Ximena D. Burgin, NORTHERN ILLINOIS UNIVERSITY, xrecald1@niu.edu
Mayra C. Daniel, NORTHERN ILLINOIS UNIVERSITY, mcdaniel@niu.edu
Sheila S. Coli, NORTHERN ILLINOIS UNIVERSITY, scoli1@niu.edu
Leslie Matuszewich, NORTHERN ILLINOIS UNIVERSITY, lmatusze@niu.edu

Exploring University Teaching Assistants' Knowledge of the Power of Culturally Responsive Pedagogy

ABSTRACT

This qualitative case study examined 11 teaching assistants' (TAs) awareness of the need to infuse culturally responsive pedagogy into undergraduate level courses. The TAs represented the fields of political science, history, English, psychology, world languages, and kinesiology at one public university. One-on-one interviews were conducted, audio-recorded, transcribed, and analyzed utilizing six phase thematic analysis. Interactive analysis and coding provided a system to examine the data, generate initial codes, and subsequently review, define, and report on the themes that emerged. Results suggest the TAs interviewed had not been adequately prepared to infuse culturally responsive pedagogy (CRP) with instruction.

KEYWORDS

culturally responsive pedagogy, teaching assistants, undergraduate students

DETERMINANTS OF ACADEMIC SUCCESS AT THE UNIVERSITY

Education is a determinant for achieving social mobility and economic stability across the world's continents (Torche 2011). For students, especially for those crossing borders, completion of a university degree holds the promise of long-term economic stability (McMahon and Delaney 2021; OECD 2013). In the United States (US) the number of diverse students enrolling in universities, including native born, as well as first and later generation immigrants, continues to increase, reflecting the changing demographics of the nation (United States Census Bureau 2020). In 2021, the National Center for Education Statistics, documented trends in university enrollment data: 59% of students in the US were White, 19% Hispanic, 13% Asians, 8% Black, and less than 1% were Pacific Islanders and American Indian/Alaskan Native. An educational problem that has not adequately addressed at universities is that the protocols of the past do not meet the academic and emotional needs of today's culturally and linguistically diverse students (Bettinger 2015; Easley and Baker 2023; Keller 2021).

Societal realities and migratory patterns have increased the pressure for university curricula to diversify instructional methodologies to include practices that help students from

all backgrounds feel welcome (Angrist, Hudson, and Pallais 2017; Nguyen, Kramer, and Evans 2019). The literature stresses the necessity for higher education institutions to be proactive in adopting inclusive pedagogies that attract diverse students to all fields of study (Banks and Dohy 2019; Dulabaum 2016). Professors and teaching assistants (TAs) who intentionally focus on culturally responsive pedagogy (CRP) create classroom environments where diverse students can see themselves reflected in the curriculum. Intercultural teaching practices reflect an awareness of students' funds of knowledge and thus maintain their interest in the university courses, leading to higher degree completion rates. Research on student persistence has strongly indicated the value of infusing CRP in curricula (Hu and McCormick 2012; Kuh 2008).

The topics that compose the curriculum and the examples used to present new concepts and ideas need to authentically relate to the lives of the students. First-year students who are the first person in their families to pursue a university degree may benefit from support to understand academic and personal expectations on campus. Museus, Yi, and Saelua (2018) documented a factor that merits attention: students who feel they belong at a university are more likely to graduate. Equity in educational access will be achieved when the professoriate and the TAs teaching under them are prepared to implement curricular models that consider learners' emotional needs. This research documents 11 TAs' knowledge of the tenets of CRP and how they perceive their instruction reflects their consideration of cultural norms in their lesson planning.

THEORETICAL BACKGROUND

The theoretical framing for this study considers Gay's understanding of CRP (2000; 2015; 2018), Paris and Alim's (2014) conceptions of culturally sustaining pedagogy, and Ladson-Billings' work (1994; 2021). Gay (2018) explained that CRP uses "the cultural knowledge, prior experiences, frames of reference, and performance styles of ethnically diverse students to make learning encounters more relevant and effective" (36). Paris and Alim (2014) challenge explanations of asset-based pedagogies that do not attend to demographic changes. Ladson-Billings (1994) recommended that the provision of equitable opportunities requires "a pedagogy that empowers students intellectually, socially, emotionally, and politically by using cultural referents to impart knowledge, skills, and attitudes" (17–18). For the purpose of this study, CRP is defined as a teaching ideology that builds humanizing and liberatory environments for learning (Freire 1970). Conversations in such classrooms evidence members' caring attitudes and developing abilities to engage in culturally responsive, culturally sustaining, and culturally relevant interactions.

At the university level, insufficient research has investigated how the cultural norms of students may complement or clash with those of their classmates and instructors, subsequently endorsing or challenging models of CRP and sustaining practices (Banks and Dohy 2019; Barkley and Major 2020; Hu and McCormick 2012; Paris and Alim 2014). Awareness that diverse university students' backgrounds reflect the struggles and successes of the people who inhabit their communities is an important factor to ensure that instructors follow sustaining pedagogies that serve and encourage minoritized students to succeed (Ball 2009;

Hammond 2014; Paris 2012; Paris and Ball 2009). A learner-centered curriculum promotes dialogue between individuals who demonstrate respect for one another's perspectives. Therefore, it is essential to incorporate instructional techniques and curricular materials that uphold principles of inclusivity and equity in university classrooms.

Culturally responsive educators

Educators proficient in CRP intentionally integrate students' home and school experiences into the curriculum, leveraging learners' cultural backgrounds to create equitable and empowering learning environments (Gay 2018; Ladson-Billings 1994). By valuing culture as an asset that enhances learning, authenticity, and amplifies student voices, CRP in higher education addresses equity gaps. By validating learners' cultural norms and languages, CRP fosters classroom dialogues on societal issues, challenging assumptions related to privilege, discrimination, and social injustice across academic disciplines (Barron, Brown, and Cotner 2021; Daniel 2017; Gay 2018). Educators implementing CRP recognize students' prior experiences as valuable knowledge bases that enrich students' understanding of new academic content (González, Moll, and Amanti 2005). Authentic curricula validates students' schooled and non-schooled experiences, exploring disciplinary content collaboratively with students in order to offer culturally relevant and sustaining instruction (Hallström and Schönborn 2019). Despite these advancements, evidence suggests that CRP is still underutilized in higher education settings (Han et al. 2014).

