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Designing Learning Environments That Support Diverse Students' Needs in a Teacher Education Program

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ABSTRACT

The need to design learning environments (virtual, hybrid, and face-to-face) that support racial and ethnic minority students' academic success has increased tremendously. The data presented here were collected via a cross-sectional survey of 59 students at Historically Black Colleges and Universities (HBCU) as part of a more extensive study that included closed- and open-ended questions. The data were collected mid-fall 2020 semester, and data were gathered until the end of spring 2021. During this period, all activities were conducted remotely because of the pandemic. Face-to-face instruction was non-existent compared to "normal situations." Summary statistics of the closed-ended questions highlighted the challenges students encountered in their learning environments and were further confirmed through the recurring themes identified in responses to the open-ended questions. Findings were used to recommend designing learning environments undergirded by culturally responsive teaching and a humanizing pedagogy.

KEYWORDS

Culturally Responsive Pedagogy, *Emergency Remote Learning*, *Grounded Theory*, *Humanizing Pedagogy*, *Instructional Design*

INTRODUCTION

Many instructors are eager to figure out how to accommodate diverse learners in their classrooms, especially with the nation's current social climate and the politically charged atmosphere. The emergency pivot to remote learning at the beginning of the COVID-19 pandemic added a layer of challenges and made previous discussions about disparities necessary for researchers who primarily focus on disproportionality, equity, and social justice. Teaching and learning during disasters presents

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challenges and opportunities. The COVID-19 pandemic and the accompanying social and economic strain altered almost every aspect of daily life prompting researchers to look back at best practices and relevant approaches that could benefit students.

The discussions in this article emerge from research that focused on the educational experiences of students of color in a historically black institution. The institution is the second oldest public institution of higher education in Texas, originated in the Texas Constitution of 1876. The university seeks to provide a high quality educational experience for students who, upon completion of their degrees, possess self-sufficiency and professional competence. The experience is imbued by the institution's values including, but not limited to, access and quality, accountability, diversity, leadership, relevance, and social responsibility.

The purpose of the research was two-fold. The primary goal was to investigate challenges students experienced in remote course formats to contribute and inspire increased dialogue related to *Culturally Responsive Pedagogy* (CRP) perspectives and humanizing pedagogy (HP). The secondary aim was to provide student-recommended support and provide spaces for instructors to discuss how to best implement the two frameworks in an remote instructional context.

In this article the authors describe key components and characteristics of CRP, highlighting instructor-designed learning environments responsive to students' needs, and further describe frameworks from HP to facilitate engagement among diverse students. Over two and a half decades ago, culturally relevant (Ladson-Billings, 1995a) and culturally responsive pedagogies (Gay, 2018) entered and, arguably, would come to dominate discourses in education and reform. In addition, we present two theoretical lenses that we used to explore recommended approaches that could be used to mitigate many of the challenges students face, including what they would look like in online/remote learning environments. Finally, the article focuses on the data collected from the teacher education majors at a rural historically black university.

LITERATURE REVIEW

Institutions of higher education (IHE) located in rural America were particularly faced with unique challenges transitioning to the remote offering of courses this past Spring 2020. Faculty may ask themselves, what are our students learning? Most college and university instructors focus on student learning outcomes and less on students' experiences as they matriculate through the program (Sande et al., 2021). The abrupt presence of COVID-19 and the sudden requirement to change business as usual prompted faculty to consider not only the content and presentation of content to students but the context in which students ultimately acquire knowledge and skills. What is important is students' preparedness and experiences of actually navigating the higher education system without always relying on faculty intervention. The two things that were evident during the transition: the critical role of the student-faculty meeting in person and the lack of faculty and students' preparedness for the sudden shift to remote engagement (Sande et al., 2021). Overall, faculty need to be armed with tools to work with students irrespective of the conditions or situations that face them. That preparation will include a toolbox of best practices in teaching and learning for both remote and face-to-face instruction.

Best Practices in Teaching and Learning

Developing best practices in teaching can positively impact learning throughout the K-12 and higher education spectrum. It is crucial that these best practices be employed at all levels of education, and especially at Historically Black Colleges and Universities (HBCUs), to ensure the success of our underrepresented and racially minoritized (URM) students. For instance, using an engaging and empathetic teaching style can lead to positive outcomes for HBCU students (Gentry, 2013). More precisely, surveys indicate that students at HBCUs have an affinity for particular teaching styles (Gentry, 2013), i.e., undergraduate students prefer instructors who explain the information well and

give feedback, maintain a good disposition, offer hands-on learning experiences, and are empathetic towards students (Gentry, 2013). This data was obtained through survey data collection techniques.

Another best practice that can lead to positive outcomes for students (Powner & Allendoerfer, 2008), in particular for HBCU students (Andres, 2019), is active learning strategies. Active learning is "the opposite of passive listening" (Smith, 2018, p. 26); it is "any activity encouraging students to participate in learning approaches, engaging them with course material and enhancing critical thinking as they make application beyond the classroom" (Lumpkin et al., 2015, p. 123). For students at HBCU in STEM and Business classes, it was determined through quantitative analyses that active teaching positively impacts final course grades and motivation to learn (Andres, 2019). In the same study, the researchers further found that even though course difficulty negatively impacts final course grades and motivation to learn, active teaching serves to moderate that relationship for that particular sample of predominantly Black students (Andres, 2019).

In addition to using best practices within the classroom to positively impact learning, HBCU students also need various support mechanisms to ensure their success. A qualitative study of African American males at a historically black university found that participants had similar factors among themselves that impacted their academic success. The themes identified among these students include: "family support, observation of others, religious and spiritual faith, encouragement from teachers, mentors and peers, resiliency, strong work ethic, and trials or obstacles" (Irvine, 2019, p. 207). Thus, students, faculty, and administrators need to be mindful of the obstacles students face and find ways to access and enhance these support structures to ensure HBCU students' success.

Remote Learning Environment

Best practices in teaching and learning are necessary for the face-to-face environment and within the remote learning environment. The remote learning environment is the more critical of the two, for the purpose of this paper, given the emergency pivot to remote learning due to the COVID-19 pandemic. In fact, in a quantitative study conducted before the pandemic by Kwun et al. (2012), the researchers found that though most students from an HBCU preferred face-to-face courses, they only enrolled in online classes because they were convenient. Thus, it is important to listen to the voices of our HBCU students, given their lack of preference for the remote learning modality. Additionally, a qualitative study noted that the completion of online/remote courses by African American males was affected by "financial needs, prior academic achievement, previous training in information technology during high school, continuous academic enrollment, online courses on topics perceived as uncomplicated and less demanding or on topics that were familiar to the students due to sufficient prior knowledge, use of handheld digital devices, and a non-prejudicial learning environment" (Salvo et al., 2019, p. 30). The same participants experienced hindrances in the form of lack of professor interaction, immediate feedback, notifications, teacher-directed instruction, teacher-mediated assessments, and an inadequate number of examples. Thus, due to the negative experiences of African American males, and the learning modality preference of HBCU students, there is a need to develop best practices in teaching and learning in face-to-face and remote learning environments.

