't lean into politics, because there's going to be lots of different views.  But you also want to make sure that you're touching on things that students might bring up.

Here, Emma is careful with her words.  She is aware that different students will have different views on what she described as issues related to politics.  She recommended that

literature teachers allow student examples into the class, but work to get the themes broad:

> If you broaden something like the Black Lives Matter movement…into what it means to be an outsider,…you can avoid…those political things that you don't want parents to think…you're trying to promote.  But I let the students also bring up those sorts of things in order to get us started.

In this example, Emma allowed her students to connect examples from their own experiences to what they're reading, and then she worked to help students see the larger themes at play that may be more inclusive of the larger student population in the class.

Like the other teachers in this investigation, Emma welcomes the connections that students can make between what they are learning and their own culture and experiences. Emma warned, though, that teachers should not force or prescribe cultural connection-making.  She described that students should be able to make and share connections organically rather than being asked, for example, to post about the Latino experience just because a student happens to be Latino.  Still, she utilizes communal platforms like the discussion board area to support these conversations.  Like George, Emma is careful to model and provide guidance for how student opinion sharing should occur within her online classroom:

> I welcome [student connections], obviously.  We talk about how we're a group that is going to have different opinions…And we talk about…Netiquette and social rules about how we don't demean, about how we don't belittle, about how we don't ridicule, and that we all have a set of ideas that no ideas are right versus wrong.  We have supported versus unsupported.

Emma and George both set parameters through modeling and through direct guidance so that their students can learn to responsibly engage in an inclusive and culturally aware learning community.

Teachers in this study also assigned collaborative activities that promote a culturally aware community. In AP Human Statistics, Sam assigned a mid-term project in which students collected field data from their own geographic area of the state. However, Sam intentionally created heterogeneous groups by purposefully grouping students from different geographic areas of the state. He chose four areas that differ in population, industry, and ethnicity. According to Sam, they get a great sample of data from across the state, but also get invaluable skills for working in groups at a distance. Sam said that it usually isn't until this midpoint assignment that he actually feels like his students have a real and authentic sense of purpose and community in his class.

George spoke about using consensus-building to promote a culturally aware learning community in his course. Each year, George donates $25 of his own money to Kiva, a non-profit organization that allows people to donate to start-up loans for folks around the world. When I asked George about the service-learning nature of this project, he talked about how this activity aligns to the learning goals within his course. George described that by the time students are asked to engage in the Kiva project, they have already learned about international development, women's empowerment, water supply, medical diffusion, fair trade, and improving the lives of people in the developing world. In this project, students read application loans from people in developing countries around the world: for example, single mothers looking to buy seeds, families looking to start a business making shoes, or handymen looking to build a water purification system.

In the class discussion board, students make their case for where they think the money should go. Based on the class consensus, George donates the loan money to the winning Kiva recipient. Here, students in the class work as a culturally aware learning community, debating the relative impact the loan may have on the lives and geographies of the people who are making the loan request. Generally, students come to a consensus, and George helps them in the discussion board to reach that consensus. Over the years, students have generally selected loans that will help to provide clean water or education. George's KIVA loan assignment is one that may help to raise student awareness and promotes a "critical consciousness" (Ladson-Billings, 1995).

*Communicating with families and schools.* Emma, George, Phoebe, and Sam each discussed spending time communicating with students' families, students' schools, and potentially with students' other online teachers at SVS. In addition to the welcome call home at the beginning of the course, teachers also call home when students' grades begin to slip or when there appears to be a trend in submitting late assignments. In *Dreamkeepers: Successful Teachers of African-American Children*, Ladson-Billings (1994) described that the culturally responsive teachers in her study would often provide even their home numbers to the families of the students they taught. The idea that community extends beyond the scope of the classroom is inherent in culturally responsive teaching.

The teachers at SVS reach out not only to parents, but also to school mentors, counselors, and occasionally to school administrators. It is a policy of SVS that every participating school assigns a school mentor to be a school-based liaison for students and teachers in the SVS. School mentors are tasked with monitoring student progress,

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proctoring tests and assessments, working with technology staff to ensure students have ample equipment, and reporting grades to school counselors. When students need an intervention, SVS teachers engage in phone conferences and web-based meetings with mentors, parents and sometimes school administrators and counselors.

In this section, I described the second way in which these teachers communicate as part of their online teaching praxis, communally. The teachers discussed the ways in which they engage in whole class communication, with particular emphasis on how they utilize discussion boards to build a sense of community in their classes. These teachers work to create caring and inclusive learning class environments, as well as culturally aware learning communities. They understand that students are embedded within larger communities in their schools and homes, and communicate often with schools and families. In the next section, I'll transition to the ways in which the teachers in this study communicate through their curriculum and instructional activities.

**Instructive communication.** The third mode of communication for these four teachers happens in their courses through teacher created instructional activities and adjustments in the content. Recall from Chapter 3 the Universal Design for Learning (UDL) framework for curriculum development. Courses designed using the principles of UDL provide multiple ways of accessing course content, multiple ways for students to demonstrate their learning, and multiple ways of engaging with content (CAST, 2011). While these teachers did not describe UDL by name, I observed that their courses were indeed multi-modal, containing varied activities and multiple ways for students to engage and to express their learning. Yet the instruction was also responsive.

Each teacher in this study was highly engaged in his or her curriculum and course content. Often, it was hard to determine where conversations about instruction ended, and conversations about curriculum began. In this section, I will explain the close connections teachers have to their curriculum and course content. A brief description of an online course at SVS will illustrate some of the ways these teacher's instructive communication comes to fruition. Finally, this section about instructive communication will culminate with the most frequently emerging code that I've grouped under this domain, the importance of being flexible in instruction.

***Curriculum and content development are a part of instruction.*** When asked about the typical day of an online teacher, each of the teachers in this study mentioned working on course content as part of their regular instructional day. Content modification may include anything from creating supplemental instructional videos, to correcting mistakes in assessments, to adding new content areas based on developments in this field or discipline. Similar findings have been identified in other investigations of online teaching. Barbour (2014), for example, noted that K-12 online teachers take on multiple roles in addition to classroom teacher, including instructional designer. 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 is a part of their instructional day, often in response to student performance in the course.

Since 2010, Sam has created approximately 3,000 instructional videos for his SVS students. Not all of these videos can be reused because they are specific to particular students or to particular problems on homework assignments. However, many

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of the videos are embedded into the course content of AP Statistics. Sam enjoys this part of his job, and sees it as a daily task. However, he noted that, "If I have videos to make or course design that requires focus with no interruption I have to do that outside of student hours so that tends to make the week longer." Sam's videos are responsive. He responds to how well students do in a particular assignment or lesson. Sam also updates assignments every year to keep them relevant. In what Sam called "investigative tasks," students "pull live data from football league, hockey leagues, different sports teams. They pull live data from weather related events, political campaigns. Whatever tends to be current for that year I try to write those investigative tasks." Sam noted that much of this work has to be done outside of his normal teaching hours, and that this level of technical and content building is not required of all teachers at SVS.

Other teachers also see daily content and curricular revisions as part of their daily teaching duties. Phoebe discussed having to update her course to meet the changing standards from the College Board. AP Psychology includes difficult vocabulary so many of the assignments pertain to practicing with and assessing student's understanding of Psychology vocabulary and terminology. Phoebe is concerned with issues of academic integrity, so she modifies the assignments and assessments in AP Psychology every semester. Phoebe described that there are 11 modules in her course, with three or four lessons in each module. Every lesson ends with auto-graded quizzes, which Phoebe frequently revises. Additionally, Phoebe revises journal and essay assignments. This year, Phoebe added an assignment about bar graphs because students on last year's AP Psychology examination were asked about bar graphs. She has also added new course on positive psychology, or the psychology of happiness, since she has observed a growth in

this field of Psychology.

Emma also sees content and curriculum work as part of her daily teaching routine; however, Emma's approach is more summative. She likes to modify her courses based on student performance at the end of the academic year. However, she adjusts her instructional strategies throughout the year. She noted that students will always be her variables, and there is never a one-size-fits-all solution to designing course content. So, while she takes a summative approach to revising her course, she supplements her instruction throughout the year to include remediation activities, providing direct instruction on a topic in a synchronous session, or creating additional activities to target a particular topic.

George reported that a well-designed course is never completed; it is always a work in progress. When his students begin asking him similar questions, or when many students miss the same question on an assessment, George realizes that he needs to revise his course content. For George, the design process includes revising the content areas and instructional activities that students struggle with, as well as updating his course to make sure it reflects recent updates in culture and geography. AP Human Geography is a course based on both history and current events. George constantly revises information so that his students have the most accurate representation of changes in demographics. As examples, George discussed the instability of Syria, the slowed migration rate in Mexico, and changing United Nations and U.S. Census data as content areas within his course that has recently updated. For George, the bulk of his course and content revision is about adaptation.

These teachers do not see modification of content or curriculum revision as

separate from their daily teaching duties.  They are connected to their content areas in such a way that compels them to keep their courses as organized and as up-to-date as possible.  They make constant design modifications based on how students engage and perform in their courses.  Gay (2000) identified clarity in organization and direction and "patterns of task engagement and organizing ideas" (p. 112) as an element of culturally responsive pedagogy.  Teachers in this study work throughout daily instruction to communicate clear and organized learning sequences in response to how their students are engaging in the course.  Additionally, teachers work to update their course content in order to reflect changes and updates in their disciplines.  Emma noted that the course content and associated instructional activities are "the primary connection between you and your students".  Thus, the ways in which teachers adjust and adapt their content are ways in which they are communicating instructively to their students.  Their constant participation in course and content development is one way these teachers are responsive online teachers.

*Varied learning activities.*  Careful observation of these four courses revealed that they have similarities.  All four courses contained a variety of learning activities.  Farmer (2009) argues that including varied learning activities in online teacher education courses helped to promote more culturally sensitive online instruction.  In their exploration of practices of effective K-12 online teachers, DiPietro et al. (2008) also found including a variety of learning activities was characteristic of the teachers and courses in the study.  George revealed that teachers, or 'subject matter experts', author the vast majority of the content and learning activities:

I'm essentially given a template of a blank course, but…the graphic design has

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been done…And I am writing a course that aligns with what the College Board wants in a creative way, looking for resources all the time online that I can adapt or link to, writing quizzes and things that might go along with those… making valid assessments that go along with the readings, and that sort of thing for students.

Through teacher interviews, I learned that these four teachers are all aware that there is no one size fits all solution for online learning. This recognition seems to be echoed in the course content by the incorporation of very many different types of activities in all four courses.

All courses contained traditional activities such as short answer questions, quizzes, essays, and tests. Beyond that, there were many and various types of learning activities for students to engage with and to choose from in each course. The AP Psychology course, for example, included a journal tool and incorporated field-based experiments in which students reported their results through text and photos. In AP Statistics, students engaged in investigative statistical tasks using up-to-date real-world data. In AP Human Geography, students were often given mapping activities. Sometimes mapping activities would be interactive learning objects, and sometimes they would be more traditional labeling assignments. Students in AP Literature were asked to engage in peer review activities and in writing workshops. While most of the learning activities in each could be completed individually, there were opportunities in all of the classes for partnered and group work in all four courses.

In all four courses, instruction occurred in multiple modalities. A modality is a channel by which communication is delivered, such as text, audio, and video. All four

courses contained examples of text-instruction, audio instruction, video instruction, and even some interactive multimedia instruction from instructional designer created interactive learning objects. While text instruction was the primary mode, all four teachers made ample use of video instruction through a combination of teacher created instructional videos and posted links to Blackboard Collaborate recordings of live sessions. Providing multiple modes of access to course content and concepts is one way these courses tend toward UDL (CAST, 2011).

The teachers in this study reported being in a constant state of course and learning activity development, and they consistently adapt and create a variety of activities to meet the different needs of students. Another way these teachers communicate instructionally is through their willingness to be instructionally flexible with their students.

*Flexible approach.* All four teachers in this study described that in order to meet the needs of their students, they must be flexible in their day and in their instruction. The importance of providing flexible instruction was one of the most frequently occurring codes that emerged during data analysis. Flexibility has oft been cited as one of the affordances of online learning (Picciano & Seaman, 2010; Watson & Gemin, 2008). DiPietro et al. (2008) also found that effective online K-12 teachers in their investigation were flexible in both their time and in their instruction. In my examination, teacher participant Phoebe claimed that flexibility is what makes SVS a good fit for diverse learners: "We [support diverse learners] probably better than a lot of face-to-face schools because the flexibility of our classes." Emma reported that SVS teachers often must adjust their goals for the day due to the need to be constantly flexible during workday, "In a face-to-face school you live and die by a schedule of bells… Whereas in an online

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environment, you…have to surrender yourself to the flexibility." Sam described his typical day as an online instructor, citing several examples of the types of activities that can impact a teacher's plan for the day:

As far as a typical day, I would say that we have good intentions for office hours or a plan for the day, and 90 percent of the time it always changes. You meet the demands and the needs of the students as they arise, and so you have to flow…If you are intending to work on curriculum…that may change by 9 o'clock and you may have to work with a mentor or a student or talk to a parent on the phone, or there might be a textbook issue and you have to update the website with the textbook information. There may be a situation with enrollments. You really just go with the flow.

Students work on their SVS courses on different schedules, from different schools, and on different operating systems and browsers. Some may have very active school mentors, and some may not. Some may have a class period at school to complete their SVS courses, and others may not. These teachers described that they in no way can anticipate the many number of issues that could arise on any given day. Therefore, they must be flexible in how they plan their day and in how they respond to their students.

Flexibility, though, can be more than keeping an adaptable schedule. Emma explained that flexible instruction is also a responsive pedagogical strategy:

It's sort of an organic process because your students are always going to be your variables. So, you know, what might work for one group of students might not work for another group of students. But at least you have that ability to be able to sort of go back to your toolbox and think about what may have worked earlier for

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a group of students that might work for a new group of students. Emma said that she sometimes schedules Blackboard Collaborate sessions to provide some remediation based on how students are doing in the course, and therefore has to adjust the pacing in her course. This is an example of responsive flexibility. She added that, "[teachers] need to able to be flexible…in redirecting or adding in any supplemental or remediation activities to be able to demonstrate that you have that connection with your students and that you are trying to meet their needs." Sam also described frequently creating supplemental instructional materials in order to meet the needs of his students. The ability to be flexible and to adapt to student needs is characteristics of all of the teachers that participated in this study.

In this section, I described how the teachers in this study communicate instructively. Results indicated that these teachers are closely connected to the content of their courses and course revision as an inextricable part of their instruction, that they create a variety of learning activities in order to reach the most students, and that they provide flexible instruction, adjusting to whatever needs arise in any given day. I have described how the teacher participants in this study communicate personally, communally, and instructively. In the next section, I will describe the final communicative domain that emerged in the findings. I have labeled the final way teachers in this study described their praxis as *authentic communication*.

