Culturally Relevant Pedagogy and Applied Behavior Analysis: Addressing Educational Disparities in PK-12 Schools

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Abstract
The purpose of this article is to describe the theory of culturally relevant pedagogy (CRP) and its application to PK–12 education for behavior analysts working in schools. CRP is an educational framework that asserts that successful teachers of African American students help their students gain three repertoires: (1) sociopolitical awareness, (2) cultural competence, and (3) academic excellence. The CRP framework was designed to counter the effects that racial bias has on the academic and disciplinary experiences of some students of color. This article suggests that applied behavior analysis and CRP, when used together, may strengthen educators’ efforts to reduce the effects of racism that some students of color experience. The authors first explain the tenets of CRP based on the work of Ladson-Billings (1995a, 1995b). Next, points of convergence between ABA and CRP are described. Finally, the authors offer recommendations for behavior analysts to consider when applying CRP in schools through the provision of examples of strategies and tactics derived from the behavioral literature that align with the CRP framework. The framework presented in this article has implications for behavior analysts interested in applying culturally relevant practices to their work as educators.

Keywords Cultural competence · Culturally relevant pedagogy · Culturally relevant teaching · Racism · Discrimination · Technology of teaching

The educational disparities that many American children from Black, Hispanic/Latinx, Asian/Pacific Islander, and Native American racial groups experience are rooted in a history of institutionalized racism in schools that enforced inequitable systems of education. For instance, from the late 19th to the mid-20th centuries, almost half of all Native American school children were forcibly placed in boarding schools that attempted to eliminate their cultural identities (Evans-Campbell et al., 2012; Lajimodiere, 2013). Anti-literacy laws forbade African Americans from learning to read during slavery and subsequent segregation laws prohibited their children from attending integrated schools until the 1950s (Williams, 2005). Chinese American and Latino American children also experienced legal discrimination through school segregation (Contreras & Valverde, 1994; Kuo, 1998). Today the majority of Black, Latinox, and Native American elementary and secondary students read at a basic or below basic level (National Assessment of Educational Progress, 2019) and experience harsher disciplinary actions than white students (Bates & Glick, 2013; Skiba et al., 2011). Such forms of institutionalized inequities have long-term impacts on students of color (Danielson, 2002; Jones & Nichols, 2013; Levin & Rouse, 2012), and contribute to the “achievement gap” that describes differences in academic outcomes between white students and
According to the National Center for Education Statistics (National Center for Education Statistics, 2019), approximately 5.6 million students are enrolled in PK–12 schools in the United States. White students are the largest racial group followed by Black, Hispanic/Latinx, Asian/Pacific Islander, and multiethnic students (National Center for Education Statistics, 2019). The majority of teachers in PK–12 schools are white and largely female; this group represents 72% of all teachers (National Center for Education Statistics, 2019). Although trends show that student demographics in classrooms are becoming more diverse, the demographics of teachers remain consistently white female (National Center for Education Statistics, 2019). The demographic makeup of schools is important because research shows that students of color with white teachers are more likely to receive lower behavioral and academic ratings than their white peers, and are more likely to experience harsher and higher rates of disciplinary actions including referrals, suspensions, and expulsions (Bates & Glick, 2013; Skiba et al., 2011). In addition, according to the Behavior Analyst Certification Board’s demographic data (Behavior Analyst Certification Board, 2020a), the majority of all ABA certificants are also white and largely female. White BCBAs are the largest group (71.82%), followed by Latinx BCBAs (9.34%), Black BCBAs (3.60%), and Asian, Native Hawaiian/Pacific Islander, Native American/Alaskan Native who combined represent less than 7% of all BCBAs. These combined statistics about professionals both in the fields of education and behavior analysis make it socially significant to find ways to engage in culturally informed practices.