Humanizing pedagogy

Educators' ideologies are vital to implementing instructional strategies that recognize and utilize students' humanity at all levels of schooling (Salazar 2013; Yosso 2005). At universities, professors and TAs who hold ideologies of humanizing pedagogy promote a philosophy of liberatory learning in their instruction. Freire (1970) stressed that humanizing pedagogy is political, whether its focus is to domesticate or liberate. Bartolomé (1994) acknowledged the need to consider Freire's ideas to achieve classroom conversations that validate all students' languages, cultures, and identities. Groulx and Silva (2010) proposed that all educators be prepared to espouse the goal of creating rather than reproducing oppressive societal norms. Wofford and Gutzwa (2022) stressed that educators with respect for learners' diversity challenge status-quo structures that discriminate. Asset-based ideologies are an integral part of CRP because they foster students' positive identity development and self-esteem, particularly among marginalized students or those who are the first person in their families to attend university, likely leading to improved academic success across all fields of study (Ginwright and Cammarota 2002).

Purposeful integration of diverse students' backgrounds in undergraduate curricula empowers students to be proud of their life experiences and helps them understand the norms of their adopted nation. Most importantly, it keeps them engaged and motivated to succeed academically (Fránquiz, Ortiz, and Lara 2019; Ginwright and Cammarota 2002; González, Moll, and Amanti 2005; Montañez 2023). When instructors establish equitable learning atmospheres that provide authenticity to the learning, all students' perspectives are

welcomed in discussions and classroom tasks (Ladson-Billings 1994; Yosso 2005). They help students develop the ability to communicate with those who hold different perspectives and whose cultural norms they may not understand, leading to the respectful interpersonal interactions that are a requisite to achieve success in academia and beyond.

Responsibilities when teaching undergraduates

Traditionally, TAs are expected to clarify and further explain concepts presented by professors in large lecture halls. However, this is just one example of the various activities they perform. In their role as support staff, TAs are often in close contact with students in laboratory settings or tutorial/seminar groups, which allows them to work with small groups of students. Based on the model of instructions, TAs can help students develop skills and promote inclusion (Cho et al. 2011; Reeves et al. 2016).

Professional development (PD) for TAs has been developed in some disciplines (Barron, Brown, and Cotner 2021; Heffernan 2018); however, little research has examined how TAs are prepared to address the influences of culture on their students' learning (Camarao and Din 2023). Some TAs report experiencing challenges connecting with students, suggesting there is a need to engage them in CRP training (O'Leary et al. 2020; Rodriguez 2013; Sarju and Jones 2021). Such PD is essential in improving the effectiveness of TAs in connecting with students from diverse backgrounds. Institutional leaders need to acknowledge that TAs' responsibilities include both teaching and assisting institutional objectives to mentor and retain undergraduate students O'Leary et al. (2020) have recommended CRP training consisting of multi day workshops to raise faculty's awareness of social identities and address learning barriers like implicit bias, microaggressions, stereotype threats, and fixed mindsets. Similar training could equip TAs with the tools to provide inclusivity and cultural responsiveness. This research investigates TAs' knowledge of CRP practices and their experiences addressing cultural responsiveness in their teaching.

METHODOLOGY

This qualitative case study explored 11 TAs' ability to implement CRP, allowing for in-depth exploration of their experiences and perceptions (Creswell and Guetterman 2019). This approach was chosen for its ability to reveal the meaning of interactions in a specific context (Bogdan and Biklen 1982). In interviews lasting one hour, the researchers collected data from TAs at Middle Center University (MCU) (a pseudonym), a mid-size rural-urban higher education institution located in the Midwest region of the US. After audio-recording the interviews, data were analyzed using six-phase thematic analysis (data familiarization, generation of initial codes, themes search, reviewing themes, defining themes, and reporting) (Braun and Clarke 2006). The coding process was "live" and the code and the data continuously shared space to examine and reveal the meaning (Saldaña 2016). Three researchers coded all collected data, convening weekly to deliberate on initial codes and potential themes derived from these original codes. This iterative process facilitated addressing any disparities and ultimately reaching a consensus on the themes that encapsulated the coding. Following the establishment of these themes, the team

collaborated to craft findings, ensuring that the results and conclusions were substantiated by evidence gathered from the participants' responses.

This inquiry was based on two research questions:
1. How do TAs describe CRP?
2. How do TAs infuse CRP into their teaching?

Guba's (1981) guidelines were employed to establish the validity and trustworthiness of the data analysis. Utilizing thematic analysis, the researchers ensured a systematic approach to analyzing the data, establishing common codes, and achieving consensus on the identified themes to enhance the credibility of the findings. The iterative nature of the data analysis and team meetings facilitated in-depth discussions aimed at validating the emergence of themes. Upon reaching consensus on the results, the researchers incorporated relevant literature through the literature review in order to substantiate and strengthen the findings. This systematic process validates the study's outcomes and provides insights for potential application in similar contexts in future research.

Researchers' positionality

The research team consisted of females from Cuba, Ecuador, the US, and Uruguay who serve as faculty across various academic departments of a single university, along with a doctoral student. The researchers were collaboratively engaged in a larger initiative aimed at fostering institutional change in order to better support undergraduate students from diverse backgrounds. Their diverse backgrounds contribute to a first-hand appreciation of the significance of culturally responsive instruction in supporting diverse students. The researchers' work reflects several years of experience preparing in-service and pre-service teachers to implement CRP, providing a comprehensive understanding of the challenges and significant benefits associated with implementation of CRP strategies across academic disciplines. The team's experiences contributed to the thoughtful interpretation of the data and the objectivity of the results was upheld through iterative data analysis, which ensures an objective and ethical interpretation of the data.

Participants and setting

Recruitment of 11 TAs was carried out through an email sent to TAs teaching undergraduate courses. Interviews were conducted after Institutional Board Requirements were met and all participants gave their consent to participate. To address the research questions, the TAs were asked how they:
1. infuse students' past and present life experiences into lessons?
2. foster critical discussions in lessons and assignments?
3. select authentic learning tasks for the delivery of content materials in the classroom?
4. include tasks in the curriculum that relate to students' lives outside the university environment?
5. help students to collaborate and learn from each other?