CONCEPTUAL FRAMEWORK

To design learning environments that support racial and ethnic minority student academic success across all modalities, virtual, hybrid, and face-to-face, we must first review some of the challenges students experience and then focus on designing teaching and learning experiences conducive to meeting their needs. We posit the following theoretical frameworks of culturally responsive teaching (CRT) (Gay, 2013; Ladson-Billings, 1995a) and humanizing pedagogy (HP) (Salazar, 2013) as pivotal to academic success for diverse students in higher education.

Culturally Responsive Pedagogy

Gay (2013) defines CRP as a personal and professional "developmental process" (p. 57) that involves "advocacy for teaching to and through cultural diversity to improve the achievement of ethnically diverse students" (p. 53). The purpose of CRP is to empower linguistically, racially, and ethnically diverse students by cultivating their cultural integrity, individual abilities, and academic success. Culturally responsive educators realize not only the importance of academic achievement but also the maintenance of cultural identity and heritage (Han et al., 2014).

A culturally responsive learning environment offers several benefits to students, including, but not limited to, enhanced opportunities for mastery of skills, stronger bonds with their instructors and the institution, strengthened students' sense of identity: and increased self-esteem. Advocates of CRT have therefore argued that academic knowledge and skills should be connected to students' personal experiences and frames of reference within a supportive and cooperative environment. This way, learning becomes more meaningful and

engaging (Gay, 2002, 2018). Indeed, different aspects of CRT are related to positive student outcomes, such as increased student engagement, better achievement, and more positive peer relationships.

Students bring with them a set of values and beliefs, or their "funds of knowledge" (Moll et al., 1992) from their homes and neighborhood cultures, that may complement or clash with the school culture and may legitimate the social, economic, political, and cultural hegemonic values of the dominant society. Thus, other terms such as culturally responsive teaching (Gay, 2018), culturally responsive instruction (Au, 2007), and culturally relevant pedagogy (Ladson-Billings, 1995a) promote social justice through a focus on equality and celebration of diversity. While each of these terms has specific meanings and

distinctions concerning this particular inquiry, the term culturally responsive teaching is employed to highlight the three central dimensions of culturally responsive teaching. First, cultural relevance and pedagogy are connected to students' cultural backgrounds (Gay, 2018; Sleeter, 2000). Second, communities of learners socially construct knowledge inclusive of all students (Nieto, 2000; Villegas & Lucas, 2002). Finally, culturally responsive teaching reflects a social justice perspective and challenges assumptions and the status quo (Cochran-Smith & Lytle, 2004; Nieto, 2000; Sleeter & Grant, 1999).

In general, students feel valued, more capable of learning, and more engaged with the learning environment and materials when the teacher is responsive to their needs (e.g.,

Gay, 2010; Nieto, 2004). CRP 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 all students. These CRP approaches have been particularly associated with increased engagement and interest in school and increased educational achievement of minoritized students. While there is a plethora of research on how to improve CRT, its practice in the classrooms is less than optimal (Lim et al., 2019). One explanation for this problem could be that certain teacher qualities are necessary for effective CRT (Gay, 2013).

Humanizing Pedagogy

Humanizing pedagogy is also crucial for instructor and student success and critical for students' academic and social resilience (Salazar, 2013). When students of color experience academic difficulties, their struggles are often attributed to their culture, language, and home environment (Cummins, 2001; Macedo & Bartolomé, 1999; Nieto, 2002; Salazar, 2010; Solórzano & Yosso, 2002; Valenzuela, 1999, 2004; Wade et al., 2008).

Ladson-Billings (1995b) suggests that successful students of color experience academic success "at the expense of their cultural and psychological well-being" (p. 475). Deficit approaches to teaching and learning, firmly in place prior to and during the 1960s and 1970s, viewed the languages, literacies, and cultural ways of being of many students and communities of color as deficiencies to be overcome in learning the demanded and legitimized dominant language, literacy, and cultural ways of schooling (see Lee, 2007; Paris & Ball, 2009; Smitherman, 1977). For over two decades,

we have seen a rise in counterarguments of the deficit thinking model and more acknowledgment of an asset-based approach to pedagogy. Additional discussions on humanism and HP approaches have seen a shift in instructional approaches, especially in diverse student populations.

Humanism is a central component of Paulo Freire's worldview and is essential to understanding Freirean philosophy (Dale & Hyslop-Margison, 2010). Freire's philosophy is guided by the notion that humans are motivated by a need to reason and engage in the process of becoming (Salazar, 2013). Many students of color in higher education are more attuned to engaging in their process of becoming (Salazar, 2013). Pedagogical approaches that recognize and appreciate the unique sense of belonging result in favorable student learning outcomes (Salazar, 2013).

METHODOLOGY

The researchers used a mixed methods research (MMR) approach in this study where the researchers gathered quantitative data on students' demographics, students' knowledge, and skills of navigating their learning management systems, equipment types, and overall students' experiences. The researchers used surveys to gather quantitative data and open ended questions to delve deeper and gather qualitative data. For the purpose of this article, we use the following definition of MMR "Mixed methods research is the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches for the broad purposes of breadth and depth of understanding and corroboration"(Johnson et al., 2007, p. 123).

The researchers then employed a descriptive approach to analyzing the data. The goal of qualitative descriptive approach was to develop a comprehensive summarization, in everyday terms, of specific events experienced by individuals or groups of individuals who participated in the study. Qualitative descriptive studies tend to draw from naturalistic inquiry, which purports a commitment to studying something in its natural state to the extent that is possible within the context of the research arena (Lambert & Lambert, 2013).

Regarding the use of sampling in this study, the researchers used a purposeful sampling technique. Like any other qualitative research design, the goal was to obtain cases deemed rich in information for the purpose of saturating the data. Data collection of qualitative descriptive studies focuses on discovering the nature of the specific events under study (Lambert & Lambert 2013). Thus, data collection involves minimal to moderate, structured, open-ended, individual or focus group interviews and surveys (Lambert & Lambert 2013). Data analysis of qualitative descriptive research was purely data-derived in that codes were generated from the data in the course of the study characterized by simultaneous data collection and analysis. The presentation of data involved a straightforward descriptive summary of the informational contents of the data organized in a logical manner moving from a broad context of an event to a more narrow context and describing an event from the perspective of more than one participant (Lambert & Lambert 2013).

The researchers gathered qualitative data on student's perceptions of online or hybrid instruction. This single-site descriptive case study methodology was used to investigate the impact of the sudden transition to remote learning. Furthermore, the researchers obtained, from the students, recommendations for instructors on strategies that can increase student chances of success in courses taught remotely. The questions of fit, relevance, workability, and modifiability were more important in determining what worked best for students.