**Authentic communication.** The fourth and final mode of communication that emerged in the data pertains to authenticity. In reading through teacher narratives, transcribing and coding interviews, and in observing courses, there was, for all four teachers, an air of authenticity that seemed to undergird all their approach to online

teaching. The *National Standards for Quality Online Courses* (iNacol, 2011)

recommends that quality online courses include "authentic learning experiences" which

"engage students in active learning" (p. 10). In the context of my 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.

Darren W. Woodruf (1996), research associate with the School Development

Program, identified a similar finding in his observations of positive class environments in

urban high schools. The Comer School Development Program (SDP) from in the Yale

School of Medicine is an intervention program focused on promoting achievement in

low-income/high-needs schools. In a meta-analysis of 29 school reform programs, SDP

was one of only three programs identified as having "statistically significant and positive

achievement effects based on evidence" (Borman, Hewes, Overman, & Brown, 2003, p.

29). Woodruf (1996), in his observations of positive classroom settings in urban schools,

observed the following scene:

> The most striking element from this scene was in how comfortable—how real—
>
> the interactions seemed to be between all involved. Student talk usually reserved
>
> for time away from school and from adults was the early focus. Mr. King did not
>
> forfeit his control as teacher, yet the group seemed as comfortable with him as
>
> they might have been with a friend. The transition from social talk to
>
> concentrated study was easily made. In his own way, Mr. King was able to reach
>
> out to his students on a social and personal level, as well as academically. Their
>
> comfort and easy relaxation in his presence enabled him to move the group
>
> smoothly into the intricacies of trigonometry. (p. 278)

He noted that instruction, communication, and classroom dynamics seemed authentic, highlighting the positive teacher-student interactions that were observable as a result.

While authenticity may not be as easily observable in the online environment, through constant-comparative coding and analysis of teacher interviews and narratives, I also identified strategies and dispositions that contribute to a semblance of authenticity among the four teacher participants and in their courses. The teachers in this study all attempt to make learning relevant, and they all feel that their work as online teachers is as authentic as the work of traditional face-to-face teachers. Where they differ, however, is the extent to which they allow opportunities for informal expression in their virtual classrooms.

*Making learning relevant.* Each of the teachers in this study view their courses as content areas that are directly relevant to students' lives. Connecting the learning at school to students' home and experiences is one of the cornerstones of equity pedagogy and of culturally responsive instruction (Banks, 2016; Bennett, 2001; Gay, 2004; Ladson-Billings, 1994). Each of these four teachers works to keep the learning experience relevant for their students. Teachers draw from current events, popular culture, social media, and student interest to incorporate relevant content and activities into their courses. George says that he includes funny YouTube videos or posts from social media in the news item and discussion board areas of his courses to make connections for students between the content they're learning in his class and what's happening in the real world. He uses the concept of cultural diffusion as an example: "it can be a fad that is happening and I…say, 'Hey this is a lot like how cultural trends diffuse, this fact that everybody is all of a sudden wearing bright orange shoelaces' or whatever the trend

might be." George hears back from former students that they have found value in their experience in online AP Human Geography event after theyhave graduated:

> I have kids tell me all the time, this is the most useful class I've ever taken. I hear back from kids who go to college who say they were ahead of the game when they got to school in a sociology or anthropology class or any kind of current events because of the things they learned in my class. A lot of that has to do with keeping it relevant.

Sam described the discussion board prompts that were already a part of his course when he first started teaching online. The original posts prompted students to complete statistical computations. He described them as "uninteresting," and noticed that his students often skipped the discussion board activity. Sam has since rewritten the discussion board prompts, making them "a lot more controversial or interactive, posing more questions" and trying to connect students with "the world they live in... not [the] textbook." I asked Sam to describe one of the posts he has rewritten:

> When we are learning inferential testing and hypothesis testing, there's claim from a company that they make their chairs for McDonald's to hold a certain weight. And so the manufacturer specs are given, the weight is there, while supposedly, this is just made up, there's a heavier weighted customer that sat in the chair and broke the chair and now he wants to sue McDonald's. Is the company's claim valid? Is it legit? And test it using a hypothesis test to see who is at fault. Should McDonald's be sued or is McDonald's actually safe based on the company's claim and is the man just extremely overweight? Is he an outlier?

This example of a rewritten discussion board post that is more relevant to what Sam perceives as his students' interests. He says he can tell when students are engaged because they are much more active on the discussion boards. When I asked him if he was ever surprised by which topics seemed to resonate with students, he replied, "Not really. Pretty much their world revolves around sports, texting, friends, making money, and going to college."

All four courses contained examples of real-world learning activities. Students in AP Literature participate in peer reviews and writing workshops throughout the year. Emma invites students to engage in writing workshops when they are writing their college application essays. In AP Statistics, Sam grouped his students into geographically diverse groups of four, and had them design a study, collect real world data, and report out the results. In AP Psychology, students completed field experiments that include perception and touch labs in their own context, and observed social interactions in their natural environment in order to see the concepts they are learning about in AP Psychology happen in a natural setting. In AP Human Geography, students are asked to consider their own religions and cultures. George shares multiple images from his many travels South Africa, Portugal, Nepal and other places. He encourages his students to try to travel and to see the world beyond their own contexts:

> Every dime spent on talk travels is worth a dollar. That's one of the things that every kid who leaves my class is probably going to repeat at some point in their life because I believe it and I want them to get on, not be afraid to get on an airplane and go.

But perhaps the most authentic real-world learning experience in George's AP Human Geography course is the Kiva loan project. Rather than speaking in abstraction, the students are read about the lives of actual families in the developing world, consider the relative impacts the loan they fund may have on that family and their community, and come to a consensus about who should receive the loan.

*Connecting culture and content.* Each of the participants in this study saw direct connections between issues of culture and the content of their course. Emma viewed the role of AP Literature as helping students to make connections between literature and the human experience. Thus, Emma welcomes, although does not require, students to make cultural connections between what they are reading and their own experience. Sam frequently spoke about culture in terms of popular culture and adolescent culture with regard to AP Statistics. In this way, he is intentional about including data from culture in investigative tasks. Phoebe commented several times that culture is an essential aspect curriculum in AP Psychology. Specifically, she explained that her course explores, "collectivist cultures versus individualist cultures and this is a great opportunity to include a different cultural perspective than most of my students' experience." In fact, Phoebe thinks that students in AP Psychology explore culture more than in other courses:

> We do look at that whole culture. We look at gender and gender values and how culture tells people how they're supposed to act…In psychology we look at it probably more than in any other course...We look at that even from the beginning when we start talking about what is Psychology and how that differs from one culture to another.

Phoebe included gender roles and identity in her discussion about culture. She went on to explain that students who may be struggling with gender identity and sexuality are often drawn to AP Psychology because they are looking for a relevant learning experience to help them learn more about gender and sexuality.

However, in my observations during this study, it seemed that AP Human Geography contained the most explicit curricular connection to culture. George emphasized that culture is the core content area of his course. In his perspective, understanding cultural differences and backgrounds is perhaps the most important part of his course:

> It's probably as important as anything else I teach them…The world is made up of all different kinds of people, and you are the product of where you were born. So think about the fact that you were born in the coal fields, and that's why you may be a Baptist and you maybe speak English…On the day you were born there were hundreds of thousands of people born all over the world, and they are all born into their own cultures…I want my kids to understand that.

Because the connection to culture is so explicit in George's course content, he feels compelled to ask culturally diverse students to share their experiences with the rest of the class, as long as they are comfortable doing so. In this excerpt, it is evident that George not only values his students' diverse cultures and backgrounds, but also values the opportunity for his dominant culture students to learn from their classmates:

> The beauty of teaching a class that is mostly about culture is that you get them to share. So, a kid from Greenville who's never known a Muslim before, you know I don't call a kid out and say, 'Well tell me Mohammed'. I don't make them

represent the Islamic faith.  But I will sometimes send a message privately to a kid

if I know that they're Hindu or whatever and say, you know, if you feel

comfortable doing so, could you share some things in the discussion board that

might help other students understand what polytheism means to a Hindu?

George works hard to facilitate class community in his course, to maintain personal

connections with his students, and to keep his course content relevant.  Yet he recognizes

that the focus of his content area makes it easier for him to be a culturally responsive

online educator.  He says, "I am lucky to teach a cultural geography course, so it's pretty

easy to be culturally inclusive." This begs the question; to what extent does course

content or discipline impact the ability or at least the opportunity for teacher to be

culturally responsive?

Other researchers have also explored culturally responsive online instruction (e.g.,

Brown, 2009; Carter, 2000; Osborne, Kriese, & Davis, 2013).  Such investigations often

explore how culturally responsive instruction happens in online courses whose content

areas pertain to cultural inclusiveness or subjects pertaining to diversity.  In Carter's

(2000) doctoral dissertation, for example, she investigated the ways in which cultural

responsiveness happened in an online graduate level course about multicultural

education.  Osborne et al. (2013) explored how multicultural awareness and intercultural

sensitivity can be taught in a class designed around the same subject area.  In a

conference proceeding about best practices for culturally responsive online instruction,

Mazur & Courchaine, 2010 explained how George Washington University has drawn

from CRP to construct a bilingual program on special education.  In each of these

examples, there are implicit connections between some of the course and program content and the very notion of cultural responsiveness.

In 1994, Ladson-Billings argued that culturally responsive pedagogy should develop a critical consciousness or socio-political awareness in students. In my investigation into the practices of culturally responsive online teachers, George's AP Human Geography course seemed to have the most potential for engendering such a level of awareness. It may be, then, that curricular connections to culture and cultural responsiveness are more likely in some content areas than in others. Still, even teachers whose disciplines do not obviously pertain to culture can employ some of the instructional strategies that can facilitate a more authentic learning experience. One strategy that teachers in this study employed was providing students with choices throughout their courses.

*Providing student choice.* Gay (2000) has stated that "choice and authenticity are essential to learning" (p. 188). Each of the courses I observed in this investigation included multiple opportunities for student choice within the curriculum and within the learning activities. AP English Literature, for example, provided students with opportunities to select books for study from a list. Books and selected readings include titles from non-White and non-Western authors, including Countee Cullen, Zora Neal Hurston, Toni Morrison, Simon Ortiz, and Naomi Koriyama, to name a few.

In all four courses in this study, students were sometimes given choices in their work products and learning activities. Sometimes the choices were as simple as which discussion board prompts to respond to. Sometimes students could choose between

working individually and working in pairs.  And sometimes students could choose what kind of product to create for a project assessment.

*Drawing from student experiences*.  All four teachers in this study try to make learning relevant by connecting their course content with their students' own experiences. As mentioned earlier, the investigative tasks in AP Statistics have students explore things like amusement parks and video games, subjects that Sam thinks will resonate with his students' experiences.  In one AP Statistics Blackboard Collaborate recording I observed, Sam asked students to point out where they were located on a map of the state.  He then referred back to their responses from the initial student survey in the course to make a point about a statistical concept.  In this live session, Sam was attempting to engage students in the concepts of statistics by referring them back to their own contexts and to their previous responses on the surveys.

Phoebe, the AP Psychology teacher, stated that "the material has to apply to their lives and they need to see their culture reflected in what they are learning." To get her students to make connections to their personal experiences, Phoebe utilizes an ongoing journal assignment in which students connect and apply concepts from AP Psychology to their own experiences.  She might ask them to name and discuss a popular psychologist they've seen in popular media or to describe a time in their life that they took advice from someone, as examples.  Phoebe asks students to complete exercises and observations in psychology within their own contexts:

> In social psychology, they either attend a sporting event, they observe the lunch
> room for three days, or they go to the mall and watch behaviors.  And then they

apply a lot of the things we are learning about in social psychology, whether it's the bystander effect or attribution error.

Here, students are very explicitly making connections between their own context and experiences and the concepts they are learning in AP Psychology.

Students are often asked to draw from their experiences in AP Human Geography. Throughout the course, students are asked to make personal connections and reflections and to make claims supported with evidence on the course discussion boards. The following Module 1 discussion board assignment provides an example:

Look around you. From where you sit, right now, can you identify 3 material culture traits and one non-material culture trait? List these in the discussion board and say why you chose them. Respond to another student's post and compare your material culture items with theirs. Can you establish whether you share a common culture by the items chosen? How would a person from outside our culture classify your surroundings?

Students in AP Human Geography work as ethnographers in their own settings. In one assignment, George asks students to visit their local grocer to find out what they can about their area based on the products on the shelves. He provides students with a signed form letter so that grocery store managers can see that students are indeed engaged in ethnographic schoolwork.

Emma has also discussed the importance of students making connections between literature and their own experiences. However, Emma also warned of the possibility of student sharing becoming inauthentic. She recognizes that not all of her students share similar experiences, and that not all of her students will have a context or point of

reference for certain experiences. She provides the example of relating the theme of jealousy in Othello to jealousy her students might see at a typical high school. If she asks students to share their experiences with jealousy from their own high schools, her home-schooled students may not have a frame for reference. Instead, Emma spoke about the need for teachers to be responsive to whatever the student experiences happen to be, rather than making assumptions about student experiences in the course activities. Emma spoke of reading the "social cues" in her class in order to garner a better understanding of what is resonating with students.

In keeping relevant instruction responsive, she looks for those examples of teachable moments. During the past academic year, Emma had to intervene and delete a student discussion board post when a student was making his own personal connections between themes in the novel *Crime and Punishment* and the very divisive presidential election season between Hillary Clinton and Donald Trump. In a discussion about the validity of power, one of her students posted a heavily redacted 15-page document that linked the Clintons to a series of murders. Emma let the student know that while this may very well provide an example of Nietzche's Overman theory, "you can't post a conspiracy theory on the discussion board as evidence." This led Emma to an explanation of what evidence means. She explained that the student's opinion was allowed, but that conspiracy theories do not count as evidence. She explained, "We also have to be sensitive to the way our messages are received as well as how we present them. And he was OK with it. He understood it rather than, you know, being silenced for his views." Rather than being bothered by this student post, Emma appreciated the opportunity for a teachable moment:

We live in a very social media saturated society…Sometimes the lines are blurred between a knee jerk reaction to a post or an image, or a reaction when we need to stop and think…about what it is we are actually…wanting to post, wanting to transmit, wanting to send, and to be able to assess before we hit send…how our message might be received…If they've learned that,…it's just as important as anything I could have taught them about English.

Relevance in this example comes not only from the student making connections, but also from the instructor understanding how to use the connections that students may make as teachable moments, when they arise.

These four teachers work to make learning relevant to their students by providing opportunities for real-world learning, by making explicit connections to culture in the content of their courses, by providing opportunities for student choice, and by drawing from students' experiences in their instruction. Finding relevance for and with their students is one example of how these teachers communicate authentically. Another way that these teachers engage authentically is through their commitment to the notion that online teaching is an authentic form of instruction.

