A LEGACY OF FINANCIAL INEQUITIES: A HISTORICAL BLACK COLLEGE AND UNIVERSITY STAKEHOLDERS RESPONSE TO FUNDING STRATEGIES IN TEXAS

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by

Kathleen G. VanDyke

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Kathleen G. VanDyke

APPROVED:

Ricardo Montelongo, PhD
Committee Chair

Meredith Billings, PhD
Committee Co-Chair

Samuel Sampson, PhD
Committee Member

Stacey Edmonson, EdD
Dean, College of Education

DEDICATION

I dedicate my dissertation to my family and my support system. Thank you to my parents Julian and Pauline VanDyke for building a foundation that was rooted in faith and the importance of education. Thank you for always encouraging me in the toughest moments of the doctoral journey and always reminding me of whom God called me to be. Thank you to my grandmother Katherine Bady who has always pushed me to drive and succeed in my educational pursuits, and always reminded me of how proud she is of me and to keep God first. Thank you to my brothers Herron and Paul for always being so supportive and protective of me throughout my life. Thank you to my cousin Raya, who has been more like my sister my entire life, thank you for always looking out for me and supporting me in everything I do.

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ABSTRACT

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While there has been disinvestment into higher education, there is also a significant disparity in state investment for certain types of public institutions, specifically for less-resourced institutions such as HBCUs (Williams, 2020). There is not much literature that examines the relationship of formula funding or state appropriations on institutional outcomes at public Historically Black Colleges and Universities in Texas (Williams, 2020). Using a critical race theory and outcome equity lens will help provide a historical context of continued inadequate funding for Historically Black Colleges and Universities. The funding disparities and insufficient funding mechanisms have not met the demands of low-income and underserved students that HBCUs serve.

This qualitative case study's primary purpose is to understand the current state funding strategies impact on a specific HBCU from its institutional and community leaders. In addition to understanding the institutional leader's perspective, the study will interview participants that work directly with the students that the HBCU serves. The Texas higher education system is underfunded; however, the current funding strategies are calculated on the base period and weighted credit hours do not equitably distribute available state funds and explain funding disparities. Serving larger diverse populations will require equitable levels of financial support.

KEY WORDS: Historically Black Colleges and Universities, HBCUs, Funding, Texas.

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> *"For I know the plans I have for you," declares the Lord, "plans to prosper you and not harm you, plans to give you hope and a future" Jeremiah 29:11*

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CHAPTER I

Introduction

Public institutions of higher education in the U.S are financed from a mixture of public and private funding that comes through; state appropriations, federal grants and contracts, tuition and fees, and donor or endowment gifts or grants (Goodell, 2017). The share from each source has shifted considerably, and the two primary sources of financing for 4-year public institutions include tuition and state appropriations (Goodell, 2017). Discussions of tuition increases point to the challenge of declining state appropriations (Baum & Johnson, 2015). However, state policy priorities and state economies vary from state to state. Policymakers have sought out varying ways to allocate limited funding to higher education institutions to support tangible outcomes (Dougherty & Reddy, 2013).

States have used or considered a variety of funding approaches over time. These approaches have included incremental budgeting, funding formulas, performance funding, performance contracting, and vouchers (Layzell, 2007). These funding approaches are not necessarily mutually exclusive or exhaustive; however, states use the funding approaches that meet their state and institutions' needs. For example, Texas uses a performance-based funding approach for community colleges but has a funding formula to allocate base operating funds for funding public universities and other higher education programs (Layzell, 2007; Texas Higher Education Coordinating Board (THECB), 2020a). One approach to allocate funding used since the 1950s is outcomes-based funding. Outcomes-based funding uses mathematical formulas where states allocate monies to institutions and use funds to focus on issues government and voters feel are important such as healthcare, infrastructure, transportation, and public assistance (Dougherty & Natow, 2015). Many of the outcomes-based funding formulas that states use include measures such as graduation rates, course completion rates, and retention rates (Goodell, 2017). Metrics can vary across institutions and the percentage of measures tied to state allocations varies from state to state. Enrollments and performance-based models can differ significantly across a state's model (Hearn, 2015).

Three traditional approaches to funding formula models included: base-plus funding, enrollment-based formula funding, and performance-centered funding (Hearne, 2015). Base-plus funding provided institutions with annual or bi-annual increments over an established base; enrollment-based formula funding provided funds that are allocated costs associated directly with instruction, student services, and the administration of academic programs and based on the number of students enrolled; finally, performance-centered funding linked funding to incentives in areas such as graduation rate, job placement rates, undergraduate access, faculty productivity, and institutional efficiency (Hearne, 2015).

The funding approach can be positive and enhance the effectiveness or efficiency of achieving higher education policy goals; likewise, it can also have the opposite effect. The opposite effect can include changes that provide incentives or opportunities for some institutions experiencing an unfair advantage of resource allocation or creating and exacerbating current or new inequities (Goodell, 2017: Layzell, 2007). According to Dowd et al. (2020), the concept of equity, although not synonymous with equality, is used as a standard to evaluate the fairness of a policy or practice and assesses the social conditions resulting from policies and practices to determine if they are just or unjust.

Consequently, inequities show up in the form of state actors distributing public goods and benefits in unequal ways, such as finance equity (Dow et al., 2020).

Jones et al. (2017) reported outcomes-based funding models implemented by states rarely included equity metrics. Equity metrics can provide equal educational opportunities and outcomes for all institutions, especially those with larger populations of low-income students if formula funding models are designed adequately without the power plays and patronage of allocation decisions(Hearn, 2015: Jones, 2016). The inclusion of these provisions can be done by (a) making equity metrics mandatory, (b) giving additional weight for enrolling low-income students and students of color attending HBCUs, and (c) investing in more resources for under-resourced institutions (Brown & Burnette, 2014: Mitchell, 2013). Texas lawmakers could show their dedication to equity by increasing HBCUs' funding to a level that is aligned with the investments in public PWIs and public state flagships (Williams, 2020).

Higher education's current climate focuses on state policies to formulate plans to improve institutional outcomes with limited existing resources. This climate has prompted state legislators and institutional leaders to focus on increasing degree attainment levels for public colleges and universities and encourage a different funding process (Kelchen, 2018; Layzell, 1998). The goal is to stay globally competitive by charging institutions to graduate more students and improve retention rates (Carnevale & Rose, 2015). State policymakers are enacting strategic plans that provide states with an opportunity to link-state appropriations to state-mandated performance standards (Dougherty et al., 2014). However, not every state has moved toward the direction of tying state appropriations to outcome-based performance indicators. Texas has proposed funding programs that tie outcome-based indicators to funding and have implemented the formula funding for two-year institutions. Texas still proposes these funding programs for four-year universities, mainly in the absence of empirical evidence supporting funding policies' effectiveness (Laird, 2014).

Funding formulas have been in existence within public higher education for over 50 years (Graves, 2005: Laird, 2014). The majority of states use funding formulas; however, the models used are not exactly the same. A state’s formula funding model's components can be similar, but objectives, goals, and political influences vary from state to state (Graves, 2005). In addition to funding, institutions that are often less resourced and need additional funding, such as HBCUs that serve a large population of low-income students, have been supplying leaders to the nation and communities for years, which is demonstrated by the contribution in awarding bachelors, masters, and doctoral degrees. Current funding mechanisms at HBCUs are insufficient for the demand of adequate outcomes, which point to equity and policy implications.

This study will investigate the possible effects of inequitable funding of state appropriations. Historically Black Colleges and Universities provide the focus of this problem and use the narratives of HBCU leaders who work with these appropriations that come from the state. Research data will be collected from a state that has not tied its state appropriations to performance indicators at the 4-year university level. The current study will explore how HBCU leaders experience disproportionate changes in state funding levels with the state’s current formula funding model and how student outcomes are affected. Current funding formula models that allocate funding to institutions do not help advance and address equity issues in higher education (Kelchen, 2018).

Funding Formulas Used in Texas

States have always utilized some mechanism of formula funding models to allocate and request state appropriations. Early formula funding models' bases included providing operating funds to institutions through expenditure categories developed by the National Association of College and University Business Officers (NACUBO) (Graves, 2005). These categories included: instruction, research, public service, academic support, student services, institutional support, scholarships and fellowships, and operation and maintenance (Graves, 2005).

Since the 1950s, the Texas funding formula model provided appropriations to public institutions within the state. The Texas Commission of Higher Education was created in 1955 to establish a formula used to determine higher education institutions' financial requirements. In 1959, the 56th Texas Legislature implemented formulas for the first time to determine appropriations to public institutions for the 1960-1961 fiscal year (Dove, 2007). In 1965, the Texas Commission of Higher Education was replaced with the Texas Higher Education Coordinating Board (THECB) by the 59th Legislature (Dove, 2007). These early formula funding models had the objective to provide an equitable distribution of available funds amongst the institutions and provide a first-class system of higher education for Texas (Dove, 2007).

The state of Texas went through a period of growth and evolvement of funding formulas. In 1960, five formulas were used to appropriate funds to Texas's public institutions (Dove, 2007). In 1968, there were seven formulas, in 1979, there were 11 formulas, and then in 1982, there were 13 formulas (Dove, 2007). The formula system was modified to accommodate newly established institutions, and during the 1994-1995 biennium, the THECB recommended 15 formulas to allocate funding for the public institutions of higher education (Dove, 2007). During this period, Texas used three different strategies to fund public colleges and universities: formulas or guidelines, incremental funding, and targeted approaches (Dove, 2007). Formulas or guidelines demonstrated the relationship between the number of students and the resources needed to teach them. Incremental funding used the previous funding rate as a baseline, and increases were based on inflation. Finally, targeted approaches provided funding to identify unique and different mission-related institutions (Dove, 2007).

One of the early models of formula funding in Texas used 13 separate funding formula calculations for each campus's program offerings (Graves, 2005). In 1997, Texas simplified the formula into two components (THECB, 2020). The first segment focused on the functionality of an institution’s instruction, research, public service, student services, salaries and operating budget, and institutional support. Student credit hours were weighted and assigned a dollar value (Graves, 2005). The second segment of the Texas formula funding model focused on building a plant and operations based on needed space for student enrollment (Graves, 2005).

Likewise, there are also some expenditures not covered with the formula funding model of Texas. Auxiliary enterprises, construction or repair and renovation of facilities, and debt service on tuition revenue bonds are not covered under the formula (Legislative Budget Board (LBB), 2019b). Formula weights are categorized by levels of disciplines, such as undergraduate, upper-undergraduate, master-level, and doctoral-level (Graves, 2005).

Variation of Revenue Streams. There are other revenue streams that HBCUs and regional public universities do not have access to. These different streams contribute to the inequities in funding across 4-year institutions in the state. The state adopted a matching fund formula known as the Texas Research Incentive Program (TRIP) in 2009 (Hu et al., 2020). The matching-fund formula program was created to leverage public funding and encourage private sector donations to eight eligible public institutions (Hu et al., 2020). Less resourced institutions, such as HBCUs, were ineligible for the matching funds.

Public flagship institutions within the state, The University of Texas and Texas A&M University, are deemed more prestigious and endowed with large tracts of public land in the 19th century. The state of Texas invested revenue from land to put the monies into what is known as the Permanent University Fund (PUF). The discovery of oil on the university's land increased the fund. The state allocated two-thirds of the PUF to the University of Texas, and Texas A&M was allocated the rest (Hu et al., 2020). The interest from this fund was moved into a separate Annual University Fund (AUF).

These alternate funding mechanisms have continued to benefit these institutions to having 26th largest endowments in the country (the University of Texas at Austin) in 2015, and the ninth-largest endowment (Texas A&M University) or the third largest endowment for a public university (Hu et al., 2020). Universities have and are using TRIP to solicit grants from the private sector. The Higher Education Assistance Fund (HEAF) was created to address the large discrepancy between institutions that qualified for the PUF and those that did not. However, the creation of HEAF has not produced significant results within the state of Texas. The four-part funding formula will be discussed in further detail in chapter 2.

Historically Black Colleges and Universities (HBCUs)

Public colleges and universities tend to vary in size, mission, and demographics. Examples of public institutions with unique foundations include Historically Black Colleges and Universities (HBCUs), which have historical missions tied to educating African Americans. Defined differently from a Hispanic-Serving Institution (HSI), which defines institutions with at least 25 percent of student enrollment with a Hispanic background, HBCUs were established in the late 19th century through the mid-20th century. The HBCUs offered African Americans a chance to receive a post-secondary education (Harper, 2007). Historically Black Colleges and Universities have encountered various obstacles over the past few decades, including declining enrollments, criticism of academic programs, and decreased state support (Sav, 1997). These HBCUs have responded differently to the obstacles and challenges of higher education finance because they were forced to start the education journey with fewer resources compared to that of their Predominantly White Institution (PWI) counterparts (Gasman & Drezner, 2010). The Higher Education Act of 1964 was established to provide federal funding to HBCUs (Gasman & Hilton, 2012). However, an imbalance of funding for HBCUs in the 21st century still exists (Williams & Davis, 2019). Public universities rely on local, state, and federal appropriations. Local and state funding tend to be the largest sources, ultimately impacting how an institution can perform and operate (Leslie et al., 2012). Along with many other public institutions, HBCUs have had to adjust to the challenges of financial disparities and rely more heavily on state support (Palmer et al., 2011).

Providing federal assistance to institutions is not a new concept to the higher education landscape. During the Reconstruction era, Congress passed the second Morrill Act in 1890 for a full endowment to support colleges (Brooks & Marcus, 2015). Within the second Morrill Act of 1890, Congress allowed Southern states to establish and maintain land-grant institutions separately for white students and Black students and teach Black individuals to farm, read, write, and be schoolteachers. Historically Black Colleges and Universities were supposed to receive equal funding to that of their PWI counterparts; however financial inequities were birthed during this time frame (Allen, 1992; Banks, 2019; Brady et al., 2000). The 1890 Morrill Act promoted higher education with funding for the development of these Black colleges for subjects that included agriculture, mechanical arts, mining, and military instruction (Lucas, 2006). As HBCUs try to move forward through vestiges of racial segregation within higher education, disparities and gaps still exist as they fight for survival and attacks associated with an accountability culture (Harper et al., 2009). These inequities often threaten the survivability of Historically Black Colleges and Universities.

Problem Statement

Over the years, state lawmakers have slowly divested Texas colleges and universities while also passing legislation bills to deregulate tuition (Johnson, 2018; Layzell, 2007; Williams, 2020). More investment into higher education for a growing population of students of color from low-income backgrounds will be essential (Williams, 2020). There is institutional diversity within universities, such as the difference between Minority Serving Intuitions (MSIs) and HBCUs in Texas; however current legislation funding and reporting policies do not address these different characteristics (National Academies of Sciences, Engineering, and Medicine (NASEM), 2019; Williams, 2020). Examples of these different heterogeneous characteristics can include: large versus small enrollments, degrees offered, demographics (i.e., the composition of students, faculty, and institutional personnel), and resource-related (i.e., institutional capacity) dimensions. Likewise, while there has been disinvestment into higher education, there is also a significant disparity in state investment for certain types of public institutions, specifically between HBCUs and PWIs, or HBCUs and flagship state universities (Williams, 2020). Johnson (2018) concluded that a strong relationship between funding and graduation rates and funding and degrees awarded exists. The researcher (Johnson, 2018) noted that increases to state appropriations were related to higher baccalaureate graduation rates and higher degree production. More insight into the disparities of funding and looking at institutional student characteristics could be valuable to show significant differences in funding and student outcomes.

Historically Black Colleges and Universities serve large populations of underserved and disadvantaged students (i.e., low-income, first-generation, and underrepresented) compared to that of their PWI counterparts (Allen et al., 2007; Hardy et al., 2019; Jones, 2016; Minor, 2008a; Nichols & Evans-Bell, 2017). About 70% of these underrepresented and underserved populations receive some form of financial aid and qualify for need-based financial aid (Saunders et al., 2016). From a national perspective, institutions with sizable portions of underrepresented and disadvantaged students tend to lag in graduation rates (Fischer, 2007). Because monetary and academic resources are significant factors for student success, researchers (Bound et al., 2012; Deming & Walters, 2017) have argued that it is vital that state legislators introduce more policies that address equity metrics. Equity metrics can identify and acknowledge the more extensive support needed to educate underserved and disadvantaged students.

The lives of underrepresented and low-income students can expand beyond the traditional postsecondary landscape. Pre-college factors, such as socioeconomic status and academic preparation, can play essential roles in understanding the complexity of underserved and disadvantaged students' lives and contributions in policy-making decisions (Hardy et al., 2019). Moreover, other contributing factors can impede a positive impact on institutional outcomes (Dougherty et al., 2014). Those contributing factors can include governance structures that impact organizational culture, outdated missions and financial issues, and accreditation status (Davis 2015). Because of the long history of unequal funding, HBCUs should be higher priorities when states allocate financial resources (Nellum & Valle, 2015).

Previous and current formula funding models' objectives appear not to acknowledge the gap in funding equity. Funding formulas do not make up for years of declining investment, nor do they address the need for increased need-based aid for low-income students despite the attempts to address racial inequity and the lack of access to higher education for minority students (Gasman et al., 2015). States are adopting new accountability standards that include institutional performance measurements to fund schools based on their outputs rather than inputs (Shin, 2010). Researchers Sanford and Hunter (2011) and Shin (2010) along with current researchers (Hagood, 2019;Hillman et al., 2015; Hillman & Corral, 2017; Mizrahi, 2020) evaluated the efforts of current outcomes-based funding models such as performance-based funding and found little to no distinguishable differences in the performance of institutions that are mandated by accountability measures and those that are not.

The educational experience for African American students who attend HBCUs has produced a positive experience in providing a supportive social environment. Earlier studies such as Fleming (1984) and Allen (1992) reported that African American students are more successful at HBCUs, and HBCUs provide more nurturing support than Predominantly White Institutions. Current studies (Campbell et al., 2019: Harper, 2019) show that HBCUs are still advancing a significant percentage of African American students in environments that foster positive images of their race and embrace cultural awareness. These academic experiences of African American students that attend HBCUs result in higher academic development and greater satisfaction. Likewise, Kim and Conrad (2006) concluded that HBCUs have been more successful than PWIs in their initiatives and efforts to retain and foster success among African American students. Furthermore, Harper (2019) reports that African American students who have earned degrees from HBCUs compared to African Americans who earned an undergraduate degree from a PWI have higher job satisfaction rates.

Similarly, Allen et al. (2007) analyzed HBCUs' continued fulfillment to society's unique social contract and served as social equalizers for groups that have historically been denied equal opportunity in education. Also, Arroyo and Gasman (2014) expounded on the work of Fleming (1984) by theorizing the foundation of supportive environments for students at Historically Black Colleges and Universities. These environments are deemed supportive when: (a) students have increased opportunities for mentoring and friendship with peers, faculty, and staff beyond the classroom; (b)students find satisfying engagement in extracurricular activities and holding leadership positions; and (c) students have acquired a sense of progress in the climate of academic development (Fleming, 1984). Higher education practitioners, legislators, and institutional leaders need to understand that student satisfaction contributes to higher persistence rates amongst students (Tinto, 2017). Despite the funding inequities that HBCUs have managed, empirical data has shown that HBCUs have made significant contributions to the graduation of African American bachelor, master, and doctoral recipients (Humphreys, 2017).

According to Carter and Wilson (1997), HBCUs continued to graduate a significant amount of Black college students. These institutions enroll over 25 % of all African American students and, 25% of all baccalaureate degrees are from HBCUs, 15% of all master's degree recipients are from HBCUs, and 10% of all doctoral degree recipients are from HBCUs (Allen & Jewell, 2002; Humphreys, 2006). Also, the United Negro College Fund (UNCF) (2020) reported that HBCUs contributed to the graduation of 70% of Black dentists and physicians, 50% of Black engineers, 50% of Black public school teachers, and 35% of attorneys who have graduated from a Historically Black College and University.

Today, HBCUs are still awarding more than 30,000 undergraduate degrees to African Americans, representing 8% of the total undergraduate degrees awarded (Cunningham et al., 2014; UNCF 2020). In 2014, HBCUs still accounted for 17% of bachelor's degrees earned by African Americans, and 24% of undergraduate degrees accounted for African Americans in the STEM fields (Humphreys, 2017). More recently, Harper (2019) concluded that HBCUs enroll 13 % of all Black undergraduate students;

however, they are still producing approximately 22 % of all baccalaureate degree recipients.

The continuation of inequitable funding could potentially result in the vanishing of Historically Black Colleges and Universities. The loss of these institutions means the loss of the enrollment and graduation of Black students. The loss of enrollment means losing African American pathways to communities rooted in the hopes and dreams of a better future. These quantifiable results demonstrate how HBCUs have and continue to provide economic impacts on labor income and employment. This type of economic development can help the hosting community of where these HBCUs are located improve the quality of life, increase middle-class attainment and, increase the lifetime earnings of HBCU graduates.

Many Americans see social mobility by enhancing access and success as the “American Dream” (Graham, 2017), and often this dominant and normative perspective becomes the social structure for disadvantaged and marginalized groups (i.e., African Americans). Social mobility is exemplified through examples of African Americans owning major conglomerates, becoming governors, doctors, and becoming President of the United States. However, these achievements have not negated the racial wealth and inequity funding gap that exists and serves as higher education barriers (Allen et al., 2018; Sykes & Maroto, 2016). These educational barriers leave higher education constituents questioning the value and purpose of higher education.

The history of American colleges and universities has been built around the national notion that education is liberating and has the transformative power to overcome inequality and prejudice. Because it is the racial attitudes and patterns that have shaped higher education (Harper, 2012), frameworks, such as critical race theory (CRT), indicate how attitudes can camouflage racism within the language and behavior of higher educational structures (Bell, 2005; Ladson-Billings, 2005). The unequal funding that has created disparities for HBCUs, combined with litigation cases of inequitable funding that have continued into the 21st century, need more attention before moving forward with new strategic plans and new initiatives (Drezner & Gupta, 2012).

One such example of allegations that courts reported was that of continued inequities of funding in Maryland. On behalf of the four public HBCUs in Maryland—Bowie State University, Coppin State University, Morgan State University, and University of Maryland Eastern Shore—the Coalition for Equity and Excellence sued the state of Maryland for not providing equitable funding for PWIs and HBCUs (Drezner & Gupta, 2012).

A similar case that took two decades to resolve within the state of Mississippi indicated how dual systems of schooling for Blacks and Whites were established and how the segregated system of higher education had not been dismantled under the de jure system of segregation (United States v. Fordice, 1992). This dual system restricted Black students' opportunities by providing inadequate educational resources, financial funding, and outdated curricula (Green, 2010). The U.S. Supreme Court reversed an initial ruling of this case and identified that duplication of programs, mission statements, and allocation of funding had robbed the HBCUs within the state of Mississippi. These HBCUs (i.e., Alcorn State University, Jackson State University, and Mississippi Valley State University) had also experienced a downward spiral of enrollment due to the admission policies enforced during the Supreme Court decision (Blake, 1991).

The declines in enrollment, coupled with the fiscal crisis in the mid-1980s for these three HBCUs in the state of Mississippi, demonstrated the full impact of devastation these institutions faced. The enrollment declines of the HBCUs were viewed as a positive progression for desegregation policies. However, these signs of progression also emerged as signs of inequality. This 1975 class-action suit's initial intent was to bring an end to the funding and administration inequities of higher education within the state of Mississippi (Lee, 2010). In 2001, a settlement was reached, in which a $503 million settlement would be used over 17 years to enhance programs at these three Historically Black Colleges and Universities (Gasman et al., 2007). These 21st-century examples of funding disparities amongst present-day HBCUs and PWIs demonstrate the need for more research to examine these racial gaps and inequitable structures.

Furthermore, the continuation of unequal funding for HBCUs can affect access to higher education for the larger populations of underrepresented students that these institutions serve. The enrollment and graduation rates for Black students affect the degree attainment levels that are tied to educational and social advantages, but these inequities can impact the communities charged with dismantling these systemic racial structures. These social structures have produced many thriving African Americans who have progressed within the community and were raised by parents, taught by teachers, and supported by mentors that have stemmed from HBCUs (Allen et al., 2007).

Lastly, the future of inequitable funding on HBCUs can have the potential to highlight the overrepresentation of African American males that are incarcerated more than they are enrolled in college. The number of increased mass incarcerations contributes to the social inequality and wealth gap (Sykes & Maroto, 2016). Black male students' impact not persisting in graduating from college affects the present and future of HBCUs and the families, individuals, and communities they serve. The adverse effects of incarceration influence racial wealth disparities and plague communities beyond economic disadvantages.

Significance of the Study

States have the jurisdiction to implement and construct their own funding formula model and metrics, which vary from state to state, and can be dependent on the influence of the economy (Delaney & Doyle, 2014). In addition to the economy's influence, diversity can be filtered through policies and programs (Patton, 2016). These formula models include specific goals and metrics tied to a predetermined allocated amount of postsecondary funding (Layzell, 1998). Often tied to state goals, these metrics can include: (a) overall degree completion, (b) research funding levels, (c) student persistence, (d) bachelor’s degrees awarded to minorities, (e) STEM degrees, and (f) remediation success (Dougherty et al., 2014). This list is not exhaustive, and the listed indicators can vary from state to state. Metrics are assigned a weight based on the priority of the state’s strategic plan. However, unintended consequences of implementing a formula with specific metrics can have the potential to reduce access for low-income and underrepresented students, ultimately harming the institutions that serve larger populations of underserved students (Lahr et al., 2014; Cielinski & Pham, 2017). Unintended consequences could include academic changes such as changes to tuition and financial aid policies, registration and graduation procedures, and student services departments (Dougherty et al., 2014).

Continued research is needed regarding how funding and fiscal policies have affected public universities, especially HBCUs (Hillman & Corral, 2017). By evaluating more equity measures in formula funding models, this research's outcomes can contribute to the understanding of the influence of current formula funding policies on selected public universities, including HBCUs in the state of Texas. Specific measures included in formula funding models can have the potential to meet the funding needs for at-risk populations, fund the progress and completion of underserved student populations, and reward institutions that admit low-income students. Including an emphasis on equity, measures can help give substantial weight to socioeconomic status and race metrics. Further, scholars have argued that the demographics of institutions should be a factor for funding policies. Demographics could represent economic diversity, thereby ensuring that Minority Serving Institutions (MSIs) are not disproportionately impacted by state funding models (Hillman and Corral, 2017). State legislators and decision-makers may be able to use this study's findings to explore variations in funding allocations like that of HBCUs, which include a different mission, enrollment mixes, and enrollment trajectories.

The federal government has significant influences on the allocation of dollars to colleges and universities. In efforts to strengthen the capacity of HBCUs, former President George H. W. Bush issued Executive Order 12677 in 1989 to help provide quality education to students attending HBCUs and help increase participation in federally sponsored programs (Avery, 2009). Increased federal efforts, such as the White House Initiative on HBCUs, continue to make strides that address fair and equitable funding (Toldson, 2016) yet still have a long way to go. Because the government works to invest in the future workforce by creating more jobs within the labor force, this study could influence state governments to prioritize these investments to create sustainable long-term economic benefits.

In 2014, 101 HBCUs were operating in 50 states (Humphreys, 2017), and the economic impact from HBCUs consisted of 180,142 full-time and part-time jobs in 2001, and of that number, public 4-year HBCUs were responsible for generating 105,482 jobs (Humphreys, 2006). Long-term economic benefits for HBCUs also positively impact Black students' success, especially Black males. A portion ofBlack males who come from disadvantaged backgrounds demonstrate how HBCUs are better at providing services that allow Black students to graduate (Mykerezi & Mills, 2008). Historically Black Colleges and Universities can serve as gateway institutions to help black students overcome the wage disparities within labor markets. By demonstrating the economic roles that HBCUs play within their communities, this study could influence the federal and state governments to prioritize public HBCUs' funding. Identifying the economic impact of HBCUs can provide short-term and long-term estimations of an economic impact on communities. These economic impacts affect labor forces, local businesses, local government, and industry formation (Humphrey, 2006: Humphrey, 2017).

Additional long-term benefits include work-life earnings. These work-life earnings are tools that measure the graduates of HBCUs' economic success in terms of higher earnings over a working lifetime (Humphrey, 2017). Black students who earn a bachelor’s degree earn 70% more than black students that have only received a high school diploma, and Black students with an advanced degree earn 57% more than those with a bachelor’s degree (Humphrey, 2017). Although HBCUs account for only three percent of the nation's higher education institutions, they convey substantial economic benefits to the national economy.