It is important to note that during the emergency pivot to remote learning, the institution had begun the process of converting from Moodle to Canvas. Several faculty were in the process of piloting the new learning management system- Canvas, however, the majority of the faculty had not obtained the necessary training to transition to Canvas. The videoconferencing tool used to conduct instruction was Zoom. All F2F courses converted to remote course offerings via Canvas and Zoom. The previous courses designed as online asynchronous continued using this method. Courses considered to be hybrid referred to learning combining F2F and online platforms using videoconferencing (Zoom) where necessary.

Profile of Participants

The researchers used purposeful (convenient) sampling (Elfil & Negida, 2017), and a total of 59 Education Majors completed the survey. A multiple-choice and open-ended questionnaire was distributed online to 59 students taking remote classes. The students were presented the survey mid of the fall 2020 semester and data was gathered until the end of spring 2021. During this period, all activities were conducted remotely. During this period, F2F instruction was non-existent compared to "normal situations".The profile of the participants is outlined in Table 1.

The profile of the participants is outlined in Table 1. Most of the participants, 89.83% (n = 53) and 84.75% (n = 50), self-identified as female and African American, respectively. Similarly, most of the participants, 81.36% (n = 48) and 96.61 (n = 57) were between the ages of 18 and 24 years of age and were classified as juniors and seniors, respectively.

Data Analysis

The researchers used a frequency distribution data analysis technique, which enabled them to get the big picture of the data. The researchers were able to see how frequently specific items were selected

Table 1. Profile of Participants

Characteristic	n	%
Gender		
Female	53	89.83
Male	6	10.17
Total	59	100.0
Age		
17 years or younger	1	1.69
18-24 years	48	81.36
25-34 years	6	10.17
35-44 years	2	3.39
45 years and older	2	3.39
Total	59	100.0
Classification		
Freshman	0	0.00
Sophomore	2	3.39
Junior	32	54.24
Senior	25	42.37
Total	59	100.0
Race/Ethnicity		
African American	50	84.75
Asian	1	1.69
Caucasian	0	0.00
Hispanic	8	13.56
Total	59	100.0

and what the percentages were for the same variable from the frequency distribution. The frequency distribution data items were then presented as Histograms.

Qualitative data analysis involved coding, categorizing, and theme development. Open coding was used, which involved breaking down, examining, conceptualizing, and categorizing data (Corbin & Strauss, 2008). After the initial open coding, axial coding was used. Axial coding consists of linking subcategories to other categories in a relational manner denoting phenomenon, context, intervening conditions, and consequences (Corbin & Strauss, 2008).

Finally, a descriptive research approach (Lambert & Lambert 2013) was utilized to infuse both coding methods to establish underlying themes, and a descriptive analysis to interpret individual experience to gain insight on the students' experience (Sande, 2013). Using this approach, the researchers interpreted the data, trussing the findings to current literature and the theoretical framework.

THE RESULTS

Quantitative Results

The results of specific survey items are presented in Table 2 and Table 3, followed by a discussion of each item. The survey items are listed exactly as they were stated in the survey instrument used during data collection. Clarifying notes are offered at the end of the table and throughout the discussion narrative.

Access and Use of Technology (see Table 2)

Item 6: What type of technology do you use for virtual/remote learning (see Figure 1)? Approximately three-quarters of the participants (75.9%, n = 44) used a laptop for virtual/remote learning. In comparison, the remaining quarter of the participants used a desktop computer (3.4%, n = 2), an i-Pad (a type of tablet computer; 12.1%, n = 7), or a phone (mobile/cell phone; 8.6%, n = 5) for virtual/remote learning.

Item 7: How would you describe your transition to virtual or remote learning (see Figure 2)? Just over half of the participants (53.4%, n = 31) reported difficulty (extreme or moderate) with transitioning to virtual or remote learning, and just under half of the participants (46.8%, n = 27) stated that the transition was moderately simple or simple (see Figure 2).

Item 8: How would you describe your knowledge and skill level when navigating Canvas/ecourses/Blackboard (see Figure 3)? About half of the participants (49.2%, n = 29) reported being proficient in knowledge and skill level when navigating their learning management system (LMS), while the remaining participants reported being advanced (12.1%, n = 7) or basic (36.2%, n = 21) in knowledge and skill level. A small proportion of the participants (1.7%, n = 1) reported an "I have never used any" knowledge and skill level.

Difficulties After Transitioning to Virtual/Remote Learning

Item 9: After transitioning to virtual/remote course offering, what was the most difficult for you (see Figure 4)? Nearly one-third of the participants (31.0%, n = 18) reported difficulty with assignments, just over one-third of the participants (36.2%, n = 21) reported difficulty with communication, and just under one-third of the participants (29.3%, n = 17) reported difficulty with instruction. The remaining 3.4% (n = 2) of the participants reported not transitioning to remote learning. (Note that the institution expected all faculty and students to transition to remote learning during the COVID-19 pandemic and offered multiple resources to support the same. Students were also given the option to have their grades reported on their transcripts as "pass" or "no pass" with no impact on their GPA instead of on the typical A, B, C, D, and F grading scale. The intent was to encourage and support students in continuing their studies despite the pandemic.)

Table 2. Quantitative Results for Items 6-10, and 12

Item	n	%
6. What type of technology do you use for virtual/remote learning?		
Desktop computer	2	3.4
i-Pad[a]	7	12.1
Laptop	44	75.9
Phone[b]	5	8.6
7. How would you describe your transition to virtual or remote learning?		
Extremely Difficulty	6	10.3
Moderately Difficult	25	43.1
Moderately Simple	19	32.8
Relatively Simple	8	13.8
8. How would you describe your knowledge and skill level when navigating Canvas[c]/eCourses[d]/Blackboard[e]?		
Advanced	7	12.1
Proficient	29	50.0
Basic	21	36.2
I have never used any	1	1.7
9. After transitioning to virtual/remote course offering, what was the most difficult for you?		
Assignments	18	31.0
Communication	21	36.2
Instruction	17	29.3
I did not transition to virtual/remote	2	3.4
10. After transitioning to virtual/remote course offering, what was the most difficult for you?		
Accessing Course Resources	28	48.3
Accessing Faculty	24	41.4
Accessing Technology	6	10.3
12. Which of the following choices would you prefer?		
Fully Online with Added Assignments[f]	10	17.2
Fully Online with No Added Assignments[g]	15	25.9
Virtual Meetings with Added Assignments[h]	14	24.1
Virtual Meetings with No Added Assignments[i]	19	32.8

[a]a type of tablet computer
[b]mobile/cell phone
[c]The institution started piloting Canvas prior to the pandemic with an intended full rollout in Fall 2021.
[d]eCourses is the generic name for the learning management system used at the research site reported here.
[e]The study reported here is part of a larger study. Blackboard is the learning management system used at the other research site that was not reported here.
[f]Meaning online asynchronous course with additional assignments to compensate for absence of online synchronous and in-person meetings
[g]Meaning online asynchronous course with no additional assignments to compensate for absence of online synchronous and in-person meetings
[h]Meaning online synchronous course with additional assignments to compensate for absence of in-person meetings
[i]Meaning online synchronous course with no additional assignments to compensate for absence of in-person meetings

Item 10: After transitioning to virtual/remote course offering, what was the most difficult for you (see Figure 5)? Just under one-half of the participants (48.3%, n = 28) reported difficulty accessing course resources. The remaining half of the participants reported difficulty accessing faculty (41.4%, n = 24) and accessing technology (10.3%, n = 6).