Throughout its history, the field of applied behavior analysis has used principles of behavior to address educational inequities experienced in schools. For instance, Risley and Hart (1968) and Hart and Risley (1974, 1975, 1980) published a series of studies focused on early interventions for African American children who were economically disadvantaged. The culmination of their work (Hart & Risley, 1995) and data from education projects such as Project Follow-Through (Becker & Gersten, 1982) contributed to academic programs that improved the outcomes of other children who were disenfranchised. In fact, many behavior analysts in the 1960s and 1970s focused their applications of behavior analysis on effective instruction that promoted academic achievement and social well-being for Black and Brown children who were economically disadvantaged (see Fontenot et al., 2019, for a review). Their work contributed to a larger social movement to fight discrimination, segregation, and lack of opportunity in communities in poverty (Engelmann, 1999) and their research efforts formed the basis for interventions currently used nationally by educators (e.g., Stockard et al., 2018). In fact, behavior analysts still apply principles of behavior to develop interventions that address critical educational issues where racial and economic inequities such as literacy and discipline disparities persist in PK–12 schools (e.g., Good III et al., 2019; Horner & Sugai, 2018). In addition, behavior analysts have contributed to the development of a science of teaching and teaching that helps teachers apply principles of behavior to classroom-based pedagogy (Greer, 2002).

Despite behavior analysts’ history of efforts to ameliorate racial and socioeconomic inequalities in the U.S. education system, there is a need to continue to address racial and socioeconomic issues that disproportionately affect students of color. For example, data indicate that education-related issues such as school segregation are increasing in today’s school systems (Mervosh, 2019). The continuing presence of segregation and other issues that affect Black and Brown children indicate a need for behavior analysts to refocus efforts in schools on social justice. Yet, some behavior analysts report that they do not feel prepared to work with culturally diverse groups after completing ABA graduate training programs (Connors et al., 2019).

In response to the need to serve an increasingly diverse population in schools, culturally relevant pedagogy (CRP) has become a recommended approach from state and professional educational organizations teaching children from diverse backgrounds (Muñiz, 2019). CRP is a theoretical framework developed by Ladson-Billings (1995b) that emphasizes the strengths students bring to the classroom and leverages those strengths during teaching. The framework is built on three practices that successful teachers of Black children use in their teaching during research conducted by Ladson-Billings (1995a): (1) cultural competence, (2) sociopolitical awareness, and (3) academic excellence. Although CRP has been applied in PK–12 classrooms, few articles have discussed the application of CRP for behavior analysts working in schools. Given the number of successful applications of behavior analysis to schools (Austin et al., 2015; Beaulieu & Hanley, 2014; Brashaw et al., 2012; Crone et al., 2010; Galbraith & Normand, 2017; Greer et al., 2002; Hofstadter-Duke & Daly III, 2011; Johnson & Street, 2012; Ross et al., 2009; Vanselow & Hanley, 2014), exploring the implications of CRP for behavior analysts may help practitioners support an increasingly diverse PK–12 student population. The purpose of this article is to describe the theory of culturally relevant pedagogy (CRP) and its application to PK–12 education for behavior analysts working in schools by defining and describing CRP, providing connections between CRP and ABA, and providing recommendations for integrating CRP into behavior analytic practice.

**Terms and Definitions**

Before discussing CRP, some terms in this article will be defined. In this article, the terms *educational disparities*,
academic inequities, and academic inequalities refer to lower academic outcomes that disproportionately affect children of color and can be attributed in part to the limited funding, lack of access to instructional resources and materials, lack of access to highly qualified trained teachers, and oversized and overcrowded schools. Negative school outcomes refer to the lower test scores that some children of color experience as well as the high rates of suspension, expulsion, drop out, and entry into juvenile justice systems that have been correlated with school discipline systems. Social and societal inequality outcomes refer to limited earning power and lack of access to equitable health and wealth as adults.

It is also important to first define the word culture. Skinner (1953) defined culture as, “the contingencies of social reinforcement which generate and sustain” (p. 32) the behavior of group members. Skinner noted that although these contingencies may produce rules for a group, there are other rules that may not be as observable, making culture more complex than what an observer may see. Skinner’s (1953) definition of the complexity of culture is consistent with definitions of culture used in discussions of CRP. For example, both Ladson-Billings (2018) and Gorski (2016) eschew cultural essentialism in which a group is defined by a single dimension (e.g., African American) instead of by the multiple identities that members of a group may hold (e.g., Black, female, teenager, musician). Likewise, behavior analysts in recent publications have noted the importance of acknowledging the complexities of an individual’s cultural identities (Brodhead, 2019; Fong et al., 2016). In this discussion, we refer to culture as multiple identities that an individual or group may have.