This study will offer additional research to the body of literature that examines the relationship between formula funding on public HBCUs. More importantly, the relationship between formula funding and HBCUs will emphasize the impact it has on the institutions that have played a pivotal role in improving Black communities, perpetuating Black culture, and preparing the next generations of Black leadership. The emphasis on HBCUs is significant in this study because it will demonstrate the charge that these institutions have had to uphold since their establishment.

Research Questions

1. What are the perspectives of select HBCU administrators on how the state provides funding for public HBCUs?
2. How have the current funding strategies in Texas contributed to inequitable funding for HBCUs in the state?

Theoretical Frameworks

Historically Black Colleges and Universities have deep-rooted histories that have helped shaped their foundational mission statements. Also, these institutions continue to cope with the vestiges of racial segregation. Brady et al. (2000) stated that quantitative data representing these deficiencies within desegregation and fiscal equity amongst public universities are scarce. Identifying how state governments have historically invested in public HBCUs differently than PWIs and how these differences affect HBCUs in this current accountability culture of higher education can be vital to the future existence of Historically Black Colleges and Universities (Allen et al., 2018). The accountability culture is not unique in terms of public institutions' experience within higher education as state legislatures, and stakeholders demand increased effectiveness and efficiency from public institutions.

Many moral differences have existed on the role of race in society (Minor, 2008b). The Reconstruction Era after the American Civil War and the birth of Jim Crow laws were examples of the moral differences (Minor, 2008b). The American higher education system is no different when the intersection of race and education collide and the extent to which this intersection is taken into account (Minor, 2008a). Historically, laws that have segregated communities and public education are rooted in HBCUs' primary social and economic plight for African Americans. The existence of financial inequities between public HBCUs and public PWIs (Sav, 1997; Montgomery & Montgomery, 2012) can be examined through a lens necessary to understand equity challenges associated with fiscal disparities.

Critical Race Theory

Since the establishment of Historically Black Colleges and Universities (HBCUs), these institutions have experienced profound funding inequities and were generally of poorer quality compared to that of PWIs, which were established under the 1862 Morrill Act (Brady et al., 2000). Critiques of HBCUs are often void of the systemic inequities and funding policies that have impacted them. Used as an analytical framework, Critical Race Theory (CRT) will be useful in examining policies that affect African American students and Historically Black Colleges and Universities. Critical Race Theory stemmed from the 1970s when scholars Derrick Bell and Alan Freeman examined legislation through a racial lens (Delgado & Stefancic, 2001, 2005). Critical race theorists argued that racism is camouflaged and embedded within the language, behavior, and governmental structures of society (Bell, 2005), and CRT analyzes the social disparities between dominant and socially marginalized groups (Ladson-Billings, 2005). Critical race theory began as a social implication to America's race problems and is a collection of stances against a set of existing legal orders from a racial equity viewpoint (Brady et al., 2000).

The normative and dominant policy and historical, social structures in higher education can reveal the funding inequities that have existed amongst PWIs and HBCUs and can examine how public HBCUs are governed and structured (Sav, 1997). From the Morrill Land Grant Act of 1890 that extended African Americans' opportunity to receive a post-secondary education, the *Plessy v. Ferguson* 1896 Supreme Court case instituted the concept of separate but equal to continue racial segregation (Bell, 2005: Ogletree, 2004: Allen et al. 2007). Funding, race, and policy are at the apex of analysis in higher education disparities between HBCUs and Predominantly White Institutions.

In 1965, President Lyndon B. Johnson signed the Higher Education Act as an attempt to help strengthen the financial support of low-income and underrepresented students through loans, grants, and scholarships (Green, 2004; McPherson & Schapiro, 1991) in hopes of providing more access to a historically underrepresented population. This strategic financial plan served as a means for the government to establish guidelines and desegregate vestiges of disparities and inequities in funding. However, many of these policy efforts introduced in the 1960s did not dismantle the inequitable funding experienced by HBCUs (Harper et al., 2009). Furthermore, critics of HBCUs see these institutions as not being conducive to a diverse society and providing fewer opportunities to students who enter with poor academic skills, resulting in lower graduation rates (Brady et al., 2000).

Many CRT scholars have varying tenants of the constructs for the theoretical framework (i.e., 4-7); however, this research study will examine the five basic tenants of CRT (Hiraldo, 2010; Decuir & Dixson, 2004). The tenets include counter-storytelling/centrality of experiential knowledge, the permanence of racism, challenge to the dominant ideology, interest conversion, and the critique of liberalism (Decuir & Dixson, 2004).

Counter-Storytelling. Traditionally, this tenet can comprise personal stories and narratives that challenge the dominant perspective (i.e., White heterosexual males) and shaping of normative stereotypes (Decuir & Dixson, 2004). However, this study will use this tenant to challenge the historical accurate analyses of how HBCUs have had historical funding disparities. Applying a counter-narrative from HBCU leaders and participants that work directly with students will provide a color-evasive explanation for the racial inequalities that persist and continue to produce systemic racial inequities such as funding. Solorzano and Yosso (2002) demonstrated the power of storytelling that serves as a tool to build community and allow the voices that often go silent to be heard in dominant discourse and helped describe the experiences and perspective of marginalized groups. This counter-story consists of data-based research combined with existing knowledge. This powerful combination helps to dispel myths, dominant stories, and generalizations. The presence of counter-story telling has the potential to combat stereotypes of HBCUs that are often absent from mainstream media until tumultuous circumstances arise (Jacobs, 2015; Nocera, 2016). At the same time, counter-narratives have the potential to illuminate the contributions of HBCUs and their commitment to serving low-income and disadvantaged students yet they have not been prioritized and often overlooked in state formula funding (Williams et al., 2019).

The Permanence of Racism. This tenet occurs as a normative experience for people of color in the educational context and is perceived as an embedded structure for the American civilization (Decuir & Dixon, 2004). The permanence of racism suggests that racism is a tool that controls the political, social, and economic realms of the U.S. society (Hiraldo, 2010). As legitimate vestiges of segregation have been rooted in the foundation of HBCUs (Sav, 1997; Sav, 2000), CRT indicates that HBCUs have had to manage unequal funding to survive and remain relevant within the higher education landscape. Enduring institutional discrimination, public HBCUs were established as separate land grant institutions for African Americans. The 1890 Morrill Act was mandated to provide HBCUs with funds that equaled PWIs for scientific and industrial training (Brady et al., 2000). However, the southern state legislatures never mandated equal funding. In 1914, only 8.5% of the Morrill Act funds had been directed to the Black-land grant institutions (Brady et al., 2000). Further, many of the HBCUs' curriculum offerings were restricted to vocational training, manual labor, and character building. Harper (2012) suggested that their study's findings made it clear that most higher education researchers attempt to consider the racial differences in college access and student outcomes without considering how racist institutional practices undermine equity and diversity.

The Challenge to Dominant Ideology. Challenging dominant ideology occurs when mechanisms are used to establish and maintain hierarchies of power and ideologies of White supremacy while maintaining the centrality of race and racism as primary components of the U.S. Society (Solorzano & Yosso 2002). Critical race scholars have critiqued the tendency of courts and policies that disengage and separate law from political and cultural realities (Brady et al., 2000). These cultural and societal realities have the potential to create an illusion that either racial discrimination does not exist or that state conduct is no longer influenced by it, which creates a permanent underclass.

Interest Conversion. A tenant that happens only when potential outcomes benefit Whites (Decuir & Dixon, 2004: Ladson-Billings, 2005). Structures that are designed to offer equal opportunity to people of color, are structures that White individuals benefit from through interest conversion. Power is seen as being effectively wielded within U.S. society by critical race legal theorists (Brady et al., 2000). Power has been legitimized through law structures as "Whiteness" and has been legally protected and equated as property rights over African Americans and Native Americans (Brady et al., 2000). Critical Race Theory can be used to examine how funding policies protect flagship institutions and some PWIs as "property" but serve as inequities and disparities against HBCUs and the property interest of the vast populations of low-income and disadvantaged students that are served. Flagship institutions and PWIs are the primary beneficiaries to decades of formula funding (Hillman & Corral, 2017).

Critique of Liberalism. An outcome of normalizing White privilege can be found in notions of the law being colorblind and neutral. Although incremental change is taking place, critiques of colorblindness, neutrality, and incremental change does not take the persistence and permanence of systemic racism away or into consideration (Decuir & Dixon, 2004). Race has served as an inequity, inopportunity, and oppressive historical artifact, therefore keeping racism and postsecondary inequalities present and not dismantled (Decuir & Dixon, 2004). The colorblindness that has been adopted is a way to justify and ignore the dismantling of race-based policies that were originally designed to address societal inequities (Decuir & Dixon, 2004).

The notion that incremental change are gains for marginalized groups that often come at a slow pace. The incremental change notion seeks after equality versus equity, and in doing so, processes, structures, and ideologies that have justified inequity are not dismantled or addressed (Decuir & Dixon, 2004). Likewise, when remedies of equality are sought after, it is assumed that citizens all have the same opportunities and experiences. However, race and experiences are not the same and unequal situations are created (Decuir & Dixon, 2004). Equity recognizes that these components of race and experiences are unequal and attempts to address the inequality.

Policymakers and lawyers have been litigating for years in states to dismantle state-wide dual systems (i.e., Mississippi and Maryland). In 1970, the NAACP filed a case against ten states (Arkansas, Florida, Georgia, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, Pennsylvania, and Virginia) with failure to eliminate segregation and withheld federal funding (Brady et al., 2000). These litigation cases have been incremental changes, however flagship institutions and some PWIs are not directly affected. Likewise, incremental change seems to benefit those that are not adversely affected by social, economic, and educational inequity (Decuir &Dixon, 2004). These inequities often come as a result of racism and racist practices and policies.

A critical issue that has not received much attention and one that has created a gap in the literature is the manner in which CRT is used as a construct to address fiscal inequities in higher education. Critical race theory can help examine formula funding policies through the existing color-blind lens that legitimizes White property rights as a tenant of interest conversion. As a useful tool in understanding funding inequities, CRT theorists also questioned the effectiveness of laws and policies (Harper et al., 2009). The concept of interest convergence can be used to analyze this study's data by examining the equity in formula funding policies and how they impact HBCUs. Finally, the critique of liberalism, can be used to analyze the incremental change for HBCUs through litigation cases that have taken years. However those that are most satisfied with incremental change, are less likely to be directly affected by oppressive and marginalizing conditions (Decuir & Dixson, 2004).

Jones (2013) used CRT to analyze current funding models in a qualitative case study on a particular HBCU to observe and interpret the institution’s perspective on their relationship with the state’s PBF policy. Also, Elliot (2019), Jones (2013), and Griffin (2013) all examined how HBCUs view output-based policies and practices that contribute to racial inequities in student outcomes. The researcher concluded that future research on funding models at HBCUs should identify institutional performance (Jones, 2016). Likewise, Jones (2013) recommended that formula funding policies consider alternative metrics, such as economic diversity (i.e., the portion of students who are Pell Grant eligible), ethnic diversity, or first-generation status as effective measures of performance.

Further, critical race theory uses the approach through counter-narratives as a way to highlight discrimination. This counter-narrative approach can offer racially different interpretations of formula funding policies that highlight funding disparities (Harper et al., 2009). The normative lens that has been engrained within policies is embedded in adopted normative ways (i.e., increased graduation rates and increased persistence rates) that can impact larger populations of underserved and low-income students at HBCUs. These academic outcomes for formula funding and outcomes-based policy structures are seen as the standard and become normalized and valued as more states follow the trends to implement performance-based funding or ignore the disparities in current formula funding policies. The lens of CRT can challenge these normalized values and apply a historical context, such as the purpose for the founding missions to educate Black students at HBCUs, at a time when White universities would not (Jones, 2016).

Harper et al. (2009) posited that the lens of CRT is useful in the higher education arena because it provides a perspective that questions, challenges, and critiques the methods and approaches in which race ideologies, White supremacy, and supposed meritocracy are rooted. These socio-historical structures have helped shaped policy efforts for African Americans and HBCUs within higher education. Applying counter-narratives for HBCUs within this study would be useful to the personal narrative of institutional leadership and their experience with institutional funding. Miller et al. (2020) defines a counter-narrative as “powerful data sources to present the voices of marginalized communities” (p. 270), and challenge dominant, normative narratives of daily lived experiences. In addition, the personal stories from staff and faculty that interact with the students that the HBCU serves (i.e. faculty and student support service staff) will be analyzed by telling their stories in their own words, their counter narrative can challenge the privileged discourse that are often found in policies and practices, such as higher education funding policies (Decuir &Dixson, 2004). In addition to a historical context, the concept of counter-narratives can be used during the data analysis stage to contrast the normative formula funding outcome goals (i.e., graduation and persistence rates) and the impact these goals have on Historically Black Colleges Universities.

Outcome Equity

The second theoretical framework begins with estimating the amount of funding that is needed to produce adequate learning outcomes (Melguizo et al., 2017). Typically outcome equity is conceptualized and applied to community colleges, however, because the student demographics (i.e. low-income from non-traditional backgrounds and students of color) between HBCUs and community colleges are similar, the level of resources provided to both institutional types are not sufficient (Dowd et al., 2020). Lower levels of resources equate to inequities, and inequities in resources equate to relatively low completion rates because of the inadequacy of available resources (Dowd et al., 2020). Students who are most susceptible to the risks of loan default and non-degree completion, are those students who have the greatest need for additional resources (Ahlman & Gonzales, 2019).

Historically Black Colleges and Universities cater to a larger population of underrepresented, low-income students that despite eligibility for federal and state aid, the debt burdens continue to grow. These debt burdens make it difficult for students to reach economic stability such as paying rent, saving for emergencies, and investing (Ahlman & Gonzales, 2019). There is a need to ensure that a high percentage of entrants graduate and enhance their lives and careers.

The current climate for the environment of higher education includes: a decrease in state funding, an increase in tuition, and a continued competitive race for faculty and student enrollment. Within the context of public higher education, Dowd et al. (2020)

argue that funding, although not equal, should be at least adequate. As a result of inadequate funding, large differences in public and private investments continue to reproduce racial and social divisions and sustaining inequities while affluent groups maintain privilege and resources (Dowd et al., 2020).

Funding policies and regulations have been centered on and normed against PWIs, versus institutions that have been historically disenfranchised. In addition, the colorblind concept ignores the historical starting point for all institutions in the higher education landscape. Integrating outcomes equity with critical race theory will draw upon how much funding institutions have received in context with how they have been treated and marginalized historically. Counter-narratives used within the critical race theory framework will provide insight into how history has currently impacted a specific institution. Merging the two frameworks, helps to identify equity within higher education funding policy.

Definition of Terms

Historically Black Colleges and Universities. This study will use a definition forwarded by [reference]:“Institutions that were established in the early to mid-1800s during a time of legal segregation of races to provide educational opportunities for African Americans” (Montgomery and Montgomery, 2012, p. 93). These accredited institutions were founded before 1964, built on missions that provided access and education to Black African Americans (Brown et al., 2001; Roebuck & Murty, 1993).

Metrics/Measure of Performance. Defined as components or indicators that are concerned with the congruence that exists between outputs, goals, or other criteria (Lindsay, 1982). These components or indicators are identified by states that vary from state to state. These components and indicators can measure both inputs and outputs concerning a university's purpose and processes and can help assess and measure the performance of institutions in various ways. These ways can include measuring student retention, graduation rates, job placement rates, and faculty productivity (Tandberg & Hillman, 2014).

4-Year Public University. Educational institutions that receive federal and state funds and are governed by state government entities, that were rooted in educating the 'common people' as a land-grant university are known as 4-year public universities (Anderson, 1976). These public universities have played an essential role in the disciplines of agriculture, engineering, and human ecology.

Predominantly White Institutions. Institutions of higher education that are identified by its racial composition comprised of 50 percent or greater of white students enrolled (Bourke, 2016).

4-Year, 6-Year Graduation Rates. This term refers to degree-seeking students that are a first-time, full-time entering freshman cohort seeking a bachelor's (Jones-White et al., 2010). These are undergraduate students that earn a baccalaureate degree within 150% of average time to completion, which is typically six years.

Strategies. This term will be used to describe the allocation approach of state funding to public institutions. The allocation of state appropriations to public colleges and universities are determined by funding formulas or guidelines (McKeown-Moak & Mullin, 2014).

Student Support Services. Specific programs that exist on college campuses that provide support to increase retention rates **(**Grant-Vallone et al., 2003). These include services such as: academic advising, career and personal counseling, mentoring cultural enrichment programs, tutoring, and faculty mentoring. Many of the administrators involved in these roles work directly with students.

Retention. Institutions refer to this term as rates in which students are retained or graduate as an indicator of student success (Adelman, 1999). The number of students that persist and matriculate from one year to the next preceding year.

Pell Grant. Pell grants are denied as financial awards that are awarded to students who demonstrate need as defined as the difference between a students' expected family contribution and the cost of attendance (Williams, 2020). The student's expected family contribution is calculated based on household income and other tax information.

Limitations

A limitation of the study can include the institutions being limited to the State of Texas and the selected institution ignoring other public universities within Texas. In addition, there are not that many public HBCUs within the state of Texas, and another limitation is that this study focuses only on one public HBCUs and ignores the private limited resourced HBCUs in the state of Texas.

Assumptions

Texas's current formula funding model does not equitably distribute available state funds, and HBCUs receive less funding than non-minority serving institutions. Likewise, there is a relationship between degrees awarded and funding that already exists (Johnson, 2018). Moreover, this study also assumes that the data collected from each institution is accurate and correct and submitted to the Texas Higher Education Board accountability and IPEDs system.

Summary

In Chapter 1, the introduction to what Texas state legislators and institutional leaders of public universities are focusing on within the realm of higher education was introduced. State formula funding and appropriations are critical to the functioning of institutions, and with a decline in state investments into higher education, prioritizing HBCUs in funding decisions is essential. Additionally, Historically Black Colleges and Universities (HBCUs) were introduced to focus on the unique foundations and support these institutions provided to African Americans. Because HBCUs have larger populations of underserved minority students, formula funding models have produced limited research regarding the unintended consequences that could affect these institutions differently. These consequences raise concerns at providing access to higher education to the populations of underserved and underrepresented students that HBCUs primarily serve. By examining the relationship of formula funding on HBCUs within the context of Critical Race Theory (CRT) and Outcome Equity this study can add to the literature of research and help examine the differences in investments that reproduce inequities (Dowd et al., 2020).

CHAPTER II

Literature Review

Relevant literature and scholarship related to the impact of Performance-based Funding (PBF) on Historically Black Colleges and Universities (HBCUs) will be reviewed. This section is organized into the following categories: (a) History and foundation of HBCUs; (b) Federal and state funding for HBCUs (c) Accreditation; (d) Persistence rates and graduation rates at HBCUs; (e) Higher education funding; (f) Texas governance and formula funding: Texas Higher Education Coordinating Board (THECB), Texas formula/state appropriations; and (g) accountability concepts; Texas accountability system and measures

History and Foundation of HBCUs

History

Before the beginning of the Civil War, specific colleges were established in the North with the sole purpose of educating African Americans (Gasman, 2007a). These Black colleges that opened before the Civil War included Cheyney University (1837), originally called African Institute and the Institute for Colored Youth, Lincoln University, formerly called the Ashmun Institute (1854) in Pennsylvania, and Wilberforce University (1856) in Ohio. The aftermath of the Civil War resulted in the transitioning of enslaved African people becoming freemen entering an American society that attempted reconstruction but failed at this attempt. Following the Emancipation Proclamation, the initial reconstruction plan included granting land to these newly freed individuals who were previously enslaved. Unfortunately, the term “40-acres and a mule” that promised land to newly freed slaves never manifested itself within American history.

Many ex-slaves were left with trying to understand how to build a life and earn a living but understood education and training were at the core. The avenue to necessity began with ultimately opening many more Black schools and colleges. Congress passed the first Morrill Land-Grant Act, which gave federal land to states to establish colleges and universities to educate farmers, scientists, and teachers (Brady et al., 2000). However, institutions did not extend this educational opportunity to Black people.

Many of the first Black schools did not function as colleges and provided only primary and secondary education to individuals who were slaves prior to and during the Civil War. In need of financial support, Black colleges partnered with religious missionaries, many of which were affiliated with the northern White religious denominations to fund the operational costs (Gasman, 2007a). Conversely, many of the missionaries' ideas of educating Blacks included a vocational curriculum versus a liberal arts curriculum (Allen et al., 2007), and the assisted funding would often be associated with curriculum control from the white missionaries. The era of the 1860s proved to be a promising one for the rise and movement for the education of African Americans after the Civil War (Harper, 2007). These additional funds helped to open seventeen more Black colleges with the help of the Morrill Act of 1890. (Gasman, 2007a).

Student enrollment at HBCUs expanded throughout the 1930s (Anderson, 1988). The Morrill Act of 1890 required states to extend their land grant institutions to educate Black students or allocate monies to Black institutions, providing an educational alternative to PWIs. Anderson (1988) noted enrollment trends between 1900 and 1935. In 1900, 3,880 Black students were enrolled in Southern Black institutions, and by 1935 that number had grown to approximately 29,000. Students who were enrolled were the children of many former enslaved people, and they and their parents were generally poor and illiterate.

Analyzing the historical landscape of HBCUs and identifying how they have changed over time, Allen et al. (2007) examined the local and societal benefits that HBCUs offered to Black students and their surrounding communities. Allen and associates concluded that these unique postsecondary institutions that once functioned as secondary schools still provide social capital and a social network to serve students who were historically denied access. The social benefits of HBCUs are immeasurable. These institutions include intellectually challenging and stimulating environments, increased peer interaction for Black students, and faculty-student contact. Further, HBCUs typically have faced funding challenges, yet they still work to fulfill their historic missions.

Relevance of HBCUs

Historically Black Colleges and Universities are often criticized or questioned about their continued existence by critics (Harper, 2012). Many of the institutions within higher education face the same challenges of rising costs, budget cuts, and graduation completion. These tasks must also be accompanied by teaching and developing graduates to meet the challenges of a sustainable workforce and becoming change agents for social justice. Historically Black Colleges and Universities play an essential role within higher education, and many African American students have benefited their enrollment, persistence, and graduation from the universities. Wilcox et al. (2014) examined the changing functions of HBCUs through a democratic lens. Colleges and universities were developed to promote democratic missions by fostering a more able and enlightened citizenry, while also tasked with meeting the needs of the economy by producing a more skilled and creative workforce (Hansen, 2013). However, public institutions within higher education have replicated existing power structures and have failed to provide high quality, culturally relevant education. Over time, institutions have needed to emerge and evolve to meet the needs of a diverse democracy.

Historically Black Colleges and Universities (HBCUs) help to serve these democratic functions by providing support to students who face social, cultural, and financial challenges (Wilcox et al., 2014). A portion of students that attend HBCUs may be first-generational, require developmental education courses, and work part-time jobs for financial support. Students who attend HBCUs find more cultural resonance amongst faculty and staff and are satisfied with the support received at an HBCU. According to Wilcox et al. (2014), the interpersonal skills, such as self-confidence, efficacy, and leadership skills, of students who attended HBCUs were developed at an increased rate.

Moreover, HBCUs face challenges with improving graduation rates while also dedicating their core missions to underrepresented, low-income, first generation students. This dedication and the contributions HBCUs provide to these students help to nurture and develop skills within a safe environment. Wilcox et al. (2014) assessed the importance of relevancy of HBCUs in a democratic world by identifying how they serve as incubators of racial identity and pride for disadvantaged students, while also serving as cultural reservoirs of African American history and traditions that must to be kept alive.

Focusing on creating healthy operations has the potential to offset the HBCU critics of accreditation, low endowments, and declining enrollments. Davis (2015) conducted a qualitative study and analyzed how a specific HBCU developed strategies that helped this institution maintain relevance and credibility by restructuring its financial deficit. These strategies included (a) pruning operationally by implementing refined fiscal policies and holding students accountable to academic standards; (b) implementing effective marketing strategies that stemmed from a newly formed social justice mission; (c) involving faculty in the strategic planning process, and (d) revising and implementing the tenure and promotion policies. By implementing useful marketing strategies through technology and adopting a social justice brand, while also involving faculty in strategic planning to develop systemic structures that were sustainable, kept the institution from closing its doors in 2004.

In 2001, the total employment impact from HBCUs included 180,142 full-time and part-time jobs. (Seifert et al., 2006). An economic impact can be understood in reference to the effects on employment, and in terms of labor income, the impact was $7.3 billion (Humphreys, 2017). This labor includes all forms of employment income (i.e., wages, salaries, and proprietors income). Historically Black Colleges and Universities have made several economic impacts nationally and within the communities that host them. Minor (2008b) reported that HBCUs make up roughly 3% of all institutions within higher education, and these postsecondary institutions produce 25% of Black graduates. His analysis posited that HBCUs graduate 40% of all Black undergraduate students that receive degrees in the STEM disciplines (i.e., physics, chemistry, biology, mathematics, engineering, environmental sciences). Meeting the demand of the nation's workforce development is possible by investing and increasing equitable resources from the state's funding structures into Historically Black Colleges and Universities (Minor, 2008b). The annual impact generated by HBCUs was $14.8 billion, with public HBCUs accounting for $9.6 billion (Humphreys, 2017).

Policymakers are developing initiatives to meet the nation's evolving workforce needs to stay competitive in the global market. The United States has been developing strategies to increase the production of highly educated workers in the STEM field and diversify the industry for underrepresented populations (National Science Foundation (NSF), 2006: Southern Education Foundation (SEF), 2005). The U.S. Department of Education is looking to HBCUs to meet these critical STEM challenges. The outcome of meeting these demands will increase economic growth and create advancement opportunities for African Americans (NSF, 2006: SEF, 2005). Also, increasing STEM graduation rates will contribute personal, economic, and social benefits of higher education. The contributions that HBCUs offer are met with state disinvestments, especially when funding disparities amongst HBCUs and PWIs exist (Williams, 2020). State funding models could ensure a proportionately higher amount of investment to prioritize HBCUs that serve more significant portions of low-income and underrepresented student populations.

Historically Black Colleges and Universities enroll 8% of the nation's Black undergraduate students, yet they graduate 20% of all Black students who earn an undergraduate degree (Conrad & Gasman, 2015b). While Conrad and Gasman (2015b) demonstrated the contribution of Black students to STEM majors, they also identified components that distract and hinder African American males from succeeding as STEM majors. One debilitating factor is the underrepresentation of Black scientists and engineers mixed with the unlikelihood of young Black individuals growing up in neighborhoods with members of STEM professions present. Consequently, this creates inadequate STEM training and preparation programs because of the lack of access to preparatory science and math classes (Conrad & Gasman, 2015a).

Historically Black Colleges and Universities have different identities than those of their PWI counterparts; however, HBCUs are held to the same standard about fiscal stability, accreditation status, and graduation rates. Understanding the structural barriers and governance of an HBCU is vital to the survival of the institution. Many HBCUs have encountered a structural funding issue that is directly related to past racism (Wilcox et al., 2014). Furthermore, HBCUs have been leaders in educating African American college graduates. One-fourth of bachelor's degrees awarded in education were awarded to African Americans of HBCUs in 2011 (U.S. Department of Education, 2016). These historical institutions have been able to implement proven practices that assist students with obtaining rich professional experiences, research opportunities, and mentorships while navigating through academic courses and financial challenges.

In summary, many HBCUs did not start as institutions for post-secondary education, and Blacks were denied admission to institutions of higher learning. Before the Civil War, with the exception of a few schools, there was no structured system in higher education in place to educate Black students (Gasman, 2007b). Many HBCUs only provided elementary and secondary education to ex-slaves, yet postsecondary institutions remain relevant to the social and economic benefits of students in the 21st century (Allen et al., 2007). Historically Black Colleges and Universities have a dedicated mission to serving underrepresented and low-income students while also including programs to improve graduation rates. Historically Black Colleges and Universities only represent 3% of the institutions within higher education, yet graduate 40% of all Black undergraduate students that receive a STEM degree, and 20% of all undergraduate degrees for Black students (Minor, 2008b). Additionally, HBCUs have contributed to workforce development and economic impact, accounting for $14.8 billion annually (Humphreys, 2017). Historically Black Colleges and Universities have historically played, and continue to play, a pivotal role in enhancing equal educational opportunities for all students.