Table 3. Quantitative Results for Item 13

Students' Immediate Needs	Rank													
	1		2		3		4		5		6		7	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
More communication and weekly updates by faculty	26	44.07	18	30.51	11	18.64	1	1.69	2	3.39	1	1.69	0	0.00
Increased orientation and training on eCourses and Canvas	12	20.34	8	13.56	6	10.17	15	25.42	7	11.86	6	10.17	5	8.47
More social-emotional support	10	16.95	9	15.25	6	10.17	4	6.78	12	20.34	6	10.17	12	20.34
Video description accompanying assignments	6	10.17	14	23.73	20	33.90	11	18.64	5	8.47	1	1.69	2	3.39
Supply of additional technology	3	5.08	7	11.86	9	15.25	14	23.73	15	25.42	9	15.25	2	3.39
Alternative assessment methods- more tests and quizzes	2	3.39	1	1.69	5	8.47	5	8.47	11	18.64	22	37.29	13	22.03
Alternative assessment methods- more research and projects	0	0.00	2	3.39	2	3.39	9	15.25	7	11.86	14	23.73	25	42.37

Item 11 - Select the top three challenging aspects of virtual/remote learning (See Figure 6 & Table 4). This study supported the view that students struggled when faced with attending class virtually from home. Students reported they not only had to attempt to focus on their own studies, but also care for children now at home learning remotely, care for elderly parents, and juggle home chores – not ever visible while attending class face to face (F2F).

None of the distractions noted above even accounted for the environmental changes students faced. Students met with challenges like the ever-present roommate or girl/boyfriend, no real study space like the dorm or campus library offered, and disruptions like pets and other family members simply going about life, to name a few. The front stage of the classroom collided with the backstage of people's homes (See qualitative results section).

Students' Preference (see Table 2)

Item 12: Which of the following choices would you prefer (see Figure 7)? Almost one-third of the participants (32.8%, n = 19) would have preferred virtual meetings (i.e., online synchronous classes)

Table 4. Challenges of Remote Learning item 11

#	Answer	%	Count
1	Using Zoom	13.79%	24
2	Collaborating with peers	21.84%	38
3	Managing time	21.26%	37
4	Distraction	20.11%	35
5	Access (WiFi, electricity)	22.99%	40
	Total	100%	174

with no added assignments over the other options provided. Yet approximately one-fourth of the participants (24.1%, n = 14) picked virtual meetings (i.e., online synchronous classes) with added assignments, and about another one-fourth of the participants (25.9%, n = 15) chose fully online (i.e., online asynchronous courses) with no added assignments. The remaining participants (17.2%, n = 10) selected the fully online (i.e., online asynchronous courses) with added assignments option.

Ranking of Students' Needs (see Table 3)

Item 13: Moving forward, what would be your immediate need in order to be successful in an online platform? Rank the following in order of importance (see Figure 8). Most participants ranked "more communication and weekly updates by faculty" as their first (44.07%, n = 26) and second (30.51%, n = 18) most important need, while "alternative assessment methods – more research and projects" was ranked least important by most participants (42.37%, n = 25).

Qualitative Results from the Open-Ended Question

A unified explanation of a process grounded in the data and built from categories and dimensions that define that process Creswell (2014) described the systematic process for grouping data in which specific statements are analyzed and categorized into themes that are grounded in the phenomenon of interest. After categorization, theme development, and thematic analysis, we identified 11 recurring themes. Many of the themes corroborated findings from the qualitative data. Student responses are included in the discussion of each theme.

Excessive Assignments

The most challenging concern for students was that there seemed to be more assignments. This unusually high volume of assignments, unexpectedly assigned, may have been the instructors' way of compensating for not meeting F2F. However, when this occurs in all courses simultaneously, the burden on the students seemed insurmountable. Students' verbatim responses included:

Don't add too much work into the class.
Don't add additional assignments and projects for your students. It creates more stress for all of us, and it is very unnecessary.

Figure 1. Item 6: What type of technology do you use for virtual/remote learning?

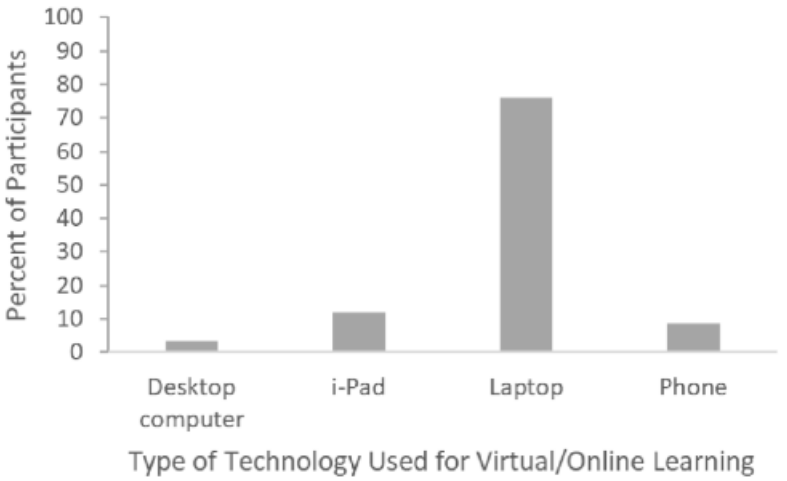


Figure 2. Item 7: How would you describe your transition to virtual or remote learning?

