Students' Satisfaction with Interactions in Online Courses at Historically Black Colleges and Universities (HBCUs)

by

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Abstract

Student satisfaction is an important factor when analyzing online courses. Research has shown that student interactions in online courses are linked to overall satisfaction and success in their courses. However, student satisfaction in online courses at HBCUs has not been evaluated in great detail in relation to interactions. The researcher in this study used regression models in order to determine the best predictors in HBCU students' online course satisfaction in relation to gender, age, classification, number of online courses taken, learner-instructor interaction, learner-learner interaction, and learner-content interactions. An online Qualtrics survey was used to collect data from a sample of 184 undergraduate and graduate students. Three regression models were tested and compared for predictive power. All learner interactions were positive significant predictors in students' satisfaction in their online courses, with learner-content being the strongest predictor. Age was also a significant predictor in students' online course satisfaction, which indicated a negative correlation. In sum, results suggested that students over the age of 22 were dissatisfied with online courses, emphasis in learner-content interactions in online courses at HBCUs would strengthen student satisfaction, and learner-learner interactions were not as influential in online courses.

Dedication

Dedicated to my father and mother, Theodore Gilbert and Lena Reeves Gilbert, who persevered through a system of segregated education and instilled long-lasting educational values within me.

To my sister and first role-model, Lori Gilbert. Thank you for your steadfast determination and for pushing me to not only succeed, but to excel in all things.

To my extended family — aunts, uncles, cousins, and other relatives — our conversations and your words of encouragement continue to resonate with me, and I am ever-grateful for your support.

In memory of my grandmother, Clementine Morris Gilbert, who was with me when I started this journey and departed before my completion — your prayers are still keeping me.

In memory of my grandparents, Fred and Mahalia Reeves, and Jonny and Clementine Gilbert — the seeds you have planted have grown, and your legacies will continue.

In memory of all of my ancestors, whom, amongst other unimaginable conditions, were denied the opportunity for a proper education, — your wildest dreams are only beginning to come true!

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A special thank you, Dr. Maria Witte, for your dedication from the time I started my doctoral program until now. Your cool, calm, and collected demeanor made me feel like a doctoral degree was not as difficult to attain as people made it seem. You explained each step of the process so clearly and with such patience and made sure that I knew exactly how to prioritize my tasks. Your trust in me as a student in your classes as well as a doctoral candidate have given me greater confidence in my future academic career. You do everything with such professionalism and poise, and I respect that about you.

Dr. James Witte, from the day I walked into your office for my doctoral program interview, you instilled confidence in me that I could and should pursue my doctoral degree. As the first in my family to earn a doctoral degree, you have no idea how much this meant to me. I appreciate your guidance throughout this process, and I especially appreciate the wealth of knowledge that you seem to be able to reference without books or computers. I realized during my first semester in your class that you didn't carry any books to class or anywhere else, and then it eventually dawned on me that you were the book — one of the best books from which I have ever learned!

Dr. Leslie Cordie, beyond being a phenomenal professor, you were the reason that I participated in my very first academic conference as a presenter. Before ever meeting in person, you saw a project that I completed in your online class and emailed me suggesting that I shared the research from that presentation at the American Association for Adult and Continuing Education. Not only did you suggest that I participate, but you also provided guidance throughout my application and preparation process. Since then, I have presented in many more conferences. I appreciate your encouragement and belief in me — seeing beyond what I saw for myself when I started this program.

Dr. Marshall, I would like to extend a special thank you for the many hours you fervently dedicated in guiding me though my data collection and analysis process. Statistics were the most intimidating aspect of the process for me, and you helped me to understand it with what seemed like relative ease, and this helped me to view statistics more positively. This was a major deal for me, as I have never considered myself a "numbers" person; however, I now have a more confident approach to statistics. In fact, I have grown more interested in learning more about statistics as a basis for my future research agenda.

Dr. Melody Russell, thank you for your support in my doctoral journey and for expressing such interest in my topic. I remember sharing my research topic with you at a social gathering for faculty and staff, and your enthusiasm enriched my spirit. When I mentioned that I would like to reach out to you as a reader for my dissertation, you unhesitatingly agreed to support in whatever way you could. This was especially encouraging for me. Your strong support and encouraging

attitude gave me that much more motivation to continue. You are outstanding, and I thank you for being the role model you are.