Federal and State Funding for HBCUs

Under the Higher Education Act (HEA), funding allocations for HBCUs are under Title III, Part B, Sections 323 and 326 (Postsecondary National Policy Institute, 2019: Boland and Gasman, 2014), and appropriations are formulated around the number of Pell grant recipients, graduation completions, and the number of graduates that continue to professional school. During the FY2013 (Postsecondary National Policy Institute, 2019), HBCUs received $527,632,210 split between 96 institutions. These HBCU funding appropriations can be used for: (a) student services, (b) faculty and staff development, (c) tutoring, or (d) counseling services to improve academic success, constructing or renovating facilities, acquiring property to improve campus facilities, to name a few allowances. Title III funding is critical to the financial health of Historically Black Colleges and Universities.

Impact of State Funding on HBCUs

State control can manifest itself in the form of increased efficiency; however, much of the influencing behavior comes from a political perspective and initiatives. States that have public HBCUs can exert influence and govern the rules of revenue diversification differently than other states. HBCUs depend more heavily on state funding

(Palmer et al., 2011) and receive less funding than other institutions in their respective states (Sav, 2000).

Coupet (2017) examined how the effect and efficiency of different revenue sources impact HBCUs. Coupet estimated the efficiency of 81 HBCUs over five years by examining the effects of federal and state revenue on the organization. According to Coupet (2017), the operational control of HBCUs is asserted through state governments within a political process. This type of control can ultimately have a negative effect when institutions have decreased proportions of state revenue. The theoretical framework, Resource Dependence Theory, emphasizes the institution's dependence on environments that serve as critical resources (Coupet, 2017). Internal efficiency has the potential to be constrained because the state's influence is centered on state goals (i.e., state initiatives, graduation completion). Coupet (2017) reported that these goals are not often linked to organizational goals.

Likewise, Williams and Davis (2019) stated that in addition to HBCUs serving significantly higher proportions of first-generation and low-income students and contributing to the national economy, HBCUs wrestle with funding challenges beyond their control. The researchers acknowledged that HBCUs rely more heavily on tuition and fees, and both federal and state support to assist with operations (Williams and Davis, 2019). The results from a higher level dependence on tuition dollars and reliance on federal and state support, leave HBCUs vulnerable to swings in enrollment and more susceptible to economic downturns. One major challenge for HBCUs is to increase costs to offset public disinvestments in higher education. Historically Black Colleges and

Universities are mission-driven to broaden college opportunities for black students, many of whom have limited financial resources (Williams & Davis, 2019).

Elliot (2019) conducted a case study to help provide insight into the influence of a current formula funding model that tie state appropriations to institutional performance metrics and the power relationships between HBCUs and the state in which the institution is located. The findings from Elliot (2019) indicated that the current formula funding policy engendered mistrust between the state and HBCU, increased students' academic and personal hardship, and increased financial difficulty at both the institutional and student level. As seen through the lens of CRT, the funding model in the state utilized imperialistic and capitalistic measures by allowing flagship institutions with more significant resources to increase and grow. A mixture of the MSIs and smaller regional institutions in the state with more diverse students fell to the bottom of the formula funding rankings (Elliot, 2019). The funding system has served to the advantage of PWIs and has diminished funding at HBCUs.

In the study, Elliot (2019) analyzed how the state changed the language and calculation of a metric from the number of Pell recipients enrolled to the percentage of Pell recipients who graduate. These changes resulted in the HBCU within the study having their institutional performance points staying the same, and the "distinguished" institutions and PWIs within the same state gaining institutional performance points. These institutional advantages can serve as examples of oppression within formula funding models and helps states reinforce the narratives of white supremacy by promoting and favoring PWIs by naming these institutions as distinguished.

Similarly, Griffin (2013) conducted a single-site case study to explore the extent to which internal leadership stakeholders perceived the impact of funding policies that are tied to institutional outcomes on a small public HBCU's ability to uphold its mission. Griffin (2013) attempted to reveal how University administrators alter operations to meet funding policy standards and concluded that the internal leadership stakeholders were unsatisfied with the current funding model. The stakeholders were unhappy with the ability to create new program offerings and offer more scholarship dollars to prospective students that had been negatively impacted by the funding model. Like other researchers (Jones, 2013; Elliot, 2019), Griffin (2013) identified the traditional student demographics being different than traditional students at nearby PWIs and found evidence of past discrimination on HBCUs and put at a disadvantage of receiving equitable funding.

Jones (2013) conducted a case study on a public HBCU within a state system that enacted a formula funding policy that tied the appropriations to outcomes in 2003. The author (Jones, 2013) described the historical relationship between the HBCU and the state with issues of race that shaped the Historically Black Colleges and Universities. The policy design was based on recommendations from a multi-campus committee within the system. However, no HBCU representative was selected to serve on the committee. Jones (2013) used the counter-narrative from the HBCU members and constituents in her study to capture the mixed feelings of the implemented performance-based funding model. The participants of the study critiqued the funding model as being underfunded, which required them to improve outcomes without additional financial resources. Secondly, the participants critiqued the limitation of representation during the development stages of the funding policy, resulting in a narrow view of diversity. The participants suggested that the limited resource constraints negatively affected student behaviors that were being measured by the policy (Jones, 2013). In addition to the critiques, the primary concern of the participants focused on how the policy would affect the institution's ability to provide funding and focus on serving Black students.

Funding Disparities of HBCUs

The challenges in the higher education system include rising tuition costs and federal and state budget cuts (Jaschik, 2017; Rothsman, 2016: Saunders et al., 2016). The majority of funding for public colleges and universities are derived from three different types of revenue: a) public sources (i.e., federal, state, and local appropriations, grants, and contracts), b) private investments (i.e., gifts and grants), c) tuition and fees, and d) other income (i.e., auxiliary) (Williams & Davis, 2019). According to Williams and Davis (2019), public HBCUs rely more dependently on federal, state, and local funding (i.e., 54 percent) than non-HBCUs compared with 38 percent of their White counterparts.

Many HBCUs struggle to stay financially solvent. Historical litigation cases have demonstrated how HBCUs in individual states have been inadequately funded. Between 1968 and 1970, the U.S. Department of Health, Education, and Welfare (DHEW) concluded that over ten states were operating segregated systems of higher education (Minor, 2008b). These operations were in direct violation of Title VI of the Civil Rights Act. Brown and Burnette (2014) identified the differences in state spending between public 4-year HBCUs and their PWI counterparts by expounding upon the funding gaps that exist between HBCUs and predominantly white institutions. Brown and Burnette (2014) referenced four different legal settlements and mandates that increased the supplemental funding for HBCUs that experienced equity disparities within the state.

Knight v. Alabama (2006). This settlement case that lasted for over 30 years helped remove the desegregation of funding from 'Alabama's state system of higher education (Brown & Burnette, 2014). Two HBCUs, Alabama A&M University and Alabama State University, filed the suit, claiming that Alabama's higher education system was racially discriminatory in several areas. In 2003, plaintiffs claimed the massive gap in the underfunding of both Alabama's K-12 and higher education systems. The settlement provided Alabama A&M University with $7.3 million and Alabama State University with $28.5 million in capital funds (Brown & Burnette, 2014).

United States v. Fordice (1992). Twenty-five years after the original suit was filed, in 2001, three of ' 'Mississippi's public HBCUs (Mississippi Valley State University, Jackson State University, and Alcorn State University) received $503 million. This settlement came after the the Supreme Court acknowledged a pattern of unequal resource distribution to the three public HBCUs in the state of Mississippi (Sum et al., 2004). In 1975, an African American citizen group filed a class action suit against the state of Mississippi. The plaintiffs of this legal battle alleged that the state of Mississippi perpetuated a dual-track system of public higher education amongst the ' 'state's PWIs and HBCUs (Sum et al., 2004). These duplicated tracks proved to be systemically discriminatory against university policies and practices and the general distribution of financial resources.

United States v. State of Louisiana (2005). Similar to the Fordice case, the state of Louisiana had to eliminate all vestiges of state-imposed segregation from its higher education system (Diamond-Sellers, 2007). The original lawsuit was filed in 1974 and targeted both Title VI and the Fourteenth Amendment Equal Protection violations. These violations were a result of the state operating a dual system of education. The state of Louisiana was required to take affirmative measures toward the dismantling of the dual system. The $125 million settlement would be used for new academic programs at Grambling State and Southern University in the state of Louisiana, and scholarships for minority students at PWIs, and a new engineering facility at Southern University.

North Carolina v. Department of Education (1981). In 1970 the United States DHEW informed the University of North Carolina System that they had violated Title VI of the Civil Rights Act by maintaining a racially dual system of public higher education (Brown & Burnette, 2014). In 2000, North Carolina policy makers launched an initiative called "Focused Growth" that equaled $580 million. Five HBCUs within the state had received capital appropriations. These HBCUs included: (a) Elizabeth City State University, (b) Fayetteville State University, (c) North Carolina A&T State University, (d) North Carolina Central University, and (e) Winston-Salem State University (Minor, 2008b). However, once these settlements were initiated and specific benchmarks were met, the capital funding stopped. The discontinuation of funding can increase the funding gap between HBCUs and Primarily White Institutions. The researchers provided recommendations for future research that will explore and correct the disparities for capital expenditures between HBCUs and Predominantly White Institutions.

This section reviews how public HBCUs rely more heavily on federal, state, and local funding than their PWI counterparts (Palmer et al., 2011; Sav, 2000; Williams & Davis, 2019). As a tenant of critical race theory the critique of liberalism occurs when postsecondary inequalities are established or not dismantled (Decuir & Dixson, 2004) In addition to this reliance, many public HBCUs are controlled through state governments within a political process (Coupet, 2017). Followed by the funding for HBCUs, this section presented examples of early compliance activity in postsecondary education. While this study reviews four cases, there were ten states in total (Arkansas, Florida, Georgia, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, Pennsylvania, and Virginia) that were operating racially segregated higher education systems and failed to dismantle the systems by 1973 (Carter & Wilson, 1996; Drezner & Gupta, 2012). As a result, states were required to plan and implement a process that: (a) dismantled dual systems of higher education; (b) strengthened HBCUs by enhancing the quality and academic programs; (c) reduced racial disparities in retention and graduation rates; and (d) increased minority representation of faculty, staff, and governing board to name a few (Drezner & Gupta, 2012).

Historically, state allocation systems have favored PWIs over HBCUs. Boland and Gasman (2014) conducted an empirical qualitative study and analyzed PBF trends across Alabama, Louisiana, Mississippi, and North Carolina and reported that state funding decreased significantly. The researchers concluded that funding within these states is prioritized at PWIs and flagship institutions. The outcome forces HBCUs to rely on increased tuition revenue for underserved students who cannot afford to enroll. The under-sourced HBCUs have smaller endowments, which hinders them to compete against the more prominent and better-resourced Predominantly White Institutions. Nevertheless, Boland and Gasman (2014) demonstrated how the aforementioned states revealed the strengths of HBCUs in graduating African American students. Public HBCUs in Alabama awarded 30% of all 'bachelor's degrees in the state to African Americans; public HBCUs in Louisiana awarded 40% of all degrees to African Americans: public HBCUs in Mississippi awarded 50% of all degrees to African Americans; and public HBCUs in North Carolina awarded 60% (more than the total amount of all PWIs in the state) of all degrees to African Americans.

Accreditation

Accreditation status is linked to funding and reputation, and HBCUs have received substantial criticism and the revocation of their accreditation (Burnett, 2020: Fester et al., 2012). Funding and accreditation challenges, directly and indirectly, impact one another. The federal and state governments depend on the accreditation process for institutional quality, linking funding disbursements to institutions and serve as the gatekeeper to more than $120 billion of federal financial aid (Burnett, 2020: Eaton, 2009). In the U.S., most public and private institutions are accredited by regional accreditation agencies (Eaton, 2006). More than 80% of HBCUs are under the jurisdiction of the accreditation of the Southern Association of Colleges and Schools (SACS).

Burnett (2020) examined whether HBCUs had higher odds of being sanctioned compared to other institutions. The researcher controlled for characteristics such as budgetary resources and graduation rates and found that there was a statistically significant relationship between HBCU-status and negative accreditation actions. Burnett (2020) suggest that the accrediting process failed to accommodate mission diversity and certain standards being misaligned from an HBCU context.

Donahoo and Lee (2008) noted that 25% of accreditation decisions were towards HBCUs during this time frame of 2007. This disproportionate number is more than the HBCUs make up in the higher education system. As mentioned before, HBCUs account for 3% of institutions in higher education. As of 2017, 80 of the 101 HBCUs were accredited by SACS (Burnett, 2020). In addition, Lee (2008) noted that HBCUs make up 13% of the membership within SACS; however, HBCUs represent 50% of the institutions that have lost their accreditation since 1989. Because of these alarming numbers, Wershbale (2010) argued the need for amendments to the Higher Education Act of 1965. The researcher argued that these amendments could accommodate HBCUs and their structural challenges by requiring accreditors to qualify for federal and state funding. Further, aligning institutions' specific accreditations standards with federal funding could best serve legislative goals and use accrediting agencies to their full potential. Comparing HBCUs to their better-resourced PWI counterparts holds HBCUs at a disadvantage.

In addition to the historical funding inequities, HBCUs have, on average, smaller endowments compared to those of their white counterparts (Gasman & Drezner, 2010; Green 2004). Larger private philanthropists tend to donate to many of the prestigious and higher-ranking institutions. Often, it is the external funding from private organizations that attract students and faculty to an institution (Crawford, 2017).

Accreditation is based on the results of assessments that are tied to institutional outcomes, which are then tied to funding (Crawford, 2017). Likewise, accreditation has been a long and challenging process for HBCUs (Dumas et al., 2014), and the majority of HBCUs are accredited by the Southern Association of Colleges (SACS) through its Commission on Colleges, in which many of them face challenging regional accreditation hurdles (Donahoo & Lee, 2008; Dumas et al., 2014; Lee 2008). Many of the HBCUs in SACS make up 50% of the sanctions (i.e., warning and probation), and many of them have faced budget cuts for years because of inadequate government funding (Dumas et al., 2014: Lee, 2008). Accreditation of colleges and universities is impacted by a blended model of both: (a) external factors, such as demands on the legislature for funding, and (b) internal factors, such as demands from governing boards, faculty, staff, and students (Dumas et al., 2014). Moreover, accreditation can be viewed through the critical race theory lens of challenging dominant ideology. Because accreditation drives funding, the accrediting process can sometimes have the potential to disengage and separate the process from the cultural realities that HBCUs face (Brady et al., 2000; Solorrzano & Yosso, 2002).

Persistence Rates and Graduation Rates at HBCUs

The graduation rates at HBCUs are 32% compared to the national average of 46% of all institutions (Postsecondary National Policy Institute, 2019). The six-year low graduation rates between HBCUs and PWIs are lower than that of PWIs, 32%, and 52%, respectively. Also, the retention rates of HBCUs at 65% are nine percentage points lower than PWIs at 74%. However, many of these rates and studies do not control institutional differences (Hardy et al., 2019). Institutional differences as compared to PWIs, HBCUs tend to be smaller and less resourced. The performance of African American students at HBCUs is equal to the graduation rates of African American students at Predominantly White Institutions (Gordon et al., 2019: Hardy et al., 2019).

Montgomery and Montgomery (2012) compared the graduation rates between 10 HBCUs and 10 predominantly White institutions. The researchers also examined institutional characteristics that played a factor in these graduation rates. The findings suggested that despite the HBCUs having larger numbers of low-income and less academically prepared students, HBCUs remain competitive in regard to educating

African American students (i.e., graduation and contribution to workforce development). Montgomery and Montgomery (2012) explain, even though HBCU graduation rates appear to be lower than the sampled PWIs, the students at HBCUs need more funding support to improve educational outcomes. The researchers demonstrated that all public institutions' graduation rates were low and that public institutions require more funding to meet educational outcomes aligned with funding expectations.

Likewise, Hardy et al. (2019) reported that HBCUs serve a higher portion of low-income students than PWIs; however, HBCUs showed higher first-year retention and graduation salaries once pre-college characteristics were controlled. These pre-college characteristics included SAT scores, socioeconomic status, and academic preparation, which can all have enormous effects on graduation. The difference in pre-college characteristics accounts for a significant variation in student outcomes such as graduation, retention, and graduates' salary (Hardy et al., 2019). Although students at HBCUs are less academically prepared, have fewer institutional resources, and come from lower socioeconomic backgrounds, they are still comparable with the African American population of students at the PWIs (Hardy et al., 2019: Montgomery and Montgomery, 2012).

Similarly, Gordon et al. (2019) examined the success of graduation rates at HBCUs. They found that despite HBCUs accepting more at-risk students of not graduating, HBCUs have a higher graduation rate for African American students than their peers. Gordon et al. (2019) utilized a set of control variables to condition the graduation rate difference across institutions. The sampled institutions were similarly based on variables that included student preparedness and institutional characteristics. As a result, Gordon et al. (2019) found that African American students attending HBCUs are up to 33 percent more likely to graduate than African American students attending non-HBCUs. These results suggest that HBCUs outperform other institutions once the proper comparison is made.

In summary, some HBCUs may have favorable persistence and graduation rates, while other HBCUs have persistence and graduation rates that trail non-HBCUs and national medians (Hardy et al., 2019; Gordon et al., 2019: Montgomery & Montgomery, 2012). However, HBCUs' graduation rates compare favorably compared to institutions with similar student factors and demographics such as low-income, underrepresented, and inadequate pre-college preparation (Montgomery & Montgomery, 2012). These different student factors could be contributing factors that account for low persistence and graduation rates at Historically Black Colleges and Universities. Additional research could identify the most effective performance indicators beneficial in funding models. Examples of useful indicators include equity metrics, student satisfaction measures, quality of faculty instruction, and historical spending efforts correlated to institutional academic success. Historically Black Colleges and Universities can also develop internal measures to determine academic progress and success to meet external pressures.

Higher Education Funding

Private and public institutions within higher education vary based on their source of funding, including how individual states finance higher education (Heller, 2002). Higher education tends to be disproportionately impacted by different economic cycles, which can create critical changes to the rising costs of tuition prices, financial aid programs, and state appropriations (Heller, 2002). Critical changes to a source of funding combined with increased accountability demands can influence the landscape of higher education and can have an impact on the institutions within the arena. Applying the analytical framework of Resource Dependence Theory (RDT) in examining higher education funding helps to understand how external influences and vulnerabilities are essential to identifying public universities dependency upon external pressures (Pfeffer & Salancik, 2003). When the funding of higher education is examined, the sources can be broken down into four main categories: (a) Federal, (b) State (state appropriations), (c) Student and families (tuition and fees), and (d) endowment income (Fowles, 2014).

Federal Funding. Early support from the federal government, known as the Morrill Land Grant Acts of 1862 and 1890, came in the form of land grants to help develop institutions (Mullin, 2013). Federal assistance was also extended to disabled World War I veterans and then to all returning soldiers from World War II via a program known as the 'Servicemen's Readjustment Act of 1944 (GI Bill) (Mullin, 2013). In 1958, the National Defense Education Act (NDEA) provided funding for higher education by creating low-interest loans for students (Mullin, 2013). Under the Higher Education Act (HEA) of 1965, other provisions from the federal government included institutional need-based grant programs for institutions that prepared students for gainful employment.

Formerly known as the Basic Educational Opportunity Grant Program; programs such as the federal Pell Grant program assisted students, while other forms of federal funding helped support specific research projects (Schroeder et al., 2015). Most federal assistance is comprised of Pell grants, research funding, and veteran’s benefits. Likewise, the federal government is the 'nation's largest student loan lender, as it issued approximately $94 billion in loans (Schroeder et al., 2015). In addition to the grants, research dollars, and veteran's benefits, the federal government supports higher education financing through a tax code. This tax expenditure includes credits, deductions, exemptions, and exclusions. Federal revenue accounts for varying percentages of a public college and university's budget (Schroeder et al., 2015).

Most of the federal funds that are dispersed through federal research in the form of Research and Development (R&D) grants are disbursed in the form of financial aid (e.g., Pell Grants). These disbursement mechanisms limit the direct relationship between the Federal government and higher education institutions. These disbursements have never been dependent upon unified performance indicator systems (Nisar, 2015).

State Funding. Historically, states have provided more financial assistance to public institutions and students, 65% more than federal assistance on average between 1987 and 2012 (Schroeder et al., 2015). Public higher education has been known as the "balance wheel" for state budgets, resulting in higher education becoming easy targets for massive budget cuts when the economy is doing poorly (Delany & Doyle, 2014). When the economy is doing fairly good, higher education is funded at a higher rate. State governments are tasked to allocate limited funding to public institutions and programs and conjecture that public colleges and universities balance revenue sources that differ by institutional type, typically implementing budget cuts first to public institutions (Layzell, 2007). Because of ongoing state budget pressures, states are being forced to evaluate and examine their approaches and models that allocate funding to public colleges and universities (Layzell, 2007).

Higher education funding is often the largest discretionary spending item within the state budget and continues to decline over time while competing with other state pressures (i.e., Medicaid, healthcare, and K-12 education). Factors that influence state-level spending include state fiscal conditions, political considerations, and higher education leadership capacity (Layzell 2007). By the mid-1970s, government agencies funded higher education institutions through enrollment-driven formulas. Because there is much variation across states and institutions due to the influence and autonomy state governors and legislators possess in determining appropriations (Ortega & Swinton, 2018), state revenue accounts for varying percentages of public college and university budgets (Schroeder et al., 2015).

Tuition and Fees. Another stream of revenue includes tuition and fees. When states and institutions are unable to reduce the price of tuition, students are asked to carry the burden of this increased price. Tuition and fees account for varying percentages of public college and university budgets (Schroeder et al., 2015). Institutions publish the average amount of tuition and required fees for an academic year for both full-time and part-time undergraduate and graduate students to the public (McKeown-Moak & Mullin, 2014). The price of attendance includes the average price of tuition and fees, books, educational expenses, transportation, plus the amount of room and board. This information is included in publications, such as the National Center for Education Statistics (Synder & Dillow, 2012). The published prices, in addition to the price of student expenses, are what institutions will publish on their institutional website. Often the price of attendance is referred to as the *cost of attendance* (McKeown-Moak & Mullin, 2014).

Each year, the cost of attendance estimates a student's plan and helps inform the federal, state, and institutional policies. The accuracy of projection is crucial to an institution's budget because it allows the institutions to accurately estimate their sufficiency of resources. The price of tuition can also be determined based on recommendations from state legislators, governing boards, and state executives of higher education (Armstrong et al., 2017). The variation across states on tuition setting authority is codified by board rule or policy, leaving a few states without a formal process on the state level. Some state governors are primarily responsible for proposing tuition rates, where other statewide coordinating boards, system governing boards, and individual institutions have primary authority in proposing tuition rates (Armstrong et al., 2017). Analyses are completed, and research is conducted in the tuition setting process. Institutions will examine previous tuition charges over the past several years and examine the previous charges of other institutions in comparison to that of their own (McKeown-Moak & Mullin, 2014).

Endowment Income. Finally, the fourth source of revenue is often significant at private institutions and provides a substantial proportion of institutions operating budget; however, most colleges and universities have modest endowments, or none at all (Barr & McClellan, 2018). Endowments can be defined as monies that donors or external parties stipulate that the fund's principal can be invested, and the income generated can be expended or added to the principal amount of the fund (McKeown-Moak & Mullin, 2014). The institutional staff or outside management firm is responsible for the day-by-day management of endowments. A percentage is used to support the institution's yearly operating budget (Barr & McClellan, 2018). The remaining percentage is reinvested into the endowment, allowing it to grow unless restrictions have been included. Endowments usually include a number of gifts that the donor can restrict for a specific purpose (Barr &

McClellan, 2018). These restrictions can include endowed scholarships and endowed chairs for scientific research or construction and maintenance of new buildings (Barr & McClellan, 2018).

The Organisation for Economic Co-operation and Development ([OECD], 2012) noted that 62% of higher education expenditures come from private sources within the U.S. Many early colleges and universities were started with funding from endowments and gifts from private individuals or from sponsoring churches and other organizations. Unlike private institutions, public institutions did not start raising private donations and public endowments in substantial amounts until the 20th century.

Nisar (2015) examined the policy design of funding models within the complex arena of higher education. The role of the government in policy within higher education is what Long (1958) refers to as the ecology of games. The author defined games as the interactions between groups or institutions based on a set of rules that provide the players with a set of goals, often attached to a sense of success or failure. These games can be centered on specific policy goals to which various political actors participate to satisfy different agendas and ideals. These political influences refer to the role of the players' and the sequence of multiple games that are being played simultaneously, while each player is concerned with a single game (Long, 1958). The politicians are playing one game, the bankers are playing another game, and the institutions are playing another game (Nisar, 2015). The analyses of games used in educational policy helps to illustrate critical insights into policy formulation and implementation.

The federal government game is one in which universities participate, where the institutions are more interested in Research & Development grants, federal financial aid, prestige, and influence. Politicians and policy makers are interested in the symbolic value of their respective policies for re-election purposes (Nisar, 2015). The state has a role in which they seek to gain more funding from the federal government in support of higher education and other purposes. Many universities are competing against one another in this game. The competition is related to money and prestige, which are associated with: (a) non-profit donors, (b) industry, (c) business firms, (d) ranking agencies, (e) research journals, and (f) endowments.

Lastly, another game that influences institutional behavior is the one played between universities and students. Attracting 'good' students can raise the prestige of a university while also becoming more likely to be alumnus donors later. In addition to the tuition that these students pay, making tuition a significant revenue source for universities has become a dangerous game. Some researchers acknowledge that this ecology of games metaphor can be used to describe the limited influence that federal and state policies have on influencing institutional behavior on higher education governance (Nisar, 2015). Examining through the analytical framework of resource dependence theory, Nisar (2015) helps explain public institutions' behavior and how these behaviors are shaped and governed by external resources (Pfeffer & Salancik, 2003).

In summary, the history of funding higher education in the U.S. has been influenced by the federal, state, and local levels of government. The federal government has supported higher education by providing land grants to institutions, assisting disabled World War I and II veterans, developing institutional need-based grant programs, and creating research and development (R&D) grants (Mullin, 2013). State funding varies from state-to-state and operates as discretionary spending within state budgets. Higher education is also funded through streams of revenue that include tuition and fees that come from students and families and endowment income that comes from private donations and philanthropic efforts. Likewise, as state appropriations continue to be a significant source of income, the influence of funding can be equivalent to multiple players in a higher education game being played in society (Nisar, 2015).

Texas Governance and Formula Funding

Each state has a particular governance structure, policy goals, and political components that affect its own higher education system differently. In Texas, the Legislature and committees play a very distinct role in policy formation and meet biennially for 140 days (Wolf, 2004). Public universities in Texas are organized as either independent institutions or as members of multi-campus university systems. In Texas, it is the Lieutenant Governor and Speaker of the House that controls the public policy process (Wolf, 2004). However, the governor appoints private citizens to committees, commissions, advisory panels, and boards (Wolf, 2004). The governor appoints leaders to the Texas Higher Education Coordinating Board.

Hackworth (2019) examined state funding perceptions from Texas state legislators by surveying the House of Representatives and the Senate's legislators. The researcher found that the Texas legislature members are predominantly comprised of Caucasian males with at least 50 percent of them having no committee (I.e., education appropriations committee, higher education committee, or public education committee) experience responsible for governing or funding Texas public higher education. While Texas state legislatures agree that funding appropriations should exceed the amount students pay in tuition and fees and tuition increases should increase additional financial aid provided to the student, their perception shapes funding policy decisions differently. Hackworth (2019) found that the rationale for individual decision making is limited by the decision problem's tractability, the cognitive limitations of their minds, and the time available to them. These perceptions from the Texas legislation could be missing from how HBCUs are prioritized in formula funding and what counter-storytelling of critical race theory refers to as telling the HBCU stories and experiences that are not often told (Solorzano & Yosso, 2002). A good understanding of HBCUs within higher education and its mission can influence perceptions, and perceptions influence decisions (Hackworth, 2019).