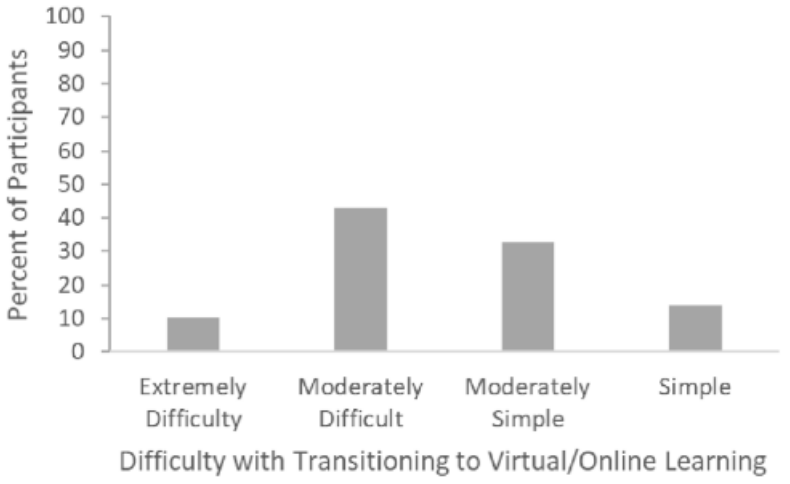
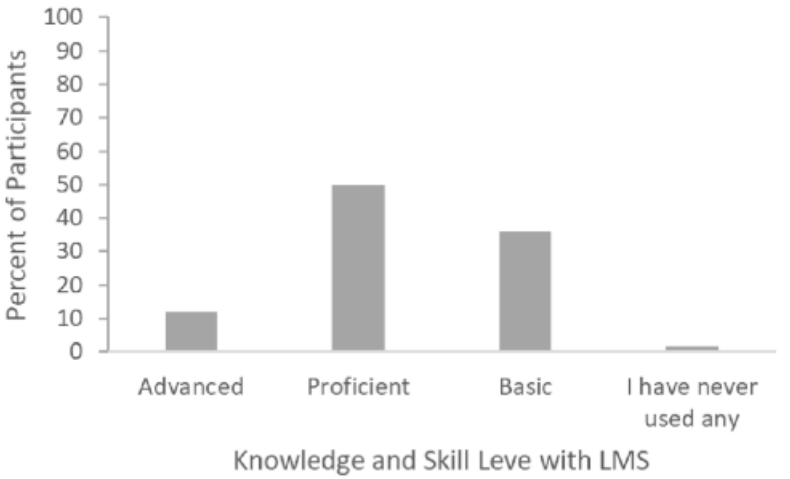


Figure 3. Item 8: How would you describe your knowledge and skill level when navigating Canvas/ecourses/Blackboard?



During a pandemic, less work should be given because you never know what people are going through. If work must be given, it should be given with consideration in mind.

Bombarding students with many additional assignments that would normally not happen in the classroom is not good.

This sentiment was consistent with survey Item 12 that captured students' preference, which mostly included no added assignments.

Faculty Communication.

Students described their challenge with contacting their instructors. Many instructors typically have office hours and open-door policies during those hours. Students are typically seen streaming in

Figure 4. Item 9: After transitioning to virtual/remote course offering, what was the most difficult for you?

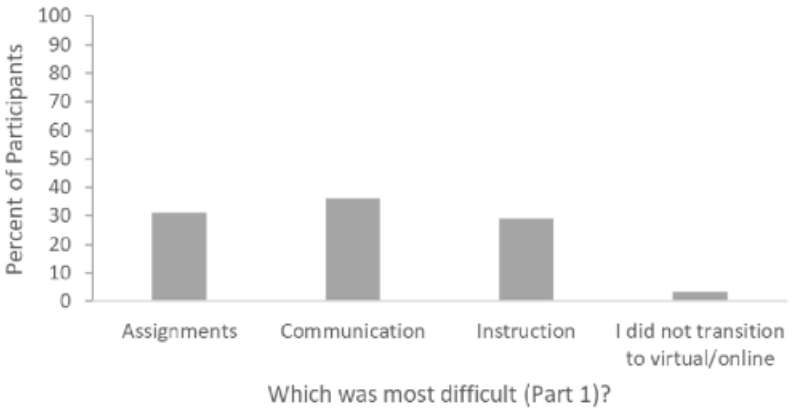


Figure 5. Item 10: After transitioning to virtual/remote course offering, what was the most difficult for you?

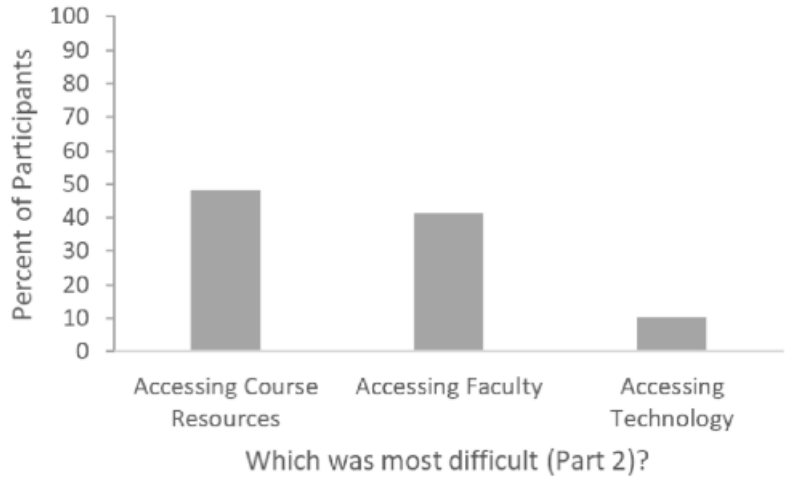


Figure 6. Item 11 - Select the top three challenging aspects of virtual/remote learning

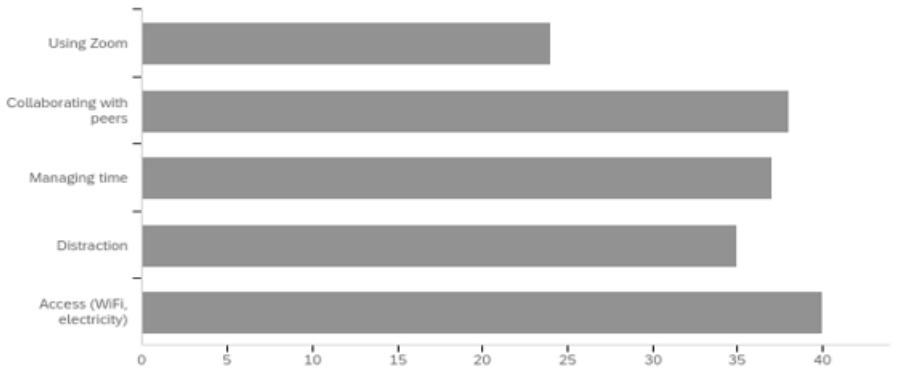


Figure 7. Item 12: Which of the following choices would you prefer?