***Online teaching is teaching.*** Throughout this investigation, Emma, George, Phoebe, and Sam frequently made comparisons between online teaching and face-to-face teaching. It became clear in listening to them that these online teachers, all former face-to-face teachers, view online teaching in the same way they view face-to-face teaching. Teaching is teaching, regardless of the platform. When I asked Phoebe to describe her typical day, she did so by comparing what she does with what a face-to-face teacher does:

That's just like a regular face-to-face classroom…I have tests that I grade, and the homework that I have to check…I have to talk with parents, and schools and things like that…Versus one administration that most teachers are dealing with, I probably have 30 different schools, and I have to try to figure out what's going on there.

George and Emma also compared their online teaching to face-to-face teaching, except they explained the affordances of online learning. George finds that he is able to provide more meaningful communication to his online students:

At the end of the class, if you don't run out of time you've got a couple of minutes for them to ask you questions or hang around outside your door to talk… Whereas here, when a student is working on a homework assignment, whether that be at night or during the school day, and they have a question, they can just send it to me. And I can think about my response and really make it meaningful.

Emma similarly described affordances in the online environment as compared to the face-to-face classroom. She said the engaging in such frequent communication and dialogue helps to communicate a sense of empathy and understanding toward the students. Thus, she feels like she can take more time with them and get to know them at a greater depth as compared to students in her previous face-to-face classes.

Every teacher in this study compared what they do online with what they did in their face-to-face classrooms. George sums up this comparison:

Online learning is learning…The same things that work in a classroom work online, you just have to think about them a little bit differently. A course that just gets you through the content is not a class, it's not an experience, it's an

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information dump…The more we can design instruction in a way that doesn't just

deliver information but delivers understanding, that's the key to teaching.  That's

the key to teaching whether you're online or whether you're in front of a student.

Each participant made comparisons between their duties as face-to-face teachers and their

duties as online teachers.  In both platforms, they designed instruction, monitored student

progress, and engaged in communities.

When I asked them about their perceptions of online credit recovery online

courses (which tend to be more self-paced and less teacher-facilitated), each participant

overwhelmingly saw more far more value in teacher-led online courses such as the ones

they instruct.  Their reasons included their ability to forge relationships with students and

to provide personalized assignments based on individual student needs and interests.  For

these reasons, the participants in this study consistently described online teaching as an

authentic form of instruction.

***Language choice and self-expression.***  The final ways that some, but not all, of

the teachers in this study engage with their students authentically is through their

acceptance of informal language choices or alternative forms of student self-expression in

the online classroom.  After the initial class observations, I noticed that students in some

classes were engaging in discussions using more informal language including hash tags,

emoticons, and memes.  For example, in one AP Psychology discussion, a student replies

to a text discussion by simply posting a meme with an image of the rapper Waka Flocka

(see Figure 7).

*Figure 7.* Student meme reply on an AP Psychology discussion board.

Here, the sentiment of the meme is a hesitant acknowledgement to the speaker. In another discussion thread in the same class, students are asked to "diagnose" a fictitious male named "Gnarly" who has trouble dating. In this fictional scenario the teacher has designed, Gnarly is devastatingly afraid of women, yet wishes to date. Students are asked to both diagnose and recommend treatment for this character. During this discussion, I observed that a student used a simple pair of emoticons, void of text, as his reply (see Figure 8).
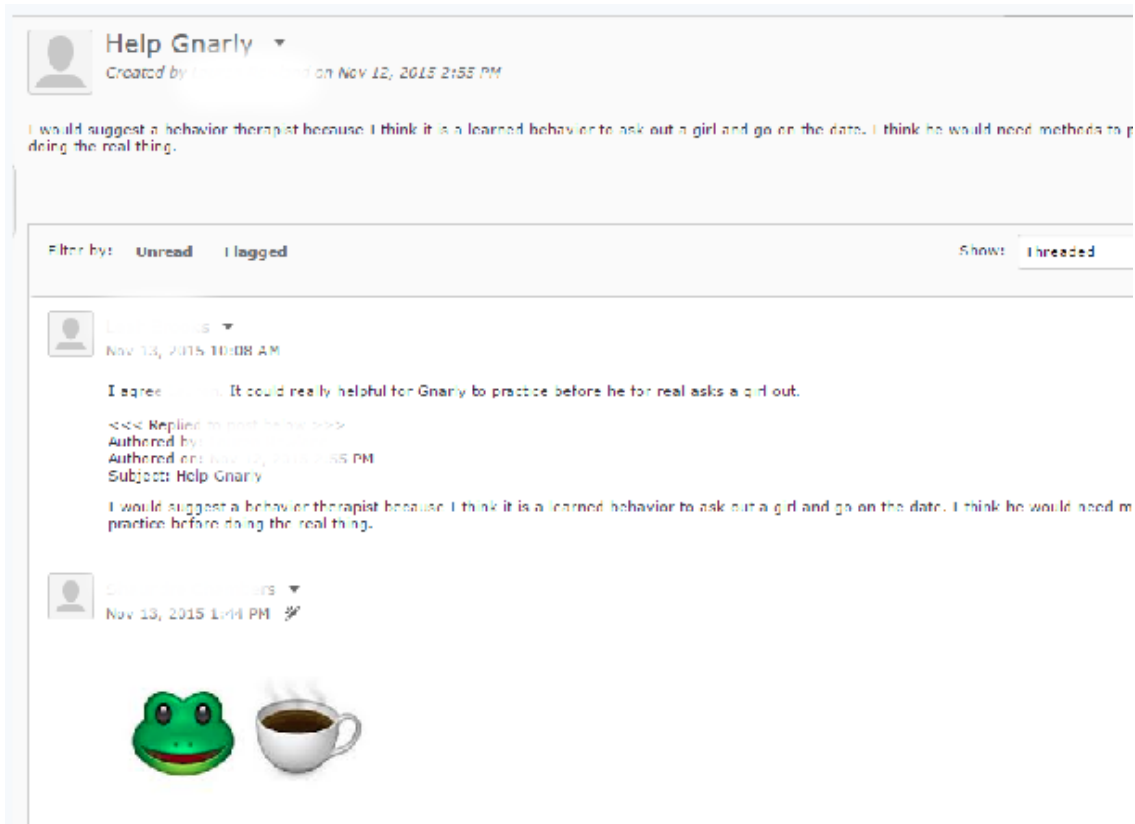
*Figure 8.* Student use of frog and coffee emoji on AP Psychology discussion board.

At first, I didn't think much of the frog and coffee emoji together. Then in the car one day, I asked my 14-year-old daughter if that emoji combination meant anything to her. "Oh, of course!" she replied. She went on to explain to me that it was a sarcastic remark meaning, "That's none of my business." I looked up emoji meanings, and discovered that my daughter was correct. This is a widely known emoji combination that is written as a sarcastic response to a judgment of someone else's behavior. (This particular emoji combination is an evolution of popular Kermit the Frog memes from 2014). These discoveries led me to wonder to what extent the teachers in this study allowed students to vary their language choices in the online classroom.

In the follow-up interview, I asked teachers how they felt about allowing informal language in their online classes. Emma, the English teacher, discussed how language

choice should be connected to purpose.  She does not mind informal language if the communication is an informal chat or a fun discussion.  However, if the purpose of the communication is academic or more serious, she prefers that her students use a more formal register.  George had a similar response: "As long as it's respectful, I don't really care, to be honest.  It's the language they use.  I always make sure that when it's a formal writing assignment, that they know, you know, that this is not conversational." Phoebe and Sam, however, do not prefer to allow informal language in their courses.  Sam addressed this issue directly it in the beginning of the year in a live Blackboard Collaborate session:

> We have a welcome session at the beginning of the year, and I tell them that this
> is an open, public viewed course.  Anybody could pop in at any time.  Keep it
> professionally academic.  You know, and if I see anything pop up like that that's
> somewhat nonacademic, I will send that student a message in the course via email
> or in their feedback and I'll temporarily remove their post and give them a chance
> to repost it.

Phoebe also said that she also does not prefer informal language to be used in her course.  She worries that some of her students will not understand the cultural referents in informal and texting language.  I found this interesting since the examples that led to this line of questioning were from Phoebe's class.  Phoebe does not mention how she might go about understanding the meaning behind a student's post, but George does:

> Now if a kid is using like a pop culture reference that I don't [know] that might be
> a hip-hop reference that I suspect might be inappropriate in some way, I either ask
> one of my sons or I'll just send them a note and say, 'Look I'm 53 years old and

this is not part of my life, so can you just assure me that this is fine? Or is there a

problem with this?' And if there's a problem with it they almost always will take

it down.

Here, George demonstrates that he is open to having a dialogue with students about the

meaning of their informal, texting, or image based post. He trusts his students to let him

know what is appropriate and what is not appropriate. George shared that the faculty at

SVS have been having this debate about informal versus formal language use in their

classes. He said, "it was interesting to see that some faculty members have a standard

response…'Please address me as Mr. Smith'… and some of the teachers say, 'Well you

know, I'm pretty informal with them. So it's only normal.'" George settled on the idea

that the type of language and expression teachers allow in their online classes is

ultimately up to the teacher: "There are some teachers who are on the level of the student

and they can get away with that, and there are some teachers who…are not. So I think

you do what is comfortable to you." It is interesting to note these teachers' different

perspectives toward informal language in the virtual classroom. Allowing and drawing

from language variation is a characteristic that emerges in much of the literature on

culturally responsive pedagogy (Gay, 2000; Mallinson & Charity-Hudley, 2010). Yet the

only time language variation emerged as a topic in this study was in reference to informal

versus formal language use in the text-based areas of the course. In this area, teachers

had mixed perspectives and practices.

Communication with students was the most frequently occurring code in the data

of this study. All four teachers describe their teaching as dialogic. Their communication

can happen in multiple ways and multiple modes and for multiple purposes. Through

analyzing teacher narratives, interviews, and class observations, I was able to determine that the four teachers in this study communicate with their students personally, communally, instructively, and authentically. These serve as four domains for conceptualizing the practices of these selected culturally responsive online teachers.

**Conclusion**

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 and across multiple modalities. Both Gay (2000) and Ladson-Billings (1994) have identified dialogue between students and teachers, as well as between students and students, as one characteristic of a culturally responsive classroom. Friere (1970) proposed dialoguing as a strategy for co-constructing knowledge with students. Today, some educators refer to this type of co-construction of knowledge as cogenerative dialogue (Beltramo, 2017).

The teachers in this study, all experienced face-to-face and online teachers, share similar beliefs about online teaching and about culturally responsive pedagogy. They teach in similar online contexts and all believe in the mission of the online program they work for. After analysis of the data, the main finding that emerged is the idea that online teaching is dialogic. The teachers in this study dialogue with their students and classes in multiple ways, and adjust their communications and course materials in response to these ongoing dialogues. These teachers communicate with their students personally, communally, instructively, and authentically.

**Chapter Five: Discussion of Results**

This study examined how culturally responsive online pedagogy happens in several teacher-facilitated, fully online, high school courses. In Chapter 4, I reported the results that emerged from employing the methods of grounded theory research. Through constant-comparative coding aided by reviewing code frequency charts, a core category emerged. A core category is the predominant finding of a grounded theory investigation (Corbin & Strauss, 2008). From their perspective and practice, their praxis lies within multiple ways and methods of dialoguing with their students.

This chapter will include a discussion about teaching as dialogue, including the concept of cogenerative dialogue, dialogue in online teaching, and dialogue as it relates to culturally responsive pedagogy. Then, I will elaborate on the emerging model of culturally responsive online pedagogy (CROP) and each of its domains, identifying the elements of CROP that emerged, as well as those that were discussed in the literature on culturally responsive teaching (Gay, 2000; Ladson-Billings, 1994) but did not emerge in this study. Next, implications for educational leaders at multiple levels will be discussed. This chapter will culminate with recommendations for future research.

**Teaching as Dialogue**

One of the primary findings from this study was the importance of student-teacher dialogue in culturally responsive online pedagogy. The act of teaching as a rhetorical exchange or dialectic has roots in Western philosophy, beginning with the teachings of Socrates (Burbules & Bruce, 2001). In philosophy, the notion of the dialectic is most often rooted in logic and reasoning. The idea of dialogue as a pedagogy, juxtaposed with the lecture or "monologue" as a pedagogy, was perhaps most advanced in the writings of Paolo Friere (Burbules & Bruce, 2001). The movement away from the monologue and toward the dialogue in pedagogy was a movement away from a banking approach to teaching toward a more responsive approach. The Greek prefix *di-* means two. While a *mono*logue is one person speaking, a dialogue entails at least two parties engaging in a rhetorical exchange. Thus, to dialogue is not only to speak, but also to listen. 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. This joint approach to learning between student and teacher has been termed by some as "cogenerative" (Beltramo, 2017).

**Cogenerative dialogue**. Friere (1970) wrote that a dialogic "pedagogy…must be forged with, not for, the oppressed (whether individuals or peoples) in the incessant struggle to regain their humanity" (p. 48). Friere was writing quite literally about subjugated laborers and about liberation. While the political context may not be quite the

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same, advocates of culturally responsive pedagogy have drawn from Friere's

constructivist and liberatory approach to suggest that student voices and perspectives

should be invited into the learning process (e.g., Delpit, 1988; Gay, 2000; Ladson-

Billings, 1994; Van Duinen, 2006). While engaging in cogenerative dialogue may not

result in political liberation, it may aid teachers in getting to know their students, and in

making subsequent adaptions in their instruction.

The phrase "cogenerative dialogue" has emerged in recent years to describe this

dialogic process among teachers and between teachers and groups of students. The word

cogenerative implies that both parties in the dialogue share experiences and input and as a

result generate "a shared, collective responsibility for future activity and the

accomplishment of its outcomes" (Tobin & Roth, 2005, p. 67). Tobin and Roth (2005)

discussed how engaging urban students in cogenerative dialogue, or as co-teachers,

created advantages and transformation in urban settings:

> If cogenerative dialogues are regarded as a field in which culture can be produced,
>
> reproduced, adapted and transformed then the focus of activity in the field can be
>
> on the learning that occurs. Cogenerative dialogues can be opportunities to learn
>
> about others, who are positioned differently in social life in terms of such factors
>
> as age, class, ethnicity, and gender. (p. 68-69)

In an investigation of urban teachers' pedagogical approaches, Beltramo (2017) found

that engaging in cogenerative dialogue with their students about learning enabled

teachers to adapt their instruction at both the micro (student) and the macro (curricular)

level.