The Texas Higher Education Coordinating Board. The higher education system in Texas is overseen by the nine-member Texas Higher Education Coordinating Board (Texas Higher Education Coordinating Board (THECB) 2020a), which was created by the Texas legislature in 1965 (Legislative Budget Board (LBB), 2019b: THECB, 2020a: Wolf, 2004). The purpose of The Higher Education Coordinating Board (THECB) is to develop a master plan for higher education within Texas and work with the Legislature and Texas colleges and universities to ensure that the state's strategic goal is being implemented (Texas Higher Education Coordinating Board (THECB), 2020b). The statewide body THECB is responsible for making policy recommendations that include appropriations and funding formulas (to the legislature), approving all new academic programs in the state, approving university strategic plans, administering the state financial aid programs, and approving building projects supported with state funds (THECB, 2020b).

In 2004, then governor of Texas, Rick Perry, issued executive order RP 13, an order that required each institution and system to work together to provide information deemed as necessary to determine the effectiveness and quality of education (THECB, 2020b). The accountability system for public higher education in Texas provides data for 37 public universities, nine health-related institutions, four Texas State technical colleges, and three two-year Lamar State Colleges (THECB), 2020a). In 2005, the two-year community colleges were added to the accountability system.

The higher education coordinating board has appointed a subcommittee called the General Academic Formula Advisory Committee in which they develop a funding formula to achieve the 60x30Tx statewide higher education strategic plan (Ellis, 2016). Public institutions are allocated direct appropriations through a formula and non-formula funding model (Hackworth, 2019; LBB, 2019b). The complex formula funding for public universities in Texas is primarily based on enrollment and instructional costs. The public universities work with THECB to submit budget requests to the governor. The state's legislature then votes on the final amounts, and the THECB disburses the funding to the institutions (LBB, 2019b).

Texas Formula Funding/State Appropriations

State appropriated funds for higher education in Texas include revenues to support instruction, student services, administration, employee benefits, capital construction, and other campus needs (Hackworth, 2019). During each biennium, higher education within Texas also needs additional financial assistance to support special item requests that are most often included as a part of general revenue appropriations (LBB, 2019b). Higher education institutions' funding is appropriated through four methods:

General revenue funds, general revenue-dedicated funds, federal funds, and other funds (LBB, 2019b). It is essential to understand that Texas is funding community colleges differently from four-year public universities during the time of this study. Community colleges receive a percentage of funding through an outcomes-based model, while universities are funded through a model with two types of formulas (LBB, 2019b).

The funding formula is a mathematical algorithm that includes instructions and operations formula and an infrastructure formula. Within the formulas, semester credit hours (SCH) measure how many classes and the number of students enrolled in those classes an institution delivers. In addition, SCH is weighted by discipline (i.e., engineering is weighted more than liberal arts) and by levels such as lower and upper-division, masters, doctoral, and professional degrees (LBB, 2019b).

Instruction and Operations Formula. The central calculation for Texas formula funding is the instruction and operations formula (Hackworth, 2019). This formula accounted for 83.1% of the overall formula funding ($4,143.1 million) for the 2018-19 biennium. (LBB, 2019b). The base period for 2018-19 biennium included summer 2016, fall 2016, and spring 2017. The formula is calculated as SCH x Program and level Weight x Rate ($55.82).

Teaching Experience Supplement. The specific calculation for the teaching experience supplement formula is calculated using the semester credit hour (SCH) program type and course levels (Hackworth, 2019). During the 2018-19 biennium, this appropriation accounted for $95.4 million (LBB, 2019b). The formula is calculated as SCH x Program and Level Weight x Supplement (0.10) x Rate ($55.82).

Infrastructure Support Formula. The infrastructure support formula accounted for 16.9% ($748.3 million) of the four-year public universities formula funds for the 2018-19 biennium (Legislative Budget Board (LBB), 2019a). The formula uses a statewide infrastructure rate with two different rates. These rates are known as the adjusted utility rate and all other rates. The adjusted utility rate is 41.1% of the statewide infrastructure rate, and all other rates are 58.9% of the statewide infrastructure rate and remain constant among institutions (LBB, 2019a). The formula is calculated as (Adjusted Utility Rate+ All other Rates) x Predicted Square Feet.

Small Institution Supplement. As the final piece to the formula funding model, institutions with less than an enrollment of 10,000 students qualify for the small institution supplement (LBB, 2019b). Before 2009, institutions with less than an enrollment of 5,000 received the additional supplement that totaled to $750,000 (Hackworth, 2019). In 2009, the 81st Legislature increased the threshold to 10,000 students.

Institutions experience a decrease in formula funding that can be caused by a decrease in enrollment, a shift from upper-level or graduate semester credit hours to lower-level hours, a change in utility costs, or a small increase in enrollment than other institutions (LBB, 2019b).

Non-Formula Funding. Some appropriations are considered non-formula support items and are direct appropriations from the General Revenue Funds and the General Revenue- Dedicated funds (LBB, 2019b). Previously called special items, these activities are not funded by the formula; however, they are designated by the Legislature for state support. Not every institution receives these layers of support because they are items that identified by the Legislature as needing support (LBB, 2019b). Additional examples of non-formula funding items include institutional and instructional support, public service items, accreditation program items, and research items other than general research support and funding for separate campuses (i.e., Permanent University Fund (PUF), Available University Fund (AUF), and Higher Education Fund (HEF), salaries health insurance premiums, social security benefits, and retirement contributions. For the 2018-19 biennium, non-formula appropriations totaled $422.8 million. Although institutions are not required to spend the non-formula support item, previous expenditure reports indicated that institutions used the entire appropriations (LBB, 2019a).

The two flagship institutions in that state: the University of Texas and Texas A&M University, were both founded and endowed in the 19th century receive the Permanent University Fund (PUF) each (Hu et al., 2020). Each institution provides oversight to other campuses and state agencies that make up individual systems. There are 11 universities within the Texas A&M University System and 14 within the University of Texas System. In 1923, oil was discovered on the lands where the state invested revenue and placed it into the PUF. Only the campuses within the University of Texas and Texas A &M University system are allowed to receive these funds' disbursement (Hu et al., 2020). These differences in funding have allowed these institutions to benefit from the PUF revenues. In addition, institutions that receive funding from the PUF do not receive money from the Higher Education Fund (HEF) as well. The Higher Education Fund are for institutions that do not receive PUF disbursements.

Additionally, some universities receive support from research funds. These research funds include the Texas Research University Fund, the Core Research Support Fund, the Comprehensive Research fund, the Texas Research Incentive Program, and the National Research University Fund (LBB, 2019a). Aimed at helping "emerging research universities," the state of Texas adopted the Texas Research Incentive Program (TRIP) in 2009 (Hu et al., 2020).

Only eight universities were eligible as they were able to match the funds from the state for gifts or endowment donations, leaving less resourced and less selective institutions ineligible for the matching grants (Hu et al., 2020). The institutions that were granted "emerging research" designations were: the University of Texas at Arlington, the University of Texas at Dallas, the University of Texas at El Paso, the University of Texas at San Antonio, University of Houston, University of North Texas, Texas State University, and Texas Tech University (Hu et al., 2020). The capital funding that comes from the Available University Fund (AUF) and the Higher Education Fund (HEF) constitutional appropriated funds are for debt service on tuition revenue bonds (LBB, 2019b). The non-funding formula from general revenue-dedicated funds includes funds that are a portion of tuition revenue set aside by institutions for financial aid to students known as the Texas Public Education Grant (TPEG).

During the 2018-19 biennium, THECB recommended structuring funding to increase student success (LBB, 2019a). The higher education coordinating board recommended that the legislature adopt a "Graduation Supplement" for public universities to invest in academic and student support services to help students complete their degrees. This recommended graduation supplement would measure a university's performance on two metrics that included the average number of “at-risk” and not “at-risk” students completing their undergraduate degrees during the previous three years (THECB, 2020a). According to THECB (2020a) an “at-risk” student is defined as either being Pell grant eligible or below national averages on the SAT or ACT. It is proposed that universities would receive $500 per not “at-risk” graduate, and $1,000 for each “at-risk” graduate” (THECB, 2020a). The recommendation from THECB proposes providing additional funding for graduating “at-risk” students by compensating institutions for the greater support needed to help service “at-risk” students and complete their program. Ideally, the proposal would also encourage institutions to assist the underrepresented population, which must be completed at higher rates to achieve the 60x30TX goals (THECB, 2020a). However, how and where this additional funding would come from is yet unclear.

There is little research on studies that sample across different institutions such as flagships state universities and their regional system institutions. Ellis (2016) examined the benefits and burdens of a proposed performance-based funding model for the 37 public universities within Texas to see if the model reflected significant differences in institutional missions, diversity of students, or if proposed metrics would exacerbate inequalities in funding. The researcher converted the weights of metrics into dollar amounts studying the proposed PBF model's general effects. The researcher found that the Legislature session's recommended funding showed the possibility of incentives to be less beneficial. Ellis (2016) found that institutions will benefit from a PBF model if the formula funding focuses exclusively on operations and spaces. However, if formula funding shifts to having the institutions rely on bonus dollars only, this would result in the public institutions being burdened with reallocating funding from their current budgets to meet the state's 60x30Tx strategic plan (Ellis, 2016). Also, Ellis (2016) concludes that regional institutions stand to gain and lose the most, whereas flagship institutions stand to gain and lose the least if the formula funding ties performance indicators to state appropriations.

The decline in state investment for public universities can be devastating for institutions that serve low-income students that are not academically prepared. Bachelor completion rates in Texas are impacted by a significant factor that includes college readiness for students of color (Elliot, 2016). Bailey (2011) examined higher education policies and college preparedness towards two Hispanic-serving institutions. The case-study examined a public four-year HSI (University of Texas at El Paso) and a two-year feeder HSI (El Paso Community College). The university's biggest funding challenge was simply the overall declining trend in per-student state appropriations, which had a disproportionate effect on the university versus other system schools. Inadequate funding coupled with under-preparedness for undergraduate studies and the amount of remediation significantly impact degree completion (Adelman, 1999). Likewise, the performance indicators in college readiness changed, and the two institutions would be placed in a situation with trying to improve outcomes with fewer funds (Bailey, 2011).

In summary, Texas's governance structure comprises the governor appointing leaders to THECB, which serves to review and recommend changes in formulas for state funding appropriations. Currently, funding appropriations for universities are allocated through formulas that are different from two-year colleges. The four-year universities receive funding through two different formulas, instructions and operations formula and an infrastructure formula. Although there is continued consideration from Legislation to tie a percentage of funding through an outcomes-based funding model for four-year universities, a legislation bill has not been enacted. There is not much literature on formula funding in Texas and the impact on public four-year universities. The majority of literature on outcomes-based models in the state is centered on two-year public institutions; however, proposed funding formulas do not show much empirical evidence of institutions benefiting.

Accountability Concepts

The concept of accountability is not new; however, various meanings of the term "accountability" are used in higher education. McKeown-Moak & Mullin (2014) describe it as institutions in higher education being “accountable through financial and/or performance audits, through accreditation by regional or discipline-based accrediting agencies, by compliance with state and federal regulations, or through quality assurance programs” (p. 164). Many of the early colleges and schools generated specific types of accountability, and institutions are deemed accountable through financial and performance audits, accreditation or discipline-based accrediting agencies, federal and state compliance regulations, and quality assurance programs (McKeown-Moak & Mullin, 2014). These institutions are accountable to governing and coordinating boards, agencies that provide federal, state, and local funding, students and families, the faculty, staff, and community.

Generally, university financial officers are responsible for providing financial audits for the financial accountability of institutions. Faculty and staff within student services are responsible for providing accountability for students and student progress towards graduation or program completion. Furthermore, in new trends and best practices in higher education, financial officers may be responsible for providing financial and academic accountability while maintaining an institution's quality assurance program (McKeown-Moak and Mullin, 2014). Accountability can be thought of in terms of state priorities, academic concerns, and market forces (Burke, 1998). These three targets for accountability can have competing forces that reflect civic, collegiate, and commercial interests. Burke (2004) identifies these forces as state priorities representing political accountability, academic concerns reflecting professional accountability, and market forces reflecting the customer demands and needs of students, parents, and businesses.

Texas Accountability System and Measures. Texas was amongst the first states to implement a formula funding policy in the 1960s. In the mid--1980s, Texas experienced an economic downturn due to the decline in oil prices and agriculture (Bogue, 1993). In the 1992-93 biennium, Texas initiated Performance-based budgeting (PBB), which combined strategic planning, budgeting, budget implementation, and budget monitoring (Bogue, 1993). Performance is considered as a factor in appropriations; however, it does not directly link performance to funding as in Performance-based funding. The primary functions of PBB consist of legislative oversight of THECB performance, agency accountability, and prioritization of state funding (Bogue, 1993: Hackworth, 2019).

Texas's public colleges and universities provide data on performance indicators established by the Governor's Office and the Legislative Budget Board. However, unlike other states, these performance indicators are not tied to funding through Texas's reward mechanisms. In 2004, Texas's governor issued an executive order that called for the development of a statewide accountability system (THECB, 2020a). Texas's current accountability system comprises four critical areas: (1) Key accountability measures; which measures the participation, success, excellence, research, and institutional effectiveness and efficiencies; (2) Contextual/explanatory measures; which are additional measures that help to describe each institution's specific efforts better; (3) Institutional explanation and description; allows each institution to provide further information or needed explanation, and finally; (4) Out-of-state peer comparisons; provides each university with at least five peer comparison institutions (THECB, 2020a).

Moving towards increased accountability concepts, especially within Texas, could be examined through the lens of interest conversion as a tenant of critical race theory. Current literature (Boland and Gasman, 2014) suggests that PWIs have benefited more than HBCUs from formula funding trends, especially those with increased measures that do not benefit institutions that serve larger portions of low-income students. Williams (2020) identified that public HBCUs in Texas invest a more significant proportion of their total funds on student services and scholarships than the state’s flagship institutions. In 2018, one public HBCU spent 21 percent of its total funds on student services and scholarships, and the other public HBCU spent 16 percent of its total funds on student services and scholarships (Williams, 2020). On the contrary, the flagships institutions within the state spent eight and 12 percent total on student services and scholarships. To this end, Williams (2020) found that the average difference in state investment per student for the two HBCU’s and PWIs was nearly $2,500.

Many states are subjected to accountability pressures for public institutions in higher education (Kelchen, 2018). Many state policymakers are concerned with institutional effectiveness and have focused efforts toward increased accountability concepts. Accountability assessments can include indicators, goals, and objectives in which early measures were based on inputs (McKeown-Moak & Mullin, 2014). Although there has been a shift to output indicators (i.e., graduation rates), it still can vary from state to state and from institution to institution. Texas is an example of one of those states that have not linked state appropriations to those performance indicators; however, current formula models have not closed the equity gap between public HBCUs and public PWIs.

Summary

There has not been much research on state funding formulas for HBCUs and other MSI's (Boland, 2020). The literature review introduced what researchers have identified as the historical purpose and foundation of HBCUs, and their relevant contributions to the community, to the workforce, and the higher education arena (Allen et al., 2007; Conrad & Gasman, 2015b; Davis 2015; Minor 2008a; NSF, 2006; Seifert et al., 2006, U.S. Department of Education, 2016; Wilcox et al., 2014; Williams 2020). In addition to the funding disparities, researchers have reported that HBCUs depend more heavily on state funding than PWIs (Brown & Burnette, 2014; Coupet, 2017; Palmer et al., 2011; Sav, 2000; Williams & Davis, 2019). Formula funding varies from state to state, and in Texas, the funding formula has performance indicators that are not tied to state appropriations during the time of this study.

CHAPTER III

Methodology

Introduction

In Texas, the THECB partners with public institutions to develop and provide state strategic plans. From a calculated funding formula model, THECB provides recommendations and presents them to the Legislative Budget Board (LBB) on the first of June on even years (LBB, 2019b: THECB, 2020a; Wolf, 2004). Unlike other state policies, Texas uses instruction and operations, infrastructure support, supplemental teaching experience, and small institutional supplement as components of the formula funding. However, there has also been a push in recent years to implement outcomes-based funding based on student-success metrics.

In the accountability era of higher education, policymakers suggest that graduation rates are useful for analyzing institutional efficiency (Montgomery & Montgomery, 2012). It is also recommended that specific performance indicators such as graduation rates and retention can help serve as a tool to determine the various funding levels for institutions. Historically Black Colleges and Universities vary in control (i.e., private, public) and award level(i.e., 2-year, 4-year.), and differences amongst them and other public institutions can be found in other areas than their graduation rates. These differences can include (but are not limited to); admission criteria, high school academic success, socioeconomic background, and higher educational attainment (Montgomery & Montgomery, 2012). HBCUs and their programs have additional institutional characteristics that should be considered when analyzing institutional indicators.

This qualitative single-site case study utilized questionnaires and interviews to examine the implications of the state's current formula funding model on a select public HBCU. This chapter will present the study's design and is organized into five sections: (a) introduction; (b) research purpose; (c) research questions; (d) research design; (e) participation selection; (f) data collection; (g) data analysis; and (h) a summary.

Research Purpose

The purpose of this study was to explore the extent to which HBCU leaders identify and experience implications with the state's existing funding strategies. This study was used for a single institution and explored the low-income and underserved students that the institution served. In-depth probing provides the advantage of focusing on a single site (Yin, 2009). In addition, the single-site case study allows "researchers to collect detailed information using a variety of data collection procedures over a sustained period of time" (Creswell, 2014, p. 14). Because of the limited research on formula funding models and the impact on HBCUs, this research can help shed light on policies that influence HBCUs' institutional outcomes. The research questions that guide this study are:

Research Questions

1. What are the perspectives of select HBCU administrators on how the state provides funding for public HBCUs?
2. How have the current funding strategies in Texas contributed to inequitable funding for HBCUs in the state?

Research Design

The single-site case study focused on a public HBCU in context with its state policy. The researcher employed criterion-based sampling and identified a site that fulfilled the criteria. This study's criteria directly reflected this study's purpose and supported identifying information-rich cases (Merriam & Tisdale, 2016). Using a criterion-based sampling for this case study, I selected a site and identified individual interview respondents who could discuss the formula funding relationships and experienced challenges. In addition to this case study design, I interviewed and collected detailed experiences from the participants who work directly with the institution's student population. The baseline criteria for the selected site included:

1. Holds a federal HBCU designation
2. Public Institution
3. Four-year institution
4. Regionally accredited
5. State formula funding from the state of Texas

A sampling of the first five criterion yielded two institutions. From the two eligible HBCU institutions, I considered my ability to access the site. I had direct professional contact with the administrators, students, and alumni at the eligible HBCU institutions. The site selected for this study was given the alias of Kranston Central University (KCU). The institution had approximately 9,500 students and offered a range of bachelor's degrees in approximately 50 academic programs. There was public access to state agencies' records and public universities' performance in Texas in academic and other areas. The designated participants' access allowed participants to connect me with potential participants.

Participant Selection

The participants for the study provided a lens in relation to their position at the university. Selected interviewees possessed some knowledge of the HBCU's internal context, campus context, and state policy context. Pilot testing for the interview protocol with at least three participants (i.e., one from upper administration and two from the student services and faculty group) was sought after initially to ensure participants understood the questions, and the transition from one group to another worked well so that the protocol was not too long.

The participants not included in the pilot testing initially consisted of two groups of study participants—four to five individuals who held at least five or more years in upper administration. Upper administration refers to positions that include the president, which serves as the liaison between the governing board and provides overall leadership to the institution (Hendrickson et al., 2013). The chief financial officer (CFO) oversees the institution’s fiduciary operations. The individual in this position provides leadership to areas within the university that encompass smaller departments and specialized services of student services, institutional support, auxiliary enterprises, and the physical plant's maintenance and operation (Hendrickson et al., 2013).

The Provost, also known as a “Vice President” depending on the institution, is generally responsible for academic affairs by establishing the institution’s academic vision and working closely with deans and department heads. The Vice President (VP) of enrollment management is typically responsible for creating and implementing strategies to attract, enroll, and retain students (Bontrager, 2004). The VP of enrollment management works with several departments, including financial aid, admissions, and the registrars. These selected individuals were preferred because they were viewed as critical internal stakeholders aiding in the decision-making process of budgets and the call for additional state funding.

The second group of study participants consisted of three to five staff and full-time faculty participants that held at least five years in higher education at an HBCU, particularly in student service functional areas or directly interacting with students. The staff in student services helped provide a narrative that offered insight into the direct interaction and engagement with students. The initial desired participants' included the director of tutoring services, a financial aid counselor, a student affairs administrator (i.e., dean of students), two faculty (i.e., one faculty that teaches development education), and an academic advisor.

The financial aid counselor is responsible for determining aid eligibility, offering grants, managing loans, and providing students with payment plans. A Dean of Students is responsible for developing and assessing nonacademic programs to improve campus life and enrich the student experience. In addition, the Dean of Students handles disciplinary issues and communicates with students and legal guardians (Hendrickson et al., 2013). Academic advisors are responsible for advising students on the courses needed to graduate on their academic career's overall roadmap and equipping students with the necessary tools to achieve academic success (Hendrickson et al., 2013). The full-time faculty from different disciplines provide a combination of teaching, research, and service contributions to the students and institution. The faculty may have various ranks that may not be tenured and influence the university curriculum, graduation requirements, and admissions criteria. In addition, full-time faculty have more experience interacting with students, often serving as the first line of defense of support to students.

The participants were knowledgeable in the funding strategies and held university affiliations for at least one year. In addition, the faculty and staff working in the student service areas provided insight into the type of students that the university serves. The affiliation for one year with the selected HBCU is significant to the study because it is expected that the participants have a working knowledge or involvement of the state's funding strategies and the low-income and underserved students at the university.

Instrumentation/Data Collection

Interviews

One-on-one, semi-structured interviews were conducted via Zoom or in-person. Doing face-to-face interviews was preferred to observe the participant's behaviors closely during the engagement and get more context for the study. Participants were recruited with a pre-approved email detailing the study's purpose and the interview's confidentiality. In addition to the approval, participants completed an informed consent form. Along with the participant’s permission, interviews were recorded and transcribed. Participants were asked about their connection to the university when the interviews were initiated. These background questions included the length and nature of their current role and any former roles related to higher education. In addition, participants were asked about their understanding of the state funding strategies and the university's role in meeting benchmarks to receive appropriations.

While the interviews were recorded, the transcripts were not considered the interview notes. Instead, pseudonyms were used for all participants and the institution, including gender-neutral first names and common surnames to protect the identity of the participants. Participants had the opportunity to select their pseudonyms before assigning them. Where possible, gendered pronouns will be avoided. Interviews followed the interview protocol of open-ended questions included in Appendix A.

Supplemental Documents. Documents such as the THECB Interactive accountability system website and reports from the Texas legislature biennium sessions (i.e., 86th, 85th, 84th) were readily available for the researcher. However, these documents were only used as needed to assist the researcher with adding more context to the information that the participants provided. The THECB interactive accountability system was only utilized to download institutional data and predefined reports (i.e., fall headcount, graduation rates, degree, and certificate awarded) that showed the institution's accountability measures. The accountability system tracks performance on critical measures that exemplify the institutional mission.

State policies and desired outcomes of Texas's state formula funding model came from THECB higher education policy and appropriations, formula funding recommendations (i.e., 86th and 87th legislature), and the legislative budget board reports. Each legislation session within Texas holds its regular session in January of odd-numbered years, and reports are made available (LBB, 2019a). The documents will include public and historical documents examining the historical contexts of funding trends and how the funding model changes have impacted the institution.

The THECB accountability system provided a large depth of data on Texas's state of higher education. The system tracks public institutions' performance on critical measures and provides reports, interactive portals, and institutional profiles for 38 public universities (THECB, 2020b). The measures are centered on the state’s strategic plan, also known as 60x30TX. The strategic plan is designed to address public concerns about producing a larger workforce, with all postsecondary attainment being critical to the strategic plan's success (THECB, 2020b). Ideally, the workforce must be educated, adapt, and compete at the highest level. The plan's goals are to have approximately 60 percent of the state’s 25-34 year-olds obtaining a postsecondary credential by 2030 (THECB, 2020b). Including underrepresented student populations in higher education for the 25-34-year-old population is critical to the plan’s success. The goals include: (a) educated population; (b) completion; (c) marketable skills; and (d) student debt.

The first goal of the 60x30TX plan aims to raise the percentage of postsecondary attainment for the young adult population (THECB, 2020b). The second goal projects that at least 550,000 students will complete a certificate, associate, bachelor's, or master’s from a Texas institution by 2030 (THECB, 2020b). The plan’s third goal is to identify marketable skills from the programs students will graduate from. In doing so, institutions will document, update, and communicate all of the skills students acquire in their programs (THECB, 2020b). The fourth program of the 60x30TX plan is designed to balance a graduate’s potential earnings during the first year after college with the level of student loan debt received (THECB, 2020b). The Institutional Review Board approved the study at Sam Houston State University.

Data Analysis. The notes taken during the interview and transcription of the recorded interview were summarized, assessed, and categorized according to the interview responses. The categorizations included the generalizations observed, views on the state formula funding policy, the views on interactions with the types of students at the institution (i.e., low-income, academically prepared), and the participant's possible conclusions on the inequities to the funding strategies.

The in-depth interviews provided opinions and historical data concerning the funding process, views of the current process, and views on the institution's students. After collecting the data through interviews, recommendations for employing Creswell’s (2014) inductive analysis and emergent theme design were employed. Becoming familiar with all the raw data: listening to interviews, reading transcripts, and reviewing documents and notes before coding occurred first. Once sufficiently reviewed, each line of text was examined and assigned codes accordingly. Dedoose analysis software was utilized to organize the codes. According to Creswell (2014), coding refers to the process of organizing data by brackets and writing words or phrases that represent a category, and labeling that category with a term in the margins (Creswell, 2014; Rossman & Rallis, 2012). The emergent design allowed all phases of the interviewing process to change or shift if the questions or participants needed to be modified (Creswell, 2014).

Dedoose is a web-based application that allows researchers to organize and analyze research data from both a qualitative (text, audio, images) and quantitative (spreadsheets, surveys, demographics) form (Salmona et al., 2020). The computer program organized and analyzed text for qualitative research. The program was primarily used to organize, code, and theme the collected data. Using the software helped conduct multiple rounds of coding to identify dominant categories and themes (Creswell, 2014). After the transcribed interviews were typed up, the filed notes were arranged into different data types and then examined. The process helped get a general sense of the information and reflect on the overall meaning (Creswell, 2014). The assistance of the software provided multiple rounds of coding to identify dominant codes and themes. Also, the analysis proceeded hand-in-hand with other parts of the data collection. While interviews were scheduled, earlier interviews were conducted, and supplemental documents were analyzed and included in the organizing and structure of the final report (Creswell, 2014).

Trustworthiness. Trustworthiness was ensured through the observation of field notes that were taken through the conducted interviews. The different interviewees' perspectives will provide trustworthiness, which is why at least 5-10 participants were identified and selected to participate in the interview. In addition, two validity strategies were incorporated and included: triangulation and clarifying the bias that I brought to the study (Creswell, 2014). Multiple perspectives were triangulated on the same data. The triangulation aimed to test for consistency across different data types, in this case, interviews, observations, and audiovisual information. Themes were established based on merging the participants' perspectives and, when necessary, supplemental documents. The triangulation helped to increase the rigor and trustworthiness. My bias was clarified by providing interpretations of the personally experienced findings that were shaped as a low-income first-generation student who attended an HBCU. These lived experiences are a part of my positionality and reflexivity as the researcher.

Researcher Reflexivity. As a first-generational and low-income student who attended and graduated from an HBCU, I am aware of the role that HBCUs play within higher education. The institution that I am a proud graduate of helped provide a campus culture and haven necessary to succeed. I participated in a youth program and went on a Black college tour as a junior in high school, which shaped the trajectory of my future endeavors. Leading to a rewarding and fulfilling professional experience, I have been afforded the opportunity to experience the lens of an administrator at an HBCU working with students. This professional experience at an HBCU has placed me in very stimulating environments that have been full of new ideas and intelligent debate. It has also been an environment that is constantly evolving under the influence of federal and state government policies, global relations, and changes in funding. These identities and lived experiences will be a part of processing my positionality and reflexivity as the researcher.