I would like to thank my family, friends (particularly Joye, Jana, Deborah), colleagues, students, and supporters whom have cheered me on for the past five years, shared information about my survey, and helped me with the data collection process. I would like to thank a special mentor, Dr. Shae Anderson, who unselfishly extended guidance and support along every step of this process, sharing her own personal knowledge and doctoral experience to benefit me.

Lastly, I would like to extend a warm thank you to all Historically Black Colleges and Universities (HBCUs). From the time I was a little girl, before I had a full understanding of what college was, I knew that I wanted to go to an HBCU. My father, Theodore Gilbert, a Tuskegee University alumnus, always involved my sister and I in activities at his alma mater. He is the reason why I fell in love with HBCUs. There was such a warm, welcoming spirit there — almost like home. I always felt like I would be embraced, and this strongly influenced my decision to attend and graduate from my HBCU, Spelman College. HBCUs were my inspiration and motivation in pursuing and completing my doctoral program, and my admiration for the responsibility that HBCUs have taken in uplifting an entire race is unending.

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Chapter One: Introduction

Overview and Organization of the Study

Chapter one was designed to provide a statement of the problem being researched, explain the purpose of the study, provide brief historical background information on HBCUs as well as background information on online education, introduce key terms that would be used throughout the study, and explain how the dissertation was organized.

Research Questions

The research questions that this study sought to address were as follows:

RQ 1: Is there a relationship between HBCU students' satisfaction in online courses and the following demographics?

    a. Gender (male or female)

    b. Age (traditional 18-22 or non-traditional over 22)

    c. Classification (undergraduate or graduate)

RQ 2: Is there a relationship between HBCU students' satisfaction in online courses and the number of courses that students have previously taken?

RQ 3: Is there a relationship between HBCU students' satisfaction in online courses and the following course interactions?

    a. Learner-Instructor

    b. Learner-Learner

    c. Learner-Content

Statement of the Problem

   While the positive impact that HBCU experience has evidently had on students on their traditional college campus, it was unclear if students taking online courses at HBCUs shared a similar experience. Although HBCUs comprised only three percent of higher education institutions in the United States, approximately 20% of African American students have received a degree from an HBCU (Taylor, 2018; United Negro College Fund, 2019). HBCUs have been accredited as being responsible for approximately 22% of bachelor's degrees granted to African Americans, 40% of all congress members, 12.5% of CEOs, 50% of professors at non-HBCUs, 50% of lawyers, and 80% of judges (United States Commission on Civil Rights, n.d.; Thurgood Marshall College Fund, 2019). New America (2015) provided the following statistics to explain the diversity of HBCUs:

     While HBCUs are connected in mission and history, they are not a monolith.

     There is incredible diversity within the sector with regard to institution type: 87%

     of HBCUs are four-year institutions, 51% are public, 17% are land grant

     institutions, 10% are research institutions, 23% are masters universities, 48% are

     baccalaureate universities, 4% are seminaries and 2% are medical schools.

     Together HBCUs enroll over 300,000 students. (Types of Institutions, para. 1).

   It has been overwhelmingly documented that HBCUs have been known as nurturing and encouraging spaces for HBCU students regarding interactions with faculty and peers with whom they can relate and that, and this has helped to create a family-like environment and cultural inclusion (Bracey, 2017; Finley, 2018). In a personal interview (May 1, 2020), a 1971 graduate of Tuskegee University, Theodore Gilbert shared his experience as a student during his time there:

My HBCU experience at Tuskegee University was the right place and the right time then, now, and in the future. Tuskegee provided me with access to knowledge that heled to improve my quality of life, which allowed me to help many others do the same. I always felt encouraged and empowered just being among my peers and especially interacting with excellent professors and administrators. They were so nurturing in dealing with students.

Mobley (2017) described HBCUs as having consistently "… functioned as engines of social change and racial uplift… among the few places where Black culture is placed at the forefront, appreciated, and sustained" (p.1036). HBCUs have been documented as villages that have nurtured students through "Othermothering," the concept of mothering non-biological children that has been prevalent within African American communities through history. It was unclear, however, if the essence of the HBCU experience based on the interactions that traditional students experience on campus was being realized in 100% online course environments at HBCUs.