Culturally Relevant Pedagogy

Culturally relevant pedagogy (CRP) is a conceptual framework that Ladson-Billings (1995a) developed to describe the behaviors of effective teachers of African American students. Ladson-Billings (1995b) observed the pedagogical practices of eight successful teachers of elementary school African American children and then used themes from their teaching to develop the CRP framework (Ladson-Billings, 1995a, 2009). The CRP framework is composed of three key practices that successful teachers of African American students implemented:

- **Sociopolitical Awareness**: Ladson-Billings (1995b) defined sociopolitical awareness as a student’s ability to critique the world and connect it back to a larger picture. In doing so, students learn to question social norms that perpetuate social inequalities and, in turn, are empowered to shift them.

- **Academic Excellence**: Ladson-Billings (2001) asserted that schools must ensure that students are academically successful. By doing so, teachers also help students access the culture of power, a term that Delpit (1988) used to describe the dominant culture that one must know in order to access higher forms of education.

- **Cultural Competence**: Ladson-Billings (1995b) reported that successful teachers of African American students ensure that students know their own cultural history. Successful teachers also use students’ cultures during instruction and teach their students the culture of power (Delpit, 1988).

Since the original publication of the CRP framework in 1994, several studies have reported applications of CRP with students from different groups including racial, ethnic, economic, language, and disability groups. Table 1 operationalizes CRP practices as described in a synthesis of CRP research conducted by Morrison et al. (2008). The practices in Table 1 are included to help behavior analysts integrate CRP into their own work with PK-12 students and their teachers.

**Points of Convergence between ABA and CRP**

Research and practice in ABA can potentially contribute to the ongoing work of educators engaged in CRP to address bias in education. ABA is a versatile field with principles of behavior that have been applied in numerous settings, organizations, and systems. The collective knowledge in ABA has formed a foundation of evidence-based strategies that are used in multiple fields including medical health care (e.g., Addison et al., 2012; DeFulio & Silverman, 2012) and mental health care (e.g., Hayes et al., 2012; Petts et al., 2016), social and community activism (e.g., Machalicek et al., 2021; Mathur & Rodriguez, 2021), and educational programming (e.g., Greer, 2002; Hugh-Pennie et al., 2018; Trump et al., 2018) with emerging evidence in law enforcement and the justice system (e.g., Carvalho et al., 2021; Crowe & Drew, 2021; Pritchett et al., 2021). In addition, behavior analysts use research from experimental behavior analysis (e.g., Bergmann et al., 2021; Green & Freed, 1993; Harsin et al., 2021; Michael, 1982; Nergaard & Couto, 2021), and applied behavior analysis (e.g., Dixon et al., 2012; Erath et al., 2021; McKeown et al., 2021; Normand et al., 2021) as well as related fields that apply behavioral principles such as social work (e.g., Thyer, 1999).

This versatility may make the effects of ABA appear less visible or targeted to one type of population. However, the flexibility within the experimental and applied branches of behavior analysis—in conjunction with its application across professional fields of practice—is what makes it powerful for educators interested in making individual, group, organizational, and systems changes. This section concentrates on the application of ABA in educational settings and how the
rich diversity of practices in the field are compatible with the goals of CRP. We also describe theories and practices that underlie both ABA and CRP with the goal of helping behavior analysts learn how to apply CRP to practice. The following are areas of convergence between CRP and ABA:

- **Cultural Competence**: In many fields, the term *cultural competence* refers to the degree to which an educator or practitioner is aware of the culture of the students or clients they serve (Ladson-Billings, 2008). However, Ladson-Billings (2018) used the term *cultural competence* to describe the process by which a student learns to honor their own culture and also navigate the culture of the majority or the culture of power (e.g., white, middle-class culture in the United States). This is an important component of CRP because of the ways in which history has revised the culture of racial ethnic groups in the United States (e.g., Huffman, 2019).