These experiences have allowed me to be invested in research work on HBCUs and have the potential to give me unique insights during data collection. While my shared experience connected to the interview participants, I approached the research with care and respect. In addition, I separated my own experiences and perspectives from those that were reflected in the interview. Finally, I centered on HBCUs, state funding, and equity in doing this work.

Summary

Formula funding has various definitions of success from state to state and from institution to institution. Defining "success" in funding strategies is the same challenge that makes it hard to define and transfer goals into outcomes and weights to meaningful measures (Burke & Morarresi, 2000). This study examined both the tangible and intangible characteristics of students at HBCUs in relation to funding strategies. The study conducted a case study on a single site on a select four-year public HBCU by collecting data through interviewing the leaders of an HBCU. Future research is needed to examine the influence of different funding models in specific state contexts

(Dougherty et al., 2016:Hu & Villarreal, 2019). Policymakers and practitioners could benefit from a multitude of qualitative and analytical approaches and research designs that may provide insight into institutional needs and missions.

CHAPTER IV

Results of Data Analysis

Chapter 4 will provide the results of the single-site case study. The purpose of this study was to explore the extent to which HBCU leaders and community leaders perceive the state's existing funding strategies. The study was for a single institution and also explored the perceptions of participants that work with the low-income and underserved students that the institution serves).

In-depth probing provided the advantage of focusing on a single site (Yin, 2009). In addition, the single-site case study allows "researchers to collect detailed information using a variety of data collection procedures over a sustained period of time" (Creswell, 2014, p. 14). The one-on-one semi-structured interviews were used to reveal the implications of the current state funding strategies on a specific HBCU from the lens of its institutional and community leaders. This chapter includes an overview of the study, data collection, data analysis, findings, and the chapter summary.

This study relied upon open-ended interviews to answer two research questions:

1. What are the perspectives of select HBCU administrators on how the state provides funding for public HBCUs?
2. How have the current funding strategies in Texas contributed to inequitable funding for HBCUs in the state?

There were eight one-on-one, semi-structured interviews via Zoom and one in-person interview for a total of nine interviews. Conducting face-to-face interviews were preferred to get more context for the study; however, the researcher also complied with the participants' preferences due to the Covid-19 pandemic. The participants determined the interview schedule based on their availability to participate without interruption. Face-to-face interviews helped the researcher observe the participant's behaviors closely during the interaction. Participants were recruited with a pre-approved email detailing the study's purpose and the interview's confidentiality. In addition to the approval, participants completed an informed consent form.

Along with the participant’s permission, interviews were recorded and transcribed. When initiating the interviews, participants were asked about their connection to the university, including the length and nature of their current role. The community leader was asked about their role within the state legislature and their outlook on HBCUs. Participants were asked about their understanding of the state funding strategies and the university's role in meeting benchmarks to receive appropriations. Pseudonyms were used for all participants and the institution, including gender-neutral first names and common surnames to protect the identity of the participants.

Pilot Study

The researcher conducted a single-site case pilot study to test and add validity to the semi-structured interviews. The single-pilot participant had similar qualifying characteristics as the target participants in the research sample and worked at a public HBCU in the state not used in the final study. Creswell (2014) recommends pilot testing to help adapt research procedures, assess the degrees of observation bias, and refine and develop research instruments. The results from the pilot study led to refinements of the interview protocol. These refinements included rearranging questions based on the participant’s role (i.e., working directly with students or serving strictly in an administration role). The protocol was then used for the study. The pragmatic approach of the pilot study helped initiate and inform the experiential learning of research procedures and critical listening techniques to participants’ responses for the researcher’s purpose. The pilot study also served as an indication that the 30-minute time frame would be adequate for interviews. This case study was centered on two research questions that allowed the researcher to investigate the perceived and actual impact of funding strategies on a public HBCU. The data collected from the pilot interview was not used in the final analysis.

Participants

The final findings described in the study were based on the experiences of two different participant groups. Four individuals held upper administration positions at the institution, and one participant served as a state representative. In addition, four participants who work directly with students as faculty or in a student service role were a part of the second group of participants. The initial desired upper administration participant group included the institution's president, the chief financial officer, the provost of academic affairs, and the vice president of enrollment management. However, scheduling conflicts arose for the president, resulting in the participation of a state legislature representative instead. The state representative provided important context as someone who serves on the appropriations committee for the state. Also, the provost emerita were added to the upper administration group and recommended by another upper administrator participant. The provost emerita was also a participant who could provide a historical background of the institution and a historical lens of how it responded to funding strategies during their tenure.

In addition, the initial desired group for the participants that work directly with the students or in a student service functional area included: the institutions director of tutoring services, a financial aid counselor, a student affairs administrator (i.e., dean of students), two faculty (i.e., one faculty that teaches development education), and an academic advisor. However, again, because of scheduling conflicts, one of the faculty participants and a student affairs administrator could not participate in the study. There was a total of nine participants that contributed to the study. Tables 1 and 2 below describe the role of each participant. In addition, the number of years they have served at an HBCU or as an HBCU community representative.

Table 1

Demographics of Upper Administration and Legislative Participants

Participant	**Position**	**Years of Service at HBCU and Community**
Dr. Franklin	Provost	19
Dr. Carrie	Vice President of Enrollment Management	7
Dr. Bady	Chief Financial Officer	5
Dr. Sofi	Provost Emerita	45
Rep. Julian Justice	State Representative	5

Note. Pseudonyms were assigned to each study participant

Table 2

Demographics for Student Service and Faculty Participants

Participant	Position	Years of Service at an HBCU
Dr. Paul-Herron	Director of Tutoring Services	5
Dr. Lizzy	Assistant Director of Advising	28
Dr. Pauline Turner	Associate Director of Financial Aid	8
Dr. Georgia Howard	Full Professor/Director of an Academic Center	45

Note. Pseudonyms were assigned to each study participant

Data Analysis

After the interviews were conducted, the zoom meetings and recordings were relied upon to transcribe and clean up the data. This transcribing process allowed the researcher to become familiar with the raw data and prepare for the data analysis process. The data analysis process was initiated by listening to the audio files of interviews and reading transcripts several times to identify specific categories of information. Including editing the information, categorizing responses, and summarizing the personal explanations of the participants. By listening to the recorded interviews and reading the transcripts to identify initial similarities in responses, the similar responses were manually identified by written memos, and frequent words and phrases were charted. These memos were then used to discover patterns in responses used for coding and developing themes.

Next, Microsoft Word documents of memos and transcripts were loaded into Dedoose software to develop data displays further. Dedoose is a web-based application that allows researchers to organize and analyze research data from qualitative and quantitative data sets. The responses from the two different participant groups were used to create codes in Dedoose software. Themes from Dedoose coding verified manual coding and were displayed in a summative graph from Dedoose indicating frequency.

Findings

Codes and Salient Themes. The useful framework for the data analysis included reviewing the two research questions to organize the data and presenting the data according to the two research questions. The state's funding strategies' perceived impact was reported based upon the following salient findings discovered in the research study through the analysis process. First, the researcher became familiar with the data and got a thorough overview of all the collected data before analyzing individual items. This familiarization process included transcribing the audio, reading through the text, taking initial notes, and looking through the data to become familiar with emergent themes.

Next, the data was coded by uploading the transcribed interviews into Dedoose, highlighting sections of the text, and coming up with shorthand labels, known as "codes" to describe the content. The researcher went through each interview and highlighted key ideas that stood out as relevant and vital for the study. This process continued throughout the review of the entire data set, highlighting all the phrases and sentences that matched the codes. In addition, adding new codes while reading through the text provided a condensed overview of the main points and common meanings that reoccurred throughout the data. After examining the codes, patterns were identified, and themes were created. Salient themes were determined to be the topics, words, and expressions that were repeatedly mentioned by at least 50% of the participants from each group. Table 3 describes the salient themes that are centered on organizational and student challenges from how the state funds the institution.

Table 3

Theme Descriptions

Theme	Description	Quotes	RQ Answered
• PWIs favored over HBCUs	Perceptions of how the institution has been historically underfunded and has not received the same funding as the flagship institutions.	"The flagship institution was allocated a certain amount of money, and we had not been receiving that as well."	RQ1
• Funding formulas do not adequately address the needs of HBCUs	Perceived state-controlled funding variables that potentially harm the institution and students.	"They are treating all institutions the same. So they are not really looking at an HBCU versus HSI versus a normal PWI."	RQ1

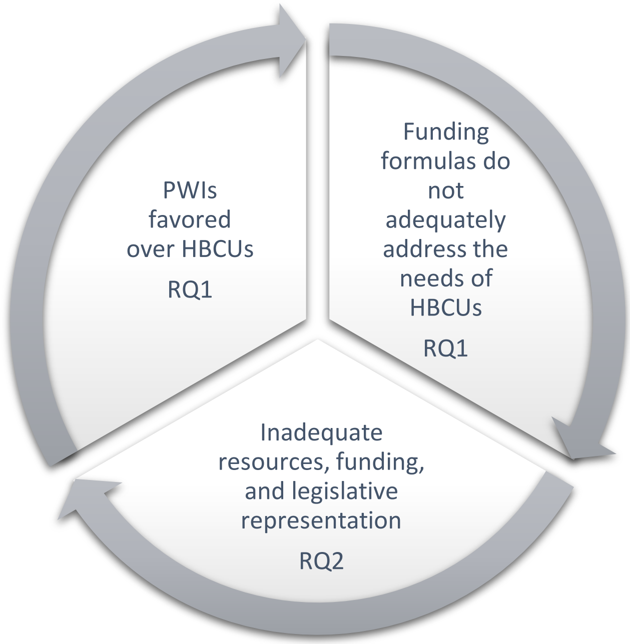
(continued)

Theme	Description	Quotes	RQ Answered
• Inadequate Resources, Funding, and Legislative Representatio n	Varying perspectives on how the funding strategies negatively impact the institution and students and contribute to funding inequities.	"so you can't invest as much as you would like to in the research arenas, or course release time, when in fact, you have to devote it to the special support services that are needed."	RQ2

The researcher returned to the data several times to accurately represent the data to help with the theme's usefulness. In addition, consistently examining the themes helps ensure that the themes are present in the data (See Figure 1 below). Figure 1 displays the emerging themes that answer the intended research questions.

Figure 1

Emerging Themes



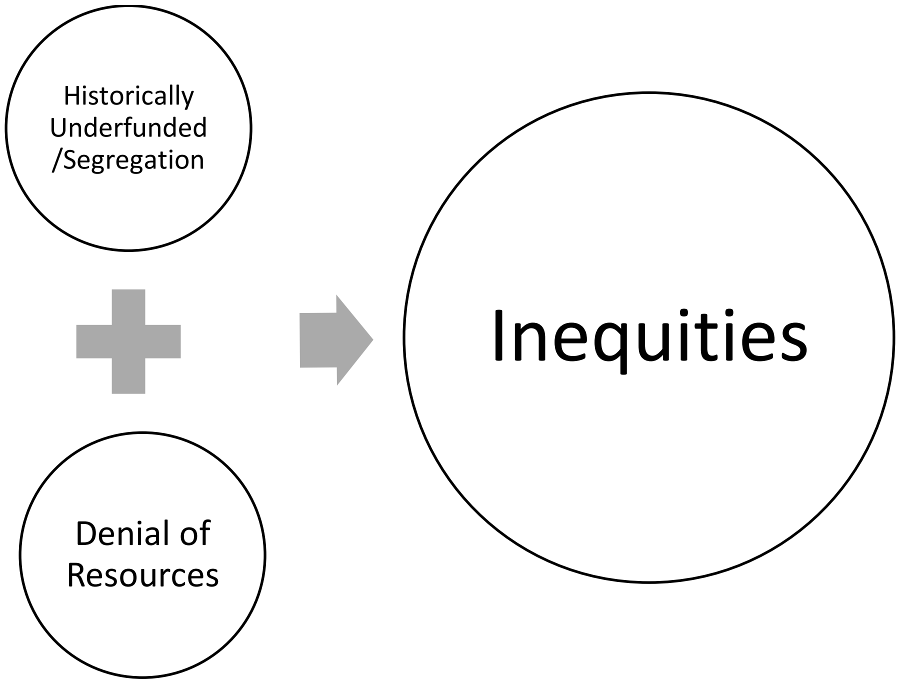
Research Question 1: What Are The Perspectives of Select HBCU Administrators on How The State Provides Funding for Public HBCUs?

PWIs are Favored over HBCUs

The perceived theme from both participant groups in how the state funds public HBCUs presents itself in the form of inequities by PWIs being favored over Historically Black Colleges and Universities. These inequities have created disparities for HBCUs for decades. These disparities are combined with the 21st-century litigation cases that address the inequities of a long experienced denial of resources needed to serve an underserved student population, as shown in Figure 2. Historical inequities in the state and additional contributing factors demonstrate the state’s funding strategies favoring PWIs over HBCUs and describe how the state’s funding strategy does not adequately address the needs of historically black colleges and universities.

Figure 2

Inequitable Funding Strategies



The 21st-century cases of funding disparities amongst present-day HBCUs and PWIs mirror the experience of Kranston University as recalled by Provost Emerita Sofi:

> Starting in about 1983, with the first Texas plan, which came in response to litigation, at the federal level, regarding this disparate treatment of a public HBCU versus the traditionally white institutions, the institutions in the states that have previously had segregated systems of higher education. The very first Texas plan, which was signed in 1983 by then-Governor Mark White, set forth a plan for the increased equitable funding in support of Kranston University and in the course of the other public HBCU, but no real money came with that plan.

As with upper administration, the faculty and staff perceive the inequities resulting from the state's allocation systems historically underfunding HBCUs, favoring PWIs over HBCUs (Boland and Gasman, 2014). Being underfunded and trying to fit all institutions in a one-size-fits-all model without acknowledging the historical gap can be detrimental as the director of tutoring services, Dr. Paul-Herron, states:

> We spent most of our existence trying not to get shut down. We are a higher education institution, so we will never get the kind of money we need. Because of the population we serve, we should get additional funding to serve additional services. But I also think the powers that be, whether it's at the Coordinating Board, which as an extension of the State House in Austin, I think the educator will often say, "Look, our students need a different model." It goes back to this traditional education model that you try to fit everybody in, which may not be the best model for us. But we are part of a university system. And the people that run the system are in line with the statehouse and now the government of Texas.

Consequently, like many other HBCUs, Kranston University was established as a segregated school for African Americans in Texas. Since the early 1950s, the Brown vs. Board of education case demanded states to desegregate their K-12 schools and higher education institutions. However, states still segregated and shortchanged HBCUs through funding strategies that provided plans with no real funds over the decades. In addition, inadequate state funding strategies forced Kranston University to fit into a one-size-fits-all funding strategy model, and the unique mission and need for services do not fit into that same box.

The historical inequity experienced aligns with the historical beginnings of Historically Black Colleges and Universities. The history begins with segregation and has historically received less funding from the state government and private donors (Elliot, 2019: Palmer et al., 2011: Williams & Davis, 2019). These funding inequities linger on and have forced HBCUs to work harder with fewer resources than their counterparts and are required to achieve the same benchmarks (NASM, 2019: Nicholas & Evans- Bell, 2017).

Historical Inequities in Texas. The Higher Education system in Texas is comprised of six state university systems. Both public HBCUs in the state belong to either an independent or state system. These systems are governed by the Texas Higher Education Coordinating Board (THECB), an agency that makes recommendations to the state legislature (THECB, 2020a). The U.S. government allocated federal aid through the first Morrill Act of 1862, excluding Black students. Consequently, the second Morrill Act of 1890 was created to include Historically Black Colleges and Universities.

This study analyzed the integral role of the United States Department of Agriculture (USDA) in administering federal land-grant funds. The USDA's National Institute of Food and Agriculture (NIFA) awards research funding through a combination of formula funding strategies (Lee & Weskeys, 2013). This funding requires the home state of the land-grant colleges to match all formula funding received from federal funds on a dollar-to-dollar match requirement. However, Representative Justice reveals the severity of the inequity as:

> There are two land grant colleges in Texas. That is a federal statute. Now, the federal government gives each one of these institutions monies based on their ability to educate their students. And the federal government gave the land grant college for the flagship institution $94 million. The State of Texas is supposed to match that dollar for dollar. Dollar for dollar, they are supposed to match that. Well, the state of Texas gave the flagship institution $196 million. They gave

> them $196 million, and the federal government gave them $94, and the state of Texas said we will match that at $196. But, conversely, when you look at the HBCU land grant college, the federal government looked at the HBCU land grant college, at its programs, and they said you qualify for $23 million dollars. The state of Texas is supposed to match that dollar for dollar, and if you don't match that dollar for dollar, the federal government has the right and the ability to pull that money back and say, well, the state didn't do its match. Well, the state of Texas gave the HBCU land grant college $4 million of a $23 million match, and so, it hurts my brain to have to think how in the hell did you provide $196 million dollars for the flagship institution on a $94 million dollar match, and you gave the HBCU land grant college $4 million dollars of a $23 million dollar match in itself, that is what I'm talking about when you see the disparity in funding.

The state does not match the land grant money from the federal government for the HBCU land grant compared to the PWI land grant. Missing the state land grant match is one of the ways that states, especially southern states, tend to underfund the land-grant Historically Black Colleges and Universities. The experienced underfunding limits the institution in so many ways. Historical litigation cases demonstrated that over ten states were operating segregated higher education systems before 1964 (Minor, 2008b). While the state of Texas put forth efforts to dismantle segregated systems of higher education, HBCUs remained segregated with poorer facilities and budgets compared to predominantly white institutions. Historically the HBCUs in Texas had been underfunded. According to Provost Emerita Sofi:

> Now, historically, I think that we have not been funded the way that other universities have, which is why there was, in fact, a lawsuit in the 1990s. In the state of Texas, both public HBCUs were put on a priority plan for higher education. However, when we built our plan of what it would cost us to really achieve parity with the Flagship institution, our figures, our fiscal note for that was about a half-billion dollars. We got probably all total somewhere between $250 million dollars. That money was spread over a broad range of areas and did not last forever. It lasted for about eight years.

All of the participants understood the historical inequities that existed as a part of the HBCU establishment and history. In addition, the state one-to-one funding match disparity is a present-day byproduct of underfunding that still has not been dismantled and demonstrates how PWIs have been favored over HBCUs within funding strategies. The state attempted to address the lower levels of funding, however bringing HBCUs to the equivalent funding levels of PWIs may not be possible and continue to produce inequities.

Many HBCUs are financially fragile and need more support compared to other institutions in regular times and in times of crisis. Institutions, specifically HBCUs, have experienced challenges in struggling to grow endowments. However, the formed resilience of faculty and staff still produces resentment against the incremental changes, as professor Dr. Howard states:

> When you look at what our endowment is at the institution and what the endowments are at the predominately white institutions in the state, there's no comparison, you know. So, sure, we're doing much better, but it is still not in

> comparison to what others are doing. It is almost like they continue to say, "Well, you know, you should be satisfied with what you get, you know, we gave you a little extra, so you should be satisfied with that," and I guess that's my resentment. I should never be satisfied with just something that's mediocre, and I am not going to be satisfied with that.

The resentment still does not outweigh how the participants view the success of graduating students despite the funding disparities. Participants understand that the institution has successfully supported students and contributed to the graduation completion of African American bachelor, master, and doctoral recipients (Humphreys, 2017). As Provost Emerita pointed out:

> The public HBCUs in the state really can never ever be repaid or have been given proper credit for the extent to which they have grown the middle class, the African American population in the state, in the region, and the nation. So, it has come through a whole lot of litigation. There is a lot of push by people within the institutions, alumna, and people who represent these institutions to keep on pushing and pushing and pushing. To show the value of the institutions and how much this nation has gained from institutions that have been poorly dressed.

However, continued funding disparities can threaten the HBCU's contributions to the workforce economy and the overall graduation rate. In the higher education arena, institutions that hold a prestigious status according to certain standards tend to get the most donations. However, unfortunately, these inadequate standards are coupled with the state government's inability to provide more resources, resulting in continued fewer resources. Fewer resources equate to inequities.

Summary

The theme of PWIs being favored over HBCUs highlights decades of underfunding for HBCUs steeped in structural segregation and racism. As the state sought to create investment plans, no actual strategy was implemented to decrease the inequity's funding gap. In addition, the inequities have continued as the state does not allocate and provide the federal match at an equitable amount compared to the flagship land-grant institution. The historical underfunding of HBCUs and inadequate allocation of funding were apparent for the majority of the participants of the study. The majority of participants understood that funding inequities existed due to federal and state segregation policies that were created decades ago and a part of the HBCU history.

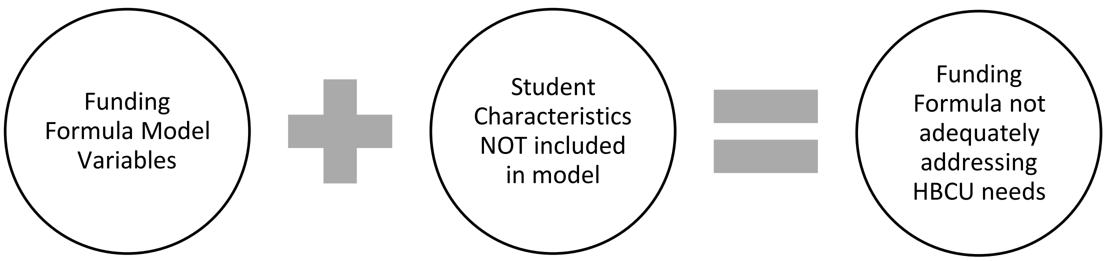
The second theme that emerged was the participants' perspectives on the funding formula not meeting the needs of the institution. As a result, institutions committed to serving low-income and underrepresented students are not receiving an equitable amount of financial support (Williams & Davis, 2019). In 1959, the Texas legislature established a funding formula to determine appropriations for public institutions (Dove, 2007). The funding model has evolved and changed over the years and has even been modified to accommodate newly established institutions. However, even in the 21st century, the diversification of institutions is not considered in the formula funding model.

Funding formulas do not adequately address the needs of HBCUs

The funding inequities also stem from the variables of the state's formula funding model. These variables do not consider student characteristics, as shown in Figure 3. This study defines student characteristics as low-income, first-generation, and students needing additional support services. The funding strategy used by the state is comprised of a formula that includes several different variables. The complex formula funding model is primarily based on enrollment and instructional costs (Hackworth, 2019; LBB, 2019b).

Figure 3

Formula Funding Variables Not Adequately Addressing HBCU Needs



The Texas Higher Education Coordinating Board (THECB) appoints a subcommittee to develop a funding formula, called the General Academic Formula Advisory Committee, to achieve the 60x30TX strategic plan (Ellis, 2016), as the Chief Financial Officer (CFO) Dr. Bady describes:

> All of us are weighed based on the formula funding. So they look at the base year period of the summer, fall, and spring of the prior year of the prior full year to look at what that semester credit, our production is, in conjunction with the projected weights that go with those specific disciplines, and then a rate. So there is a formula funding advisory committee that meets, made up of CEOs, CFOs, and institutional research from institutions across the state, and that's chaired by the Coordinating Board as well as the LBB, the legislative budget board. So when

> you look at that process, one would say that it's fair because it's based on the formula of funding for past performance for the institution. But in large part, universities are funded through, you know, those tuition dollars, and there is also a formula to enrollment

The mathematical algorithm that makes up the state's funding formula includes a: instruction and operations formula and an infrastructures formula (Legislative Budget Board, 2019). Within the formulas, semester credit hours (SCH) are weighted by discipline and measure the number of classes and the number of students that are enrolled into the courses, as provost

Franklin states:

> It's based on enrollment. It's based on kind of a weighted formula, if you will, that STEM areas are semester credit hours that are paid a little bit more than, say, humanities courses. Graduate students bring in more money than undergraduates and certainly more money than freshmen do. It depends on the enrollment and the majors that you have out.

Although the institution may qualify for a small institutional supplement and other non-formula funding items, the formula contributes to inequities because while the state funds public institutions on the number of students that are enrolled, it negates the type of student that is enrolled and the varying needs for the students are not reevaluated over time. In addition, these formula mechanisms do not address the initial levels of inadequate funding that existed since the institutions began and have been perpetuated without intervention. This slow progress in undoing decades-long underfunding HBCUs often exacerbates the initial inequities.

Policy decisions are made on a one-size-fits-all model. The flagship institutions in the state represent a small fraction of the 4-year public institutions within the state, and less-resourced public institutions, especially HBCUs, that rely heavily on state support (Palmer et al., 2011). Many of these less-resourced institutions serve a large number of low-income and underrepresented populations and need additional resources to serve their students.

Funding strategies often do not consider the more significant challenges that stem from a lack of resources. Including variables within the formula funding model that could address these challenges. Many variables that are included in the formula funding strategies are not necessarily taken into consideration as VP of enrollment management Dr. Carrie states:

> I don't know that when you talk about low income and how the formula funding is set up that that factor is there or present. I don't know that outside of special efforts and legislative things that are really focused on low-income students, students of color, things like that. I think you have those types of efforts outside of the state funding model that happened in the state where institutions receive additional funding to support different types in groups of students. But I do not think that is part of the overall state funding piece.

Funding strategies are typically created to incentivize goals. For example, while some other states have incentives to increase graduation rates, others like Texas have a few performance metrics folded into the formula. However, for 4-year public institutions in the state, most funding levels are still tied to student enrollment or credit hours. Therefore, even with the carefully reviewed performance goals, the institution cannot control certain factors that can predict their success. As the VP of enrollment management, Dr. Carrie states:

> There are certain factors that we cannot control, and we lose our funding, which in some cases, you know, some people may believe it is enough, some people may not. We can set you up with all the right things as an institution. But there are still some pieces of your decision: to go to class, to get the grades that you need to pass, and to actually finish the journey that you started, that only you control. So it's hard for me to then, and I understand the thought behind outcomes-based funding, but it's hard for me to say, you're going to cut my funding because I can't convince this student, who has this going on personally. So I can't address that, and I do not know that we could have, ever.

The explicit mission of HBCUs is to serve a diverse ethnic and socio-economic population of the state. Students served at HBCUs, by large, include students of color, low-income, are disadvantaged by their K-12 schooling, and often have lower outcomes upon high school completion. Since the formula funding model emphasizes enrollment, student characteristics are not a part of the formula's equation; as director of tutoring services Dr. Paul-Herron states:

> The percentage of our students that are Pell-eligible students, that are first-generation, it takes more to get those students to where they need to get to. Now, there is, you know, funding attached to different categories of students that you let in, who come from socio-economic backgrounds. Because look at the percentage of our students that are Pell-eligible students, that are first-generation, it takes more to get to those students.

The funding strategies that focus on enrollment rarely focus on what it takes to help navigate large populations of first-generation and low-income students that typically need more student support services. In identifying the needs of the students at the institution, the faculty and staff find that these varying student needs require additional navigation as faculty Dr. Howard states:

> I believe it is every faculty member's responsibility to teach holistically, that there are things that our students come to us with, they may be first-generation students, they may not be first-generation students, they may have, you know, two generations before them that have come through. So they may have a legacy here and there, but there are things that they still don't know there.

Many first-generation and low-income student populations need more faculty and staff mentoring during their college journey. The funding strategies do not allocate funds based on the students' characteristics or account for student needs. In addition to the funding strategy not allocating based on student characteristics, enrolled students have additional challenges that can add stress to their matriculation journey. These challenges include personal, family, and work obligations that can also be critical to the matriculation process. In addition, traumatic personal experiences can impact a student's matriculation. The assistant director of academic advising, Dr. Lizzy, describes these experiences as:

> As you build that rapport with the student, they feel more comfortable talking to you about everything. So I've had stories from, you know, where parents were just killed, you know, tragic stories.