Subjectivity Statement

The primary researcher of the current study was an HBCU alumna who has also taught online courses at an HBCU. This background provided further insight regarding the HBCU experience and informed the researchers initial approach to the general topic of study. This study initiated based on the positive experiences that the researcher had while attending and graduating from an HBCU as an undergraduate. While this HBCU did not offer online courses while matriculating through undergrad, this was nevertheless an important research area to focus on because online courses had since become more prevalent in higher education. The researcher also taught online courses at an HBCU, which led to a curiosity regarding how connected students felt to their HBCU campuses and traditions. These ideas underlined the researcher's interest in the current study.

Purpose of the Study

This study sought to determine that type of interaction (learner-instructor, learner-learner, learner-content) that best predicted student satisfaction for HBCU undergraduate and graduate students who were enrolled in 100% fully online courses. It also sought to determine satisfaction levels based on gender, age, and classification. Finally, the number of online courses taken were analyzed to determine the impact on students' satisfaction levels.

Background Information on Historically Black Colleges and Universities

The amended Higher Education Act of 1865 defined Historically Black Colleges and Universities (HBCUs) as educational institutions founded prior to 1964 whose primary mission was and is to educate African Americans (U. S. Department of Education, 2011). Dunston (2016) referred to HBCUs as "…institutions established prior to the Civil Rights Act with the primary mission of education African Americans by providing access and equal opportunity," primarily fulfilling their mission through "…an atmosphere of culture, history, and engagement, frequently supported by smaller classes and personalized attention from professors" (p. 152). The history of African American institutions of higher learning has dated back to February 25, 1837 when the first HBCU, Cheyney State College, was founded (Cheyney University, 2017; Estell, 1994), followed by Lincoln University in 1854 and Wilberforce University in 1856 (Gates, 2013). However, the majority of African American higher education institutions, known as HBCUs, were founded post-1865, after the Civil War. Following the Emancipation Proclamation, the Freedmen's Bureau was established by the federal government in March 1865 in order to provide for the basic needs of nearly four million formerly enslaved people (Estell, 1994; Gates, 2013). Seeing that these basic needs were not enough to prepare formerly enslaved people to merge with the free civilization, Freedmen's Aid Societies along with northern missionary groups

assisted the Freedmen's Bureau in establishing schools that would address the needs of the newly freed population of African American people (Gates, 2013).

HBCUs have established an undeniable legacy. They were responsible for uplifting an entire race of people when no other educational options were available (United States Commission on Civil Rights, n.d.) For this reason, their presence and legacy have remained a permanent cultural and historical mark. However, they would need to position themselves to revamp their course offerings in order to carry their interminable legacy into the future through preparing students for an advancing, technological world. In so doing, it would also be imperative for them to maintain the integrity of the HBCU experience and spirit.

Background Information on Online Learning

Online learning has become a staple in higher education across the world (Singh & Thurman, 2019). As of 2017, more than 6.5 million students were enrolled in distance education classes at post-secondary schools in the United States (National Center for Education Statistics, "Distance learning"). In of 2013, only 25% of HBCUs offered fully online degree programs (Ingeno, 2013). This was in stark contrast to the percentage of online course offerings at 2-year and 4-year Title IV institutions, which was approximately 70% from 2006-2007 (Flowers, White, Raynor, & Bhattacharya, 2012). In order for HBCUs to be competitive amongst other contending higher education institutions, they would need to match or exceed the types and availability of course offerings at other institutions. Doing so would possibly and inadvertently help to address the very financial issues that have caused them to be reluctant in offering online courses by introducing another stream of revenue (Nguyen, 2019; Get Educated, 2020). The current study aimed reveal how the HBCU experience on the traditional campus was translated into the online course environment by identifying the level of satisfaction that HBCU students

taking online courses had regarding their online course interactions with instructors, other learners, and content. However, the HBCU experience was a concept that had not been clearly defined in previous literature. In order to determine how students perceived the HBCU experience in online courses, a review of qualitative and quantitative literature was included in chapter two.