The teachers in my investigation perceived that their students were diverse culturally, socioeconomically, and geographically. Yet, they had no reliable data to support their perceptions. They learned about their students by engaging in phone conversations, by conducting surveys, and by collecting mid-course feedback from their students about their experiences in their courses. Teachers did not, however, report that they were concerned for any particular group of students, nor did they report having any academic gaps between student groups. In both the Tobin and Roth (2005) and Beltramo (2017) studies on cogenerative dialogue, dialoguing occurred through scheduled meetings with groups who were representative of non-dominant cultures engaging in conversations and negotiations about the learning process. I did not observe this level of cogenerative dialogue in this study. However, since State Virtual Teachers have no systematic way to identify salient groups, organizing discussions for and with students from selected racial, ethnic, or selected socioeconomic groups would be unlikely at SVS. Not only is there a lack of demographic student data, students enrolled in SVS work at different times and at different locations throughout the state. So, scheduling group meetings in the same way that Tobin and Roth (2005) and Beltramo (2017) described would be quite difficult. The teachers in this study did, however, engage in frequent communication through multiple modes, but their adaptations in instruction and curriculum seemed to result more as a response to individual student feedback rather than from large group dialogue.

The four teachers in this study described only briefly how their dialoguing prompted them to make micro level changes for individual students. Most often, these teachers described making micro level changes in schedules and due dates, and coming up with agreed upon pacing plans that enabled students to regain the recommended pace

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in the course. Teachers referred most frequently to the act of providing feedback as the way in which they dialogue with their students. Each teacher described providing both personal feedback to individual students, and communal feedback to the whole class. Some teachers used reflexive questioning in their feedback and others allowed assignment revisions so that students could engage in a feedback loop, or conversation, about their learning. Thus, micro level changes could occur during the feedback loop on student assignments. George described the process of trying to engage students in dialogue at the individual or micro level. George noted how he attempted to draw students into the dialogue that, as each of the teachers in this study described, often takes place during the feedback process. George said that he has to tell students "you can respond to my feedback, you can give me feedback on my feedback." Although it was not clear how often the teachers altered individual assignments or learning activities for students based on this reciprocal feedback approach, they did describe allowing rewrites and setting up individual synchronous sessions to assist individual students.

At the macro level, however, the teachers in this study seem to be engaged in continuous content and curriculum adaptation based upon how their students engage with the material. Recall, for example, how Sam revised his discussion board posts to come up with more open-ended questions rather than problems with set solutions after realizing that his students didn't seem to be fully engaged on the discussion boards. Emma described these macro level adaptations in more summative terms:

> You make notes as a teacher in content review and development at the end of the year of where your students had the most difficult time, you know if you had to spend a lot more time or they and a difficult time in understanding the concept

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and you can think of ways of shifting that and maybe revising it for your next

group. It's sort of an organic process because your students are always going to be

your variables, so you know, what might work for one group of students might

not work for another group of students.

Emma noted that revision and adaptation in course content and activities is responsive to

student engagement with the materials. However, she also said, "your students are

always going to be your variables," noting that for this reason this process of adaptation

and revision will be constant. Adapting and varying instructional strategies and materials

is inherent in Banks' notion of equity pedagogy, yet Banks (1995), Ladson-Billings

(1994), and Gay (2000) each stressed that this adaptation occurs at least in part to include

instruction that is more culturally congruent. Gay (2004) described the process of

connecting students' home cultures with school content as "cultural congruity" (p. 147).

The results of this study indicated that these four online teachers adapt instruction and

materials to meet the individual needs of students, but that these adaptations were not

necessarily done to make learning more culturally congruent.

Recall from Chapter 3 that equity pedagogy occurs when teachers utilize and

adapt their teaching methods in order to appeal to, engage, and connect with students

from various backgrounds. Gay (2000) wrote that one of the goals of CRP is to improve

achievement for marginalized students of color, and Ladson-Billings (1994) notes that

one of the goals of CRP was to help promote a critical consciousness amongst students

who may have been marginalized so that they themselves may be able to challenge power

structures. While the results if this study did not indicate that teachers adapted

instruction to promote a more critical consciousness amongst traditionally marginalized

students, the results did indicate that teachers adapt instruction to meet individual learning needs and student contexts.  The teachers in this study did not claim to co-construct knowledge or learning with their students (as may be implied by the term 'co-generative').  Rather, they described their teaching in terms of communicating with students on multiple levels, and making adjustments to their instruction (either through individual feedback, communal remediation, or instructional modification) based on what they learned from their ongoing communication.  If we expand our notion of dialogue to include the different modes of communication identified in this study (personal, communal, instructive, and authentic), it is possible to claim that these teachers are indeed adapting their online teaching based on what they glean from their students.

**Dialogue in online teaching.**  The notion of dialogue as a teaching strategy emerges in several recent investigations of effective 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.  DiPetro 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 et al. (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. Their students felt cared for, and felt that they and their teachers were working together

toward a common goal. 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 include 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.

**Dialogue in culturally responsive teaching**. This notion of teaching as dialogue also emerges in scholarship about culturally responsive pedagogy. Friere (1970) suggested that teachers and students should engage together in the learning process, and a method for bringing about this shared approach to teaching and learning is through dialogue. Ladson-Billings (1994) described culturally relevant teachers as those who pull knowledge out of their students like "mining" rather than those who put knowledge into their students like "banking" (p. 34). Such knowledge-mining must involve getting to know students, and teachers can only get to know students through reciprocal exchanges. While Gay (2000) does not explicitly state that the act of dialogue is characteristic of culturally responsive teaching, she does identify the act of listening as characteristic of CRP. In her discussion of how culturally responsive teachers may demonstrate caring in their instruction, Gay notes that culturally responsive teachers can demonstrate care through the reciprocal act of listening to their students. She says that, "A caring person is sensitive to, emotionally invested in, and attentive to the needs and interests of others"

(pp. 48-49).  Engaging in cogenerative dialogue also assumes a level of care.  Beltramo (2017) concluded that engaging students in congenerative 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.  Thus, care, listening, and reciprocity are implicit in cogenerative dialogue.

**Culturally Responsive Online Pedagogy**

The goal of this investigation was to understand how culturally responsive teaching happens in teacher facilitated fully online courses.  Overwhelmingly, the teachers in this study described their praxis in terms of communication and dialogue.  Thus, a concept for culturally responsive online pedagogy (CROP) emerged.  The modes in which the four teachers in this study communicate with their students were grouped into four sub-categories: personal, communal, instructive, and authentic.  The ways in which teachers communicated in each domain was described with illustrative examples in Chapter 4.  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 9.
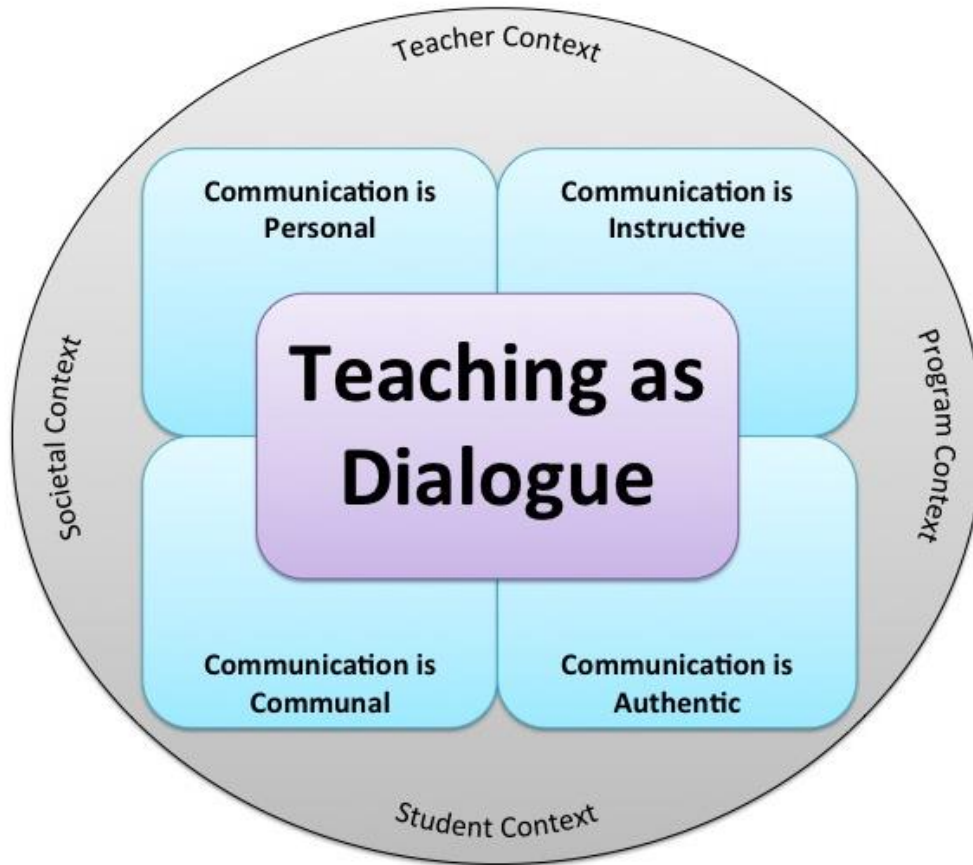
*Figure 9.* Emerging model of culturally responsive online pedagogy (CROP).

In this conceptual model, teaching as dialogue is represented as the center or core category, with the four sub categories 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 in this study shared similar contexts: they were all experienced classroom teachers, they all resided in rural areas of a 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, serving multiple schools and students from across the state.  These 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 and exhibiting 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 are skillful in their ability to communicate in multiple and concurrent modalities.  They provide 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 move 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.

**Communication is personal.** The teachers in this study engage in frequent individual dialogue with their students through email and text messages, phone conversations, and through individualized feedback on student assignments.  They strive to get to know their students, and work toward cultivating strong teacher-student relationships.  At least three of the teachers in this study keep notes on what they learn about students' individual interests and backgrounds so that they can refer back to this information in feedback and in conversations with students.  All four teachers both feeling and express care toward their students.  They rely on the personal connections they make with their students help keep their students motivated throughout the course.  They often monitor, check-in, and dialogue with students individually.  The teachers in

this study believe that they get to know their students, and respond to them according to their needs and interests.

Gay (2000) identified that caring is a "multidimensional process" that equates to "responsiveness"; responsiveness that is rooted in "understanding people in context" (p. 52). Educators learning about their students' lives is at the core of culturally responsive teaching (Gay, 2000; Ladson-Billings, 1994). Teachers in this study described that educators who are unfamiliar with teacher facilitated online teaching assume that the instruction is impersonal. Velasquez et al. (2013) found that while online learning is often regarded as impersonal and uncaring, the teachers in their investigation in an online highs school also engaged in continuous dialogue with their students to facilitate caring. When online teachers actively engaged 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. 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 outlets in order to facilitate community in their online classes. Through frequent news item posts, academic and non-academic conversations on discussion boards, group emails, and live synchronous sessions, these teachers work to create caring, inclusive, and culturally aware learning environments in their online classes. They provide 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 are aware of one another and of how they are working together as a class toward common learning goals. They help students with similar interests make connections with one another so that there are opportunities for social connectedness, for those students who are 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) identified 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 oft 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 et al., 2013; Picciano, 2002; Richardson & Swan, 2003; Rovai, 2002b; Sadera et al., 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). Palloff and Pratt (2007) described this sense of belonging to an online community as *coalescence*. 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. Teachers communicate 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. They create a variety of learning activities in order to appeal to varying student learning preferences. Above all, the teachers in this investigation 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. Flexibility may include 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 flexibility with their time, and were flexible in adapting pedagogical strategies in order to meet the needs of different learners.

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 is inherent in Gay's (2000) and in Ladson-Billings's (1994) models for culturally responsive instruction. The teachers in this investigation did report that they vary learning activities, and that they include 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 ways in which the instructive communication domain emerged in this study 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. The teachers did identify ways in which they make their courses relevant to students, and these methods will be discussed as ways in which these teachers communicate authentically, the last domain that emerged in the results of this study.

***UDL meets responsive teaching***. Because the teachers in this study do constantly adapt and modify their content and curriculum, I categorized this act as an instructional strategy. While I did not find explicit examples of teachers modifying content and instruction to align with students' cultures, what I did find was teachers using various forms of dialogue to inform the ways in which they may modify and adapt their instruction. They all recognized that different instructional approaches and different ways of presenting and engaging with content appeal to different learners. Therefore, they continuously add to and adapt their course content, and frequently offer multiple

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ways to access information (ex. video, audio, and text).  This design principle, coupled

with the recursive nature of their work, resembles a responsive Universal Design for

Learning (CAST, 2011).  As noted in Chapter 3, from a CRP lens, what is missing in the

UDL framework is the importance of community.  The teachers in this study work to

translate what they learn about how their students engage in their course (through

feedback on surveys, through email exchanges, through discussion board conversations,

through student performance on assignments) into adaptive instruction.  The instructive

communication domain of CROP incorporates the ways in which teachers listen and learn

from their students in order to differentiate instruction, construct more inclusively

designed activities, and better facilitate a sense of community.  While their modifications

do not appear to be based on awareness of students' cultures, they do appear to be based

on students' experiences in the classes.

      **Communication is authentic.**  The teachers in this study felt that their

communication with students was authentic.  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 did not emerge in this study, preferences for informal versus formal language

did.  Recall that I observed students using informal and social media related language in

some of their class discussions.  (Students referred to hashtags, used combinations of

emojis to express ideas, and posted memes as replies in discussions.)  The teachers in this

study varied in their acceptance of informal language use in their classes.

Gay (2000) 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 activities observed in this study were extremely varied. Students had opportunities to work individually or collaboratively, to tell stories, 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 is an integral part of their praxis. Yet, I did not observe or learn of any specific examples of these teachers making adjustments or modifications in instructional activities based on their understanding of student culture or background. Rather, they provided opportunities for student choice, and multiple ways to engage with course material. Teachers included some activities and assessments that were based on real-world data, current events, and on their students' contexts. Activities that are relevant to students' lives are indicators of culturally responsive pedagogy (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 curricular materials with teacher-selected materials that are multiethnic. The teachers in this study do regularly supplement the existing course content with material that they deem as relevant to their students. The supplemental materials they provide are sometimes multiethnic, but certainly not overwhelmingly so. Rather, the supplemental

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materials they provide are more often related to current events and popular culture. Sam, for example, pulls from live sports data to inform his investigative task assignments. George pulls 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 is aware of the need to post images that represent diverse groups of people. She refers to posting images of Buddha in her online course as an example. 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 are included as texts that students may select. However, students select one from several texts listed. So while the list included several examples of multiethnic texts to choose from, students are really only engaging with one.

The teachers in this study believe that better learning occurs when the content and activities are personally relevant to students. They supplement their courses with materials that they believe are relevant to teenagers, although supplemental materials are not necessarily representative of diverse cultures. They include assignments and assessments that allow students to engage in real-world learning. They use communication and student feedback to understand what assignments and materials work for students, and which do not. Two of the teachers allow students to engage in informal social interactions. Even though Phoebe does not prefer that her students use references to social media in their course discussions, I observed students posting 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 posts non-academic news items every Friday in order to convey a sense of humanness to his students. The teachers in this study use the same language they use to describe face-to-face teaching when they describe online teaching. There is an authenticity to their ways of communicating in and about their instruction.