Additional characteristics that can impact a student's development and matriculation in college include personal stress and family dynamics. The faculty and staff participant group engages and interacts with the students daily and witnesses the students balancing financial challenges, family dynamic challenges, and academic challenges. Dr. Paul-Herron describes these additional encounters as:

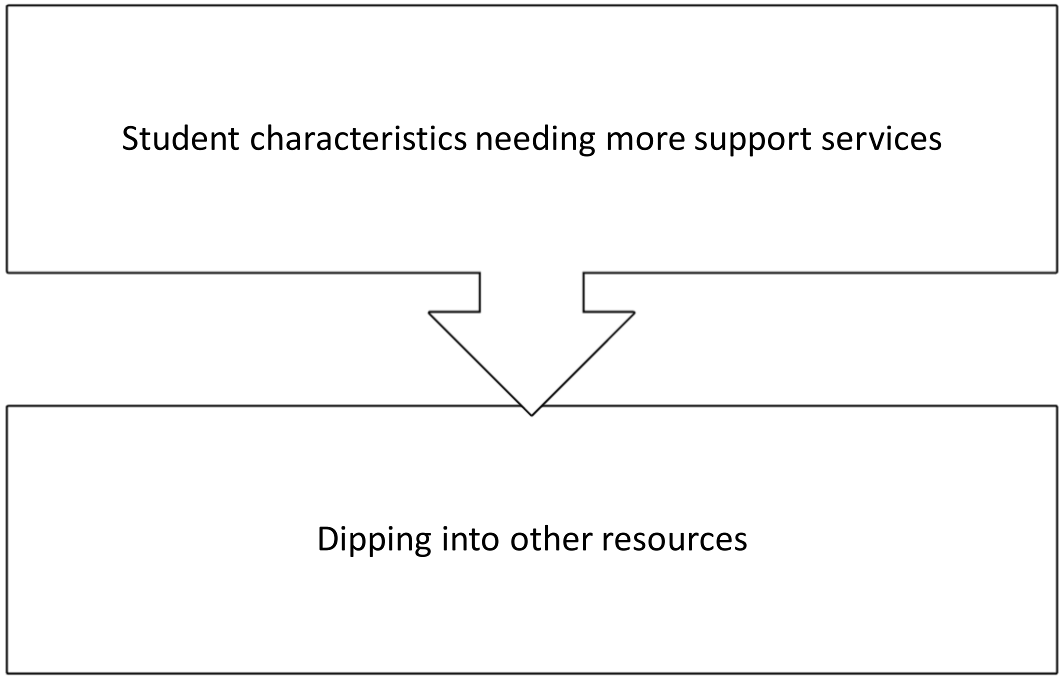
> The mother or father is calling the student as soon as financial aid hits, or the mother, getting the financial aid deposited into her account and taking the money, maybe paying bills at home with it, maybe getting high with it. But now this student has no money. So that's the issue. It may be that many of our students are not used to doing well in school. They come, they struggle.

The services needed to help students with family, work, and stress dynamics are not assessed and included in the state's formula funding strategies. Balancing daily stressors from financial challenges, family dynamics, and academics are variables that can impact how a student persists. Instead, the funding strategies are focused on a formula that is centered on enrollment and not services to meet the characteristics of students.

Additional Unmet Needs. Historically Black Colleges and Universities are generally less resourced and are forced to use other resources and provide costly student services. Figure 4 represents the additional perceived factors on how the state provides funding to HBCUs and is not adequately meeting the needs of the institution. The factors include the student characteristics needing more support services and the institution using other resources.

Figure 4

Additional Unmet Needs



The outcome of a decade-long discriminatory funding practice from state governments makes HBCUs have to work harder with fewer resources. The resources needed to educate the population of students are then used up because of the underinvestment. This disinvestment gives birth to a decline in enrollment. Representative Julian Justice describes the situation as:

> When you have an institution like one of the public HBCUs in the state that for its maintenance and building when a state like Texas is not even giving the public HBCU the money, they are having to take their money from student services and academia to try to simply maintain their buildings. For the public HBCU to still have the same buildings on their campus that my father had when my father was a student, and in the same classrooms, when dorms are in disrepair, all of those things contribute to the decline in enrollment. The pandemic contributed to the

> decline in enrollment simply because we understand that both public HBCUs have a very unique population. So when you have a population like this that can't go to school, they can't go to work, and they're dropping out. When the state ignores that and does not put money back towards those institutions and does not provide adequate funding, it demonstrates the disparity and how overt they are. When I say they, I am talking about the state of Texas, how overt they are with their ability to underfund institutions like the public HBCUs to give you the prime example of what I am talking about because they'll talk about formula funding.

Student support programs help increase persistence and completion rates. However, institutions with resource constraints often offer limited comprehensive student support services. Student service support can address challenges that arise in academic preparation, mental health, family responsibilities, health issues, and financial assistance. Provost Dr. Franklin explains the need to put more money into wrap-around services:

> We actually have nearly 50%, not quite 50% of our students come in with developmental needs. I use the word developmental kind of loosely because I know it is not a popular term right now. But it does mean that they are not considered college-ready by the state of Texas, and so we have to do a lot more than some institutions for the population that we serve, and that takes more of our resources. Therefore we're using more of our tuition designated tuition dollars, the University services fee that students pay for, or those types of services, like the library, like the computing services, like the mental health support, and all of those kinds of things can be more expensive at a university like ours.

Educating students from disadvantaged backgrounds are costly. The challenge of providing more students with more support services and having to focus on increasing and sustaining enrollment, a variable that is dependent on receiving funding from the state, can work against the institution, as Provost Franklin states:

> If we're going to focus on graduation rates, when in fact, we know nearly 50% of our students are not coming in college-ready. In fact, they are coming to a university that is stem focused that has a higher semester credit hour degree requirement than some other, some other institutions might have because you can graduate a humanities major in four years in a way that you cannot have an engineer, who has to make up some leveling courses. And in fact, the degree plan is 128 hours versus 120. So if we could take into account that variable somehow in the formula, I think it would do us a great deal of service.

Historically Black Colleges and Universities provide student support services, just as other post-secondary institutions provide. However, the services needed at HBCUs are essential and needed and not just considered “add-ons.” Having to dip into other resources because of using appropriations to support additional services such as tutoring, counseling, and library services increases the funding inequities between HBCUs and PWIS and further demonstrates how the current funding formula does not address the needs of the public historically black colleges and universities.

Summary

The current funding strategies in Texas are allocated funding mechanism that incorporates a funding formula that is primarily focused on enrollment and disciplined weights. This funding approach does not include student characteristics or consider the student needs to help determine funding levels. The approach for special items funding that may consider specific student characteristics only designate small portions. These funding mechanisms do not adequately address all of the needs of the institution and favor PWIs over historically black colleges and universities. These perspectives increase equity gaps within funding and student access and success.

Research Question 2: How Have The Current Funding Strategies in Texas Contributed to Inequitable Funding for HBCUs in the State?

Inadequate Resources, Funding, and Legislative Representation

The second research question examined the participant's perspectives on how the current funding strategies have contributed to inequitable funding for the public HBCUs in the state of Texas. The perceptions from upper administration and faculty, and staff centered on inadequacies that negatively impact the institution and their students and contribute to funding inequities. These contributions to the funding inequities emerged as different subthemes.

One subtheme emerged as inadequate resources to serve both the institution and the students. A second subtheme emerged, leading to reduced courses, programs, and overburdened faculty and staff. Finally, the last subtheme centered on inadequate HBCU representation in the legislature. The inadequate funding strategies have not provided a systematic and transparent approach that results in equity. Instead, the outcome has resulted in inadequacies in resources, funding, and representation, ultimately failing to deliver an adequate return on the investment for taxpayers.

Sub Theme 1: Inadequate Resources to Serve the Institution and Students

The inadequate resources subtheme impacts the organization and the students negatively. The subtheme consisted of the state funding strategies not supporting the institution's mission in its ability to invest in programs and services needed to serve its student population. The impact also ultimately impacts the students who need more financial aid. The inadequate resources have not driven equity and continue to contribute to the equity gap between HBCUs and predominantly white institutions.

Not Supporting the Mission of the Institution. Targeted approaches were developed during Texas's 1994-1995 biennium to identify the unique mission-related institutions (Dove, 2007). Currently, the state funding strategies did not reflect the diversity of the multiple higher education institutions and their missions, and the Vice President of enrollment management described the state as not necessarily being designed to meet the institutional differences and being responsive to the uniqueness:

> When you talk about the number of universities in the state of Texas, and the diversity in size, in mission, in location, geographical, you know, the geographical location alone speaks to who those students will be. But, moreover, the distribution of students in those institutions, especially when you start to look at regionals versus R1's [R1 is an old Carnegie classification that has been replaced by doctoral universities with very high level of research activity], all of those different components that go into it. So I do not know that I believe in any state, at the state level, a formula fund, a funding formula could ever be responsive to the needs of an institution.

Historically Black Colleges and Universities have unique missions that meet the need of low-income and first-generation students. However, the negative impact of not supporting the mission revealed the need for additional funding to serve the institution's mission. As Provost Franklin explained

> There needs to be some recognition that, as I mentioned, that a mission that is like ours has to have some degree or there has to be a recognition, right that there are a lot of factors that go into serving the students that we admit because of the population that we serve due to our mission.

Historically Black Colleges and Universities help play an essential role in creating access to higher education for students that have been least represented at moderate to highly selective institutions (Jones, 2013). However, due to the state funding strategies not reflecting the diversity of institutional missions, and as mentioned before, in the unmet needs of the institution, the institution has to dip into other resources and cannot provide the financial assistance to students that they would like.

Students Needing More Financial Aid. Both participant groups perceived a negative impact on students, resulting in students needing more financial aid. Williams (2020) revealed that between 63 percent and 66 percent of students at public HBCUs in Texas had a financial need compared to the 23 percent and 22 percent at the flagship institutions. The institution serves a large population of students that are low income as stated by Dr. Turner, the associate director of financial aid:

So, of course, when you look at HBCUs, we typically have a higher number of lower-income students, first-time, first-generation students who meet that EFC threshold who are Pell recipients. Currently, 68% of our student population are Pell recipients.

A significant number of Pell Grant students demonstrate the essential financial assistance needed. Needing more institutional resources to support students can be the dramatic difference in a student who earns their degree versus a student who drops out. Provost Franklin pointed out the financial limitations of students that need more financial assistance:

> First-generation students may have a lower EFC, and they may have a larger amount of Pell eligibility than other populations. But at the same time, there are more family dynamic issues that affect those particular students. And so, my experience tells me I can't speak for this broadly. But my experience in this role tells me that the slightest variation in that family dynamic can, in fact, put a student off of the graduation path very, very quickly. And I have seen students who have needed as little as $200 step out for a moment

Substantial research has documented that HBCUs enroll students from low-income families with financial needs and limited access to additional resources (Saunders et al., 2016). The number of Pell Grant recipients that the institution serves aligns with what Dr. Sofi considers the broader context of the population make-up as stated:

> If the population we are serving is coming from heavily, low-income urban Native, urban-centered schools, they do not have a lot of resources. They need financial aid. I mean, what percent of our students, of freshman, for example, are on Pell grants? Then you stop and think, they have to work. So you got many students who either cannot take the full load or cannot be in school.

Historically Black Colleges and Universities do not have as many resources to put towards institutional scholarships and financial aid when compared to other PWIs and flagship institutions. The faculty and staff that experience the impact on students with the lack of financial aid become very burdened by the desperation of the students that need more financial assistance. Dr. Lizzy explains the experience as:

> I wish that my area had scholarships to provide for the students. They are left with trying to figure out how to come out of pocket with stuff, you know, money that they do not have out of pocket. It is sad when a student comes to us and says, "I really need financial help, and financial aid says I have either used all of my money, I don't have enough money, or I am not going to get any more money." Some students work and go to school, which again is a challenge, you know, it is a full day, and it is hard to work at night and then try to study as well.

The students at HBCUs rely more heavily on financial assistance (Williams, 2020). For example, over half of the student population at Kranston University are Pell grant recipients. Consequently, the institution is forced to utilize other resources to assist its students financially. In addition, additional access resources are needed because the HBCUs use proportionally more of their funding resources on student services and scholarships (Williams, 2020).

Inadequate resources for HBCUs make it difficult for the institution to be a critical access point for low-income and underrepresented students. The states funding strategies do not support the unique missions of HBCUs that have large portions of low-income students and need more financial aid to support them. These inadequacies contribute to the higher education funding inequities within the state.

Subtheme 2: Inadequate Funding for Classes, Programs, and Administrators

The next subtheme is a result of inadequate funding that leads to reduced classes and programs and an overburdened faculty and staff population. The inadequate funding subtheme included reduced classes being offered and available to students, reduced programs, and administrator burnout. These inadequacies contribute to the existing funding gap between PWIs and historically black colleges and universities.

Reduced Classes. The funding strategy can impact the institution at a macro-level and individual behavior at the micro-level by influencing the behavior of academics and the faculty and staff. The level of activity for faculty and staff and the various activities they are engaged in (i.e., teaching students, advising students, or conducting research) can vary in how they respond. Dr. Lizzy, who serves as assistant director of academic advising, acknowledges the need for financial aid for students. However, the underfunding also equates to the inability to register students for the required courses, with her having to direct students to take the courses at a local community college as stated:

> How many are anticipated to graduate at a certain time, and again, having students here starting, and they get to their fourth year, and they are still here, because of funding, lack of, you know, money that they need, or lack of classes that they cannot enroll in? It just baffles me. It really does. You know, you do not want to have to tell the student, okay, go to the local community college, because I know they are going to have a class. You want your students to stay here on your main, on your home campus. So the lack of the classes sometimes is feeling

> the lack of support of what you are trying to accomplish, that is a setback. I guess I am looking from a different lens. Doing what you can with what you have.

The negative impact of reduced classes suggests that the theme can also significantly impact the ability to sustain enrollment and have students matriculate on time due to the institution's lack of classes. In addition, enrollment serves as a variable within the funding formula strategy for the state (THECB, 2020a) and can serve as a threat because of the lack of classes being offered.

Reduced Programs. The need to duplicate or end programs to sustain others can occur because of inadequate funding. The perception included the negative impact of programs at HBCUs being cut, duplicated, or limited in support. Duplicative programs, where states use funds that could be invested and used to strengthen academic programs at HBCUs or have created similar academic programs at PWIs, have harmed public historically black colleges and universities. For example, according to State Representative Justice:

> We do realize that, especially with one of the public HBCUs in the state when you have a PWI where the public HBCU in the state was created first, why in the world would you allow, from the state of Texas' perspective, give them the funding that they need 100%... The public HBCU had a pharmacy school, the PWI went and created a pharmacy school. The public HBCU had a law school, the PWI went and created a law school. Even today, the public HBCU created an aviation school. Well, guess what, guess what the PWI is doing at this very time? Creating an aviation school. And so what happens is, you are starting to pull from its population base, which is draining on its enrollment because they have more

> money, and they are able to do more. And so students find it more attractive to be able to go to these PWIs without having any pause because there's. Oh, well, it's a better program, better amenities. But that in itself is what the state should not allow.

In addition, the challenge of sustaining programs has had a negative impact on the institution and its ability to sustain the quality of needed programs. Professor and director of a program, Dr. Howard explains:

> Even for the Center for Teaching Excellence, we get limited funding. Fortunately, I have been supported by Title III [grant funding from the federal government used for projects that improve and strengthen academic quality, institutional management, and fiscal stability]. But, you know, anytime you are supported by an activity, like Title III, you are supposed to be able to have a vision that it will be sustained. So when your Title III funds are not renewed, and I say not renewed, there is a limit, time limit on Title III activities. And so, once you have had an activity, the university should be able to pick those things up.

There has been a history of states allowing PWIs to duplicate programs that HBCUs offer. As a result, prospective students tend to overlook HBCUs and continue to offset the enrollment struggles that HBCUs experience. In addition to duplicating programs, sustaining faculty development programs is significant as it enhances the learner's academic performance. However, providing sustainable programs can become challenging when inadequate funding is present.

Administrator Burnout. Consequently, a constant burden of watching the students suffer from a lack of courses, not having enough financial aid, and wearing multiple hats can lead to a negative impact of feeling burnt out. Administrator burnout is the feeling of exhaustion and can be critical for the performance of the institution. Dr. Lizzy describes this challenge:

> When it comes to universities and functioning, you know, from beginning to the end, as far as classes and professors, the day-to-day operation of the university, when that funding lacks or there are budget cuts, it makes a big difference. It changes the dynamic of how we operate, how we function, and what we can provide. In most cases, we are asked to improvise or work what we can work with what we have. Sometimes, that is not always easy. You are asking us to work with nothing, in some cases, and it does put a damper on things. You are always asked to, hey, have that smile on your face and provide customer service

Having multiple hats to wear and working hard with little control and frequent conflicts can impair performances and institutional objectives through depersonalization and emotional exhaustion. According to Shoshan and Sonnentag (2020), customers, equivalent to students in this study, evaluate organizations by interacting with front-line service employees (i.e., faculty and staff). Thus, the student perceptions of service are valuable and sometimes critical. Burnout can also impact the data collection process and its ability to effectively communicate the needs to institutional leaders and stakeholders. As a result, sabbatical support is essential to faculty and can help prevent burnout. Sabbatical support can be viewed as an opportunity to provide further training or work experience in one’s field in addition to resting. Faculty professor Dr. Howard describes the impact as:

> I don't think we document enough of what we do well, and part of that is because when you have multiple assignments, you're not taking the time to do that. One of the things we do is, we support faculty development sabbaticals. We've been limited on the number of individuals that have gone out on sabbaticals. Again, if you go out on a sabbatical, the University has to identify somebody to teach your classes to do the things you were doing. And so you have people that probably want to go out on sabbaticals, but they also have that dedication to the university to teach their classes and to their research, and they have not figured out a way to remove themselves for a semester and still be able to support what goes on in their departments. Losing one person in a department is going to make a big difference. That dedicated faculty member will probably not go out on sabbatical, even though it would be beneficial to them and the students. Because to me, sabbaticals should be reinvigorating of the faculty member to have them do something that when they come back, it makes everybody better.

Higher education faculty and staff both have demanding jobs, and sometimes burnout can go unnoticed or ignored. The funding inadequacies can increase the feeling of burnout by not providing relief in hiring additional faculty and staff that have to teach more or carry on additional duties that can affect performance. Burnout can affect productivity and efficiency, which ultimately can impact the students. Many legislators may believe that institutions are doing well at sustaining their enrollment and programs with the encountered inadequacies. However, state legislatures must understand the negative impact of inadequate resources and funding and its contribution to funding inequities. State representation for HBCUs is critical in the legislative decision-making process to help close funding inequities.

Subtheme 3: Inadequate HBCU Representation in Legislature

The need to address the diversification of institutional missions can lead to another subtheme experienced, including not having all groups and institutions represented in the decision-making process. The inadequate representation leads to needing more HBCU representation in legislation. The representation for flagship institutions and PWIs have always been present, according to Provost Emerita Sofi:

> There are many institutions, particularly the two PWIs that had more alumni in powerful places, had more alumni that were at the table when policies, laws, policies, and procedures were formulated. And you know, we had fewer people in those places. And so, politically, it was very, it was dicey.

Consequently, having more representation in legislation can create more discussions before policies are put into place to consider how HBCUs can be supported to meet the state's demand for an increased workforce. State Representative Justice claimed:

> When you have to do more with less than you have to, you know, we know where the workforce is, we know where this state is going, both public HBCUs provide the education for a population of people that this state needs to be in the workforce, but yet you refuse. In its own admission, the Higher Education Coordinating Board talks about the 60x30TX [Plan]. And they talk about who, in fact, is not being employed or who is being underemployed. And that is the black and brown population. And, because we know both public HBCUs provide

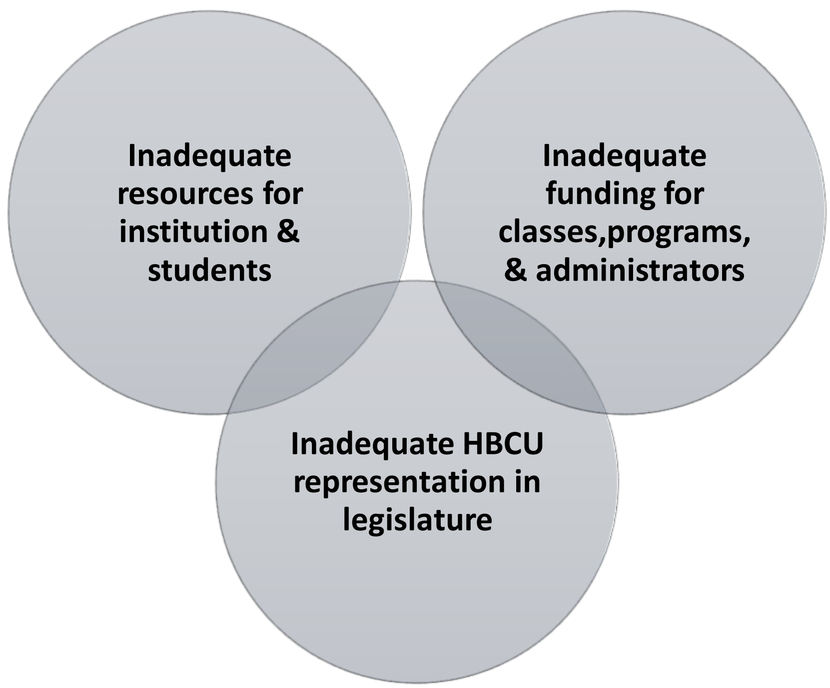
> education to those types of students, why aren't you meeting the needs that your own Higher Education Coordinating Board is asking you to target?

The inadequate representation can misrepresent the needs of Historically Black Colleges and Universities. The representation has been absent from legislative conversations, directly impacting the institution. These diverse HBCU institutions are responsible for awarding certificates and degrees to nearly 30,000 African Americans (Cunningham et al., 2014). However, the empirical data is void of the conversations, and diverse representation within the state legislature is needed.

Summary

Figure 5

Inadequate Subthemes



The inadequacies produce a negative impact and contribute to funding inequities. As a result, different and similar subthemes emerged. Figure 5 represents the emerging subthemes. The inadequacies contribute to the inequities by not reflecting the diversity of institutional missions and reducing classes that impact the ability to sustain enrollment and impact the persistence rates of students. When the state allows PWIs to duplicate HBCU programs, prospective students gravitate more towards fully supported programs, resulting in lower enrollment.

When the state allows the duplication of programs, the HBCU is impacted negatively. The inadequacies negatively impact students as they are in need of more financial resources, and the institution is unable to assist. In addition, these programs are managed by administrative units that consist of faculty and staff. The funding strategies negatively impact faculty and staff as they wear multiple hats and experience administrator burnout. The administrator burnout is all the more reason why faculty sabbaticals are essential for professional and personal rejuvenation. Failing to understand these negative impacts on a legislative level can impact an institution's ability to deliver high-quality education to students. Therefore, HBCU representation needs to be present in the legislative decision-making process.

Summary of Findings

The single-site case study provided insight into the perceptions of upper-administrative leadership, a community leader, and faculty and staff on how the state’s funding strategies impact a public Historically Black College and University. The findings revealed that the state’s funding strategies show up in the form of PWIs benefitting more than HBCUs and the state’s funding formulas not focusing on the student characteristics that the HBCUs serve. The large population of low-income students needs additional support and forces the institution to dip into their other resources to assist the students. Consequently, the perceptions of the funding strategies are identified as not adequately meeting the institution's needs. As a result, resource, funding, and legislative representation inadequacies contribute to the funding inequities between HBCUs and flagship institutions.

CHAPTER V

Discussion, Implications, and Recommendations

The purpose of this case study was to understand the extent to which HBCU leaders experience the state's existing funding strategies. This final chapter summarizes the findings, the interpretation of the findings related to the literature and research questions, implications for policy and practice, and recommendations for future research. A total of nine interviews (i.e., five in upper administration and four individuals that worked directly with students) were conducted for this research study to help answer this study's two research questions:

1. What are the perspectives of select HBCU administrators on how the state provides funding for public HBCUs?
2. How have the current funding strategies in Texas contributed to inequitable funding for HBCUs in the state?

The preceding chapter addressed the research questions focusing on the perspectives of select HBCU leaders and administrators by collecting data through in-depth interviews. An ongoing process of reviewing, transcribing, and coding the collected data to create overarching themes concluded the data analysis process. The following section summarizes the findings from the in-depth one-on-one interviews.

Summary of Findings

The data collected for this research were from interviews from HBCU upper administration, HBCU faculty and staff, and HBCU community leaders. The findings were the perceptions of HBCU administrators and community leaders centered on the state's funding strategies favoring PWIs over HBCUs and the formula funding model not adequately meeting the institution's needs. These findings addressed how the participants perceived the state’s funding strategies and the impact on their institution. The historical inequities from the state’s allocating system have favored PWIs over HBCUs and have created deep unequal funding amongst the institutions that continue to persist today (Elliot, 2019). In addition, the participants perceived inadequate resources, inadequate funding, and inadequate representation in the state legislature as contributors to continued funding inequities. The current funding strategies include variations of revenue streams that can contribute to funding inequities across 4-year institutions in the state; however, inadequate components (i.e., resources, funding, and legislative representation) result from continued funding inequities that have existed for a century (Brown & Burnette, 2014: Drezner & Gupta, 2012: Minor, 2008b).

Often the broader narratives of HBCUs can overemphasize challenges and deficits experienced. However, this study aimed to utilize counter-narratives to emphasize and illuminate the contributions of HBCUs that also include the societal benefits. In addition, this study aimed to use counter storytelling to address the contemporary challenges that impact both the institution and student population. There was a need to address the contemporary challenges for continued institutional progress. The conceptual models that provided the foundation for this study’s theoretical framework included a necessary lens to understand equity challenges associated with fiscal disparities. Used by Derrick Bell and Allen Freemen in the 1970s, Critical Race Theory (CRT) was used in this study to understand the contemporary funding inequities through story-telling from HBCU leaders.

Storytelling is essential to this study because it reframes the dominant narrative often found in state funding policy discourse (Williams et al., 2019). The state uses a funding strategy primarily focused on enrollment and academic disciplines. The funding formula strategy does not emphasize the difference in students or the cost of what it would take to retain these students. An example of the institutional differences includes having a large number of low-income and first-generation students and students with prior academic challenges. This study found importance from the participants who provided their experiences with students who encountered financial challenges (i.e., lack of financial aid) and experienced systemic academic preparation challenges in the K-12 system (Williams et al., 2019). The study revealed that the public HBCUs in the state has a unique mission to meet the needs of the students who experience these challenges and meet the workforce demands that the state needs. However, the dominant narrative in policy discourse does not often recognize the necessity. The legal implications of this study challenge the state's underfunded higher education system that often blind lawmakers to the value that HBCUs adds.

Participants describe the necessity of HBCUs as the institution being able to meet the state’s strategic 60x30TX plan, yet they have been excluded in funding ways. An example of this exclusion includes public HBCUs not receiving an equitable amount of funding from the state’s agricultural match. The participants explained how the state provides flagship institutions the dollar-for-dollar match at $196 million from the state to match the $94 million from the federal government. However, the state provides a $4 million state match to a $23 federal match for the state’s land-grant Historically Black College and University. According to Williams et al. (2019), it is critical to destabilize the majoritarian stories within the HBCU and PWI framework. The CRT tenants helped unpack the current funding strategies and provided a lens that described how these structures have contributed to funding inequities. In addition, the use of CRT helped provide a lens that does not disregard the sociopolitical necessitation of Historically Black Colleges and Universities. The findings of this study challenge the current policy that still needs to consider the different dynamics of low-income students and students who need more support services. Challenging the legacy of inequitable state investment into HBCUs that have provided upward social mobility is critical. The findings provide counter-narratives to the dominant discriminatory funding against Historically Black Colleges and Universities.

The second lens was needed to address the experienced contemporary challenges of institutions that enroll most of the nation's low-income students and students of color yet receive the fewest resources. As a result of continued racial and social divisions that have helped sustain inequities while affluent groups maintain privilege and resources, outcomes equity provided a lens of inadequacy experienced by HBCU leaders (Williams et al., 2019). The result of inadequate funding for the institution is that the state funding strategies do not support the institution's mission, and students require additional financial aid. Dar (2014) described the need to define equity as a means to evaluate consequences. The researcher emphasizes one of the needs for defining equity within funding policies because it can entail the unequal distribution of resources allocated to students without considering their diverse educational needs (Dar, 2014). The participants explained the need for the state to recognize that many factors go into serving the students that the institution admits. The participants explained that many of the admitted students include low-income students from disadvantaged K-12 systems and need more support services.

The outcome equity lens emerged as the participants described the diversity in size, mission, geographical location, and Carnegie classification amongst the Texas universities. Consequently, because the state formula funding model does not recognize the differences, the institution was forced to dip into other resources. At the time of this study, the funding formula was not adequately addressing the institution's needs and did not consider student characteristics. As a result, the institution had unmet needs from the state’s funding strategy.