Significance of the Study

The achievement of African American students at HBCUs has been documented in several sources, and HBCUs have been noted as the top producers of African Americans in several professional fields (United States Commission on Civil Rights, n.d.; Thurgood Marshall College Fund, 2019). In light of their history, it would be incumbent upon HBCUs to carry the same unique experience that has characterized them on traditional campuses into the online environment not only for students' academic success, but also for their personal well-being. This study was significant because faculty along with curriculum and online course developers could use this information in order to brand online courses in ways that mimicked the traditional, on-campus HBCU experience. This results of this research could also be used to help HBCUs determine if the face-to-face interactions that make the HBCU experience so unique for students are also being realized by students in their online courses, and if not, ways that they can modify online course interactions to be as supportive and nurturing as their on-campus interactions. This, in turn, would help HBCUs students to be more successful in their online courses, while also making HBCUs more competitive among other institutions of higher learning.

Definition of Terms

The following terms were used throughout this dissertation:

African American – People residing in or citizens of the United States who have sub-Saharan African ancestry (Livingston, Pierce, & Gollop-Brown, 2013, Para 3).

Black – A racial identification for a person who has origins in any of the Black racial groups of Africa (US Census Bureau, 2018).

HBCU – The White House Initiative on Historically Black Colleges and Universities (n.d.) officially defined an HBCU as follows:

> "…any historically black college or university that was established prior to 1964, whose principal mission was, and is, the education of [B]lack Americans, and that is accredited by a nationally recognized accrediting agency or association determined by the Secretary [of Education] to be a reliable authority as to the quality of training offered or is, according to such an agency or association, making reasonable progress toward accreditation."

PWI – According to Brown & Dancy (2010), "Predominantly white institution (PWI) is the term used to describe institutions of higher learning in which Whites account for 50% or greater of the student enrollment. However, the majority of these institutions may also be understood as historically White institutions [HWIs] in recognition of the binarism and exclusion supported by the United States prior to 1964.

Online Learning – This term referred to educational instruction occurring primarily through the Internet through the use of computers or mobile devices (Jones & Davenport, 2018).

Distance Education – Distance education was defined as "a method of teaching where the student and teacher are physically separated" (Kentnor, 2015)

Online Course – For the purposed of this study, online course referred to courses in which all course activities were completed online without face-to-face interaction or on-campus activities which "… consist entirely of online elements that facilitate the three critical student interactions: with content, the instructor, and other students" (Sener, 2015).

Course Interactions:

Learner-Instructor – Learner-instructor interaction referred to any form of communication and collaboration between students and instructors (IGI Global, 2020).

Learner-Learner – Learner-learner interactions referred to "… inter-learner interaction, between one learner and other learners, alone or in group settings, with or without the real-time presence of an instructor" (Moore, 1989).

Learner-Content – Learner-content interaction was defined as any intellectual engagement that learners had with course content that led to improved understanding and greater perspective (Gunawardena, 1999).

Organization of the Dissertation

This dissertation was presented in five chapters, each of which were explained below.

Chapter two consisted of a literature review of general and specific details regarding the topic of the dissertation. It went into depth with the aforementioned terms, providing a chronological detailing of the education of African-descendant people from the time they were arrived in the Americas through the transatlantic slave trade, throughout many legislative acts that impacted African American people socially and educationally, to the establishment of HBCUs. Starting with rules established by the First General Assembly of Virginia in 1619, to the

Declaration of Independence 1776, Articles of Confederation of 1781, United States Constitution signing of 1787 (and subsequent amendments), and the Emancipation Proclamation 1865, many rules and laws that were designed to regulate America had a resounding impact of African American people due to their designation as enslaved people and the fact that they were viewed as subordinate to White people. This subordinate social designation undoubtedly affected every aspect of the African American's lives, including education. The 13th, 14th, and 15th Amendments to the United States Constitution were also pivotal moments in the lives of African Americans. Following the Emancipation Proclamation was Reconstruction, a brief period in which African-Americans were finally able to begin to build lives as free people; however, there came additional set-backs that had tremendous and long-standing impact on the livelihood and education of Black people (History.com Editors, 2009). The *Plessy v. Ferguson* decision, in addition to domestic terrorism against African Americans, essentially reversed the building phase of the Reconstruction, forcing African Americans to resort to segregation in all aspects of life, eventually leading to the further establishment of HBCUs across the country. This chronological presentation of the history of African American people was necessary to place into context their place in society and how this impacted their access to education in general — then higher education, more specifically.