  Ladson-Billings (2008) asserted that teachers help their students gain cultural competence by: (1) acknowledging the reality of their students’ social contexts (e.g., acknowledging the socioeconomic needs of economically disadvantaged students), (2) remembering that all students have potential for high achievement but may depend on their schools to obtain it (e.g., recognizing that economically disadvantaged students may need technology and food services from the school to participate in school during the COVID-19 pandemic), and (3) modifying the curriculum and using engaging instruction to help students acquire knowledge (e.g., realizing that mainstream curricula may need to be supplemented to show the socioeconomic and racial diversity of a group of students). In summary these three aspects of cultural competence can help a teacher understand how the individual context of a students’ lived reality may present real barriers or limitations to access, opportunity, and, eventually, goal attainment. Steps must then be taken to understand how a student can gain access, increase opportunity, and decrease barriers to achieving their goals (i.e., social significance).

- **Sociopolitical Awareness**: sociopolitical awareness occurs when a teacher connects social issues in a student’s community, state, country, and the world to events in their classroom. Teachers practice sociopolitical awareness by incorporating social issues into classroom lessons and then guiding students through the process of critiquing their own social viewpoints. The goal of sociopolitical awareness is to help students gain a sense of agency in their communities and the world. For example, a teacher may guide students through their own self-determined advocacy work in a school or community. It is interesting that Ladson-Billings (2008) noted that teachers themselves need to gain sociopolitical awareness as much as their students. To apply this tenet of CRP in schools, behavior analysts may partner with teachers and school leaders to employ a number of behavioral strategies and tactics that can help address academic inequalities that they observe such as unfair discipline systems and a lack

### Table 1 Characteristics of culturally responsive pedagogy

| Characteristics of CRP | Description |
|------------------------|-------------|
| Academic excellence    | Model, scaffold, and clarify a challenging curriculum; use students’ strengths and not only weaknesses as instructional starting points; Invest and take personal responsibility for students’ success; create cooperative learning environments |
| Cultural competence    | Reshape the prescribed curriculum; build on students’ knowledge; build relationships with school and communities |
| Sociopolitical awareness | Critical literacy; engage students in social justice work through community projects; make explicit the power dynamics of mainstream society; share power in the classroom through personalized systems of instruction and choices in learning |

*Note: This table is adapted from Morrison et al. (2008). Practices are applicable to PK–12 student populations.*
of access to technology for students. One example of applying sociopolitical awareness to behavior analytic partnerships with schools may be helping schools or districts address a high number of discipline referrals for students by providing behavior analytic classroom management or positive behavior support (Buckley, 2019; Thomas, 2021).

- **Academic Excellence**: Academic achievement is an important part of CRP because it empowers students to successfully engage in school throughout their academic careers (Ladson-Billings, 2008). ABA can greatly strengthen the use of CRP in schools with its focus on observable and measurable behaviors as well as effective teaching practices developed from research on instructional design. Examples of evidence-based interventions from behavioral education include Direct Instruction (Engelmann & Carnine, 1982), Precision Teaching (Pennypacker et al., 2003; White & Haring, 1976), Personalized System of Instruction (Keller, 1968), and Classwide Peer Tutoring (Greenwood et al., 1989; Kamps et al., 1994).

ABA can also help schools develop positive descriptions of students who are not gaining specific academic repertoires. The use of positive descriptions of students’ strengths is consistent with the goals of CRP. For example, when students are described in nonscientific and pejorative terms such as lazy or unmotivated, or when their limited mastery of a subject area such as reading is attributed to parents who are nonparticipatory, this verbal behavior of educators shifts blame to setting events outside the control of the teacher or educational system as a whole. These nonscientific and pejorative descriptions of students perpetuate a system in which implicit bias (Gilliam et al., 2016) decreases overall accountability and leaves white teachers to subjectively determine which students are helped with assignments or peer tutoring, gain teacher directed positive feedback or corrections, and receive reinforcement for on-task behaviors instead of being corrected for off-task behaviors, sent out of a classroom for administrator consequences, or suspended.