**Summary of CROP.** Through this study, several domains of culturally responsive pedagogy emerged in these online classrooms. The primary way in which CROP was engaged was through individual and whole=class communication**.** In CROP, communication primarily takes the form of dialogue between teachers and students. This dialogue and communication occurs in four modes: personal, communal, instructive, and authentic. These four teachers respond 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 learn about their students' cultural backgrounds by initiating dialogue on the phone and by working to draw out their stories. However, I did not observe that any of the teachers in this study adapted instruction to be more culturally congruent with their students. Rather, they provided varied activities and opportunities for student choice.

The teachers in this study exemplified some of the characteristics of all four of Gay's (2000) domains of culturally responsive teaching (caring, communication, curriculum, and instruction); yet communication and caring emerged 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) 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 did not emerge in the results of this study. George's course, the 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 of these 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 not only allows all students across the state to enroll in supplemental high school courses it draws student populations from diverse districts. Thus, the teachers in this study believe that students in their courses represent multiple ethnicities, and often referred to their diversity in terms of socio-economic and geographic differences. Unlike the writings of Gay (2000) and Ladson-Billings (1994), in which culturally responsive teachers are embedded in predominately African-American classrooms, the teachers in this study describe having students from multiple communities in their online courses.

Both Gay (2000) and Ladson-Billings (1994) discussed the importance of community in their descriptions of culturally responsive instruction. Ladson-Billings (1994) noted that the teachers in her study all felt they were a part of the communities in which they taught. In a statewide online program, the student population comprises multiple communities. Thus, it may be more difficult for online teachers to feel that they belong in the same communities as their students. Instead, these teachers work to facilitate their own virtual communities. The extent to which culture impacts the development or sense of belonging in a virtual community has not yet been fully explored. At the same time, the teachers in this investigation work to facilitate connection-making among students who come from different communities across the state. Thus, the statewide online platform may at the same time provide an affordance and a barrier to developing a culturally responsive online pedagogy.

**Role of the Online Teacher**

The teacher's role is central in this model. This model of CROP rests upon the ability and willingness of the online teacher to engage in frequent communication with students and stakeholders. The role of the online teacher is central in creating differentiated learning experiences, in creating appropriate student assessments, and in monitoring and motivating online learners (Barbour & Reeves, 2009). The teacher is also central in models of culturally responsive pedagogy (e.g., Gay, 2000; Ladson-Billings, 1994; Mazur & Courchaine, 2010). As Boykins and Noguera (2011) have shown, the role of the teacher may be even more important in to the achievement of African-American students as compared to the achievement of their White peers. Thus, the teacher is central in models of impactful online instruction and in models of CRP.

The teachers in this investigation spend their workweek engaged in online communication. They hold full-time positions, and respond to student questions and communications promptly. Sam noted that providing quick replies to his students is one way in which he demonstrates care online. One concern of K-12 online learning is high attrition rates (K.L. Rice, 2006). In an investigation of attrition among rural students who were enrolled in an online AP English and Composition course, students identified the lack of teacher immediacy as one of their reasons for dropping out (Varre et al., 2014). Students in this study were frustrated by the time it took to receive a response or to receive feedback on assignments. Thus, teachers who are readily available and who engage in frequent communication may provide a sense of increased teaching presence in their courses (Garrison et al., 2000). The perceived presence of the online teacher has been positively correlated with increased student satisfaction and with positive perceptions of learning (Palloff & Pratt, 2007; Picciano, 2002).

During one of our conversations, Phoebe suggested that the students at SVS who have a full-time online teacher (such as the participants in this study) may have a better experience than students who have classes taught by part-time online teachers. Phoebe described that some online teachers have full-time face-to-face teaching jobs during the day, and teach an online course as an adjunct in the evenings. Thus, if students have questions during regular school hours, they likely must wait until the evening hours to receive a response from their online instructor. This suggests that programs staffed by full-time online teachers who are readily available and willing to engage in frequent communication may be better aligned to the model of CROP that has emerged in this investigation. Thus, districts and states looking to implement or expand more culturally

responsive online learning programs should consider their teacher resources and their ability to scale and in their ability to reach and maintain high expectations for all students.

**Personalized Learning**

The teachers in this study spoke frequently about their ability to provide personalized learning experiences for their students. They spoke to the ways in which they use dialoguing to get to know their students, to build relationships, and to provide responsive instruction. While none of the teachers were comfortable making judgments about the efficacy of other programs, each of the four teacher participants expressed reservations about self-paced online credit recovery models that may offer personalized instruction based on student diagnostics. Emma described the self-paced model as "impersonal," and Sam recalled his experience as a face-to-face monitor of an online credit recovery in a local high school by reporting that students "were just clicking through stuff". George suggested that students who struggle academically need more teacher interaction, not less. At the same time, all four teachers admitted that students who do not do well in traditional school may struggle in the teacher-facilitated cohort based model of online learning because they may not be expecting such high levels of communication or requirements for participation in a community. Some online learners may not prefer to engage in the frequent communications and community-building activities that have emerged as components of a more culturally responsive online pedagogy.

The ability of digital tools and platforms to provide personalized learning experiences is widely regarded as one of the affordances of educational technologies

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(e.g., Cullata, 2015; U.S. Department of Education, Office of Educational Technology, 2016).  Enyedy (2014) outlined the difference between "personalized instruction" and "personalized learning."  Personalized instruction pertains to technologies and learning systems that allow for student choice and adaptive instruction, such as adaptive learning systems.  Personalized learning, on the other hand, pertains to the ways in which teachers can vary instruction and activities.  In a review of existing literature on personalized instruction, Enyedy (2014) found little evidence that personalized instruction is effective.  Thus, Enyedy suggested, "The type of computer technology that many believe will lead to transformational change will be technologies built around the process of learning and that attempt to enhance human-to-human interaction, not supplant it" (p. 16).

Whether to invest in computer-mediated adaptive learning systems or in additional teacher positions is just one of the many questions that school leaders will need to grapple with over the next few years as they consider ways to provide innovative personalized learning programs in their districts.  In the next section, I will discuss this and other implications for leadership.

**Implications for Leadership**

In their latest report on virtual schools in the United States, the National Educational Policy Center (Molnar et al., 2017) recommends that more research is needed "to increase understanding of the inner workings of virtual and blended schools, including such factors as the curriculum and the nature of student-teacher interactions" (p. 34).  The results of this study provide one snapshot of the inner workings of one teacher-led, cohort-based virtual program.  This study's findings have implications for multiple levels of leadership. In this section, I discuss implications for state education

leaders and policy makers, for school- and district-level administrators, and for directors and leaders of online programs.

**State level leaders.** State level educational leaders are charged with creating state policies regarding virtual schools and online programs. During the 2014-2015 school year, 24 states provided online options for public school students through a state virtual school (Watson et al., 2015). In these states, and in those considering the creation of state level online programs, state leaders engage in strategic planning and in developing mission and vision statements for state supported programs. For these states in particular, state level education leaders should consider the implications of the mission and organizational structure of online programs. State level leaders should also implement consistent data collection systems in order to provide both descriptive and comparative data on student enrollment, demographics, and achievement in all of the online programs available through the public school system. The Secretary of Education appointed under the Trump administration, Betsy Devos, is an advocate of full-time online charter schools (Harold, 2017). As the American public education system considers school choice, potentially embracing more for-profit online vendors, state level leaders will need to be able to use state, district, and program level data to make informed decisions about the efficacy of both profit and non-profit online programs that are sanctioned by the state.

*Program mission and organization.* SVS was selected for this study because it is an option for all public school students across a diverse state, and because the teacher-facilitated cohort model of online instruction aligns more closely with the characteristics of culturally responsive teaching that are outlined in the literature on multicultural

education as compared to the individualized self-paced model of online instruction. However, the structure and organization of online and blended programs and classes may vary widely. There are a number of permutations in structure and design. From teacher-led to teacher-less, from cohort-based to self-paced, from supplemental to full-time, from didactic to project-based, there are now seemingly any number of ways to organize an online or blended program.

While my focus was on the practices of culturally responsive teachers, each of the teachers in this study stressed how the structure and organization of SVS impacted their ability to be culturally responsive. SVS is a non-profit state-supported online program that is available to all secondary students across the state. Thus, any student who wishes to take an online course at SVS may. The teachers in this study agree that the program provides opportunities where they may not exist otherwise, which is also explicitly written into the mission statement of the program. It was evident from the four teacher participants in this study that they believe in the mission of the program. Students in rural or hard-to-staff schools, for example, have access to high quality teacher-led Advanced Placement and elective courses. The State Virtual School provides a service as an educational leveler or opportunity-creator that is supported by the state budget and is free and open to all students, regardless of their zip code within the state. The teachers in this study attributed much of the value of SVS to this open-door structure of the program. The teachers believed that SVS creates equal opportunities for the students who enroll in the courses.

Since SVS is a statewide program, teachers are able to make some assumptions about shared student experiences. Students are on similar academic calendars, for

example.  The teachers in this study discussed how they work to create student connections and a sense of community in their courses, often by connecting students to others with similar interests.  Consider how George advises his students to write SVS on their nametags when they are competing at state events like Forensics or Quiz Bowl. Phoebe also uses her discussion board to let her students know of other students in the online class that share similar extra-curricular interests.  Because it is a state level program, students enrolled in SVS with shared activities may very well meet each other at sporting events and school sponsored activities.

Thus, state leaders should consider how the structure and organization of even an online program can impact the perceived value and the social impact of the program.  In this study, teachers valued their program because it affords students opportunities, as expressed in the very mission statement of the program.  The structure of the program allowed students across a state to engage with other students.  As state technology leaders are charged with the selection and evaluation of online and blended programs and vendors, they should consider to what extent mission and structure align with the goals of the program.

***Data collection*.**  One observation during this investigation was the lack of available data on student enrollments and demographics in online programs both in SVS and in other programs across the state.  The teachers in this study used teacher created student surveys and telephone calls to collect information about their students.  SVS collects student name, school, and grade in their student information system.  Reliable data on student demographics is held by the individual school districts in the state rather than by SVS.  In the most recent report on *Virtual Schools in the U.S.*, the National

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Education Policy Center (Molnar et al., 2017) identifies that this lack of data is a concern for virtual programs: "for the vast majority of supplemental virtual schools, the state has no formal reporting requirement and researchers aren't able to access independent or state-generated data on those programs" (p. 44). The director of SVS shared with me that there are state level efforts to improve student data collection and sharing across districts, which will ultimately provide the demographic information on students. However, the new data collection system has not yet been implemented.

**School and district administrators.** School and district level administrators are responsible for selecting and implementing online learning opportunities for the students they serve. In districts that run their own online programs, these leaders may also be responsible for content development and teacher professional development for online teaching and learning. This study surfaced two primary implications for building and district leaders. First, school and district leaders should consider their own contexts when selecting and implementing online learning programs. Second, building and district leaders should work together to conduct program evaluations on the providers they select.

*Consider context.* School, district, and distance learning coordinators should ensure there is alignment between the school and district's reasons for implementing an online or blended program, and the structures and pedagogical approaches of the selected programs. SVS is a teacher-facilitated cohort based model that aligns to both College Board and state standards. This program functions within a traditional academic calendar, and students are placed in classes with 20 or so fellow online students, just as they would be in a face-to-face classroom. There are group projects and multiple opportunities for student-to-student interaction throughout each of the courses. The

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original intent of the program was to provide underserved students with opportunities to enroll in high quality AP and elective courses that might not be available at their schools. The teachers in this study value dialogue, and expect frequent communication with their students. School leaders should ensure that their students understand the structure and expectations of an online program before enrolling. For example, students expecting an individualized self-paced learning experience would be mismatched with the SVS program.

Teachers in this study described the difficulties they have been experiencing during the recent full-time virtual school pilot program. In the pilot, SVS is offering all courses required for graduation in the state, and is therefore offering more general education courses than before. The teachers in this study acknowledged that some of the students in the pilot program are struggling. George reported that some students are "having trouble in their face-to- face school, and so they see this as an option." He identified that some students have anxiety disorders or social disorders, and "they see the online as a place where they can avoid it." George reported that some students opting for online in the pilot program assume the course will be self-paced, even though SVS has attempted to make districts aware that it is a cohort-based teacher-facilitated model: "of course all we're trying to do is to build community and so it's really hard to convince them that that's not what we're doing." SVS's teacher-led cohort based model is one of many available models of K-12 online learning. In their *Guide to Teaching Online Courses*, the National Education Association (n.d.) draws from best practices in online teaching to recommend that online courses should indeed be teacher-led, student-centered, collaborative, cohort-based, and contain varied learning activities.

Additionally, pedagogical approaches included in models of culturally responsive instruction rest upon the notion that students may work together in groups, and that there is frequent and open communication between and among the students and teacher (Gay, 2000; Ladson-Billings, 1994).  George, though, noted that the students who struggle in traditional school might still struggle in SVS.  For some students, there may be a mismatch between their expectations for online learning and the actual learning context.

Dikkers et al. (2013) found a similar tension between teacher and student preferences online.  In a mixed-methods investigation of teachers and students' reactions to social presence in the North Carolina Virtual School, these researchers found that while social presence was highly valued by teachers, students' reactions to social presence online were mixed.  Some students prefer social presence and community, and some do not.  Thus, districts may wish to vary their online course offerings, providing opportunities for students to select teacher-facilitated cohort-based instruction, as well as opportunities for more individualized self-paced online instruction.

*Conduct program evaluations.*  While school and district leaders should work to educate their students about the different online options they may offer, they should also be monitoring the effectiveness of the selected programs for the students within their districts.  Recently, Secretary of Education Betsy Devos referred to high graduation rates as evidence that online charter schools should be an option for school choice (Harold, 2017).  However, the evidence she cited was based on data provided by the online provider, which did not adhere to the same reporting mechanisms as those required by state and federal regulations.  Thus, the graduation rates of this provider, according to the state and federal regulations, are much lower than reported by Secretary Devos (Harold,

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2017).  In an age of data-based decision-making, and in an area where data collection has been sparse, it is up to school and district leaders to conduct accurate and comprehensive analyses of the programs they vet and implement.

As a researcher, my access to data was limited to the information that teachers were willing to share with me, and from what I was able to understand from observations of online courses.  While conducting exploratory research on state level demographics, I had great difficulty finding any information on which groups of students were enrolling in which types of programs.  District and building leaders will be similarly hard-pressed to find data in their own research of the available online providers.  Therefore, until there are available state level data on student enrollments and demographics in virtual programs, investigations into the impact of online programs across populations of students will need to occur at the district level where leaders have access to student data and program level analytics.  Thus, I recommend that districts conduct evaluations of their existing programs in order to make programming decisions, and to share their findings with other districts in the state, in order to generate shared evidence about which providers seem to be the best suited for the students they serve in their districts.