Table 1 shows the academic concentration of the TAs, their ethnicity by continent, and their identified gender.

Table 1. Participants' demographics

Major	Ethnicity by continent
English (woman) (Solange)	Africa = 1
History (2 men) (John, Nicholas)	North America = 2
Kinesiology and physical education (1 woman, 1 man) (Carlos, Jaqueline)	South America = 1, North America = 1
Political science (1 woman, 1 man) (Jorge, Mercedes)	Asia = 1, South America = 1
Psychology (3 women) (Isabel, Carmen, Lysiane)	Africa = 1, North America = 2
World languages (Cecilia)	Africa = 1

Participants' names are pseudonyms.

Reported training of participating TAs

At MCU, academic units collaborate closely with the Academic Diversity Equity and Inclusion (ADEI) and Teaching and Learning Units to offer training opportunities for TAs. When entering the role of a TA, graduate students in the College of Liberal Arts and Sciences (n = 9) are asked to participate in the Teaching Assistant Institute (TAI), which comprises three mandatory 90-minute synchronous sessions, one of which is dedicated to CRP. TAs are also encouraged to watch video modules on the following topics: assisting students with emotional and/or behavioral concerns, addressing bias and microaggressions, reducing barriers for students with disabilities, supporting first generation college students, and implementing trauma-informed teaching practices.

Among the 11 TAs surveyed, four reported that they had received training in CRP. Three TAs mentioned that participation in the training was voluntary, and one understood that it was mandatory. One TA mentioned that the training lasted two hours. Others stated a more extended duration of "8 weeks, with 2–3 hours of training per week," and one mentioned the training was "a one-hour credit hour course." Another participant noted that the training was organized into "modules within a course." Despite these variations, TAs generally reported the training to be valuable for their roles and responsibilities. However, when it came to follow-up training on CRP, four TAs reported that they had not been invited nor required to attend any follow-up sessions.

RESULTS

Thematic analysis protocols facilitated the analysis of qualitative data, leading to the identification and grouping of emerging codes into two prominent themes: fostering inclusive learning environments and authentic integration of curriculum in education. These themes materialized as direct outcomes of the systematic application of thematic analysis steps, enabling an interactive and iterative process that meticulously navigated the transition from collected data to the identification of codes and, ultimately, the formulation of the two overarching themes (Table 2).

Table 2. Themes and categories alignment

Themes	Categories	Frequency
Fostering inclusive learning environments	Critical discussions	12
	Authentic tasks	10
	Authenticity of the curriculum	14
	Challenges of integrating CRP	8
Authentic integration of curriculum in education	Content integrating learners' lives	11
	Real-life examples	18
	Opportunities for collaboration	18

Fostering inclusive learning environments

The first theme, fostering inclusive learning environments, encompasses the critical examination of critical discussions, exploring ways to include diverse perspectives and authentic tasks that resonate with students' lived experiences and cultures (Lanson-Billings 1994), while acknowledging the challenges TAs face in effectively implementing CRP within educational settings (González, Moll, and Amanti 2005; Harper 2010; Wofford and Gutzwa 2022). Data examination generated information about navigating the challenges and realities of TAs in the classroom. Although findings indicate that TAs value dialogue and critical discussions in their classrooms, their statements indicated a desire for training that will increase their pedagogical knowledge and strategic skills to create safe environments that encourage honest interpersonal sharing, as supported by Kafele (2013) and Samuels (2018).

Several participants highlighted the intricate dynamics of fostering engaging and inclusive discussions within the academic classroom, including opportunities to share impactful life experiences that engage students as they answer questions that deepen their knowledge and understanding of the course material. TAs face challenges in their efforts to support students as they share their fears and uncomfortable moments. For example, Mercedes asks students to express their opinions on controversial topics related to the course content; however, she feels students are reluctant to "expose themselves." John "poses open-ended questions throughout lessons instead of doing it all at once" because he believes this approach allows for "build[ing] communication and debate strategies" as well as engages students with the topic that is being discussed. Solange agrees with John on the need to create safe spaces. Cecilia and Lysiane facilitate sharing from students with different backgrounds and experiences in schooling.

The TAs see the diversity of their students but do not always know how to amplify students' voices and navigate conflicting ideas that may or may not be commonplace in their cultures of origin. Cecilia mentioned creating opportunities for students to share their life experiences in the classroom in order to find commonalities and differences across them, and create spaces to learn from one another. Cecilia noted "Our students are [from] different backgrounds, and they have different perspectives. Sometimes, we have to allow for critical conversations that are hard." Solange and John pointed out the benefits of using "broken

down questions" or "open-ended questions" ". . . that students relate to and may respond to more easily, thus supporting engagement and learning." Relatable questions that students understand fuel participation and learning. Sprinkling open-ended questions throughout lessons, rather than in a single batch, sparks dynamic exchanges where one student's comment ignites a ripple effect of agreement or disagreement across the group. This approach underscores the role of question selection in driving discussions.

The TAs want to develop the CRP know-how that ignites sharing and facilitates honest dialogue. John indicated that "the best conversations occur when a student makes a comment and then it starts going across the room and other students agree or disagree." Lysiane agreed that during discussions, students better understand the content taught when they apply it to their own experiences and reflect on their own views on the topic. Effective communication and debate strategies foster engagement through discussions tailored to students' experiences. Discussions encouraging students to connect lesson material with their background enable a deeper understanding of the subject matter, making it more tangible and relevant. Twelve comments from the TAs alluded to the value of dialogue in classrooms. However, several TAs' perceptions of a critical discussion seemed to indicate that this involves asking students to express opinions on controversial topics related to content, and some students seem reluctant to "expose themselves."