However, a more objective analysis of instructional problems may occur when teaching and learning problems are defined in objective ways that identify students’ missing repertoires, prerequisite skills, ensure teaching to mastery and fluency, and nurture mutual relationships between teachers and students through effective instruction. For instance, when teachers utilize components of ABA such as continuous measurement, it may lead to positive and objective understanding of skill acquisition for both teachers and students. For students, small gains that are observed by continuous measurement might shift their motivation and lead to increased academic engagement and response effort. For teachers, it may allow them to come into contact with positive outcomes of their work, thereby improving their view of their own effectiveness as teachers as well as their view of students as capable of learning regardless of ability, race, gender, or socioeconomic status (Hugh-Pennie et al., 2018). Establishing the appropriate contingencies for teachers to accurately identify barriers to instruction and make sound decisions based on relevant student data as a necessary step in bridging the achievement gap between white and Black students.

Effective applications of the science of behavior to schooling describe the necessary repertoires of teachers to engage in remediating learning problems and choose effective teaching strategies. Once teachers gain these repertoires they can much more easily sustain culturally relevant teaching practices as this method of instruction leaves very little room for implicit or explicit bias to drive decision making allowing for more equity in education and a real way to bridge the achievement gap between white and Black students. Overall ABA aligns with the theoretical framework for CRP. Tangible examples are provided in Table 2.

### Conclusions and Recommendations

The purpose of this article was to describe culturally relevant pedagogy (CRP) and its potential application to schooling and ABA. CRP provides a culturally relevant framework that can be applied to the practice of behavior analysts working in PK–12 schools. In this article we have provided examples of tactics and strategies derived from the behavioral literature that support the CRP framework. Research indicates that students of color experience lower academic outcomes and harsher discipline because of bias from teachers, schools, and districts. However, CRP and ABA has the potential to mutually strengthen efforts to ameliorate the effects of racial bias in schools by focusing on strengths-based views of students, ensuring that students learn to honor their own cultures and can engage in the dominant culture, helping teachers and students engage in sociopolitical awareness through the use of effective instructional tools derived from research in behavior analysis and related fields, and contributing academic and behavioral interventions to students and schools that need them.

As Ladson-Billings (2018) noted in the description of sociopolitical awareness, it is important for behavior analysts to advocate for school and work environments that support children and educators who will inevitably face issues of racial bias in their daily lives and practice. It would be irresponsible to assume that behavior analysts are above such biased treatment and do not harbor or act on similar implicit biases. To provide a high quality, more culturally relevant standard of
High rates of positive reinforcement for individual and group responding, class wide peer tutoring, and enlarging communities of reinforcers (ABA) as tactics to creating and nurturing cooperative learning environments (CRP)

Individual, independent, and interdependent behavioral contingencies, behavior contracts, token economies, school wide positive behavior supports, self-monitoring, self-management, and self-regulation (ABA) as tactics for high behavioral expectations (CRP)

Using students’ interests and experience as a basis for instruction, connections to real-world as MOs for learning (ABA) as tactics to re-shape the prescribed curriculum (CRP)

Building on prior knowledge, stepwise systematic changes based on student prerequisite skills (ABA) as tactics to build on students’ funds of knowledge (CRP)

Parent performance rate and accuracy (PPRA), individual/group parent training, daily behavioral support cards, social skills instruction, conversational units, and exchanges to establish relationships and build friendships, direct and indirect assessment, preference assessment for recommended strategies (ABA) as tactics to encourage relationships between schools and communities (CRP)

Basic academic literacy curricula (e.g., Direct Instruction [DI] reading curriculum) (ABA) as tactics to gain critical literacy (CRP)

Problem-solving curricula (ABA) as prerequisites to engaging students in social justice work (CRP)

Problem-solving curricula (ABA) as prerequisites to making explicit the power dynamics of mainstream society (CRP)

Teacher and student-directed instruction, peer--tutoring, classwide peer tutoring (CWPT), personalized systems of instruction (PSI), programmed and automated instruction (ABA) to share power in the classroom (CRP)

Note: This is a nonexhaustive list of multiple tactics and strategies derived from the behavioral literature that support the CRP framework

The field of education is changing in ways that demand that practitioners and researchers address the concerns of marginalized students. As a growing profession, behavior analysts must be dedicated to expanding their professional repertoires to include cultural competence and cultural humility in their work with schools (Conners et al., 2019; Fong et al., 2016; Fontenot et al., 2019; Wright, 2019). CRP may contribute not only to an increased understanding of bias and race, but to practical steps that behavior analysts can take to view the rich diversity of students as an opportunity to improve their practice and expand their reach.
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