The outcome equity framework emphasizes the concept of what it would take to adequately provide HBCUs with funding to produce the desired learning outcomes. The participants described the historical funding inequities that led to a lawsuit in the 1990s against the state. The public HBCUs were put on a priority plan for the state due to the lawsuit. The institution’s total calculation of what it would take to achieve parity with the flagship institutions totaled a half-billion dollars. Subsequently, the participants explained that the lawsuit resulted in the institution receiving approximately 250 million dollars from the state that unfortunately did not last forever.

Outcomes equity shed light on how Kranston University experienced funding inequities that can potentially impact the quality of education they would like to deliver to their students. These inequities were shared by how the HBCU participants experienced inadequate resources, inadequate funding, and inadequate legislation representation as a byproduct of the state’s funding strategies. The participants described receiving inadequate resources to assist students who need more services (i.e., tutoring, advising, and academic enhancement programs) and even additional classes to help the students persist. The deficiency in resources, funding, and legislation representation is inadequate to meet the state's desired outcomes and contributes to ongoing funding inequities. Merging the study's two theoretical frameworks allowed me to explain how a funding strategy has historically and currently marginalized less-resourced institutions. In addition, the framework merging helped me identify inadequate factors for HBCUs within higher education fiscal policy. The following section will discuss how the findings compared to existing research.

Interpretation of Findings

As indicated in the previous chapter, three major themes emerged, including subthemes for one central theme. The selected themes were chosen because they reflected the similarities, feelings, and occurrences of the participants' experiences. The themes were perceptions of how the state's funding strategies impacted a public HBCU and perceptions of the contributing factors to inequitable funding from the state. The interpretation of each theme is described below.

Discussion of Research Question One

PWIs Favored Over HBCUs. The public universities in Texas are organized as either independent institutions or members of multi-campus university systems. Some university systems have worked to allocate more funding with some progress. However, the state continued to cut state funding overall. As a result, HBCUs that have been historically behind their white counterparts remain disproportionally behind even with incremental progression (Palmer et al., 2011). The participants identified the disproportionate funding levels as a mechanism that cannot apply a “one-size fits all” strategy to all public institutions.

As mentioned in the findings, most participants understood how HBCUs were created, including the funding inequities that have existed since its foundation. The participant's counter storytelling of funding inequities provided the study with rich data of how the current disparities are still experienced. For example, participants at Kranston University described the initial recognition of inequities from the state as just a recognition, not a plan. Meaning no funding was associated with a plan to close the funding gap. The experience described by participants of the study aligns with what Brown and Burnette (2014) identified during their research by expounding upon the funding gaps between HBCUs and Predominantly White Institutions (PWIs). The researchers explored four litigation cases between HBCUs and the states that underfunded them—resulting in temporary supplemental funding addressing decades of underfunding. However, the supplemental funding for the litigation cases did not last forever and eventually ran out.

Empirical qualitative research has concluded that funding has been prioritized at PWIs and flagship institutions (Boland & Gasman, 2014). The participants of this research study possessed some historical knowledge of HBCUs and were fully aware of states being sued as representative Julian Justice stated:

> This has been seen all across the country, where you are now seeing HBCUs, literally, suing states, and winning, because they are able to make the distinction and the determination that these universities were woefully underfunded. So thus, this is where we are, right now, in Texas.

Historical inequities such as the state's dollar-to-dollar federal match for land grant colleges have lasted decades. The participants provided a high disdain for the state's inability to recognize and provide equitable funding for the federal match. Financial inequities were birthed as congress allowed southern states to establish and maintain land-grant institutions separately for black students during the second Morrill Act of 1890 (Allen, 1992: Banks, 2019: Brady et al., 2000).

These experienced vestiges of racial segregation highlight the permanence of racism, a Critical Race Theory (CRT) tenant. The permanence of racism operates as a tool that controls U.S. society's political, social, and economic realms (Hiraldo, 2010). It is the tool that sustains the continued disparities for marginalized populations (i.e., underrepresented and low-income). The funding disparity between land grant colleges has been the racial tool that perpetuates funding gaps. Decuir and Dixon (2004) posit that the incremental progression and change to address the funding inequities do not take the permanence of systemic racism away or into consideration. These post-secondary inequalities are present and not dismantled.

Full professor Dr. Howard acknowledged the mediocre incremental funding progress towards Kranston University and shared her resentment in this study. Even though participants held resentment towards the incremental change, they still had formed a resilience and high regard of achievement in what they have accomplished despite the disparities. Historically Black Colleges and Universities such as Kranston University have had significant success in graduating African American students. The counter storytelling included counter-narratives that highlighted the contributions and commitment to educating large populations of low-income students who need more support services. The participants cherished their students and were committed to those who had promise. The Kranston administration believed in supporting the students by providing them with a fighting chance to bring them to where they need to be to earn a baccalaureate degree and beyond. The participants provided a counter-narrative of the institution's success, as Provost Emerita mentioned:

> You have to realize that there are some variables that you cannot control. When it comes to moving students through the ones we can control, I think we do a marvelous job and look at the outstanding work we do. How we have really just pushed forward in a positive way.

Moreover, the achievements and progress of HBCUs still have not negated the racial wealth gaps in funding within the higher education arena (Allen et al., 2018; Sykes & Maroto, 2016). Predominantly White Institutions have always benefited from state funding strategies, which Decuir & Dixon (2004) and Ladson-Billings (2005) describe as whites benefitting from interest conversion. As long as the interests of policies and flagship institutions benefit while the HBCUs make incremental progress within state systems, funding, and litigation lawsuits, interest conversion will serve as the foundation and initiative for the primary beneficiaries.

The progression of HBCUs equates to flagship universities and PWIs benefitting from policies that have already provided them with continued wealth and financial resources. An example would be creating funding formula models with variables and benchmarks that flagship institutions already meet as their interests converge. The state’s current funding strategies have contributed to funding inequities and have made flagship institutions and PWIs the primary beneficiaries for decades (Hillman & Corral, 2017).

In summary, Kranston University still has made strives over decades with the existing funding disparities and has successfully produced a workforce that contributes to the nation's economy. In addition, despite a century of inequitable funding, HBCUs like Kranston University have successfully continued to graduate large populations of African American students. However, while this depiction of HBCUs may provide a balanced lens and a nuanced consideration of the institution's assets, the resources and funding are still inadequate to produce the outcomes which the state may desire. Therefore, higher education policy reform for funding inequities is still needed against the structural inequalities between PWIs and Historically Black Colleges and Universities. Rather than just focusing on a funding deficit-laden discourse that can be over-emphasized, the participants also helped provide counter-narratives to highlight the institution's strengths and underemphasized success stories (Williams et al., 2019).

Funding Formulas Not Adequately Addressing the Needs of HBCUs. The storytelling from the participants also offered interpretations of how current formula funding policies have highlighted funding disparities (Harper et al., 2019). These disparities result from the state's funding formula for 4-year public institutions not adequately addressing the institution's needs. In 1955, a formula was established to determine higher education institutions' financial requirements in the state of Texas (Dove, 2007). Throughout the years, Texas has gone through several versions of formula funding. The current formula funding variables for public 4-year institutions are centered on enrollment, instructional costs, and weights categorized by levels of disciplines, such as undergraduate, upper-undergraduate, master-level, and doctoral-level (Graves, 2005; Hackworth, 2019: LBB, 2019).

The majority of the upper-administration participant group were very familiar with the state's funding formula variables. The participant group understood the components of the mathematical algorithm and what the institution needed to do to meet those metrics within the formula funding model. Participants shared their thoughts on the formula funding variables not adequately addressing student characteristics (i.e., low-income) and students needing more support services. As a result, the institution was forced to use other limited resources to support its students. The weighted mathematical algorithm applied to all public universities focuses on the number of students and negates the type of student and that student's needs. Consequently, the funding formula model is an example of inadequate mechanisms that emerge from the outcome equity framework. As a result of the inadequacies, the institution may struggle to meet both student learning outcomes and the state's strategic initiative outcomes.

The discourse of funding policies occurs when all states adopt some type of formula funding mechanism to allocate limited funding (Layzell, 2007). State governments create state-wide initiatives, tie performance metrics (i.e., inputs or output), and desire tangible outcomes from the institutions (Ziskin et al., 2018). The adoption of funding formula models can be viewed as a dominant ideology. A dominant ideology is a system, seen as the formula funding model within this study, which is adopted by most states that defines the dominant socioeconomic policy of the United States (Saunders, 2014). The CRT tenet, the challenge to dominant ideology, is used to dismantle the established hierarchies of power within funding formula policies. The participants' perceptions challenge the normalized standard (i.e., funding formulas) of how funding strategies are implemented and perceived as unmet needs. The participants' experiences with the state's funding strategies challenge the normative ideology of a funding formula applied to all public universities within the state. The normative lens of funding policies includes performance metrics seen as the standard.

The perspectives of the HBCU institutional and community leaders all perceived the state's funding strategies as impacting both the institution and the students. The standard funding formula policy has allowed the flagship institutions to maintain their power and continue to receive most of the funding compared to other institutions that cater to large populations of low-income students. Williams (2020) concluded that the Texas public HBCUs receive $2500 less per student than the flagship institutions from state investment.

Leaders of HBCUs describe the funding strategies based on mathematical algorithms that are focused on enrollment and academic programs. In order to estimate the amount of funding needed to produce adequate outcomes, the type of students and their varying needs must be included in the algorithm of the funding strategy. The state's funding formula emphasizes student inputs rather than outputs. Hardy et al. (2019) reported that once pre-college factors (i.e., SAT scores, socioeconomic status, and academic preparation) were controlled, these factors can account for the variation in student outcomes (i.e., graduation and persistence rates) amongst PWIs and historically black colleges and universities. However, whether the state formula funding model emphasized the inputs or outputs, metrics still void equity.

The CRT tenant, the challenge to dominant ideology, also challenges cultural and societal realities that have had the potential to create illusions that racial discrimination does not exist or that state conduct is no longer influenced by it (Brady et al., 2000). For example, the Chief Financial Officer (CFO) of Kranston University described how the state distributes funding appropriations through a funding formula process. In addition, the state may provide institutions with an opportunity to receive supplemental funding through special item funding [funding for new projects and initiatives] by using funds from the general revenue. The findings revealed that policymakers may have created the formula funding models with the intentions to offer equal opportunity; however, the flagship institutions continue to benefit as the CFO stated:

> Now, when you look at the flagship institutions, they take the majority of that funding. So the rest of us deemed as regionals or other institutions are kind of sitting there going; okay, it is an unfair advantage because we do not have the enrollment levels of those large flagship institutions.

Consequently, because the formula funding models are still tied to enrollment and credit hours, the formula funding models do not adequately meet the institution's needs, and discrimination continues to exist. Participants pointed out the state's inability to address the challenges that the formula funding model tends to overlook. The challenges overlook low-income and students that need more support services. Provost Dr. Franklin described the outcome of the unmet needs from the formula funding as the institution having to put more money into wrap-around services as 50 percent of the student population is not considered college-ready as defined by the state.

The unmet needs of the institution can be aligned with what Coupet (2017) described as the operational control of HBCUs being controlled through state governments, which can sometimes harm institutions. Coupet (2017) reported that the internal efficiency of institutions could have the potential to be constrained because of the state's influence being centered on state goals (i.e., state initiatives, enrollment, or graduation completion). The funding strategies of Texas put constraints on Kranston University's internal efficiency by not meeting its institutional needs.

Likewise, the findings from Elliot (2019) indicated that the current formula funding policy within their study increased students' academic and personal hardship and financial difficulty at both the institutional and student levels. The faculty and staff participants of Kranston University described their interactions with students that encounter personal, family, and work obligations as disheartening and critical to a student's ability to persist. The inequitable gaps in funding strategies equate to fewer resources supporting students most at risk of not completing. As a result, students enrolled at HBCUs need more money to succeed. The participants describe the dire need for more funding strategies to support services for students so that the institution does not have to dip into other resources.

In addition, Elliot (2019) concluded that a mixture of MSIs and smaller regional institutions in their study fell to the bottom of the formula funding rankings because of the imposed formula funding. These institutional disadvantages for HBCUs can serve as examples of oppression within formula funding models. The disadvantages reinforce the narratives of white supremacy by promoting and favoring PWIs and flagship institutions by naming these institutions as distinguished. These institutional advantages are what the CRT tenant, the critique of liberalism, refers to as normalizing the notions of state funding policies as being colorblind or neutral. The current funding strategies in this study do not adequately meet Kranston University's needs and serve as inequities. The inequalities of funding remain present and not dismantled (Decuir & Dixon, 2004).

In summary, previous studies (Elliot, 2019: Griffin, 2013; Jones, 2013) concluded that students at HBCUs had different demographics than students at nearby PWIs and flagship institutions. The participants of this study expressed the differences in their student demographics that are not considered within the state's funding strategy. Therefore, evidence of past discrimination of HBCUs puts the institutions at a disadvantage of receiving inequitable and inadequate funding to meet the needs of the institution and students.

Discussion of Research Question Two

Inadequate Resources, Funding, and Legislative Representation. The participants described the contributors to the funding inequities and its impact on the institution and its students. The negative impact is a result of inadequate resources, inadequate funding, and inadequate HBCU legislative representation. Melguizo et al. (2017) refer to outcomes equity as estimating the amount of funding needed to produce adequate learning outcomes. State funding strategies often seek equality versus equity. As mentioned before, in the formula funding model not addressing the needs of the institution, the state offers opportunities to institutions such as special items. However, the notion of incremental change seeks after equality, which is very different from equity (Decuir & Dixon, 2004). Equity recognizes that race and individual experiences are unequal and instead attempts to address the inequality.

Inadequate Resources to Serve the Institution and Students. The participants described the state’s inability to provide adequate resources as the inability to support the mission of the institution. The misalignment also impacts the students they serve, thus impacting the students who need more financial aid. There is institutional diversity within the state; however, current legislation funding and reporting policies do not address this diversity (National Academic of Sciences, Engineering, and Medicine, 2019; Williams, 2020). The participants refer to the funding strategy as not being designed to adequately address the diversity of institutions.

The byproduct of resource inadequacy equates to the institution not serving its mission fully and not investing in programs and services needed to address the challenges of its student population. Provost Franklin described the impact of the inadequate resources that do not meet the mission of the institution as: “This is about an investment in an institution and the mission that it actually is intending to serve. What that means is that you are then shortchanging the ability of that institution to satisfy its mission fully”.

When participants were asked about how the funding strategies responded to the institution's unique needs, participants described the mission as accepting students who came with some need for additional gap closing. The gaps within the educational system between the K-12 system and the post-secondary educational system result in many students being under academically prepared, thus creating a disconnect. The disconnect forces HBCUs to invest more time and funding in academic preparation and need more resources. The need to close the gap suggested that the state’s funding strategies shortchanged the ability of the institution to satisfy its mission. Consistent with the literature, Allen et al. (2007) stated that the unique missions of HBCUs still provide capital and social networks to serve students that were historically denied access even still in the 21st century. The upper administration participant group described the funding strategy as a model that is considered a “one-size fits all” model, and the strategies ignored the individual institution’s mission. The inadequate resources that serve large populations of low-income and disadvantaged students can be detrimental to meeting the state's desired outcomes.

Ahlman and Gonzales (2019) described students with the greatest need for additional resources as typically the most susceptible to loan default and non-degree completion. Institutions enrolling the majority of low-income students often have the fewest resources. Williams (2020) revealed that between 63 percent and 66 percent of students at public HBCUs in Texas had a financial need that was not covered by financial aid compared to the 23 percent and 22 percent at the flagship institutions. These percentages align with what the associate director of financial aid at Kranston University confirmed in stating that 68% of students at the university are Pell Grant recipients.

Having students who need more financial assistance and having inadequate resources to put towards more student services and scholarships impacts students. The participants helped describe the broader context of how needing more financial aid impacts the students. The participants described the need for more financial aid contributing to students working to earn money. Consequently, students cannot enroll in school full-time or cannot be enrolled in school at all. In addition, the Provost Emerita provided a lens that is often overlooked in the state's funding strategy. The lens questioned the systemic inequities in the K-12 urban-centered schools that the students attended. The system that the students are coming from suffers from a lack of resources.

The students from these inequitable K-12 systems are typically low-income and in great need of additional funding. Researcher Martinez (2016) confirms that students coming from a background that does not economically provide support and has not academically prepared students can shape the perceptions and opportunities available to them. In addition, Martinez (2016) reported that fewer students from socio-economic backgrounds enter post-secondary institutions and persist to graduation than students from higher socio-economic groups.

Saunders et al. (2016) also concluded that about 70 percent of the underrepresented and underserved populations receive some form of financial aid and qualify for need-based financial aid. The number of students receiving financial aid from both Williams (2020) and Saunders et al. (2016) align with the overview and grief that participants experience as they witness their students struggling to balance academics and their financial aid shortcomings. Participants shared their views on how they wish their departments could provide scholarships to assist the students to ease the burden of trying to be enrolled full-time and work. These inadequate resources harm the students and contribute to the funding inequities between PWIs and historically black colleges and universities.

Inadequate Funding for Classes, Programs, and Administrators. The next perceived contributions to funding inequities were perceptions of inadequate funding. The funded needed to provide adequate classes, the funding needed to provide adequate programs, and the funding needed to reduce administrator burnout. Participants that engage with students regularly and frequently directly encounter how the inadequate funding impacts students and their ability to matriculate. Montgomery and Montgomery (2012) concluded that all graduation rates were low for all public institutions; however, HBCU graduation rates appeared to be lower than the sampled PWI graduation rates because students needed more financial assistance and academic support. Additionally, the researchers (Montgomery & Montgomery, 2012) also concluded that financial assistance would improve educational outcomes aligned with the state’s funding expectations.

The funding strategies and expectations for this study’s funding formula included an emphasis on enrollment. Reducing the number of course offerings can potentially impact enrollment, thus impacting the institution’s funding. Inadequate funding also cuts programs, and the state has allowed other PWIs and flagship institutions to duplicate programs that the HBCUs offer. Subsequently, the state provides the PWIs and flagship institutions the adequate funding, resulting in additional contributions to the state’s funding inequities. Again, the inadequate funding needed to serve the mission, create programs, and support students can be detrimental to the success of the students and the institution.

Finally, inadequate funding had an impact on the institution's human capital. Administrator burnout emerged as a theme and byproduct of inadequate funding experienced by the participants. Many of the faculty and staff participants at Kranston University have multiple job duties as the associate director of financial aid described: “In the background, you are dealing with processing, you are dealing with compliance issues, and you are dealing with other things.” Multiple job duties can become overwhelming by professionally straining the employees and creating burnout. In addition to emotional exhaustion and depersonalization, administrator burnout has the potential to decrease one’s productivity and efficiency.

The lowered and decreased productivity can potentially impact the ability to collect data and effectively communicate the needs to institutional leaders and stakeholders. A proper assessment can potentially increase equity, innovation, pedagogy and document progress over time (Singer-Freeman & Robinson, 2020). The inability to collect the data can produce financial ramifications for the institution if they are unable to report and articulate to the state how they are spending the money that they do receive. The inability to report how money is being spent can impact accreditation and future disbursements. All public institutions are required to file specific reports to their state agencies. However, wearing multiple hats and feeling burnout can impact this process, and offering sabbatical leaves could solve burnout. In addition, sabbatical leave can help university faculty feel rejuvenated and return to the institution recharged.

Documenting well and communicating needs to internal and external stakeholders is as important as communicating institutional needs to state policy decision-makers. Understanding the inadequate resources and funding between HBCUs and PWIs can be critical to funding policies that exacerbate the inequities. The following section will discuss the inadequate HBCU representation within the state's legislature.

Inadequate HBCU Representation in Legislation. Hackworth (2019) found that the perceptions of legislatures shape their funding decisions. The perceptions from the Texas legislature are what Hackworth (2019) feels could be missing from how less-resourced institutions, including HBCUs, are not prioritized in the funding formula strategies. The literature is consistent with how the upper administration group describes the subtheme of needing more HBCU representation in the legislature.

More individuals advocating for HBCUs can aid in the counter-story telling of funding inequities within the legislature. Voices of HBCU advocates provide the narratives that shape the experiences happening at the institutions. Hackworth (2019) found that 50 percent of the Texas legislature is comprised of Caucasian males with no education committee experience (i.e., higher education, education appropriations committee, or public education committee). The HBCU counter-stories tell unique stories that are not typically considered within the state's funding model. Representative Julian Justice explained the importance of HBCU representation and the interactions with other state representatives as:

> I really believe that they [policy makers] are punishing and hurting the public HBCUs because, at some point or another, these new-age thinking people simply think that the HBCUs are no longer needed. So this is why we have to continue to fight, and this is why I have to continue to be on appropriations to make sure that we shine the light on this stuff.

Adequate HBCU representation can make advocating the needs of HBCUs more effective. It is the role of state legislators to pass the state's budget that funds higher education; however, there is also a challenge and imbalance of how the legislators view priorities (Hackworth, 2019). Therefore, legislatures need to understand higher education, its mission, and the institutions' missions (Hackworth, 2019).

In summary, inadequate resources, inadequate funding, and inadequate HBCU representation in the state legislature can contribute to significant funding inequities. The inadequacy of resources increases financial burdens for the institution and their students and indicates that low completion rates could be attributed. When compared to PWIs, some researchers point out how HBCU six-year graduation rates are lower (Postsecondary National Policy Institute, 2019). However, Hardy et al. (2019) note that many studies do not control institutional differences. Larger populations of students with financial needs attend HBCUs, and unfortunately, the inadequate resources can increase the student's debt burdens if the institution cannot assist the students. The result also causes many students to stop out and not graduate.

Dowd et al. (2020) suggest that funding may not be equal; however, it should be adequate. Inadequate funding impacts students in the matriculation process and can have unintended outcomes of producing administrator burnout. Dowd et al. (2020) also suggest that the threshold of adequate provision should be determined by the top and bottom levels of the funding distribution. Hence, the need for adequate representation within the legislature is essential. Within the funding distribution system, policymakers can identify the needs of HBCU advocates and institutional leaders. Providing shared experiences of the funding inequities and the inadequate funding and resources are critical to closing the funding disparities amongst HBCUs and other institutions within the state.

Implications for Policy and Practice

This research study sought to be a part of ongoing conversations that will help state policymakers develop new solutions to longstanding funding challenges that disproportionately burden institutions that serve large populations of low-income and students of color. Equity funding is a potentially effective way to provide adequate financing for public institutions, especially for those institutions that have been historically marginalized through inequitable funding strategies. As previously stated, continued research is needed to examine how state fiscal policies affect public universities, especially Historically Black Colleges and Universities (Hillman & Corral, 2018). This study's research can contribute to understanding the influence of current funding strategies on a selected public HBCU in the state of Texas. Specific measures included in formula funding models can have the potential to meet the funding needs for at-risk populations, fund the progress and completion of underserved student populations, and reward institutions that admit low-income students. Lingo et al. (2021) provide a systematic longitudinal analysis of state mechanisms and how they have changed over time. Some state funding mechanisms are beginning to include certain equity provisions within their funding models. Beginning with actionable strategies that can be used to monitor improvements, the following policy implications can be important for subsequent studies that address funding inequities across the state.

First, state policymakers could conduct a state funding equity audit that is transparent and accessible to the public. The audit can examine components that identify how much institutions receive in state appropriations and how the financial patterns vary across all public 4-year universities and colleges. This strategic process can help state policymakers identify the existing funding inequities and then help develop policy solutions (i.e., funding formulas or capacity building grants) that will help equalize funding within the public institution sector. Increasing funding for colleges that carry a heavier load of educating low-income and students of color could start closing the inequitable funding gap.

Examples of potential policy solutions can include incorporating equity metrics within the state funding formula. These metrics could include the enrollment and success of students from low-income backgrounds and students of color. Tying mandatory metrics to funding formulas will incentivize institutions to meet those metrics. Using a combination of indicators such as income and race will help ensure appropriate metrics.

Including an emphasis on equity measures can help give substantial weight to socioeconomic status and race metrics.

Second, state legislatures can invest more into student success strategies. This investment also includes providing technical assistance, technology, and human capital needed to scale existing and new student success strategies. Providing high-quality advising and academic programs is an example of investment into student success strategies. Additionally, increasing the institution's capacity to address the financial needs of students, such as housing, childcare, and transportation, can help HBCUs provide the support that their students need.

Balancing daily stressors from financial challenges, family dynamics, and academics are variables that can impact how a student persists. Although the focus of this study was not centered on family or parent support and the relationship between student completion predictors, Cutrona et al. (1994) concluded that parental support did predict college GPA when controlling for family conflict. A dynamic that impacts the student and their performance. Moreover, these dynamics and challenges are variables that should be evaluated and considered within the funding formula strategies. Additional support can come from providing incentives to institutions that work with family services to support foster care students or those who have aged out of the system. Incentives that address students' food insecurities and other basic needs can reward HBCUs that accept both SNAP and Medicaid benefits on campus.

Lastly, the state could diversify state officer rankings with HBCU and equity advocates. Funding policies within the state are enacted by the state legislature and are comprised of various joint committees (Hackworth, 2019). State-level leadership needs to be diverse so that it can be a reflection of the institutions that serve large populations of students of color and students from low-income backgrounds. In addition, the diversification implication can ensure funding policies are informed by advocates who can provide counter-stories that speak to the experiences of HBCUs and their navigation of funding challenges and inequities.

In addition to hiring and recruiting state HBCU and equity advocates, the state should continue to rely on input from institutional leaders. Understanding how different institutions, especially HBCUs, will perform under a particular funding policy is essential. The input can provide a lens to the design and changes of a funding policy. The input from faculty, administrators, and former administrators or other well-informed institutional experts who are informed on the higher education process, trends, and racial disparities can also be essential.

In summary, distributing incremental amounts of funding will not undo decades of underfunding and inadequate funding. However, providing adequate resources for low-income and underrepresented students from a policy standpoint can happen by investing in the HBCUs where large populations of low-income students enroll. The strategic approach focuses on building HBCUs up rather than having institutions alter enrollment decisions. Funding HBCUs more adequately could result in a more effective way to combat structural inequality by supporting an outcomes equity funding approach.

Recommendations for Future Research

The findings provide support for the need to conduct future research. As a result of institutional diversity within the state, diversity exists between the two public HBCUs. Each HBCU has a set of unique characteristics (i.e., higher education systems), yet

HBCUs tend to vary in size, mission, and demographics. Although the collected sample of data was from only one of the HBCUs within the state, future research should include contrasting and comparing the two public HBCUs as two different case studies of how they respond differently to the funding strategies of the state. The second recommendation for future research includes exploring more financing trends that are not well documented in policy and research conversations. Researching financing trends can include disaggregating the different higher education systems within the state and seeing how different state systems with different sources of revenue (i.e., non-PUF eligible institutions) respond in terms of institutional effectiveness, including private HBCUs in the absence of mandated state allocations. In addition, future research should include which states include equity metrics within their funding strategies and how HBCUs respond to those funding mechanisms. As the funding mechanisms within Texas evolve and change over time, future research should document how the public HBCUs respond to those new funding mechanisms.

Adequate funding and accreditation challenges can, directly and indirectly, impact one another. Accreditation is based on assessments tied to institutional outcomes, which are then tied to funding (Crawford, 2017). Another recommendation for future research includes exploring how inadequate funding mechanisms impact the accreditation of HBCUs. Burnett (2020) found a statistically significant relationship between the HBCU-status of an institution and negative accreditation actions. Because of the inadequate funding, the institution must be very mindful of accrediting sanctions in which 50 percent of HBCUs make up the accrediting sanctions for within regional commissions (Dumas et al., 2014: Lee, 2008).

In addition, this study initially sought to include student affairs professionals; however, conflicting schedules arose, and the participants were unable to be a part of the study. The final recommendation is for future research to explore how funding inequities further impact the work environment of student support staff, especially those individuals in a student affairs professional role, including the narratives of professionals of color.