Regarding authentic tasks, research indicates many TAs recognize the importance of understanding students' needs and backgrounds when designing classroom tasks and seeking to enhance learning and increase student persistence (Angrist, Hudson, and Pallais 2017; Banks and Dohy 2019; Hu and McCormick 2012; Nguyen, Kramer, and Evans 2019; Schrum, Majury, and Simonelli 2021). However, most TAs struggled to grasp and explain the concept of an authentic task, knowledge that is essential for planning meaningful educational experiences. Nicholas explained that authenticity in learning tasks involves "stretching and engaging the mind through skills such as reading, writing, interpretation, and analysis, underscoring its cognitive dimension" (Barkley and Major 2020; Lombardi 2007). The TAs' understanding of authentic tasks is demonstrated by Nicholas when he incorporates "some alternative sources." Similarly, another TA referred to using "journals and authentic materials" to support learning. Jaqueline incorporates culturally relevant materials in order to make learning meaningful and attractive to students. She indicated that she tries to "provide things that are reflective of their [students] culture, also using literature from a diverse group of authors."

Many TAs emphasize the necessity of knowing students to make the curriculum authentic. Understanding their interests, strengths, and weaknesses helps in designing activities that promote persistence and contribute to graduation (Hu and McCormick 2012; Kuh 2008). Nicholas underscores the importance of knowing students to better address their academic needs and engage them effectively with course content (Mercedes and Solange). Activities and curriculum planning become more effective when educators understand students' goals, engagement levels, and cultural backgrounds. For example, Nicholas argued, "If you don't know the student, how can you assist in the learning process?" Solange incorporates students' life experiences into group discussions and journal assignments, while

Jacqueline notes, "Knowing my students' cultural and personal backgrounds helps me provide relevant examples." These insights highlight the use of culturally relevant materials (Gay 2018) and the importance of connecting learning to students' cultural contexts for greater engagement and relevance.

Authentic integration of curriculum in education

The second theme, authentic integration of curriculum in education, relates to connecting the curricula's content, context, and collaboration. This theme emphasizes the intertwining of educational content with students' lived experiences, the incorporation of real-life examples to contextualize learning, and the promotion of collaborative opportunities that allow students to engage, share, and build knowledge together within authentic settings (Herrington, Parker, and Boase-Jelinek 2014; Ladson-Billings 1994; Yosso 2005). Overall, study findings underscore the importance of understanding students' needs and backgrounds as a crucial step in designing authentic tasks that enhance learning and increase student persistence and graduation rates (Herrington, Reeves, and Oliver 2013).

The majority of the TAs' genuine interest in integrating learners' lives into content was evident in their efforts to make course content relevant to students' experiences. TAs' interest in the relevance of learners' lives offers evidence of the inclusion of CRP practices in their instruction (Lucey and White 2017). While they might not have realized it, many participants were already infusing CRP into their instruction. Several TAs referred to how they address students' lives and cultures, aligning with the principles of CRP and thus, showing connections to students' lived experiences (Gay 2018). Mercedes commented, "I try to make students reflect about how much their own life experience is affected by public policies." Cecilia indicated that she creates opportunities for students to share "cultural activities and how these relate directly to their lives outside of school." Solange encourages students to relate course content to their life through "problem-solving tasks." The TAs' comments document that their instructional methods address the context of students' lives and their diverse cultural norms.

Participants demonstrated a student-centered approach through showcasing teaching methods specifically crafted to convey information in a manner that amplifies students' learning experiences via the integration of real-life examples. John, Isabel, Lysiane, Carlos, and Jaqueline provided examples using short videos, social media, and life applications to demonstrate that students enjoyed the activities and connected to the material. Isabel mentioned "adding an extra credit assignment to make a video to either post on TikTok or social media explaining a psych concept." Carlos shares examples of his own experience in relation to the content being learned and then asks students to share experiences or an everyday application. Jaqueline indicated, "I give students space to share examples that might be relevant to the topics that we're talking about." Lysiane described an assignment at the end of the semester to show how she integrates students' experiences into her instruction:

> This final paper presentation is called a character strengths quiz . . . When I ask them [students] to talk about a time when they utilized their character strengths after they went through a negative event, they really get more personal about their life! . . . I'm able to get them to finally speak about their own experiences through the material.

The examples shared by the participants demonstrated a desire to incorporate educational materials that transcend discipline-focused instruction, aiming instead to captivate students' interest and foster comprehension of the subject matter. These examples evidence TAs' commitment to enhancing student engagement by integrating compelling and relatable content, seeking deeper understanding of the material through diverse and culturally responsive approaches.

It is apparent that participants viewed opportunities for collaboration as a driver of student learning and engagement, resonating with research stating that collaborative learning enhances academic success, supports a safer learning environment, and fosters respect for diverse perspectives (Johnson and Johnson 1999; Samuels 2018; Slavin 1995; Schrum, Majury, and Simonelli 2021; Vygotsky 1978). In this regard, five participants indicated that collaborative tasks create safer learning environments, foster a sense of group cohesion toward a common goal, and promote respect for others' opinions. Solange believes in the value of collaborative work through "small group research activities both in class and at home assignments." Cecilia poses a question for students to discuss in small groups and then the groups debrief in whole group discussion. The TAs stressed the benefits of developing collaborative skills in reaching higher levels of academic achievement. They noted that true collaboration fosters critical thinking skills. Mercedes mentioned the use of at-home group assignments such as "questions that they need to discuss to answer;" however, she expressed that "[collaboration] is difficult for students." Specifically, the TAs mentioned several ways that they support CRP with tasks that require peer editing, problem-solving, and working through disparate notions and interpretations to reach group consensus. It is important that students engage in joint proofreading and collaborative sharing of ideas.

DISCUSSION AND CONCLUSIONS

For this study, graduate students working as TAs were interviewed using five core questions that addressed different components of CRP. Overall, responses indicated that the TAs use strategies that foster inclusive learning environments and encourage the integration of individual lived experiences into the content. While there is evidence that the TAs promote CRP, the results suggest they may also benefit from additional instruction and mentoring in CRP in order to support their teaching of diverse undergraduate students. Heffernan's research (2018) alludes to how the constraints imposed by rigid curricula restrict TAs' ability to engage diverse students. TAs feel controlled by the mandated curriculum, which hinders their ability to fully engage with students and create a dynamic learning environment. It appears that current system protocols fall short of meeting TAs' PD needs (Cho et al. 2011; Reeves et al. 2016). The TAs recognized the importance of their role in shaping the

educational experience and appeared eager to develop the necessary skills to excel in this capacity, but their limited level of pedagogical knowledge limited the use of CRP practices rather than contribute to creating an entire philosophical approach to teaching (Sleeter 2012). The TAs lacked the informed language to label and discuss the instructional strategies they use as demonstrated by their struggles to define CRP. The TAs voiced a request for continuous PD, highlighting their commitment and dedication to students' success and their wish to establish connections between the curriculum and the diverse student backgrounds (O'Leary et al. 2020; Rodriguez 2013; Sarju and Jones 2021).