The latter part of chapter two focused on online and distance education in America and then more specifically online education at HBCUs. A brief history of online education was provided before examples of quantitative and qualitative studies regarding online course interactions at HBCUs and non-HBCUs were shared. The qualitative studies provided context as to perceptions of the HBCU experience and what it has meant in and of itself, in contrast to African American students' experiences at PWIs, and in contrast to African American students'

experiences at high schools in which White students were the majority. Also, of emphasis in the latter part of chapter two were the relationships that HBCU students have had with their faculty, peers, and course content. This background provided a more specific backdrop of the present study, which sought to determine which of these interactions most likely predicted HBCU students' satisfaction with their online courses.

Chapter three explain the methods used for this study, starting with the process of selecting the survey instrument and conducting a content validity test, explanation of the researcher's human subjects research training, and reliability testing of the survey instrument. The process for gaining permission letters from HBCUs in order to conduct research at their various locations was also explained. Additionally, the process of the pilot study and subsequent changes to the survey instrument were described in detail followed by the steps taken to collect data for the final study. The plan for data analyses along with assumptions for the analysis used was then explained. Lastly, there were also limitations of the study that were each explained individually.

Chapter four explained the results of the final study by providing reliability information for the survey instrument, descriptive statistics for each learner interaction scale, descriptive analyses of participants, correlation analyses, regression analyses and assumptions, and explanations of the regression model constructions. The results of all data analyses were then explained at the end of the chapter.

Finally, chapter five will include discussion of each research question and their hypotheses in relation to the literature review from chapter two. Lastly, several recommendations for research were made before the chapter was concluded.

Chapter 2: Literature Review

Overview

Chapter two provided a chronological timeframe regarding the education of African Americans that led up to the founding of Historically Black Colleges and Universities (HBCUs) and subsequent research pertaining to the HBCU experience. A review of this history was helpful to allow for understanding of the existence of HBCUs and how they came to be, requiring a historical perspective of African Americans in North America. Furthermore, this chapter provided a review of literature relating to the history of HBCUs, and a brief history of online education (in general and specifically in relation to HBCUs). Special emphasis in this chapter was on online course interactions (learner-instructor, learner-learner, learner-content), as this content related most with the research questions.

Research Questions

The research questions that this study sought to address were as follows:

RQ 1: Is there a relationship between HBCU students' satisfaction in online courses and the following demographics?

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African Civilizations Preceding the Transatlantic Slave Trade

While it has been permeated into history that the presence of Black people in present-day America commenced in 1619 when a ship containing enslaved people arrived in Jamestown, Virginia, there was documented evidence of the presence of Black people that preceded this date (Guasco, 2017). Waxman (2019) noted that 1619 marked the "Anglo-centric history of Africans in the United States" (A Turning Point, Not a Beginning, para 6) and that the Spanish actually preceded the Europeans in bringing Africans to what came to be known as the United States as early as 1513 when an African man by the name of Juan Garrido accompanied Spanish explorer Ponce de Leon on an exploration trip to present-day Florida (Gates, 2012) and later in 1565 when the Spanish brought enslaved Africans to that same area. Africa has been historically documented as the "cradle of mankind" (Coombs, 1972, p. 15) that created the prototype of advanced civilizations to follow (Chang'ach, 2015), with a rich heritage that dated back millions of years. African civilizations were known for having "their own systems of economics, scholarship, art, and religion as well as a highly complex social and political structure" (Coombs, 1972, p. 23).

However, because the Europeans did not recognize Africans as being strong in the arts of war or economic exploitation, they considered African civilizations to consist of uncivilized savages (Coombs, 1972). Europeans' lack of knowledge about West African literature and scholarship perpetuated their belief that African civilizations had not developed a system of written communication, and when Islam was introduced, Arabic was considered the official written form of West African ideas (Coombs, 1972). It was not until the 20th century that

scholars discovered West African libraries and publications relating to customs and social culture, notably the *Tarikh al-Fattish* by Mahmud Katiand and the *Tarikh al-Sudan* by Abd al-Rahman al-Sadi (Coombs, 1972).