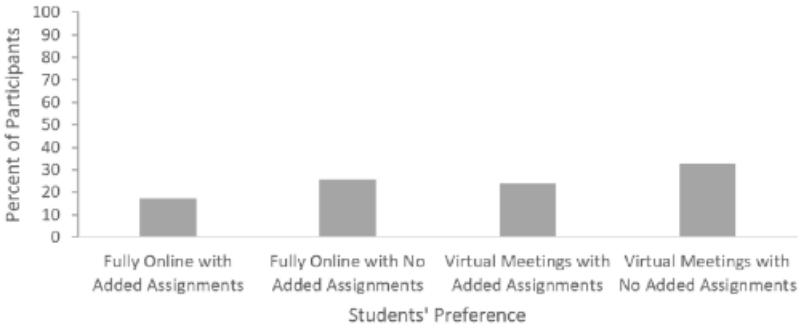


Figure 8. Item 13: Moving forward, what would be your immediate need in order to be successful in an online platform? Rank the following in order of importance

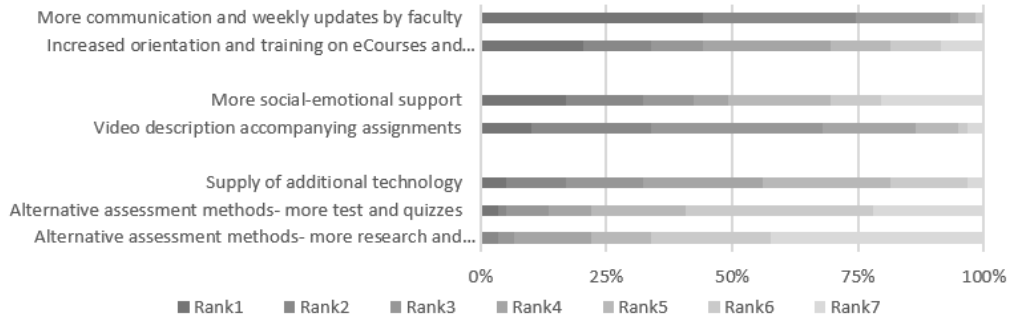


Table 5. Item 14: In a few words, state two or three things that can be done to make remote learning more manageable and increase your chances for your success

Recurring Themes	Rate of response (%)
Excessive Assignments	18.67
Faculty Communication	14.67
Need for Faculty Proficiency	14.67
Unclear directions for completing assignments	13.33
Excessive Virtual Meeting Times	12.00
Need for Student Support	8.00
Technical difficulties	5.33
Need for Reasonable Expectations	5.33
External or home impact	4.00
Mental Health	2.67
Technical Knowledge/Skills	1.33

and out of faculty offices. Alternatively, after a regular class meeting, students remain behind to ask questions they otherwise did not ask in class. Remote learning ended this ability. Students noted their inability to reach faculty during times of need. Students stated:

Professors not responding promptly to student questions also makes matters worse.
Increasing communication and emotional support would help virtual learning significantly.
[Professors need] to increase communication with students

Again, this is consistent with survey Items 9 and 10, which clearly demonstrate that students needed assistance but did not receive as much help as they needed.

Need for Student Support

Closely linked to communication was the need to provide student support, including but not necessarily. The support did not necessarily have to be through email communication, so that. The support was needed for students to be successful in meeting course expectations. Students indicated that they needed:

More updates, more resources
Provision of spaces to promote quiet, distraction-free learning.
Displaying the work in a more easy-to-read format.
Also, I believe that more instructional support videos, such as videos that explain more difficult content, could be added to help struggling students grasp the content in their online courses.
More clarity on certain assignments.

The quantitative data analysis revealed that student needs for support varied. Whereas some students needed support with instruction, some needed support with assignments, while others needed more faculty communication for consultation purposes (question X).

Need for Faculty Proficiency

The challenges mentioned above suggest that faculty needed to gain proficiency in communicating expectations, navigating the learning management systems (LMS), and supporting students to ensure student success. Students clearly perceived some level of competence or lack thereof. Students indicated that:

Professors actually teaching instead of just assigning assignments.
I wasn't too bothered by online classes, but if we are going to be fully online, having professors know what they are doing would be great. This is the only thing I would change is people being more tech-savvy.
I do not have an issue with any of the online courses except when the professor does not know how to use technology. Besides that, the experience is not so bad under the circumstances.
Professors need to have more knowledge on technology.

It is important to note that during the pandemic is when the institution introduced faculty to Canvas as their learning management systems. Previously, faculty and students used Moodle. Navigating a new system and pivoting to online course offering during the transition was noted as a challenge for many faculty. The steep learning curve may have exacerbated the remote learning experience.

Unclear Directions for Completing Assignments.

Students' fourth concern during the transition to remote learning was that information on how to complete assignments was unclear. Students indicated that faculty needed to "[h]elp the students understand as if it were face-to-face class meetings." Some students indicated that "there ha[d] been a lack of instruction and communication between the professors and students when it came to

assignments." It is important to note that both faculty and students simultaneously had to navigate these unchartered waters. The need for more guidance to complete course work, especially assignments, seemed essential to students.

Excessive Virtual Meeting Times.

Students described their challenges in having excessive virtual meetings. The researchers found this information intriguing, given that the class meeting times remained the same when students transitioned to remote learning. However, the meetings via Zoom still seemed a little more excessive than necessary for the students based on their statements as directly quoted here.

Less zoom meetings would be great.
I can barely get my work done because there are so many zoom meetings.
Meeting online provides several constraints; personally, I would prefer a typical distance education setting.

Based on the response for item 11, accessing remote conferencing tools was relatively of low consequence; however, coupled with access to Wi-Fi, many of the students in this rural IHE experience challenges. Students may have taken care of this challenge using Hotspots. However, remote meetings might still be a challenge with poor phone reception.

Technical Difficulties.

Students experienced numerous technical difficulties. Unlike the initial expectation of limited resources, all students seemed to have access to technology (item 6). The challenge was access to virtual platforms due to internet access (item 11). Students indicated that:

Mainly because internet connection issues can cause for information to not be communicated properly.
Some professors have no leniency when it comes to meetings, sometimes Wi-Fi is not working, and there are outages; so when you can't make a meeting due to something you can't control.
Students shouldn't have to turn on their camera at home.

Need for Reasonable Expectations

From the students' responses, they felt the faculty did not give realistic expectations. Students experienced multiple challenges beyond completing academic work. Students indicated that,

[Faculty needed to give] reasonable expectations during this difficult time and enough time to complete assignment without feeling overwhelmed.
[Students requested] extended time to turn in assignments due to lack of resources that one may have.
Maybe offer longer extension for assignment due dates because instructors upload multiple assignments, quizzes, etc. at the same or similar times.

External and Psychological Impact.

Students identified external factors as impacting their ability to succeed through remote learning. Some students directly indicated mental health issues due to the pandemic. The high level of stress was attributed to more work than usual.

Students get extremely stressed [with too much work]
[O]ffering virtual therapy sessions to students and bringing awareness to the importance of healthy mental states would have helped students like myself.
I feel like I have no life due to all the work that is being thrown at me.

Besides the direct mental impact on the student, other home factors impact their success.