Based on the interviews conducted in this investigation, the TAs reported that they engaged in authentic integration of curriculum through meaningful conversations with undergraduate students. This practice allowed for discussions of real-world experiences, exploring biases, addressing issues related to social justice and inequality, challenging stereotypes, and developing empathy (García-Carrión et al. 2020; Rice and Pollack 2014; Welton et al. 2015). Embracing the diversity of backgrounds and undergraduate student perspectives paved the way for challenging conversations that promote critical thinking among students and empathetic understanding, consistent with current educational practices (García-Carrión, Garazi López de Aguileta, and Ramis-Salas 2020; González, Moll, and Amanti 2005; Samuels 2018). Discussions occurring in the classroom or dialogic teaching and learning, as indicated by García-Carrión, Garazi López de Aguileta, and Ramis-Salas (2020), allowed students to present arguments grounded in validity claims instead of power claims. However, the limitations in the TAs' pedagogy might confine CRP practices to add-on strategies rather than to methods that are comprehensively and consistently integrated into the teaching. This reality suggests the need for more systematic training in CRP.

While some TAs grapple with understanding authentic learning tasks, their insights and challenges with teaching undergraduates emphasize the significance of incorporating authentic tasks to augment learning experiences. Herrington, Reeves, and Oliver (2013) explained that authentic tasks are pedagogical strategies that allow students to link classroom content to real-world practice. While several TAs' comments demonstrate their unclear understanding of the term "authentic learning" tasks, most of them shared the belief that addressing students' backgrounds enhances overall learning. This finding is supported by Herrington, Reeves, and Oliver (2013) regarding the use of students' backgrounds to support the learning of new content; Jonassen (1991) to mirror the students' reality and build upon students' knowledge representations; and Schrum, Majury, and Simonelli (2021) concerning the engagement of students of disciplinary content through storytelling. Their beliefs support the notion that knowing about students' backgrounds is pivotal in designing tasks that enhance learning and increase students' persistence toward graduation. Participants discussed their efforts to encourage reflection in their own lives, evidencing their belief in CRP practices that integrate with students' knowledge, values, and cultural norms (Gay 2018; González, Moll, and Amanti 2005; Jonassen 1991; Samuels 2018).

Overall, the challenges experienced by the TAs in integrating CRP reflect the existing literature, which acknowledges the complex interplay of factors influencing instructional practices (Gay 2018). The TAs' commitment to creating inclusive environments resonates with

recommendations for using culturally relevant materials to link together instruction and real-world situations (Bartolomé 1994; Gay 2018; González et al. 2005). Throughout the interviews, the TAs repeatedly referred to how collaborative work promotes student learning. Schrum, Majury, and Simonelli (2021) discuss the importance of collaborative and iterative instructional processes that mirror real-world problems, allowing students to construct and negotiate knowledge. The emphasis on collaborative work among TAs illustrates their acknowledgement of its contribution to learning such as deeper understanding of material and its provision of opportunities to develop respect towards classmates. The TAs believed collaboration drives student learning and engagement, enhances academic success, supports a safe learning environment, and fosters respect for diverse perspectives as presented by Schrum, Majury, and Simonelli (2021) where storytelling created an environment for students to construct knowledge while working with other; Johnson and Johnson (1999) and Slavin (1995) discussing cooperative learning to involve students meaningfully and actively.

Clearly, there is a need for continuous PD tailored to address diversity and prepared for TAs so they can navigate the complexities of CRP practices as framed by Banks and Dohy (2019), Dulabaum (2016), Heffernan (2018) and Lanson-Billings (1994; 2021). The TAs' perspectives and pedagogy underscore the value of authentic tasks, collaborative work, and inclusive instructional approaches in creating engaging and culturally responsive learning environments. The PD offered to TAs should include self-reflection and mentoring in order to model how to implement CRP in the classroom and generate examples for the different fields in higher education.

Implications

The findings of the study offer insights into how to reimagine the role of TAs in higher education (Ladson-Billings 1994; Yosso 2005). TAs encounter challenges such as a lack of inclusive pedagogy training, time constraints, reduced opportunities for collaboration, and vulnerability to bias and discrimination (González, Moll, and Amanti 2005; Hallström and Schönborn 2019; Harper 2010; Wofford and Gutzwa 2022). In alignment with other types of instructors in higher education, the TAs reported using approaches in the classroom that are consistent with CRP. This finding is interesting, given that five of the 11 participants in the study were non-native speakers of English. While this study did not specifically assess higher education in other countries, it suggests that the use of CRP supportive strategies can be recognized and appreciated by graduate students from diverse continents.

One specific strategy to address the challenges encountered by TAs involves offering PD that focuses on pedagogical topics relevant to culturally responsive teaching within a classroom setting (Camarao and Din 2023). This training would enable TAs to create inclusive learning environments and cater to diverse student needs. Encouraging TAs to use strategies that promote open dialogue and respect for diverse perspectives can help facilitate more inclusive classroom environments. This can foster a sense of belonging among students from different backgrounds, contributing to a more equitable educational experience. Additionally, providing opportunities for TAs to practice implementing this knowledge prior to delivering their own lectures is essential. This practice-based approach fosters

collaboration among TAs, facilitating peer learning and the exchange of strategies to effectively navigate constraints associated with CRP. Future research could expand the CRP framework through providing opportunities to co-create knowledge among TAs, professors, and students. This approach could investigate how collaborative knowledge-building processes contribute to enhanced learning outcomes and more inclusive educational environments.