Beginnings of the Transatlantic Slave Trade and its Impact on Education for African Descendants

Millions of years before the 15th century, a two-way slave trade was established between West Africans and Arabs, whereby enslaved people were traded by West Africa for guns from Arabs, and research indicated that the first enslaved people from Africa to Europe were viewed as "men of considerable skill and learning" and as "proof of affluence" (Coombs, 1972, p. 28). In the book *The Black Experience in America*, Coombs (1972) described West African civilization and the Transatlantic Slave Trade as follows. Because of its subsistence economy, West Africa did not have much need for enslaved labor; however, they did need guns in order to capture its citizens and also to protect themselves from being captured. Ironically, what was meant to be a mutually beneficial trade to boost both economies ended up draining West Africans of their only export – enslaved African people. What was once sought after in West Africa (a variety of exports including gold, ivory, hides, leather goods, cotton, peppercorn, olive oil, and cola) dwindled down to the primary export of their people. With weakened revenue and military position, West Africa became vulnerable to the demanding needs of Europeans, exclusively for enslaved Africans.

The year 1619 has been widely documented as the year in which the first group of enslaved Africans were forced on a ship to come to America in the month of August by way of a mysterious ship– a ship that had been robbed from its original robbers and which contained African people. *The Treasurer* (a ship commissioned by the Duke of Savoy and based in

Virginia) along with the Dutch Man-of-War ship robbed a Spanish frigate of captured Africans. A violent storm followed their capture, which led to the deaths of many of the African people on board. In a quest for safe shore, the Dutch Man-of-War landed on the shores of Hampton Roads with 19 African people, followed by the *Treasurer*, which carried one African woman (Bennett, 1975). In a state of malnourishment and despair, the captain of the Dutch Man-of-War ship offered to exchange the 20 Africans for food from John Rolfe. This group of enslaved people, whom have also been referred as immigrants or indentured servants (despite their lack of complicity in their position) inadvertently spurred the growth of individualism of poor White laborers and European immigrants, who were no longer considered to be the bottom of the social ladder (Coombs, 1972).

Despite the inferior status that Africans took in the eyes of the European occupiers, Bennett (1975) eloquently captured the significance and eventual essence of this most important cargo of "black gold" to ever touch the shores of the Americas (that was passively documented by John Rolfe -- betrayer of Native Indian, Pocahontas and tobacco expert-- as a ship that "brought not anything but 20 and odd Negroes") as follows:

> In the hold of that ship, in a manner of speaking, was the whole gorgeous panorama of Black America, was jazz and the spiritual and the Funky Broadway. Bird was there and bigger and Malcolm and millions of other X's and crosses, along with Mahalia singing, Gwendolyn Brooks rhyming, Duke Ellington composing, James Brown grunting, Paul Robeson emoting, and Sidney Poitier waling… [The ship] brought the black gold that made capitalism possible in America; it brought slave-built Monticello and slave-built Mount Vernon and the Cotton Kingdom and graves on the slopes of Gettysburg…. That ship brought *blues* to America, it brought soul…" (Bennett, 1975, p. 6)

While there were many triumphs and challenges that African descendants have had in the Americas since the arrival of the ship in 1619, education was one issue that was at the crux of their experience in what came to be known as the United States.

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African Peoples' Presence in the Americas after 1619 and Legislation that Impacted their Livelihoods and Education

Before the education of African American people could be discussed in detail, there were some contextual details to be considered regarding their overall role in the Americas. Several pivotal legislative acts which impacted African Americans' education and overall livelihood took place following their arrival to the colonies.

In the summer of 1619, The First General Assembly of Virginia was established as a form or parliament modeled after European parliament, and this group later became the House of Burgesses in 1643 (U.S. History, 2019). Over the next 50 years, the House of Burgesses put into place several laws that would have lasting impacts on the lives of African descendants in the colonies, including prohibiting Black people from possessing arms, making Black women taxable, instituting life servitude for any child born to enslaved women, making it legal to kill an enslaved person who resisted arrest, rewarding Native Indians for the capture and return of enslaved escapees, restricting enslaved people from gathering (even at funerals), preventing the right for a jury trial for capital offenses, and denying them the right to hold public office (The Colonial Williamsburg Foundation, 2020).