**Online program leaders.**  Virtual schools and online providers often have program level leaders similar to those one would find in a face-to-face school.  SVS, for example, has two directors, two instructional supervisors, and a content manager.  The results of my investigation into the practices of culturally responsive online teachers have at least three implications for leaders of online programs.  These are implications for instructional design, staffing, and for online teacher professional development.

***Instructional design.*** One implication of this study's findings is in the area of instructional design. The teachers in this study viewed curriculum and content revision as an ongoing process and as a part of their duties as a full-time online teacher. For this reason, in the emergent model of online teaching as a communicative act, I grouped content and curriculum within the instructive domain in the emergent model of culturally responsive online pedagogy.

Often in online course development, initial development begins with a team-based approach during which a teacher, or subject matter expert, works with an instructional designer to author and design the course. Virtual programs may also purchase pre-packaged online curriculum from a number of curriculum providers to get their programs off the ground (Molnar et al., 2017). The teachers in this study, however, expressed a deep connection to their course content and seem to be in a state of constant re-visioning. Barbour (2014) noted traditional teacher roles expand for online teachers into not only instructor and course facilitator, but also instructional designer. The teachers in this study engage in responsive instructional design by modifying and adjusting their course content and activities based on how their students engage in the course. While none of the teachers in this study mentioned Universal Design for Learning as a curriculum framework, their courses each contain elements of UDL. The courses offered varied learning activities with multiple ways to access and engage with course content. Thus, the courses in this study are responsively designed based on the knowledge held by these teachers about their students' experiences and engagement. In this case, we see that teachers are also working as instructional designers. Thus, leaders of online programs may consider ways to more explicitly include instructional design as part of the

responsibilities of the online instructor.  When online teachers engage in constant

dialogue with their students, the revision and adaptation of course content and activities

can be seen as an enactment of this dialogue.  Teachers adjust, revise, and supplement to

meet the needs of their learners.  This is one way that online teachers communicate

instructively in dialog with their students.

*Staffing***.**  The teachers in this study were all full-time online teachers.  Each of

these teachers indicated that they spend at least 8 hours a day online, mostly to engage in

some type of communication with their students.  It is possible that full-time online

teaching positions afford a sense of teacher presence and immediacy that a part-time or

adjunct position does not. One teacher participant in this study, Phoebe, touched on this

point when she said, "the students do better and have a better experience with a full-time

teacher versus an adjunct who is only available in the evenings for a few hours."  Varre et

al. (2014) found that rural students tended to drop out of online AP courses when there

was a lack of teacher immediacy, or delayed responses to their questions and concerns.

Thus, a teacher's ability to provide a quick and personalized response may impact their

ability to be responsive.  With this in mind, program leaders will need to consider both

staffing and budgetary implications when training and hiring online instructors.

*Professional development for online teachers***.**  A second implication for leaders

of online programs involves professional development for online teachers.  The teachers

in this study believe that traditional educators and the general public have misconceptions

about online teachers.  Emma conveyed that most people think that when students take an

online class, "they submit attached files via email and it's all through text and there's no

real interaction between the teacher and the student."  However, she reported that the

work of the online teacher is the same as the work of the face-to-face teacher in that both center on building relationships.  In either platform, according to Emma, it is up to the teacher to initiate and cultivate that relationship. Thus, for programs that strive to create culturally responsive online learning experiences, professional developers may need to provide online teacher training pertaining to diversity and relationship building in the online classroom.  Teacher training for online K-12 teachers can center on software and learning platforms (Molnar et al., 2013).  Undergirding Emma's remarks is the belief that traditional educators are not aware of the many modes and ways that communication happens online.  While online teachers will undoubtedly need to be trained to use emerging educational technologies, the results of this study indicate that professional development on communication strategies and on responsive online instruction may also be needed.  For example, practices such as beginning the year with a welcome call home, eliciting student feedback through surveys, providing both individual and whole class feedback on student assignments, and maintaining notes on students' personal interests and experiences are a few of the strategies shared by the participants of this study that could help novice online teachers be more responsive in their teaching.  The teachers in this study did not receive any formal training on responsive teaching practices. Professional development opportunities that share the strategies of experienced online teachers could help teachers who are new to online learn how to practice responsiveness in their online teaching.

The focus of this investigation was culturally responsive online pedagogy.  The teachers in this study each value cultural diversity, and all self-identify as culturally responsive teachers.  The pedagogical approaches observed were rooted in different ways

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of communicating with students, and were learner-centered.  While the teachers in this study were able to provide multiple examples of how their online teaching is responsive based on their communication with students, they were less able to make explicit connections between their responsive instruction and their students' backgrounds and cultures.  Indeed, the teachers themselves may have been limited in their own understanding of culture.  Preparing culturally responsive teachers begins with teacher education programs (Gay, 2002).  According to her framework for preparing for culturally responsive teaching, Gay recommends that professional development and teacher education programs help teachers to develop a knowledge base about culture and diversity.  She recommends that teacher education programs have teachers practice creating more culturally responsive curriculum in order for them to become more aware of how ethnic images and perspectives may be distorted and influenced by power.  Gay (2002) further recommends explicit professional development in cultural values that are inherent in different communication styles, and advises that teacher preparation prepare teachers how to use "cultural scaffolding" when instructing culturally diverse students (p. 109).

Ladson-Billings (1995a) writes that the practices she describes that are practices of culturally relevant teachers are indeed practices that are beneficial to all students.  The strategies they employ; getting to know their students, facilitating community, and creating authentic assessments, for example, are strategies that may assist all students' learning.  Still, program leaders may work to create more learning opportunities for their teachers to get to know more about their students and their communities.  Full-time instructors could, as an example, be given opportunities to visit schools or districts at the

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start of each academic year.  Perhaps teachers could serve as ambassadors for districts, each immersing themselves in learning more about a particular district in the state, and sharing what they've learned with the faculty.

The *National Educational Technology Plan* (U.S. Department of Education, Office of Educational Technology, 2016) outlined a plan that includes leveraging instructional technologies, including increased opportunities for online learning experiences.  The plan made 4 recommendations for teaching and professional development:

1.  Provide pre-service and in-service educators with professional learning experiences powered by technology to increase their digital literacy and enable them to create compelling learning activities that improve learning and teaching, assessment, and instructional practices.

2.  Use technology to provide all learners with online access to effective teaching and better learning opportunities with options in places where they are not otherwise available.

3.  Develop a teaching force skilled in online and blended instruction.

4.  Develop a common set of technology competency expectations for university professors and candidates exiting teacher preparation programs for teaching in technologically enabled schools and post-secondary education institutions.  (p. 37)

In order to discover the necessary competencies for online teacher professional development, Archambault and Kennedy (2014) looked across the existing online teacher

training standards in order to create a crosswalk of online teacher skills. They found 11 themes or domains, and grouped each skill into one of the 11 domains. One theme that emerged was "accommodations and diversity awareness." Archambault and Kennedy listed 12 skills in this domain. Included in the 12 skills are the following. An online teacher who is skilled in "accommodations and diversity awareness":

- Is cognizant of the diversity of student academic needs and incorporates accommodations into the online environment;

- Knows and understands the diversity of student learning needs, languages, and backgrounds;

- Demonstrates knowledge and responds appropriately to the cultural background and learning needs of non-native English speakers; and

- Provides activities that are modified as necessary, that are relevant to the needs of all students. (Archambault & Kennedy, 2014, p. 232)

For each of these goals, teachers will need examples of the possible ways that these activities can occur in an online classroom. What are some ways, for example, that teachers can respond appropriately to students' cultural backgrounds online? Thus, professional development for online teachers may need to be informed by the larger body of knowledge about equity pedagogy and culturally responsive teaching. This may be particularly true for online programs that have aspects of equity and access as part of their mission and vision. If a goal of online K-12 online instruction is that the learning should meet the needs of learners across cultural contexts, online teachers will need professional development that goes beyond the technical skill-building necessary to teach online. Teachers should participate in professional development opportunities that are

rooted in their contexts that include examples of how to get to know their students online, and how to adjust instruction to be responsive to their students.

**Future Research**

The results of this study suggest that culturally responsive online pedagogy probably resides within a praxis of dialogue and communication between student and teacher. This grounded theory approach to investigating the nature of culturally responsive online pedagogy, however, is just the beginning of what must be a much longer inquiry. 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, as a qualitative investigation, 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, all four participants of this study were members of the dominant culture. Despite having an increasing minority-majority of students in American classrooms, classroom teachers remain largely White across all 50 states (Goldring et al., 2013). There does not yet appear to be any reporting on the demographics of online teachers. In a conversation with the Director of SVS, he shared that among the 33 full-time teachers, 4 are non-White. Third, 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 study. This investigation was held in a state that in the 2016-2017 academic year had a majority of minority students in public schools. SVS serves students in every district in the state. Still, without available demographic data, we

cannot make assumptions about the characteristics or demographics of the students who are served by the program.

With this in mind, I suggest three areas for future research on culturally responsive online pedagogy: 1. Critical research in K-12 online learning; 2. Student enrollment and demographics; and 3. Research on student experiences in different models of online learning.

**Toward a critical lens**.  Since I was interested in learning more about the practices of culturally responsive online teachers, I situated my research in an interpretive paradigm.  Research in the interpretive paradigm seeks to uncover what is rather than what should be.  The results of this study revealed that the four teachers selected as culturally responsive online teachers engaged in learner-centered dialogue with their students across multiple domains.  However, I did not observe examples of teachers adjusting instruction based on student culture and background.  Rather, these teachers build varied instructional activities and opportunities for student choice into their courses. One recommendation for future research on the intersection of culture and online learning is to explore this area from multiple perspectives.

Gloria Ladson-Billing's work on culturally relevant teaching is cited frequently throughout this study (e.g., Ladson-Billings, 1994, 1995a, 1995b).  In 2001, seventeen years after the publication of her seminal book *Dreamkeepers: Successful Teachers of African-American Children*, Ladson-Billings authored the book chapter *New Directions in Multicultural Education* in which she argued that it was time for researchers interested in multicultural education to adopt a more critical approach.  Ladson-Billings (2001) argued that multicultural education has come to represent multiple differences between

people, including gender, class, ability, and sexual orientation, in addition to race and ethnicity. Indeed, I noticed that when I specifically asked the teachers in this study about culture, they rarely spoke about race. By 2001, Ladson-Billings believed 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). She argued that researchers should use critical race theory in exploring issues of race and equity in education. Thus, I recommend that future researchers explore the intersections of culture and online learning using a critical paradigm such as critical race theory.

**Student enrollment.** 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; Tucker, 2007; Watson & Gemin, 2008). The four teachers in this investigation agree that their courses and program hold this opportunity-making potential for students. Yet, SVS is just one model of K-12 online learning. The credit-recovery model--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 at-risk populations (Repetto & Spitler, 2014). I recommend for future research that we explore the demographics of students enrolled in supplemental virtual programs, full-time virtual programs, and in online credit recovery programs to ensure that there is equity in student access and enrollment at the state level.

**Student experiences.** Finally, my investigation focused on teacher practices. As a practitioner, I was interested in learning about the nature of culturally responsive online pedagogy. Specifically, I wanted to know how this happens online. What do culturally

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responsive teachers do in their praxis? However, this is just one side of the dialectic that occurs within the online classroom. The other side is the student experience. I recommend that future studies explore student perspectives about culturally responsive online courses. Do students experience these instructors as culturally responsive? Does cultural responsiveness matter to students online? For example, in an investigation of the Social Presence Model of K-12 online instruction in the North Carolina Virtual School, teachers responded overwhelmingly positively to the model, while student response to the model was mixed (Dikkers et al., 2013). As one of the teacher participants in this investigation noted, some students enrolling online are expecting a self-paced individualized experience, not a teacher-facilitated cohort-based experience. Until we begin to ask K-12 students about their perspectives, we will not know to what extent culture matters online to them, if at all. Future researchers can learn from the teachers in this study by engaging students in dialogue about their experiences in K-12 online learning.

**Conclusion**

The four teachers in this investigation shared how they use different modes of communication to dialogue with their students. They get to know their students, they facilitate community, they adapt instruction to meet the perceived needs of their students, and they do so with an understanding that their work is important, and their students matter. The time they spend online is immense, and the care they exude in their teaching is tremendous. As our public schools continue to diversify their programs by offering more blended and online learning opportunities, I hope that we can learn from the teachers in this study. 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, while highly technically skilled, 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 the students they teach.  These teachers care for their online students, and they feel that their instruction provides their students with new skills and opportunities.  Emma, George, Phoebe, and Sam all believe that their instruction provides their students, whoever they may be in any given year, with equal opportunity to learn.

As educational leaders look for ways of providing more innovative and equitable online learning experiences for students, they should carefully consider the different models of K-12 online learning, and the role of the online teacher in providing equitable learning experiences.  The results of this study indicate that culturally responsive teachers engage in frequent dialogue with their students in order to inform and adapt instruction.  Other investigations into K-12 online teaching yielded similar results.  DiPietro et al. (2008) found that best practices for K-12 online teaching included engaging in conversations with students, including non-academic ones, in order to cultivate relationships, facilitating community, varying pedagogical approaches in order to meet the needs of different learners, and including relevant course content that reflects students' interests.  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 each study, the ways in which teachers get to know their students and make adaptations based on the needs of their students is core.

A model for culturally responsive online teaching may provide guidance for online teachers on the ways in which teachers may facilitate 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 online so that they can facilitate relevant and responsive learning experiences for their students.

# 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][1]
- 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

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[1] Bracketed items may not be directly observable, but their foci will be addressed during participant interviews.

Research Participant Consent Form

**Purpose of the Study**
This study, "**Culturally Responsive Online Pedagogy: Practices of Selected Secondary Online Teachers,**" is designed to explore your online teaching practices and dispositions, and the strategies you employ when facilitating culturally responsive instruction.

**Importance of Your Participation**
Studying the instructional strategies of culturally responsive online instructors will help me to understand the actions, communications, and dispositions of effective online teachers who are culturally responsive to their students. This study is my dissertation research, the final portion of my doctoral program of studies.

**How You Were Selected**
You were identified by an administrator with whom you work as a highly qualified online instructor who likely exhibits culturally responsive teaching practices. You are one of a group of 4 to 6 teachers who are being invited to participate in this study.

**Timeline**
Data generation will occur from May 2016 through December 2016.

**What is requested of you?**
1. I will ask for observer status in one of your online courses. As an observer, I will take field notes on the communicative exchanges I observe in this online course. I will focus upon course announcements, threaded discussions, and assignment feedback. I may ask to see all available course materials during a one to three month time period.

2. I will ask you to provide a written response to the following prompt: "Please draw from your life experience, personal teaching philosophy, and/or your experience as a teacher to answer the following two questions:
   −To what degree is creating a culturally responsive class environment important to you, and why?
　−How do you facilitate cultural responsiveness online?"