I also have 3 children at home and they also have half online and half in school work and I am managing my work and keeping up on their work
Understand that we are dealing with things at home so assigning more work is more stress.
I have tried my best to have good time management. I do have distraction at home. I need a little more time to finish assignments.

Based on the response from item 11, managing time and distractions ranked third and fourth. Combined, these two categories ranked much higher. Students rated time management and distractions highly because this comes with not being on campus, where students may have more time focused and devoted to learning and less on family or employment. This added layer of challenges made ERL more difficult, given that most instructors maintained the usual F2F routines and expectations. Students' educational lives might be even more challenging in the years ahead as they deal with the pandemic's economic consequences and a new academic environment that currently includes a combination of F2F and remote courses. Students offered recommendations such as,

It would be beneficial if test deadlines were scheduled after 7 PM or on weekends. Everyone in my household is on the internet until 5 PM. I often lose connection when I'm working online from 8-5.

Technical Knowledge/Skills

The quantitative data analysis showed that many participants (62.1%, n = 36) reported being advanced or proficient in knowledge and skill level when navigating their LMS. However, 37.9% (n = 22) of the participants reported a "Basic" or "I have never used any" knowledge and skill level. The technical difficulties may have stemmed from using a novel LMS. Compounded by limited communication, students had numerous challenges completing their work on this new platform. Most students did not seem to have limited technical knowledge and skills in using computers or accessing remote conferencing tools (1.33% from the qualitative data). However, it is essential to note that the institution transitioned to a new LMS simultaneously as it transitioned to remote learning.

Summary

The authors identified recurring themes about the students' remote learning experiences from a historically black institution. The data reported here were collected as part of a more extensive study intended to investigate and understand teacher education students' experiences with remote instruction. Most of the participants identified as African American females and were classified as juniors and seniors. Responses to the closed-ended survey questions were summarized using descriptive statistics. In contrast, the responses to the open-ended survey questions were analyzed using a descriptive research approach to identify recurring themes to formulate a theory.

The responses to the structured questions revealed that just over half the students found it challenging to transition to virtual learning, even though a similar proportion claimed proficiency in the learning management system. The participants reported difficulties in assignments, communication, and instruction. They also reported challenges with accessing course resources and accessing faculty. Analysis of responses to the open-ended questions revealed similarities with the closed-ended questions through recurring themes such as unclear directions for completing assignments, excessive assignments, and limited faculty communication.

IMPLICATIONS FOR STAKEHOLDERS

What do we know about what is going on in households where students seem unable to complete their tasks? The data shows that students faced challenges faced with remote learning, as the open-ended data makes clear. Students shared their individual experiences during remote learning in item 14 (table 5). However, what methods are students using to address these challenges, and what can faculty and institutions do to assist students with more favorable experiences, enhance learning further, and make student learning more responsive, engaging, and impactful? Students provided some suggestions for how instructors could assist them. Some of these concerns may be addressed on an individual faculty level, or the institution can present some best practices for all instructors to implement.

The benefits of this research are to faculty and students. Information gathered could help faculty and universities tailor their virtual and remote course offerings to ensure students' maximum benefit and success. The consistency in students' responses justifies developing a working framework for university instructors at historically black institutions grounded in CRT and HP.

Culturally Responsive Teaching

CRT is a pedagogy/framework that acknowledges the importance of incorporating students' cultural references in all aspects of learning. These components include but are not limited to the characteristics below.

Providing responsive feedback and communication: Students expressed the need to engage with their instructors more so for affirmation and guidance. It is crucial for faculty to know ethnic groups' cultural values, traditions, communication, learning styles, contributions, and relational patterns (Gay, 2002). Knowing the instructors were 'there' even with an online presence seemed to provide a sense of security (Turner et al., 2020). Students needed clear communication concerning assignment expectations since some changes occurred during the transition to remote learning. Finally, they needed to understand through the communication channels of email, texts, and virtual meetings, how to get support if they were ill and unable to attend to class requirements or if external factors beyond their control prohibited immediate involvement with class activities (Mollenkopf & Gaskill, 2020). Effective communication would address the concern highlighted in questions 9 and 10, where one-third (33.7%) of the study's participants reported difficulty with communication and just over one-third (38.6%) of the participants reported difficulty accessing faculty, respectively. It would also address the same recurring theme of faculty access and communication in responses to open-ended questions.

Scaffolding instruction and instructional methods: Instructors must find an equilibrium to ensure optimal balance between actual online meetings and much-needed time for assignment completion. In fact, 41.0% of the study's participants would have preferred fully online classes (with or without added assignments), per item 12 (see Table 2). It would also address the same recurring theme of excessive virtual meetings present in the responses to open-ended questions. Culturally responsive instructors must provide instructional scaffolding (Bazron et al., 2005; Gay, 2002; Montgomery, 2001) and create reciprocity in the classroom, in which students and teachers become partners to improve student learning.

Culturally responsive instructors use interactive teaching styles (Irvine & Armento, 2001) to avoid virtual meeting fatigue. Passive learning becomes exhausting for students, and very little learning takes place. Incorporating cultural scaffolding (students' cultures and experiences) will expand the students' intellectual horizons and academic achievement and makes for a much richer learning experience.

Modeling high expectations through proactive coaching: We do not advocate a "hand-holding" scenario for both faculty and students, but instead an efficient and expedited process that supports faculty transition to a novel remote learning management system and allows faculty to provide the same to their students. Programs that address multiple barriers to success and include a robust and proactive coaching component can help students navigate these new realities, support students staying in school, and address inequities exacerbated by the crisis (Aguliera & Nightengale-Lee, 2020).

Institutions are encouraged to regularly provide professional development to faculty as a proactive approach. Instructors, in turn, are encouraged to model high expectations while encouraging students to think critically and problem solve (Banks, 2004; Gay, 2018; Ladson-Billings, 1995a).

Selecting relevant assessment and meaningful activities: Research into effective remote instruction offers three conclusions. First, remote or online instruction can be as effective as traditional instruction. Second, to do so, online courses need cooperative/collaborative (active) learning, and third, they also require strong instructor presence (Dixon, 2011). This unique environment makes it more important to align resources with evidence-based practices proven to help students succeed. Therefore, motivating students to become active participants in their learning is essential. Motivating students begins with a focus on individual students' academic achievement (e.g., clear goals, multiple forms of assessment; Brown 2007; Gay 2002; Ladson-Billings, 2011) and creating a favorable disposition toward the learning experience through personal relevance and choice (Wlodkowski & Ginsberg, 1995). More importantly, engender competence with an understanding that students are effective in learning something they value. Make sure assignments and activities add value to what the student is learning and are not meant to provide busy work.