While the TAs articulated their use of CRP, there were still disparities in TAs' understandings of CRP that could result in challenges related to student engagement, comprehension, and academic performance. This is supported by Fránquiz, Ortiz, and Lara (2019) who indicated that when learners do not see themselves represented in stories and books, their educational future is jeopardized, and their sense of belonging diminishes; Ginwright and Cammarota (2002) who stated that learners need to be afforded opportunities to discuss community and social issues, increasing their awareness of social inequalities; Montañez (2023) explained the value of adopting asset-based perspectives to appreciate the strengths and capabilities of students and to support their academic success. If TAs are to contribute more significantly to educating undergraduate students, it will be important to train them in culturally responsive, sustaining and relevant pedagogical practices. While the experience of teaching undergraduate students provides TAs with some mentorship opportunities, they still face difficult challenges, such as limited pedagogical training, time constraints, and varying levels of preparedness that require focused attention (Banks and Dohy 2019; Barron, Brown, and Cotner 2021; Cho et al. 2011; Dulabaum 2016; Heffernan 2018; Reeves et al. 2016). These challenges necessitate a commitment to PD and inclusive policies, ultimately creating supportive environments for TAs.

Limitations

The findings of this study are limited in their generalizability due to the small sample size, which restricts the ability to draw conclusions for other TAs in the US. However, the exploration of issues related to CRP in an undergraduate classroom provided information on the challenges faced by specific participants. Another limitation pertains to the reliance on self-reported data, which may have influenced teaching assistants' attitudes and responses. Future research could address these limitations by expanding the sample size to further validate the findings of this study.

ACKNOWLEDGMENTS

AUTHOR BIOGRAPHIES

Ximena D. Burgin (USA) is an assistant professor at Northern Illinois University, researching culturally responsive classrooms. She develops and evaluates K–12 and adult education programs, exploring how diverse interventions impact academic achievement through various methodological approaches.

Mayra C. Daniel (USA) is a professor at Northern Illinois University, originally from Cuba. Her work focuses on supporting linguistically diverse students, with a commitment to social justice and the importance of teachers in fostering academic and emotional growth.

Sheila S. Coli (USA) is an experienced EFL teacher from Uruguay and an EdD candidate at Northern Illinois University. Her research focuses on social-emotional learning and teacher development, particularly in implementing SEL in the classroom.

Leslie Matuszewich (USA) is an associate professor of psychology and senior associate dean at Northern Illinois University. Her research examines the impact of stress on motivation and learning, and she has coordinated graduate training on inclusive teaching practices.

REFERENCES

Alim, H. Samy, Django Paris, and Casey Philip Wong. 2020. "Culturally Sustaining Pedagogy: A Critical Framework for Centering Communities." In *Handbook of the Cultural Foundation of Learning*, edited by Na'ilah Suad Nasir, Carol D. Lee, Roy Pea, Maxine McKinney de Royston 1–16. New York: Routledge.

Angrist, Joshua, Sarah Hudson, and Adeline Pallais. 2017. "Evaluating Post-Secondary Aid: Enrollment, Persistence, and Projected Completion Effects." NBER Working Paper, 1–47. National Bureau of Economic Research.

Daniel, Mayra, editor 2017. *Culture, Language and Curricular Choices: What Teachers Need to Know about Planning Instruction for English Learners*. New York: Rowman and Littlefield Publishers, Inc.

Ball, Anetha. 2009. "Toward a Theory of Generative Change: In Culturally and Linguistically Complex Classroom." *American Educational Research Journal* 46 (1). https://doi.org/10.3102/0002831208323277.

Banks, Tachelle, and Jennifer Dohy. 2019. "Mitigating Barriers to Persistence: A Review of Efforts to Improve Retention and Graduation Rates for Students of Color in Higher Education." *Higher Education Studies* 9 (1): 118–31. https://doi.org/10.5539/hes.v9n1p118.

Barkley, Elizabeth, and Claire H. Major. 2020. *Student Engagement Techniques: A Handbook for College Faculty, 2nd* ed. San Francisco: Jossey Bass.

Barron, Hillary A., Julie C. Brown, and Sehoya Cotner. 2021. "The Culturally Responsive Science Teaching Practices of Undergraduate Biology Teaching Assistants." *Journal of Research in Science Teaching* 58 (9): 1–39. https://doi.org/10.1002/tea.21711.

Bartolomé, Lilia. 1994. "Beyond the Methods Fetish: Towards a Humanizing Pedagogy." *Harvard Review* 64 (2): 173–95. https://doi.org/10.17763/haer.64.2.58q5m5744t325730.

Bettinger, Eric. 2015. "Need-Based Aid and College Persistence: The Effects of the Ohio College Opportunity Grant." *Educational Evaluation and Policy Analysis* 37 (1): 102S–19S.

Bogdan, Robert, and Sari K. Biklen. 1982. *Qualitative Research for Education: An Introduction to Theory and Methods.* Boston: Allyn and Bacon.

Braun, Virginia, and Victoria Clarke. 2006. "Using Thematic Analysis in Psychology." *Qualitative Research in Psychology* 3 (2): 77–101. https://doi.org/10.1191/1478088706qp063oa.

Camarao, Joy, and Cari Din. 2023. "'A Group of People to Lean On and Learn From': Graduate Teaching Assistant Experiences in a Pedagogy-Focused Community of Practice." *Teaching & Learning Inquiry* 11. https://doi.org/10.20343/teachlearninqu.11.11.

Cho, Yoonhung, Myoungsook Kim, Marilla D. Svinicki, and Mark Decker. 2011. "Exploring Teaching Concerns and Characteristics of Graduate Teaching Assistants." *Teaching in Higher Education* 16 (3): 267–79. https://doi.org/10.1080/13562517.2010.524920.

Creswell, John. W., and Timothy C. Guetterman. 2019. *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research,* 6th edition. New York: Prentice-Hall.

Dulabaum, Nina L. 2016. "Barriers to Academic Success: A Qualitative Study of African American and Latino Male Students." *League for Innovations* 11 (6). https://www.league.org/innovation-showcase/barriers-academic-success-qualitative-study-african-american-and-latino-male.

Easley, Janeria A., and Regina S. Baker. 2023. "Intergenerational Mobility and Racial Inequality: The Case for a More Holistic Approach." *Sociology Compass* 17 (10): 1–12. https://doi.org/10.1111/soc4.13128.

Fránquiz, Maria E., Alba A. Ortiz, and Gilberto Lara. 2019. "Co-Editor's Introduction: Humanizing Pedagogy, Research and Learning." *Bilingual Research Journal* 42 (4): 381–86. https://doi.org/10.1080/15235882.2019.1704579.