Following a struggle for freedom from English rule, the Revolutionary War between Great Britain and the American Colonies ensued, and in November of 1775, King George III of England issued a proclamation to the American colonies stating that any indentured servant who was able and willing to bear arms on behalf of the British troops would be freed (Hubbard, 2018). Less than a year after Britain's proclamation was issued, the American colonies signed the Declaration of Independence on July 4, 1776, known as Independence Day, officially declaring their independence from Great Britain (Hubbard, 2018). Although the Declaration of

Independence granted freedom of the American colonies from British rule, it did nothing to further the freedom of Africans within the colonies (Hubbard, 2018; Goza, 2019).

The Articles of Confederation were next. The Constitutional Rights Foundation (2020) provided the following details regarding the Articles. The Articles of Confederation, adopted in 1781, established the first United States national government. Since the colonies had already won their freedom from the British, they were not inclined to form a strong central government; thus, they established a Congress in which each state had one vote. Over time, the Articles of Confederation proved to be ineffective in executing its laws or collecting taxes. It also failed to address the issue of slavery and other powers that each state was expected to hold. Although many colonists renounced slavery, they hypocritically owned enslaved people. Southerners, whose cash crop industries were vastly growing, relied heavily on the labor of enslaved people.

The United States Constitution was written in 1787 and signed on September 17th of that year, and by 1788, the nine out of thirteen states that were required to approve of it ratified it; although, this was accomplished by bypassing state legislatures and holding special ratifying conventions in each state out of concern that state legislatures would not consent of the document (The Constitution: How Did it Happen?, 2019).

During the Constitutional Convention of 1787, delegate Charles Pinckney of South Carolina introduced the three-fifths clause in an effort to regulate the number of congressmen each state could send to the House of Representatives (Simba, 2014). In an article titled "The Three-Fifths Clause of the United States Constitution (1787)," Simba (2014) elaborated on what the Three-Fifths Clause entailed, stating that this was a concept that had previously been established by Congress as the basis for national taxation when they adopted the Articles of Confederation in 1781. Some state delegates agreed that African-descended people should be

equal with white people, while other delegates disagreed with the proposal because it would give southern states more representation and thus more encouragement for the slave trade. As suspected by some, the Three-Fifths Compromise increased the number of congressmen from slaveholding states by 1793 from what would have been 33 without the compromise to 47 with the compromise. For the next few decades following the Three-Fifths Compromise and leading up to the Civil War, slaveholding states had a disproportionate influence on the Presidency, the Speaker of the House, and the U. S. Supreme Court.

Over time, the original framers and delegates of the Constitution decided that the it needed to provide a description of individual rights, and this list, known as the Bill of Rights, was added in 1791 (National Constitution Center, n.d.).

Early Attempts to Educate African Descendants from the 17th through the 20th Centuries

Despite the many restrictions placed on enslaved African descendants in the Americas, there were organizations who made efforts to educate them. Eskell (1994) documented that possibly the earliest group to provide education for enslaved people were Louisiana's French Catholics, who were held responsible for educating them through a system of laws called the French Code Noir in the early 1600s. In the early 1700s, the slavery-opposed Pennsylvania Quakers established monthly educational meetings and evening schools before opening a school for African-descended people in 1774. Christian churches were also involved in educating enslaved people; although, their primary purpose was to convert them to Christianity. Other early educational efforts included those from abroad, such as the Church of England's Society for the Propagation of the Gospel in Foreign Parts in 1701, The Manumission Society's New York African Free School in 1787, and several African Episcopalian schools in Philadelphia, including the House of Industry in 1848, Corn Street Unclassified School, Holmesburg Unclassified

School, and the Home for Colored Children (Eskell, 1994). The Freedman's Bureau was also a prominent organization following Reconstruction that helped African Americans attain educational advancement (Bracey, 2017).

Ramifications for African descendants obtaining education during slavery.