Conclusion

The findings from this study suggest that policymakers should continue to look to new funding strategies within Texas to ensure adequate resources for HBCUs and other less-resourced institutions are being provided. As the state currently faces a global pandemic, a new recession, and a national reckoning on racial justice, equipping HBCUs with adequate funding will be paramount for its continued contributions to the workforce. In theory, state funding strategies are meant to nudge institutions to produce state outcomes. However, the state of Texas' funding strategies has inadvertently increased existing funding inequities between flagship institutions and HBCUs within the state. The experiences from Kranston University are counter storytelling narratives that continue to paint the lens of inequitable funding from the state and need to be a part of ongoing conversations despite incremental progress. Targeting the under-resourced HBCUs can start the remedies of the financial inadequacies that are at the root of higher education inequities today. It may be suggested that it is time to move away from funding strategies that favor colleges and universities that take more than their fair share of funding and resources. Centering on equity and using state-informed student demographics can help decrease funding inequities.

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APPENDIX A

IRB-2021-186 - Initial: Limited IRB Determination

The image part with relationship ID rId81 was not found in the file.

Date: Jun 3, 2021 12:43:17 PM CDT
TO: Kathleen Vandyke Ricardo Montelongo
FROM: SHSU IRB
PROJECT TITLE: The Exploration of a Public Historically Black College and University's Experience with State Funding Strategies in Texas
PROTOCOL #: IRB-2021-186
SUBMISSION TYPE: Initial
ACTION: Exempt - Limited IRB
DECISION DATE: June 3, 2021
EXEMPT REVIEW CATEGORIES: Category 2.(iii). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met: The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by §46.111(a)(7).

OPPORTUNITY TO PROVIDE FEEDBACK: To access the survey, click **here**. It only takes 10 minutes of your time and is voluntary. The results will be used internally to make improvements to the IRB application and/or process. Thank you for your time.

Greetings,

On June 3, 2021, the Sam Houston State University Institutional Review Board (IRB) determined the proposal titled The Exploration of a Public Historically Black College and University's Experience with State Funding Strategies in Texas to be Exempt with Limited IRB Review pursuant to 45 CFR 46. This determination is limited to the activities described in the Initial application, and extends to the performance of these activities at each respective site identified in the Initial application. Exempt determinations will stand for the life of the project unless a modification results in a new determination.

Modifying your approved protocol:

No changes may be made to your study without first receiving IRB modification approval. Log into [URL], select your study, and add a new submission type (Modification).

Study Closure:

Once research enrollment and all data collection are complete, the investigator is responsible for study closure. Log into [URL], select your study, and add a new submission type (Closure) to complete this action.

Reporting Incidents:

Adverse reactions include, but are not limited to, bodily harm, psychological trauma, and the release of potentially damaging personal information. If any unanticipated adverse reaction should occur while conducting your research, please login to Cayuse, select this study, and add a new submission type. This submission type will be an adverse event and will look similar to your initial submission process.

Reminders to PIs: Based on the risks, this project does not require renewal. However, the following are reminders of the PI's responsibilities that must be met for IRB-2021-186 The Exploration of a Public Historically Black College and University's Experience with State Funding Strategies in Texas .

1. When this project is finished or terminated, a **Closure submission** is required.

2. Changes to the approved protocol require prior board approval (**NOTE:** see the directive above related to **Modifications**).

3. Human subjects training is required to be kept current at citiprogram.org by renewing training every 5 years.

Please note that all research records should be retained for a minimum of three years after the completion of the project.

If you have any questions, please contact the Sharla Miles at 936-294-4875 or irb@shsu.edu. Please include your protocol number in all correspondence with this committee.

Sincerely,

Chase Young, Ph.D.
Chair, IRB
Hannah R. Gerber, Ph.D.
Co-Chair, IRB

APPENDIX B

The image part with relationship ID rId81 was not found in the file.

PROTECTION OF HUMAN SUBJECTS

Sam Houston State University
Consent for Participation in Research

KEY INFORMATION FOR THE EXPLORATION OF A PUBLIC HISTORICALLY BLACK COLLEGE AND UNIVERSITY'S EXPERIENCE WITH STATE FUNDING STRATEGIES IN TEXAS

You are being asked to participate in a research study about the relationship between state funding strategies on public Historically Black Colleges and Universities. You have been asked to participate in the research because of your knowledge of your institution's internal and campus context in relation to its state policy context. In addition to understanding the institutional leader's perspective, the study will examine the correlation between institutional characteristics and interview participants that work directly with the students that the HBCU serves

HBCUs have been supplying leaders to the nation and communities for years, which is demonstrated by the contribution in awarding bachelors, masters, and doctoral degrees. This study will explore how HBCU leaders experience disproportionate changes in state funding levels with the state's current funding strategies and how student outcomes are affected. You will be asked a series of questions about your experience with state funding strategies and appropriations and the impact it has had on your institution. Suppose you are serving in a faculty or support service role. In that case, you will be asked questions on your interactions with students that the university serves.

I am asking you to help me learn more about the state funding strategies and appropriations experienced by your institution. Before the interview, I will send you a Zoom link or call you on the phone or come to a private setting and location (whichever you prefer). If you participate in a face-to-face interview, I agree to take certain precautions and you are encouraged to wear a face covering if you are not fully vaccinated against COVID-19, although not mandatory.

If you do not wish to answer any of the questions during the interview, you may say so, and the interviewer will move on to the next question. No one else but the interviewer will be present unless you would like someone else to be there. The information recorded is confidential, and no one else will have access to the information documented during your interview. The entire interview will be tape-recorded or recorded via zoom. However, no one will be identified by name on the recording. The recording will be kept with an encrypted, password-protected file. The information recorded is confidential, and no one else will have access to the recordings. Your participation in this research will last about 45 minutes to 1 hour.

WHAT ARE THE REASONS YOU MIGHT CHOOSE TO VOLUNTEER FOR THIS STUDY?

You might choose to volunteer to help add to HBCU research and scholarship about inequitable and disproportionate funding experiences at HBCUs. For a complete description of benefits, refer to the Detailed Consent.

WHAT ARE THE REASONS YOU MIGHT CHOOSE NOT TO VOLUNTEER FOR THIS STUDY?
You may NOT want to volunteer for this study, considering your varying perspectives and experiences

For a complete description of risks, refer to the Detailed Consent.

DO YOU HAVE TO TAKE PART IN THE STUDY?
If you decide to participate in the study, it should be because you want to volunteer. You will not lose any services, benefits, or rights you would normally have if you choose not to volunteer

WHAT IF YOU HAVE QUESTIONS, SUGGESTIONS, OR CONCERNS?
The person in charge of this study is Kathleen G. VanDyke of the Sam Houston State University Department of Educational Leadership. Kathleen, the PI, is a student and is working under the supervision of Dr. Ricardo Monetelongo. If you have questions, suggestions, or concerns regarding this study or want to withdraw from the study his/her contact information is: *(PI: kgv003@shsu.edu, 281-734-8449 and Faculty Sponsor: Dr. Ricardo Montelongo, rxm059@shsu.edu, 936-294-1155)*. If you have any questions, suggestions, or concerns about your rights as a volunteer in this research, contact the Office of Research and Sponsored Programs – Sharla Miles at 936-294-4875 or e-mail ORSP at sharla_miles@shsu.edu.

APPENDIX C

Sam Houston State University

Consent for Participation in Research

DETAILED CONSENT THE EXPLORATION OF A PUBLIC HISTORICALLY BLACK COLLEGE AND UNIVERSITY'S EXPERIENCE WITH STATE FUNDING STRATEGIES IN TEXAS

Why am I being asked?

You are being asked to be a participant in a research study about the impact of the state formula funding model on HBCUs and the students that they serve) conducted by Kathleen VanDyke from the College of Education at Sam Houston State University. I am conducting this research under the direction of Faculty Advisor Ricardo Montelongo. You have been asked to participate in the study because you will help provide a different lens in relation to your position at the university, in addition to possessing some knowledge of your internal campus context and its state funding context, and may be eligible to participate. We ask that you read this form and ask any questions you may have before agreeing to be in the research.

Your participation in this research is voluntary. Your decision whether or not to participate will involve no penalty or loss of benefits to which the subject is otherwise entitled. You may discontinue participation at any time without penalty or loss of benefits to which the subject is otherwise entitled.

Why is this research being done?

While there has been disinvestment into higher education, there is also a significant disparity in state investment for certain types of public institutions, specifically for less-resourced institutions such as HBCUs. The funding disparities and insufficient funding mechanisms have not met the demands of low-income and underserved students that HBCUs serve, and more research on administrators' experiences is being conducted.

What is the purpose of this research?

The purpose of this research is to understand the current state funding strategies and their impact on a select HBCU from the lens of its institutional leaders. In addition to understanding the institutional leader's perspective, the study will examine the correlation between institutional characteristics to the current state funding strategies in Texas and interview participants that work directly with the students that the HBCU serves.

What procedures are involved?

If you agree to be in this research, we would ask you to do the following things:

First, all communications sent via email will be encrypted. Before the interview, I will send you a Zoom link or call you on the phone or come to a private setting and location (whichever you prefer). No one else but the interviewer will be present unless you would like someone else to be there. The information recorded is confidential, and no one else will have access to the information documented during your interview. The entire interview will be either audio-recorded or recorded via zoom. However, no one will be identified by name on the recording. The recording will be kept with an encrypted, password-protected file. The information recorded is confidential, and no one else will have access to the recordings. The total length of time for the interview will be 45 minutes to 1 hour of your time. Approximately 10 participants may be involved in this research at Sam Houston State University. Data will be destroyed approximately 3 years afterwards.

What are the potential risks and discomforts?

I am asking you to share with me some very personal and confidential information. Suppose at any moment you feel uncomfortable talking about some of the topics. In that case, you do not have to answer any questions or take part in the discussion/interview if you do not wish to do so. You do not have to give me any reason for not responding to any question or refusing to participate in the interview. You do not have to answer any question or participate in the discussion/interview if you feel the question(s) are too personal or if talking about them makes you uncomfortable.

Are there benefits to taking part in the research?

There will be no direct benefit to you for your participation in this study. You will not be provided any incentive to take part in the research. However, we hope that the information obtained from this study may add to the literature and scholarship about inequitable and disproportionate funding experienced at HBCUs.

What other options are there

The researcher would prefer face-to-face; however, they will adhere to the comfort level of the participant. Participants will inform the researcher on the preference of location.

What about privacy and confidentiality?

The only people who will know that you are a research participant are members of the research team. No information about you or provided by you during the research will be disclosed to others without your written permission, except:

- if necessary to protect your rights or welfare (for example, if you are injured and need emergency care or when the SHSU Protection of Human Subjects monitors the research or consent process); or
- if required by law.

When the research results are published or discussed in conferences, no information will be included that would reveal your identity. If photographs, videos, or audiotape recordings of you will be used for research and educational purposes, your identity will be protected or disguised.

Any information obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law.

Nothing you tell me on the interview day will be shared with anybody outside the committee, and nothing will be attributed to you by name. The knowledge that we get from this research will be shared with you and your community before making it widely available to the public. Each participant will receive a summary of the results.

Your name will not appear anywhere, and no one except me will know about your specific answers. I will assign a number or name to your responses, and only I will have the key to indicate which name or number belongs to which participant. In any articles, I write or any presentations that I make, I will use a made-up name for you (unless you would like to make up your own). I will not reveal details, or I will change details about where you work, where you live, any personal information about you, and so forth.

I will not be sharing information about you with anyone outside of the dissertation committee. The researcher will make every effort to preserve your confidentiality, including the following:

- Assigning code names/numbers for participants that will be used on all research notes and documents
- Keeping notes, interview transcriptions, and any other identifying participant information in an encrypted file in the personal possession of the researcher

The researcher will destroy all audio or videotaped recordings following the analyses of the data.

<u>What if I am injured as a result of my participation?</u>

In the event of injury related to this research study, you should contact your physician or the University Health Center. However, if any, you or your third-party payer will be responsible for payment of this treatment. There is no compensation and/or payment for medical treatment from Sam Houston State University for any injury you have from participating in this research, except as required by the University by law. If you feel you have been injured, you may contact the researcher, Kathleen VanDyke.

What are the costs for participating in this research?

There will be no research costs for which the subject will be responsible

Will I be reimbursed for any of my expenses or paid for my participation in this research?

You will NOT be paid or offered other gifts (e.g., free care)

Can I withdraw or be removed from the study?

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and remain in the study. The investigator may withdraw you from this research if circumstances arise that warrant doing so. At any point, if you decide to withdraw, please inform the researcher in writing, and any data collected prior to withdrawal will be included in the study.

Who should I contact if I have questions?

The researcher conducting this study is Kathleen VanDyke. You may ask any questions you have now. If you have questions later, you may contact the researchers

Adviser's name: Dr. Ricardo Montelongo, co-chair: Dr. Meredith Billings,

What are my rights as a research subject?

If you feel you have not been treated according to the descriptions in this form, or you have any questions about your rights as a research participant, you may call the Office of Research and Sponsored Programs – Sharla Miles at 936-294-4875 or e-mail ORSP at sharla_miles@shsu.edu.

You may choose not to participate or to stop your participation in this research at any time. Your decision whether or not to participate will involve no penalty or loss of benefits to which the subject is otherwise entitled, and the subject may discontinue participation at any time without penalty or loss of benefits to which the subject is otherwise entitled.

You will not be offered or receive any special consideration if you participate in this research.

Agreement to Participate

AUDIO/VIDEO RECORDING RELEASE CONSENT

As part of this project, an audio/video recording will be made of you during your participation in this research project for transcription purposes only. This is completely voluntary. In any use of the audio/video recording, your name will not be identified. *You can review recording and the destructions of the recording will be approximately 3 years after the project.* You may request to stop the recording at any time or to erase any portion of your recording.

I have read (*or someone has read to me)* the above information. I have been given an opportunity to ask questions, and my questions have been answered to my satisfaction. I agree to participate in this research.

I understand that if I have any questions about my rights as a research subject, I can contact Kathleen VanDyke. I have received a copy of this consent form.

☐ I consent to participate in the audio/video recording activities.

☐ I do not wish to participate in the audio/video recording activities.

Your name (printed):__________________________

Signature: ______________________________ Date: ____________________

APPENDIX D

Script before Interview:

Thank you once again for being willing to participate in the interview aspect of my study. As I have mentioned to you before, my study seeks to explore the perceptions of HBCU leaders with how the state currently funds HBCUs based on the state's formula funding model and implications for the future of HBCUs and the students they serve.

[Reviews aspects of consent form]

Prior to this interview, you completed a consent form indicating that I have permission (or not) to audio record our conversation. Are you still ok with me recording (or not) our conversation today? ___Yes__NO

If yes: Thank you! Please let me know if at any point you want me to turn off the recorder or keep something you said off the record.

If no: Thank you for letting me know. I will only take notes of our conversation.

Before we begin the interview, do you have any questions [Discuss Questions?]

If any questions (or other questions) arise at any point in this study, you can feel free to ask them at any time. I would be more than happy to answer your questions.

The interview questions for the participants include: universal questions (every participant asked), questions for upper administration/non-student services, and questions for student services and faculty:

Universal Questions

a) What is your title and role at the university?
b) How long have you worked at this specific institution?
c) Can you explain to me how four-year institutions in Texas are funded?
d) What is your understanding of the funding strategies in Texas?

Upper Administration/Non-student service

e) What is your perception of the funding levels/amounts for HBCUs in the state compared to other four-year institutions?

f) Are the institutions held fiscally accountable? Explain.

g) What is your perception of the state's role in holding institutions accountable for specific student outcomes or benchmarks?

h) Do you think the state's funding strategy is responsive to institutional differences?

i) What are your perceptions about how low-income and underserved students are impacted by the state funding policy?

j) How has the institution responded to specific components of the funding strategies? (i.e. has enrollment, persistence or graduation rates increased?)

k) To what extent do you feel that the state funding strategy is a reasonable compromise between public accountability and institutional autonomy?

l) How does the funding strategy impact the university as a whole?

m) To what extent is the state's funding policy responsive to the unique need of your institution?

n) How would you redesign the state funding strategy to create more equitable funding among 4-year institutions?

Student service functional participants and faculty

o) How often do you interact with students?

p) What type of students do you interact with (developmental, conditionally admitted, top 10 percent from graduating high school, etc.)

q) What do students come to you to discuss? (i.e. Academics, finances, personal life situations, etc.)?

r) Do students experience any academic or personal challenges while enrolled at the university?

s) To what extent has the state's funding strategy had any impact on any academic programs at your institution?

t) To what extent has the state's funding strategy promoted efficiency in your institutional operations?

APPENDIX E

Recruitment Notice

Date

Name of potential participant
Address
City, State, Zip

Re: THE EXPLORATION OF A PUBLIC HISTORICALLY BLACK COLLEGE AND UNIVERSITY EXPERIENCE WITH STATE FORMULA FUNDING IN TEXAS OVER TIME

Dear <<*insert name*>>:

I am writing to let you know about an opportunity to participate in a research study about state formula funding and the impact on HBCUs. This study is being conducted by Kathleen G. VanDyke at Sam Houston State University. This study will explore the extent to which HBCU leaders perceive implications with the state's current formula funding model on the future of HBCUs and the students they serve.

The contact information was obtained from the directory on the University's website. There will be a follow-up from this email (i.e. phone call). You may opt out by calling the contact on the letter and requesting that no further contact be made. Agreement to be contacted or a request for more information does not obligate you to participate in any study. If you would like additional information about this study, please call Kathleen G. VanDyke.

Thank you again for considering this research opportunity.

Kathleen G. VanDyke

APPENDIX F

Letter of Informed Consent

TITLE OF STUDY

THE EXPLORATION OF A PUBLIC HISTORICALLY BLACK COLLEGE AND UNIVERSITY EXPERIENCE WITH STATE FORMULA FUNDING IN TEXAS OVER TIME

PRINCIPAL INVESTIGATOR

Kathleen G. VanDyke
[Department]
[Address]
[Phone]
[Email]

PURPOSE OF STUDY

My name is Kathleen G. VanDyke, and I am a doctoral student at Sam Houston State University, and I am researching the impact of the state formula funding model on HBCUs. I am inviting you to participate in a research study and will provide you with information about the research. Please read the following information carefully. Please ask the researcher if there is anything that is not clear or if you need any additional information about the research. Before you decide, you can talk to anyone you feel comfortable with about the research. Before you decide to participate in this study, it is vital that you understand why the research is being done and what it will involve.

HBCUs have been supplying leaders to the nation and communities for years, which is demonstrated by the contribution in awarding bachelors, masters, and doctoral degrees. This study will explore how HBCU leaders experience disproportionate changes in state funding levels with the state's current formula funding model and how student outcomes are affected. You will be asked a series of questions about your experience with state appropriations and the impact it has had on your institution. The interview will take approximately an hour and a half of your time.

PROCEDURES

I am asking you to help me learn more about the state funding appropriations experienced by your institution. Before the interview, I will send you a Zoom link or call you on the phone (whichever you prefer). If you do not wish to answer any of the questions during the interview, you may say so, and the interviewer will move on to the next question. No one else but the interviewer will be present unless you would like someone else to be there. The information recorded is confidential, and no one else will have access to the information documented during your interview. The entire interview will be tape-recorded or recorded via zoom, but no-one will be identified by name on the recording. The recording will be kept with an encrypted, password-protected file. The information recorded is confidential, and no one else will have access to the recordings.

RISKS

I am asking you to share with me some very personal and confidential information, and if at any moment you feel uncomfortable talking about some of the topics, you do not have to answer any questions or take part in the discussion/interview if you do not wish to do so. You do not have to give me any reason for not responding to any question or refusing to participate in the interview. You do not have to answer any question or participate in the discussion/interview if you feel the question(s) are too personal or if talking about them makes you uncomfortable.

BENEFITS

There will be no direct benefit to you for your participation in this study. You will not be provided any incentive to take part in the research. However, we hope that the information obtained from this study may add to the literature and scholarship about inequitable and disproportionate funding experienced at HBCUs.

CONFIDENTIALITY

For this research study, your comments will be anonymous. Your name will not appear anywhere, and no one except me will know about your specific answers. I will assign a number or name to your responses, and only I will have the key to indicate which name or number belongs to which participant. In any articles I write or any presentations that I make, I will use a made-up name for you, and I will not reveal details, or I will change details about where you work, where you live, any personal information about you, and so forth.

I will not be sharing information about you with anyone outside of the dissertation committee. The researcher will make every effort to preserve your confidentiality, including the following:

- Assigning code names/numbers for participants that will be used on all research notes and documents
- Keeping notes, interview transcriptions, and any other identifying participant information in an encrypted file in the personal possession of the researcher

SHARING THE RESULTS

Nothing that you tell me on the day of the interview will be shared with anybody outside the committee, and nothing will be attributed to you by name. The knowledge that we get from this research will be shared with you and your community before making it widely available to the public. Each participant will receive a summary of the results. Following the interview and the dissertation committee's approval, the results will be published so that other interested people may learn from the research.

CONTACT INFORMATION

If you have any questions, you can ask them now or later. If you wish to ask questions later, you may contact any of the following: [name, address/telephone number/e-mail] This proposal has been reviewed and approved by [name of the local IRB], which is a committee whose task it is to make sure that research participants are protected from harm if you wish to find about more about the IRB, contact _____.

VOLUNTARY PARTICIPATION

Your participation in this study is voluntary. It is up to you to decide whether or not to take part in this study. If you decide to participate in this study, you will be asked to sign a consent form. After you sign the consent form, you are still free to withdraw at any time and without giving a reason. Withdrawing from this study will not affect the relationship you have, if any, with the researcher. If you withdraw from the study before data collection is completed, your data will be returned to you or destroyed.

CONSENT

I have read, and I understand the provided information and have had the opportunity to ask questions. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and without cost. I understand that I will be given a copy of this consent form. I voluntarily agree to take part in this study.

Participant's signature ______________________________ *Date* __________

Investigator's signature _____________________________ *Date* __________

VITA

Kathleen G. VanDyke

OBJECTIVE

To obtain a position in an organization that will promote best practices, improve processes, strengthen infrastructures, and utilize my previous experience providing student-centered services such as retention, academic coaching, and academic advising in an inclusive higher education and outreach setting.

PROFESSIONAL STRENGTHS

- Certified Academic Coach
- Advisor and staff trainer
- Retention and engagement strategies
- Student management systems (i.e., Banner, CRM advise, Argos)
- Improved Processes (enrollment, advising, academic support)
- Academic advisement
- Coach and Mentor
- Budgeting
- Evaluation and Assessment
- Prioritization and organizational practices
- Course Review/Instructional Design
- Knowledgeable of all local, state, and federal higher education requirements
- MSI/HBCU experience
- Community development and grant writing
- Developing and cultivating professional relationships
- Stays current with trends and practices regarding student retention
- Distance learning
- Development and implementation of educational programming
- Problem-solving
- Diplomatic skills
- Public speaking
- Analytical skills
- Written and verbal communication
- Solution-oriented
- Culturally competent

EDUCATION

Sam Houston State University Huntsville, TX
Ed.D, Doctor of Education candidate in Higher Education LeadershipExpected May 2022

Prairie View A&M UniversityPrairie View, TX
MCD, Masters in Community DevelopmentMay 2014

Prairie View A&M UniversityPrairie View, TX
MBA, Masters of Business AdministrationAugust 2011

Prairie View A&M UniversityPrairie View, TX
BSEE, Bachelor of Science in Electrical EngineeringDecember 2007

LEADERSHIP/TEAMWORK EXPERIENCE

03/2012-Present, Senior Academic Advisor/Coordinator of Academic Engagement and Student Success, Advising Services, Prairie View A&M University

- Coordinator of training for advisors to promote innovative engagement and professional development
- Led and supervised a team of 18 academic advisors in absence of Director
- Held and facilitated annual advisor meetings
- Facilitator and coordinator of New Student Orientation advising sessions
- Chaired, coordinated, and planned registration workshops
- Motivated students to practice self-regulation and take ownership of their academic success
- Helped students identify, develop, and implement learning strategies and study skills
- Provide comprehensive academic and career advisement to graduate, undergraduate, and incoming students
- Plan and implement leadership experiences, seminars, forums, freshman orientation, and other academic and non-academic programs for retention and student success
- Provide advisement to students with provisional, undecided, and probationary status and assist with college readiness testing
- Serve as Lead Advisor Program For System Admission (PSA) advisor for the Texas A&M University System

- Provide feedback to students about their academic progress, and refer students to campus resources, including tutoring, counseling, and/or career services
- Developing quantitative and qualitative metrics to evaluate and assess student success strategies
- Use assessment tools (i.e., surveys, early-alert systems, office of institutional research) to track student progress and student engagement
- Meet with high schools, individual students, and high school counselors to promote outreach initiatives
- Co-create departmental standard operating procedures

10/2019-Present, Course Reviewer/Instructional Design, Distance Learning, Prairie View A&M University

- Analyze existing instructional material
- Examine online learning material and content
- Assess learning needs
- Train faculty/staff to use the online learning system

8/2017, First-Year Experience (FYE) instructor, Academic Engagement and Student Success, Prairie View A&M University

- Prepared and conducted well-organized presentations, class discussions, and activities on various topics
- Communicated accurate and timely information to students about academic and student resources
- Prepared and delivered useful instructional material using a variety of teaching methods

09/2013-05/2018, Sorority Advisor, Student Activities, Prairie View A&M University

- Actively provide guidance and support to the chapter and chapter officers
- Advised and fostered the development of the chapter
- Assess the contributions and commitments
- Counselor and Facilitator
- Information source
- Clarifier

09/2007-8/2011, Freshman Financial Aid/Special Prog. Coordinator Assistant, University College
Academic Advisement, Prairie View A&M University

- Collaborated with Customer Service Support Specialists to facilitate outstanding service

  to prospective students through clear communication of admissions, financial aid, and major selection processes and responding to student questions
- Compiled and reviewed the student award letters and explained to the student's effectively
- Assisted the students with the completion of the Free Application for Federal Student Aid (FAFSA)
- Maintained conformity with State, Federal, and institutional regulations and procedures
- Provided Panther Track training to students during orientation and Panther Camp
- Recruited for the university and engaged in the UC outreach programs with high school students

to assist them with the admission and financial aid process

05/2006-08/2007, Instructor, **Inwood North Community Outreach Program Houston, TX**

- Assisted children from the ages of 5-7 in learning mathematics and sciences
- Chaperoned daily field trips
- Organized team-building activities

05/2005-08/2005, Student Intern/MSU Noninvasive Laboratory, Michigan State University,
Electrical and Computer Engineering Lab, East Lansing, MI

- Assisted in testing heart Valve using Electro-Magnetic Acoustic Transduction (EMAT)methods
- Produced visual imaging of all heart valves using CCD colored video imaging computer
- Prepared a Standards report on EMAT for review by the FDA regulation

ORGANIZATIONS/MEMBER

Delta Sigma Theta Sorority, Inc., Prairie View Alumnae Chapter
Gamma Sigma Sigma National Service Sorority, Inc., Zeta Iota Chapter
Order of the Eastern Star, Hadassah #77

CONFERENCES ATTENDED

TEXXAN- 2013, 2018

Southern Educational Research Association (SERA) – 2019

Louisiana State University (LSU) Curriculum Camp-2019

Ellucian 2019 Live Degree Works-2019

National Academic Advising Association (NACADA: The Global Community for Academic Advising)-2019

College Board -A Dream Deferred Historically Black Colleges and Universities (HBCUs) conference

PROFESSIONAL PRESENTATIONS

VanDyke. K. (2019). Differences in 2-Year persistence rates over time for black students at Texas 4-Year universities. Paper presented at the Southern Educational Research Association, San Antonio, TX.

VanDyke, K. & Maynard, J. (2019). The politicization of curriculum through neoliberalism. Paper presented at the Louisiana State University Curriculum boot camp, Baton Rouge, LA.

VanDyke, K. & Marion, E. (2019). The impact of degree works on advising and student experiences. Presented at the Degree Works Forum 2019 Ellucian Live conference, New Orleans, LA

VanDyke, K. & Littleton, D. (2019) Nurturing beyond institutional disparities in academic advising: HBCU women speak. Presentation at the NACADA virtual conference.

VanDyke, K. & Marion, E. (2019). Using technology to enhance the academic advising experience: A year in review. Poster presentation for annual NACADA conference, Louisville, KY.

VanDyke, K. (2020). Dismantled silos: Changing summer bridge programs through academic advising. Presented at the College Board: a Dream Deferred an