3. I will ask you to participate in two hour-long, audio recorded interviews, once at the beginning of the research study and once toward the end of the investigation. These

interviews will occur at times that are convenient for you, and can take place face-to-face, by telephone, or online, depending on geographic location and your preference.

4.  Prior to the second interview, I will ask you to identify two examples from your current courses that you feel exemplify strategies that promote culturally responsive teaching.  We will discuss these examples during the second interview.

5.  Following each interview, I will provide you with a draft of my interpretations and analysis.  You will have the opportunity to confirm, change, and/or add to the interview interpretations in order to clarify your experiences if you wish.

**Additional Information**
- The confidentiality of your personally identifiable information will be protected.
- Participant pseudonyms will be used in the reporting of findings.  Neither your name nor any other personally identifiable information will be published.
- The audio recordings of the two interviews will be erased once the research has been completed.
- You may refuse to answer any question you are asked during the interviews.  You will not be encouraged to answer any question you are uncomfortable with answering.
- You may terminate your participation in this study at any time by informing me, the researcher, of your decision to do so.
- Participation in this study is completely voluntary. Refusal or termination of participation will not result in negative consequences in any way with The College of William & Mary, Virtual Virginia, or your school division.
- A summary of the results of this investigation will be sent to you once the study is complete.

**What if you have concerns?**

If you have any questions or concerns about the study at any time, contact the researcher, April Lawrence by email (adlawrence@wm.edu) or phone (757-221-1450) and/or her dissertation chairperson, Dr. Judi Harris (judi.harris@wm.edu) at The College of William & Mary in Williamsburg, VA (757-221-2334).  If you have questions or concerns regarding your rights as a participant, or are dissatisfied at any time with any aspect of this study, you may (anonymously if you choose) contact Dr. Tom Ward at 757-221-2358 (tjward@wm.edu) or Dr. Ray McCoy at 757-221-2783 (rwmcco@wm.edu), chairs of the two committees that supervise the treatment of human research study participants.

By checking the "I agree to participate" selection below, and by signing and dating this form, you will indicate your voluntary agreement to participate in this study and confirm that you are at least 18 years old.  Signed copies should be scanned and submitted to the researcher via email at adlawrence@wm.edu, or mailed to April Lawrence, College of William & Mary, School of Education, P.O. Box 8795, Williamsburg, VA 23187-8795

□  I agree to participate in this study.
□  I do not agree to participate in this study.

A copy of this consent form will be emailed to you to keep.


**Signatures**


Participant_____ Date_____


Researcher_____Date_____

Excerpt from Reflexive Journal

**3/7**
**Review of the Open Codes**

Deleted Attrition. Only 1 excerpt and not something teachers "do".

Merged Emotions into Student self-efficacy

Merged Family engagement into Communication with parents

Merged Inappropriate into Class environment

Merged Inclusive into Class environment

Merged Migrants into Teaching Diverse Students

Reparented Refugees into Teaching Diverse Students

Merged Relatability into Relevance

Merged Response Time into Responsive

Merged Retention into Welcoming

Deleted Responsibility. The 3 excerpts were unrelated, and all had other codes applied.

Reparented Rural into Teaching Diverse Students

Merged formative assessment into Self-check

Reparented self-check under assessment

Reparented Sense of Belonging under Class Environment

Reparented Setting Goals under Caring

Reparented Social Pressure under Communication with Students

Merged social media with Formality of Language because there was just one and it was a response to me asking about informal vs formal

Merged Special Education into Communication with other teachers because the one excerpt was about meetings

Deleted Student Differences because there were two unrelated excerpts and each had multiple and more appropriate codes

Reparent Student Needs under Responsive
Deleted Rural, Middle-class, Suburban, White under Teacher background- no excerpts for most. Everything is just Teacher Background.

Reparented Teaching Style under Instruction

Reparent Text Style under Communication with Student

Merged Texting with Formality of Language

Deleted Tolerance because there was only one excerpt which was also coded under Acceptance and Discussion Board

Merged Advance Organizer, Comprehension Questions, Glossary, Meta-cognition, Quizzes, Tests into Varied Activities

After initial Open Coding I have a total of 124 codes. Yikes! By running a co-code occurrence report in Dedoose, I am able to identify overlap (co-occurrence) among the following code pairs: Caring-Communication with Student and Varied Activities-Instruction.

The highest occurring codes, according to frequency:

1. Communication with student 270
2. Instruction 232
3. Discussion Board 217
4. Communication 192
5. Caring 153
6. Varied Activities 147
7. 4 Domains of CRP 135
8. Relevance 129
9. Motivating Students 120
10. Connecting to Content 119
11. Community 107
12. Teaching Diverse Students 101
13. Student Connection 101
14. Feedback 101
15. Videos 88
16. Conversation/Dialogue 83
17. Comparison to face to face 74
18. News Item 72

19. Communication with parent 67
20. Personalized 65

3/9
Now that I have my initial codes, the first step in looking for patterns will be to separate out that which I do not need. In other words, that which may not directly answer the research questions. To do this, I'm going to look at the 3 data types separately, beginning with the teacher narratives. The bulk of the codes come from the teacher interviews.

**Axial to Holistic Analysis of Narrative Texts**
I ran a frequency report of the codes that appear in the teacher narratives to help start the move toward a holistic analysis of the narratives. 3 of the 4 teachers submitted narrative texts. Emma, the AP Literature teacher, never submitted the teacher narrative despite repeated requests. However, Emma's two interviews were the longest and most thorough of all of the teacher participants. Therefore, I'm confident I still have enough data from this participant. Based on the 3 teacher narratives that were submitted and on the results of the frequency report, I see that no one code appears in all 3. The following codes appear in two of the narratives: Teacher Background, Connection to Content, Class Environment, Welcoming, Sense of Belonging, Relevance, Discussion Board, News Item, Acceptance. Here is a list of the codes ranked by frequency:

Welcoming 7
Relevance 7
Class Environment 5
Connection to Content 4
Teacher Background 4
Sense of Belonging 3
Acceptance 3
Discussion Board 2
News Item 2

It looks like in the narratives that teachers' values have greater emphasis over what they actually do. This makes complete sense, given that the first prompt was **To what degree is creating a culturally responsive class environment important to you, and why?** The second prompt was **How do you facilitate cultural responsiveness online**. I'm going back to read the narratives together holistically. I'm wondering if I might through teacher background out as a point of analysis all together. The four teachers are white, two men and two female. When I look back, only one teacher mentions demographics as part of his background. However, in two of the three narratives teachers mention being a different culture from many of the students they teach. George, AP Human Geography, discusses having experience teaching three underserved populations- white economically disadvantaged students in alternative education settings, minority students in an urban setting, and economically advantaged students in rural settings. Phoebe writes that "Some days I forget that 60-70% of my students of my students are minorities and their culture is

different from mine". All 3 teachers discuss the importance of providing a welcoming and accepting learning environment. They relate that class environment relates to student learning:

"**If I simply taught in a way that felt comfortable to me, I would alienate students and miss opportunities to teach them in ways that recognize the contributions they can make to the classroom**." (George, AP HG)

"**I would rank the class environment and overall tone/feel right up there towards the top of the list. This is how students connect, feel welcome, and develop a sense of "I can do this". If students are nervous or feel anxious, learning has to bridge an emotional gap, which sometimes prevents students from learning material well. Feeling like a student belongs, is welcome, and if they can relate to the teacher and other students is a critical part of getting started and maintaining student retention in the course. Students don't want to be just a "login ID"**." (Sam, AP Stat)

"**I believe that students learn best when they are engaged in a comfortable and accepting learning environment. I feel the material has to apply to their lives and they need to see their culture reflected in what they are learning. Students should not feel they are standing on the outside looking in. What they are learning should be relevant to them**." (Phoebe, AP Psych)

All of the teachers are veteran teachers. It seems the big take away from the narratives is an inclination by the teachers to want to create a welcoming, comfortable, and accepting learning environment in order to promote increased student learning. These teachers all recognize a connection between class environment and student learning.

**Axial Coding of Teacher Interviews**
I want to remind myself of my research question and focus, as stated in the research proposal: **How does culturally responsive online pedagogy happen in several teacher-facilitated, fully online courses**? This question should drive the reanalysis/comparisons/categorizations as I attempt to look once again at the date from the teacher interviews.

I'm beginning by looking at code frequency in the Code Application report for only the teacher interviews. I see that only Emma has the 4 Descriptors of CRP code applied (42 times). I believe this is because I reparented the 4 descriptors, Caring, Communication, Instruction, Curriculum after the first interview (Emma's) was coded. Therefore, I'm going to filter this code out for analysis. I'm also going to filter all codes that do not appear within any of the teacher interviews (Text style, Self-check, 6 Descriptors, Comprehensive, Emancipatory, Empowering, Validating, Multidimensional, Class feedback, Clear Directions, ESL, Interaction Activity, Non-academic post, Teacher background, Teacher created resources, Teacher Created Tutorial, Alternative Ed, Economic Disadvantaged, Gifted, Minority, Rural, Underserved Populations, Urban, White).

3/10

I'm isolating my code comparison today to just one of the data types- teacher interviews. I have 8 total interviews from 4 teacher participants. I have done some initial code comparison in Dedoose, but today I need to spend some time comparing codes to one another and looking for emerging patterns. I have written every code out onto a post-it note and am reading excerpts for each code, beginning with the highest occurring codes first. (The most frequently occurring code in the teacher interviews is "Communication with students". Starting from there, I am reading and starting into alike groups, based on what I read in the excerpts from each code.

Relevance- 3rd most frequent code. After reading the excerpts, this cuts across multiple strategies but all examples really have to do with making the learning real for students. I'm adding a parenthetical "making it real" to this code post-it.

3/11
After reviewing the 34 excerpts associated with "**Content**", I have decided to get rid of that code completely. I noticed that the excerpts did not seem to have a unifying theme or experience conveyed. I was able to delete the code for some excerpts that contained multiple codes. For others, I recoded them to Course Design or Curriculum Revision, which I felt were both more appropriate and more specific.

I am looking at the code "**Grades**", and in re-reading the 24 excerpts, it looks like teachers are discussing using grades in 3 different ways: 1. As a way to communicate with students, 2. As a way to motivate students, 3. As a way to monitor student progress. So, I feel like the act of grading and checking grades becomes a mechanism for continuing what's emerging as a "**Conversation**" online teachers have with their students. I'm going to create a second post it because I want to put **Grading** under both **Communication** and Instruction (two emerging themes).

The code "**Cultural Awareness**" is also giving me some pause. In reviewing the 27 excerpts with this code, it seems that in some the teacher refers to creating a culturally aware and inclusive learning community, while in others the teachers discuss the learning activities or instruction and curriculum pieces that help to promote cultural awareness in their individual courses. I'm taking another look at this one. I was able to delete this code completely by recoding many of the excerpts in **Facilitating a Culturally Aware Learning Community**. I was able to delete several that had multiple applied codes (most often, those that refer to topics in the curriculum). I also recoded some as just **Culture**.

Information related to **Teaching Experience** occurs in 30 excerpts. For now, I am not including Teaching Experience in my analysis. I will reserve this to explain and discuss teacher backgrounds. All four teachers are highly experienced in both traditional instruction and in online. Even though some of these excerpts appear in the interview transcripts, I will discuss this withhold analysis and discussion of this in this part of the analysis as I am looking at what culturally responsive teachers DO online and what this looks like online (rather than how they came to be).

The code **Student Obstacles** occurs 18 times. However, in reviewing the excerpts, student obstacles are discussed with regard to the full-time pilot which the program is currently running. They are seeing a change in student from AP to students who traditionally appear in alternative educational settings and homeschool students. This is an important observation (that students in these different groups face different challenges). However, because the current classes under observation are all AP classes, I will reserve discussion of this to Chapter 5 of the dissertation rather than in the development of what is emerging as CROP.

Likewise, I'm withholding the codes under **Full-time Pilot** for discussion in implications in Chapter 5, for the same reasons as listed above.

Aha moment: I currently have **Teacher Communication** and **Community** grouped into two post-it groups. But, I'm seeing that the only reason these communities emerge is because of the communication and modeling exerted by the teacher. The online communities in these courses are not organic. They emerge because teacher facilitates them, and the teacher facilitates them due to very intentional communication strategies.

The code **Teacher Professional Development** occurs 8 times, generally in close proximity to formality of language. I realize this is happening because in the 2nd round interview I asked about their preferences for formal vs informal language in online communication with and among their students. Teachers had different preferences. I also asked if they thought professional development would be helpful in this area. For now, I am excluding teacher professional development because the codes are in direct response to that question, not something that emerged as a part of what these teachers currently do.

The last 30 codes in my frequency list occur less than 5 times each. I am going to look at them carefully to see A. if they appear in two or more different teacher's responses and B. if I can merge any of them with an existing code.

I'm merging the 5 excerpts that appear for the code **Intervention** into the **Responsive** code.

I removed the code **Student Engagement** as each of the 5 coded excerpts already had multiple applicable codes.

I am not including **Academic Integrity** in this analysis because it only occurs in one teacher's transcript.

I am not including **Reason for Taking Online** in this analysis because it only occurs in one teacher's transcript.

The code **Varied Activities** occurs only three times in the interviews, but 13 times in the memos based on course observations. I'm withholding it from this main analysis, but will refer back to it when I review the memos from the course observations.

The code **Structure** appears only three times in the interviews, but it is associated with several memos based on course observations. I'm withholding it from this main analysis, but will refer back to it when I review the memos from the course observations.

Similarly, I am withholding **Diverse Representation** for now. It appears 4 times in the transcripts, but 8 times overall in all of the data.

I am also withholding **Transformative** for now. I found two instances of this, both related to George's KIVA service learning project and to his instruction about religion. While these activities are potentially transformative, I feel uncomfortable proclaiming that they are, so I'm holding off for now. This is the only one of 6 a priori codes from Gay that I found in an initial coding of the data.

I am deleting the code and excerpt for **Bullying** as it appears only once and is seemingly insignificant: "You know there have been a couple cases of more like bullying way back" (George, Interview 2).

I am merging the 5 instances of **Sense of Belonging** into existing codes and deleting **Sense of Belonging**.

**Initial Findings from Axial Coding of Teacher Interviews**
**Teacher Communication** is clearly at the center of what is emerging. Originally, I had codes grouped into 3 large groups and two smaller groups. However, I feel not that Teacher Communication is really at the heart of the 3 main groups: **Instructional Strategies**, **Getting to Know the Learners**, and **Facilitating a Welcoming Community**. However, I have two smaller groups, both off to one side, that I know are important, but that I can't yet figure out how and where to fit it.