Freire, Paulo. 1970. *Pedagogy of the Oppressed*. New York: Herder and Herder.

García-Carrión, Rocío, Maria Padrós Garazi López de Aguileta, and Mimar Ramis-Salas. 2020. "Implications for Social Impact of Dialogic Teaching and Learning." *Frontiers in Psychology* 11: 140. https://doi.org/10.3389/fpsyg.2020.00140.

Gay, Geneva. 2000. *Culturally Responsive Teaching*. New York: Teachers College Press.

Gay, Geneva. 2015. "Teachers' Beliefs about Cultural Diversity: Problems and Possibilities." In *International Handbook of Research on Teachers' Beliefs*, edited by Helenrose Fives and Michele Gregoire Gill, 436–52. New York: Routledge.

Gay, Geneva. 2018. *Culturally Responsive Teaching: Theory, Research, and Practice,* 3rd edition. New York: Teachers College Press.

Ginwright, Shawn, and Julio Cammarota. 2002. "New Terrain in Youth Development: The Promise of a Social Justice Approach." *Social Justice* 29 (4): 82–95.

González, Norma, Luis Moll, and Cathy Amanti. 2005. "Funds of Knowledge for Teaching in Latino Households." *Urban Education* 29 (4): 443–70. https://doi.org/10.1177/0042085995029004005.

Groulx, Judith G., and Cecilia Silva. 2010. "Evaluating the Development of Cultural Relevant Teaching." *Multicultural Perspectives* 12 (1) 3–9. https://doi.org/10.1080/15210961003641120.

Guba, Egon G. 1981. "Criteria for Assessing the Trustworthiness of Naturalistic Inquiries." *Educational Communication and Technology Journal* 29 (2): 75–91. https://www.jstor.org/stable/30219811.

Hallström, Jonas, Konrad J. Schönborn. 2019. "Models and Modelling for Authentic STEM Education: Reinforcing the Argument." *International Journal of STEM Education* 6 (22): 1–10. https://doi.org/10.1186/s40594-019-0178-z.

Hammond, Zaretta. 2014. *Culturally Responsive Teaching and the Brain: Promoting Authentic Engagement and Rigor among Culturally and Linguistically Diverse Students*. California: Corwin Press.

Han, Heejeong S., E. Vomvoridi-Ivanović, J. Jacobs, Z. Karanxha, A. Lypka, C. Topdemir, and A. Feldman. 2014. "Culturally Responsive Pedagogy in Higher Education: A Collaborative Self-Study." *Studying Teacher Education* 10 (3): 290–312. https://doi.org/10.1080/17425964.2014.958072.

Harper, Shaun R. 2010. "An Anti-Deficit Achievement Framework for Research on Students of Color in STEM." *New Directions for Institutional Research* (148): 63–74. https://doi.org/10.1002/ir.362.

Heffernan, Troy A. 2018. "Approaches to Career Development and Support for Sessional Academics in Higher Education." *International Journal for Academic Development* 23 (4): 312–23. https://doi.org/10.1080/1360144X.2018.1510406.

Herrington, Jan, Thomas C. Reeves, and Ron Oliver. 2013. "Authentic Learning Environments." In *Handbook of Research on Educational Communications and Technology*, edited by J. Michael Spector, M. David Merrill, Jan Ellen Elen, Bishop, 401–12. New York: Springer.

Herrington, Jan, Jenni Parker, and Daniel Boase-Jelinek. 2014. "Connected Authentic Learning: Reflection and Intentional Learning." *Australian Journal of Education* 58 (1): 23–35. https://doi.org/10.1177/0004944113517830.

Hu, Shouping, and Alexander C. McCormick. 2012. "An Engagement-Based Student Typology and Its Relationship to College Outcomes." *Research in Higher Education* 53: 738–54. https://doi.org/10.1007/s11162-012-9254-7.

Johnson, David W., and Roger T. Johnson. 1999. "Making Cooperative Learning Work." *Theory into Practice* 38 (2): 67–73.

Jonassen, David H. 1991. "Objectivism versus Constructivism: Do We Need a New Philosophical Paradigm?" *Educational Technology Research and Development* 39: 5–14. https://doi.org/10.1007/BF02296434.

Kafele, Baruti. 2013. *Closing the Attitude Gap: How to Fire Up Your Students to Strive for Success*. Alexandria, VA: ASCD.

Keller, Katarina. R. I. 2021. "The External Social and Economic Benefits of Higher Education: Empirical Evidence from Worldwide Data." *Journal of Education Finance* 46 (4): 431–55. https://www.muse.jhu.edu/article/796975.

Kuh, George D. 2008. *High-Impact Educational Practices: What They Are, Who Has Access to Them, and Why They Matter.* Association of American Colleges and Universities.

Ladson-Billings, Gloria. 1994. *The Dreamkeepers: Successful Teaching for African-American Students*. San Francisco: Jossey-Bass.

Ladson-Billings, Gloria. 2021. "Three Decades of Culturally Relevant, Responsive, & Sustaining Pedagogy: What Lies Ahead?" *The Educational Forum* 85 (4): 351–54. https://doi.org/10.1080/00131725.2021.1957632.

Lombardi, Marilyn 2007. "Authentic Learning for the 21st Century: An Overview." EDUCAUSE Learning Initiative 1 (2007): 1–12.

Lucey, Thomas A., and Elizabeth S. White. 2017. "Mentorship in Higher Education: Compassionate Approaches Supporting Culturally Responsive Pedagogy." *Multicultural Education* 24 (2): 11–17.

McMahon, Walter W., and Jennifer A. Delaney. 2021. "The External Social Benefits of Higher Education: Introduction to This Special Issue." *Journal of Education Finance* 46 (4): 387–97. https://www.muse.jhu.edu/article/796973.

Montañez, Smirla Ramos. 2023. "Advancing Equity through Research: The Importance of Asset-Based Approaches and Methods." *Journal of Applied Developmental Psychology* 86. https://doi.org/10.1016/j.appdev.2023.101540.

Museus, Samuel D., Varaxy Yi, and Natasha Saelua. 2018. "How Culturally Engaging Campus Environments Influence Sense of Belonging in College: An Examination of Differences Between White Students and Students of Color." *Journal of Diversity in Higher Education* 11 (4): 467–83. https://doi.org/10.1037/dhe0000069.