Implementing a problem-solving approach: The need to provide more student support, such as course resources, was a recurring theme within the responses to the open-ended questions, with almost half of the participants (49.4%, n = 41, question 10) reporting difficulty with accessing course resources. Culturally responsive instructors know about the lives of their students (Villegas & Lucas, 2002) and provide the resources that will accommodate the needs of their students.

Culturally responsive instructors understand how learners construct knowledge and are capable of promoting learners' knowledge construction through the design of appropriate content (curriculum) and context (learning modes). Regarding instructional practices, whether online or otherwise, it is vital that future efforts are made towards a better understanding of the potential for distributed teaching and learning networks for differentiating students' schooling experiences (Holmes et al., 2020). These could include increased flexibility for content delivery, representations of learning, and assessment; collaboratively developed expectations, and a better understanding of the "experience of learning," rather than solely learner outcomes. Culturally responsive instructors must use their knowledge about students' lives to design instruction that builds on what they already know while stretching them beyond the familiar (Villegas & Lucas, 2002).

Promoting social justice through access to resources: COVID-19 has put immense pressure on state and college budgets. To accomplish most of these recommendations, institutions will need to fund various projects. These include faculty training, additional resources for both faculty and students, investment in quality LMSs, purchasing superior quality video conferencing tools, purchasing bandwidth for students in remote areas, and overall investing ineffective communication systems and alerts, so student needs are addressed promptly.

The study presented here shows that participants did not have trouble accessing or using the hardware or software (item 10, Table 2). Only a few participants (12%, n = 10) reported difficulty accessing technology. Additionally, their responses to internet access devices and LMS proficiency indicated that almost all participants had access to a desktop computer, laptop, or i-Pad, and nearly three-quarters of the participants reported being advanced or proficient in navigating their LMS, respectively. The concerning issue was access to the internet, expressed in their responses to the open-ended questions. Rural adults are also less likely than suburban adults to have multiple devices or services that enable them to go online (Perrin, 2019). Rural residents go online less frequently than their urban and suburban counterparts. Roughly, three-quarters (76%) of adults who live in rural communities say they use the internet on at least a daily basis (Perrin, 2019), compared with more than eight-in-ten of those in suburban (86%) or urban (83%) areas (Anderson & Perrin, 2017). Therefore, instructors teaching remotely need to know that most students have access to the internet but have limitations to choice of device to use. Providing students with alternative means to access and complete course activities can ensure student success. Better yet, an LMS accessible

via multiple devices (computer, iPad, or phone) can ensure all students have access to materials they need to be successful.

Humanizing Pedagogy

Educators are responsible for promoting a more fully human world through their pedagogical principles and practices (Salazar, 2013). There is synergy between a teacher's philosophical orientation and instructional methods, and both elements are instrumental in creating a humanizing experience for students. From the research, we identify some of the challenges students experienced during online learning. They included too many assignments, unclear directions, too many virtual meetings, and limited to no communication.

Instructors who implement HP demonstrate caring and build a learning community for all their students (Harriott & Martin, 2004). It is crucial that students feel a sense of belonging. Besides creating a sense of community, instructors who implement HP frequently engage with individual students (Navarro, n.d.). These instructors know that trusting and caring relationships advance the pursuit of humanization (Salazar, 2013). According to Paulo Frèire (1970), in an HP, "the method of instruction ceases to be an instrument by which teachers can manipulate the students, because it expresses the consciousness of the students themselves" (p. 513). It is essential to know one's students. The journey for humanization and belonging is an individual and collective endeavor toward critical consciousness (Salazar, 2013).

Instructors who implement HP are socioculturally conscious, that is, they recognize that there are multiple ways of perceiving reality and that these ways are influenced by one's location in the social order (Villegas & Lucas, 2002). These instructors understand that students will achieve through their academic, intellectual, and social abilities. Tapping into those abilities and designing instruction around the most beneficial experiences for the students will create the most powerful results. Instructors who implement HP have affirming views of students from diverse backgrounds, seeing resources for learning in all students rather than viewing differences as problems to overcome. These instructors emphasize holistic or integrated learning rather than making different types of learning (cognitive, physical, and emotional) discrete. The instructors ensure that the content is meaningful and relevant to students' lives and spend time carefully selecting and designing the curriculum.

Finally, from this experience with the pandemic, stakeholders now know that a crisis can arise at any time, and all should be ready to adjust. Instead, it means that all stakeholders - administrators, teachers, students, and parents - should treat unforeseen issues appropriately, sensitively, and with an awareness of nuance and complexity (Aguliera & Nightengale-Lee, 2020). To the best of our ability, we should anticipate possible land mines or sources of controversy and contention and navigate through them strategically.

LIMITATIONS

Some limitations exist for this study. First, the study involves only one institution located in rural Texas, HBCU. This limits the generalizability across rural institutions, regardless of ethnic composition. Second, the swiftness with which the emergency pivot to remote learning happened and the need to capture data as quickly as possible while the experience was fresh in students' minds did not provide the opportunity for the researchers to pilot the survey to ensure it would capture the information necessary for the study. The participants themselves provided a limitation since all of them were upper-level students. Many have already learned the nuances of university classroom life and thus had advantages over first-year students, who may have found the experience quite different. Finally, since the survey data was collected electronically, students may not have provided nearly the amount of qualitative data that a F2F interview might have obtained.

CONCLUSION

While COVID-19 is undoubtedly not the first virus to disrupt conventional education (Adnan & Anwar, 2020), it was certainly the first to facilitate a global emergency pivot to remote learning. More importantly, the long-term effects of this emergency pivot are yet to be realized. Nevertheless, this pandemic unearthed disproportionality that have been discussed in research but have not truly been as evident as it was when students transitioned to remote learning.

In this study, university students provided insight into ways to improve remote learning. This eye-opening event has propelled instructors and instructional designers to refocus efforts on some of the best practices that still prevent culturally diverse learners from achieving their full potential. Students must have the security of instructor presence in the seemingly distant remote learning world (Turner et al., 2020). Creative lesson design and quality interactions virtually could generate greater opportunities for student focus (Aguilera-Hermida, 2020; Hussein et al., 2020; Turner et al., 2020). Lastly, institutions need to invest in professional development that will equip instructors with the skills to provide CRT and HP.

I affirm that the study was conducted in accordance with human subjects' guidelines/principles (e.g., COPE, APA, Helsinki; factors such as consent and voluntary participation). Furthermore, our IRB application submitted entitled "Considerations for Teaching Remotely: Students Experiences and Lessons Learned during the COVID-19 Pandemic" fell under the Exempt Review category according to the Code of Federal Regulations. The approval was granted on June 6, 2021, by Prairie View A&M University- IRB Protocol # 2021-045.

DISCLOSURE STATEMENT

This is notification that there is no financial/personal interest or belief that could affect our objectivity, nor is there any source and nature of that presents potential conflict.

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This is notification that there is no funding or research grants (and their source) received during study, research, or assembly of this manuscript.

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