One is **Keeping it Real**. Here I've included the teachers' tendencies to pull from popular culture and current events, to create authentic learning activities based around students' interest, and to incorporate student experiences into the discussion (the teachers describe their interactions with students as individuals as conversations and dialogues that last throughout the course). Also, all of the teachers are passionately connected to their content, and are therefore in a state of constant course design in order to keep the course relevant and up to date based on changing standards from the college board, based on changes in their fields and on political and cultural developments, and based on how students have responded to activities in the past.

The other is **Valuing Cultural Diversity**. Here I've included some things that just simply seem to be in place already in the program. For one, all teachers believe they are teaching culturally diverse students, even though none of them have any quantifiable data on student demographics. (One teacher, Phoebe, at one point states that 60% of her students are minority, although it is unclear how or why she believes this). Nonetheless, every teacher provides anecdotes of the diverse students they teach in their online courses. At the same time, each teacher sees a direct connection between their course goals and building cultural awareness amongst their students. Each teacher sees a connection to his/her content, even

though these are four very different content areas, and to culture. Finally, each teacher describes the program itself as providing opportunities for students, regardless of students' background. They each see opportunity as a built-in condition of the program. Finally, they all seem to value cultural diversity and culturally responsive classrooms.

The problem is that I am not clear how **Keeping it Real** and **Valuing Cultural Diversity** fits into what I'm finding that teachers actually DO. Most of what they actually do is communication, and this communication seems to occur **instructionally, personally**, or **communally**.



I'm going to let this simmer and move on to axial coding of the observation notes and memos. I'll take a look at that alone (thinking specifically about what culturally responsive online classes look like), and will then revisit the three data types together.

**Axial Coding to Holistic Analysis of Course Observation Memos**

I completed course observations of all four courses. I used the observation protocol as a guide, and added field notes into spreadsheets throughout the observation. I had a separate page for each course, and then divided each page into 4 sections: Caring, Communication, Instruction, Curriculum. I uploaded each set of observation notes into Dedoose. I also asked teachers to provide examples of feedback they provided to students. George, Sam, and Phoebe complied. Emma did not. I also took screen shots of sample discussion boards, news

items, and content pages during my observation. I wrote memos in Dedoose for each course under each of the four domains listed on the observation protocol. I then coded the resulting memos. I ran a code frequency chart only for the data from the course observations. Here are the 18 codes that appear with a frequency of 6 or more times in the observation memos.

Discussion Board 26
Videos 16
Encouragement 15
Setting Norms 11
Teacher Created Resources 11
Varied Activities 10
Authentic 10
Clear Directions 10
Instruction 9
Structure 9
Communication 7
Groups 6
Interaction Activity 6
Live Sessions 6
News Item 6
Non-academic posts 6
Personalized 6
Teacher Created Tutorials 6

I am looking closely at the codes that appear in these memos 5 or fewer times, comparing to other codes to see if they should be merged or parented.

After reviewing the lesser occurring codes from the observation memos, I don't see that I can exclude any. While several codes only appear one or two times from the memos I wrote based on the course observations, all of the lesser occurring codes appear much more frequently in the teacher interviews (which, after all, makes up the bulk of the data). Instead of relying on the codes drawn from course observations to generate the grounded theory, I see that these observations and codes work to triangulate what I'm learning from the teachers through the interviews. Therefore, I'm not going to exclude any at this point. Rather, I'm going to pause to review them and to articulate what a Culturally Responsive Online Class LOOKS like.

First, each of the courses are highly structured, with clear and explicit directions for assignments and with multiple ways for students to access and to organize their course content. Students can access a content area, a calendar, or use links from the weekly News Items posts. Every course has a "front door" as Phoebe called it or a landing page of News Items. All four teachers discuss the importance of eh news items. Phoebe described them as the front door to her course, and compared them to a bulletin board in a face-to-face classroom. All four teachers also vary the type of information that appears on the News Items. They generally begin the week with a schedule for the week's activities, then make course announcements, then include references to current events, popular culture, or words of

encouragement, and then often end with a largely personal or non-academic news post for the week.

Every course has varied learning activities, from direct text instruction, direct video instruction, interactive formative assessments, journaling assignments, quizzes, tests, essays, and discussion board assignments. There are opportunities for paired and group work in every course. There is ample teacher created tutorials and resources in every course, and there is evidence of many opportunities for joining a Live session. Sometimes these occur during the school day, sometimes these occur in the evening. It seems that efforts have been made in every course to connect what students are doing to their own personal experiences. There are multiple opportunities, particularly on Discussion Boards and in group work, for students to bring outside experiences in as part of the learning of the course. There are few, if any, videos pulled from YouTube. I was able to deduce that this is likely because many school districts do not allow YouTube videos to play on their network.

The language in all four courses is extremely warm and friendly. Text based direct instruction is typically written in second person, and teachers often use text styles like all caps and underlining for emphasis. In every course, there are resource materials that provide guidance to students on appropriate Netiquette, grade expectations, and the tentative schedule for the entire course. Teachers share much of themselves in their words, including a page of background information for each teacher. All courses begin with a course survey as a mechanism for collecting student information and for finding out about their prior experience with online learning and with the content of the course. All course text includes encouraging words as well as ample activities meant to help students scaffold and organized their learning (like advanced organizers). Still, students are given lots of opportunities for choices in the course. They may choose between prompts on the discussion board, they may choose a new partner to work with, they may choose a text for analysis, they may choose a research project. Etc.

If I had to summarize what the courses look like, I'd have to say that they are a mix of highly **structured modules** that include v**aried learning activities** with opportunities for students to bring in **examples from their own context and experience** and with **opportunities for student choice**. All the while, the content of all courses is supported with the static **encouraging words in the text of the course** with the dynamic **encouraging words of teacher posts**. These encouraging words take the form of **multiple modes**, including text, audio, graphics, and video. I am seeing some possible connection in the courses to UDL (multiple means of representation, multiple means of engagement, multiple means of expression), not every lesson or module meets all of the UDL criteria. Further, what UDL as a lens does not cover is the warmth and humanness of the courses- the personal and the human that the teachers bring to the course content. Each of these teacher participants is actively engaged in course and curriculum revision so much so that all four see it as a regular part of the job of online teaching. It quite simply is part of what they do in here everyday work, and it is responsive to how their students experience the course. I don't think UDL as a frame captures this piece of what is going on. Nor does it capture the community piece, which seems to be much of what the teachers are striving for. All four courses draw heavily from Discussion based activities. So, if anything, the courses are all highly structured UDL-

ish courses that are built FOR a community of learners and that are RESPONSIVE to the learners in that community by way of the teacher making constant curricular modifications and additions throughout the delivery of the course. Something like…

Responsive to the Community

UDL

Highly structured
w/ multiple ways to
access;
Varied Activities;
Opportunities for
student choice and
experiences

By way of the Teacher

3/12
Yesterday's conceptualization was based on the course observations alone. This is only a part of my research focus. This starts to answer the questions, "What does culturally responsive pedagogy look like online?" but it does not yet answer what it is that teachers actually do. In other words, "How does culturally responsive pedagogy occur?" For this, I'm going back to my post-its from the axial coding of the teacher interviews.

"Keeping it Real"

3/13
I searched the ed databases for keeping it real, and quickly found an article called "Keeping it Real: The Importance of Community in Multicultural Education and School Success". It's not really a peer-reviewed article, but I was glad to see that another academic is using this informal term which seem pretty important to the findings of this study. I'm just having a hard time situating this in the emerging model. The most glaring finding from the data is the importance and frequency of **teacher communication** (overwhelmingly so)! **All teachers discuss online teaching as having ongoing conversations with each of their students**, which I find quite lovely. But it's more than that. When I compare codes, I see categories emerge in the different ways that teachers communicate: **Instructionally**, **Personally**, and **Communally**. This is the core of my findings, I think. Beyond that, though, all teachers describe pre-conditions that must be in place in order for CROP to happen. Structural

conditions that must occur: having diverse students, creating opportunities for access, explicitly connecting course curriculum and culture, and finally, what I'm interpreting as a pre-condition, each of the teachers in this study profess to valuing diversity in education. I can see this as a structural foundation for the "what" that is occurring in the online teaching. I've got a good sense of the what, I just can't figure out how to weave in the also important "Keeping it real" piece that feels important to me. Here's what I've got so far, based on a re-organization of my post-it notes:
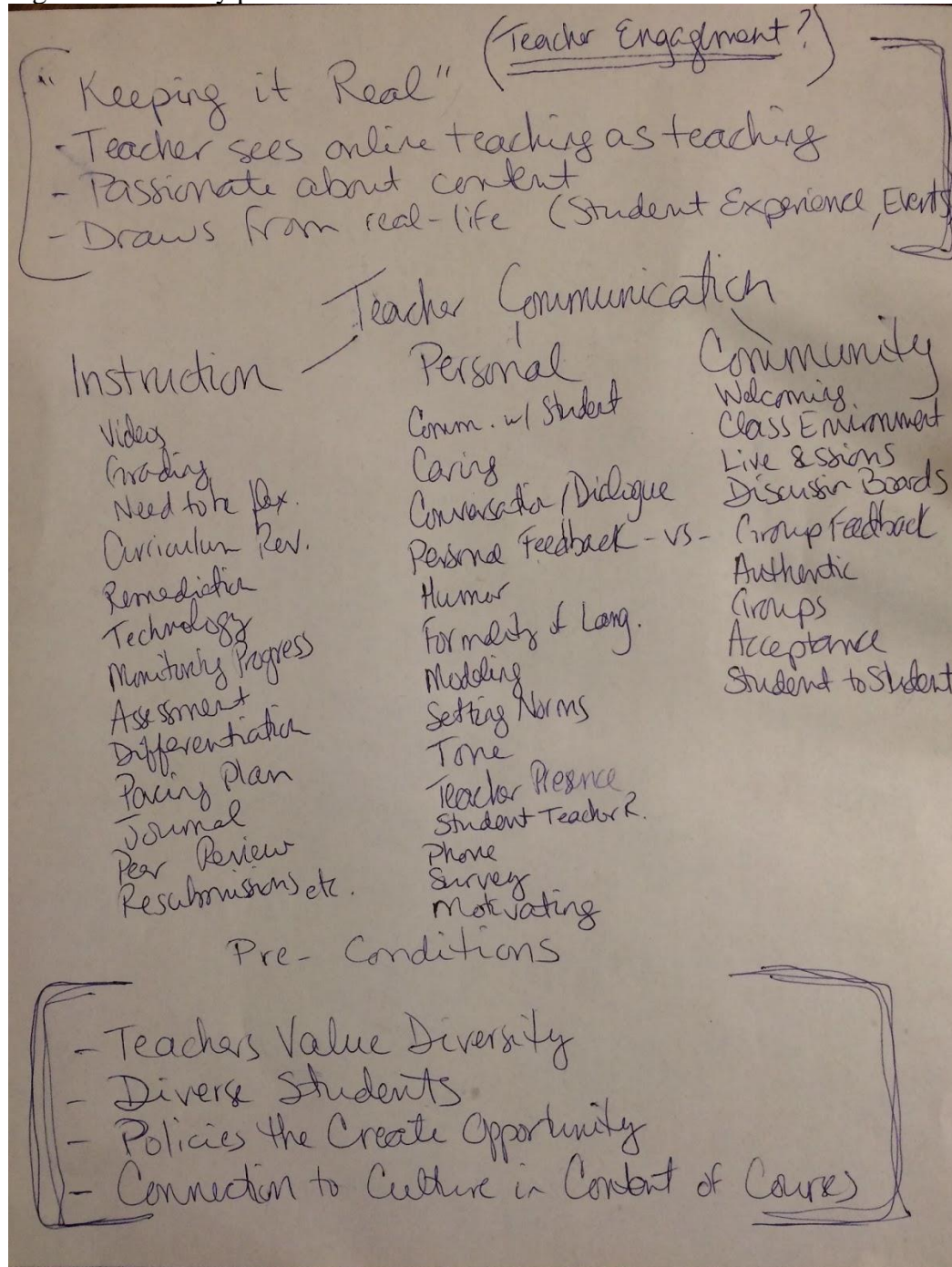
I did refer back to the Borup et al. piece about Teacher Engagement to see if it contained the top piece "Keeping it real", but it doesn't. More so, the Borup article substantiates some of the findings in my model about the importance of teacher communication. Rather, I'm finding something about the online medium as a "real" medium of instruction. Teachers in this study view online teaching as teaching, no different than their experiences as face to face teachers. Moreover, they are passionate about their content and see direct connections between what they teach and how their students participate in the world. They all create learning activities aimed at drawing experiences into the classroom. All participants in this study stress the importance of trying to make their courses relevant to the students they teach. They see this as a natural and integral part of teaching- I'm pretty sure all four of these participants would agree that this is something all teachers should do  in order to engage students in learning, not just online students.

OK, what if I change "Keeping it real" to "Authentic?" In other words, CROP is about COMMUNICATION. (Most importantly about conversing/dialoguing with students. In CROP, Teacher COMMUNICATION is…

AUTHENTIC
INSTRUCTIVE
PERSONAL
COMMUNAL

There are structural pre-conditions that must be in place. But the art and craft of teaching is about the COMMUNICATION that the teacher facilitates. Yes! That is the closest I've gotten so far about what it is that I am seeing in the data and am hearing from the participants. A great example of this is how teachers described the importance and process of giving feedback (one of the most important findings). Each teacher describes how he/she gives both class (communal) feedback on assignments and individual (personal) feedback on assignments. They have very intentional yet subtle communication strategies they employ to provide this bifurcated feedback. And their reasoning is skillful. I think Emma describes how were it not for her, none of her students would know how the class did as a whole, when in most face to face high school classes, this is a common understanding (Think of, "You guys did great on this unit!" or "Man, what happened? You guys really blew it here."). I think it's time to move forward with selective sampling based on this model.

**Appendix D**

Table of Emerging Findings, Categories, and Indicators

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

| | Communicating with families and schools | -administrators<br>-counselors<br>-mentors<br>-parents<br>-conversations with other teachers |
|---|---|---|
| Communication is Instructive (multi-modal, adaptive) | Importance of feedback | -grading<br>-rubrics<br>-the most important element of instruction<br>-group vs individual feedback<br>-ongoing dialogue<br>-opportunity for revision |
| | Importance of flexibility | -responding to student needs<br>-differentiation<br>-responsive<br>-pacing plan |
| | Instruction is multi-modal | -teacher created videos<br>-interactive activities<br>-audio/multimedia/text |
| | Varied learning activities | -individual<br>-group<br>-tests, quizzes, essays<br>-journals<br>-projects<br>-opportunities for collaboration and group work<br>-peer review |
| | Curriculum and content development are a part of instruction | -constant revision<br>-responsive to student achievement<br>-responsive to current events<br>-responsive to content areas<br>-teacher connection to course<br>-teacher created resources<br>-teacher curated resources |
| | Clear structure and sequence to learning | -teaching technology<br>-clear directions<br>-warm language in 1st and 2nd person<br>-tutorials<br>-advanced organizers<br>-multiple points of access |

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

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