National Center for Education Statistics. 2021. "Digest of Education Statistics." https://nces.ed.gov/programs/digest/d22/tables/dt22_306.50.asp

Nguyen, Tuan D., Jenna W. Kramer, and Brent J. Evans. 2019. "The Effects of Grant Aid on Student Persistence and Degree Attainment: A Systematic Review and Meta-Analysis of the Causal Evidence." *Review of Educational Research* 89 (6): 831–74. https://doi.org/10.3102/0034654319877156.

OECD. 2013. "What Are the Social Benefits of Education?" *Education Indicators in Focus* 10. Paris: OECD Publishing. https://doi.org/10.1787/5k4ddxnl39vk-en.

O'Leary, Erin Sanders, Casey Shapiro, Shannon Toma, Hannah Whang Sayson, Marc Levis-Fitzgerald, Tracy Johnson, and Victoria L. Sork. 2020. "Creating Inclusive Classrooms by Engaging STEM Faculty in Culturally Responsive Teaching Workshops." *International Journal of STEM Education* 7 (32). https://doi.org/10.1186/s40594-020-00230-7.

Paris, Django, and H. Samy Alim. 2014. "What Are We Seeking to Sustain Through Culturally Sustaining Pedagogy? A Loving Critique Forward." *Harvard Educational Review* 84 (1): 85–100. https://doi.org/10.17763/haer.84.1.982l873k2ht16m77.

Paris, Django, and Arnetha Ball. 2009. "Teacher Knowledge in Culturally and Linguistically Complex Classrooms: Lessons from the Golden Age and Beyond." In *Handbook of Research on Literacy Instruction: Issues of Diversity, Policy, and Equity,* edited by Leslie Mandel Morrow, Robert Rueda, and Daine App, 379–95. Guilford Press.

Paris, Django. 2012. "Culturally Sustaining Pedagogy: A Needed Change in Stance, Terminology, and Practice." *Educational Researcher* 41 (3): 93–7. https://doi.org/10.3102/0013189X12441244.

Reeves, Todd D., Gill Marbach-Ad, Kristen R. Miller, Judith Ridgway, Grant E. Gardner, Elisabeth E. Schussler, and E. William Wischusen. 2016. "A Conceptual Framework for Graduate Teaching Assistant Professional Development Evaluation and Research." *CBE Life Sciences Education* 15 (2): es2. https://doi.org/10.1187/cbe.15-10-0225.

Rice, Kathleen, and Seth Pollack. 2014. "Developing a Critical Pedagogy of Service Learning: Preparing Self-Reflective, Culturally Aware, and Responsive Community Participants." In *Integrating Service Learning and Multicultural Education in Colleges and Universities* edited by Carolyn R. O'Grady, 115–34. New York: Routledge.

Rodriguez, Gloria M. 2013. "Power and Agency in Education: Exploring the Pedagogical Dimensions of Funds of Knowledge." *Review of Research in Education* 37 (1): 87–120. https://doi.org/10.3102/0091732X12462686.

Salazar, Maria del Carmen. 2013. "A Humanizing Pedagogy: Reinventing the Principles and Practice of Education as a Journey Toward Liberation." *Review of Research in Education* 37 (1): 121–48.

Saldaña, Jonny. 2016. *The Coding Manual for Qualitative Researchers,* 3rd edition. California: Sage Publications Inc.

Samuels, Amy J. 2018. "Exploring Culturally Responsive Pedagogy: Teachers' Perspectives on Fostering Equitable and Inclusive Classrooms." *SRATE Journal* 27 (1): 22–30.

Sarju, Julia P., and Leonie C. Jones. 2021. "Improving the Equity of Undergraduate Practical Laboratory Chemistry: Incorporating Inclusive Teaching and Accessibility Awareness into Chemistry Graduate Teaching Assistant Training." *Journal of Chemical Education* 99 (1): 487–93. https://doi.org/10.1021/acs.jchemed.1c00501.

Schrum, Kelly, Niall Majury, and Anne Laure Simonelli. 2021. "Authentic Learning Across Disciplines and Borders with Scholarly Digital Storytelling." *Teaching & Learning Inquiry* 9 (2). https://doi.org/10.20343/teachlearninqu.9.2.8.

Slavin, Robert E. 1995. *Cooperative Learning: Theory, Research, and Practice.* Boston: Allyn & Bacon.

Sleeter, Christine. 2012. "Confronting the Marginalization of Culturally Responsive Pedagogy." *Urban Education* 47 (3): 562–84.

Torche, Florencia. 2011. "Is a College Degree Still the Great Equalizer? Intergenerational Mobility Across Levels of Schooling in the United States." *American Journal of Sociology* 117 (3): 763–807. https://doi.org/10.1086/661904.

United States Census Bureau. 2020. "Race and Ethnicity Prevalence by State: 2020." https://www.census.gov/content/dam/Census/library/stories/2021/08/2020-united-states-population-more-racially-ethnically-diverse-than-2010-figure-1.jpg.

Vygotsky, Lev. S. 1978. *Mind in Society*: *The Development of Higher Psychological Processes*. Cambridge, MA: Harvard University Press. https://doi.org/10.2307/j.ctvjf9vz4.

Welton, Anjalé D., Tiffany Octavia Harris, Priya G. La Londe, and Rachel T. Moyer. 2015. "Social Justice Education in a Diverse Classroom: Examining High School Discussions about Race, Power, and Privilege." *Equity & Excellence in Education* 48 (4): 549–70. https://doi.org/10.1080/10665684.2015.1083839.

Wofford, Annie. M., and Justine A. Gutzwa. 2022. "Funds of Science Identity: Toward AN Asset-Based Framework for Undergraduate STEM Research and Praxis." *Journal of Women and Minorities in Science and Engineering* 28 (3): 59–81. https://doi.org/10.1615/JWomenMinorScienEng.2022036454.

Yosso, Tara. J. 2005. "Whose Culture Has Capital? A Critical Race Theory Discussion of Community Cultural Wealth." *Race Ethnicity and Education* 8 (1): 69–91. https://doi.org/10.1080/1361332052000341006.