Interviews that were conducted with former enslaved people revealed the risks associated with literacy, including mutilation and death. One former enslaved man, Ferebe Rogers, recounted his experiences with education from childhood in a 1937 interview, at which time he was over 100 years old. Rogers shared the following regarding his experiences as an enslaved person in Baldwin County, Georgia in the 1850s:

> I had my right arm cut off at de elbow if I'd tried to learn to read and write. If dey found out a nigger could read and write, dey'd cut your arm off at de elbow, or sometimes at de shoulder. (Franklin, 1984, p. 162-163)

Perhaps the most prominent person in the discussion of the education of Black enslaved people was former enslaved person and renowned abolitionist Frederick Douglas. In an autobiography entitled *The Life and Times of Frederick Douglass*, Douglass (1881) recounted his time with the Master Hughs family, of which the wife/mistress would kindly teach him to read and write. However, upon the instruction of her husband, she vehemently ceased instruction, and her kind demeanor turned to a "tiger-like fierceness" and constant monitoring out of fear the he would somehow find a way to continue his literary journey. Despite having to give a constant account for himself, Douglass strategized to educate himself by trading bread with poor white children for the bread of knowledge that they would in-turn provide him. These seemingly meager exchanges equipped Douglass to read and write and subsequently flee slavery at the age of 21. Throughout his life, Douglass became a lecturer, editor, writer, organizer, diplomat, and enamored leader of black people struggling with emancipation (Crowell, 1984)

The Emancipation Proclamation

On September 22, 1862, just five days after General George B. McClellan's Union Army defeated Robert E. Lee's Confederate Army at the Battle of Antietam on September 17, 1862, a victory that President Abraham Lincoln needed to justify his stance on slavery and the preservation of the Union (Library of Congress, "Abraham Lincoln and emancipation," n.d.), President Lincoln issued the Emancipation Proclamation requiring that states holding enslaved people should free them on January 1, 1863 (Proctor, 1966). The Morrill Land Grant Act of July 2, 1862, which preempted the Emancipation Proclamation, paralleled the emancipation of Black enslaved people, perhaps as a way to have educational institutions already in development to help people and society to adjust to the new way of life and working on their own without relying on enslaved people's labor. As noted by Proctor (1966), Blacks had "… no money, no names, no cultural legacy of their own, [were] distant from their African roots and barely transplanted into a totally Anglo-Saxon ethos… [they were] pitifully orphaned in this land of opportunities." (p. 191).

The Emancipation Proclamation declared that "all persons held as slaves within any State or designated part of a State, the people whereof shall then be in rebellion against the United States, shall be then, thenceforward, and forever free" (Drexler, 2019). Lincoln's decision to issue the Emancipation Proclamation was less about the abolishment of slavery and more about military tactic and preservation of the union, as indicated in his open letter published in the *National Intelligencer* of Washington, DC on August 22, 1862 in response to an open letter from *New York Tribune* editor's, Horace Greeley, open letter entitled "The Prayer of Twenty Millions," published on August 20, 1862:

> My paramount object in this struggle *is* to save the Union, and is *not* either to save or to destroy slavery. If I could save the Union without freeing *any* slave I would do it, and if I

could save it by freeing *all* the slaves I would do it; and if I could save it by freeing some and leaving others alone, I would also do that. …[N]o modification of my oft-expressed *personal* wish that all men every where could be free. (Library of Congress, "Abraham Lincoln and emancipation," n.d.)

Lincoln carefully noted that this represented his official position. The Emancipation Proclamation was merely a start in the many legal actions that would need to take place for African-descended people to be considered equal with White American citizens; thus, later amendments to the United States Constitution were ratified. On January 31, 1865, the 13th Amendment was passed by Congress and ratified by the sates on December 6, 1865. The 13th Amendment is as follows:

> Neither slavery nor involuntary servitude, except as a punishment for crime whereof the party shall have been duly convicted, shall exist within the United States, or any place subject to their jurisdiction. (13th Amendment to the U.S. Constitution: Primary Documents in American History Library of Congress)

On July 9, 1868, the 14th Amendment was ratified, and section one directly impacted the lives of African-descended people in America by extending citizenship and the rights of protection under the law:

> All persons born or naturalized in the United States and subject to the jurisdiction therof, are citizens of the United States and of the State wherein the reside. No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law, nor deny to any person within its jurisdiction the equal protection of the laws. (The Library of Congress: American Memory, n.d.)

The passage of the 14th Amendment overturned a previous landmark decision, Dred Scott v Sanford (1857) that ruled that African Americans were not United States citizens (Lawson, n.d.). Additionally, the15th Amendment of 1870 granted African American men the right to vote (History.com Editors, 2019).

The Morrill Land-Grant Act of 1862

The first Morrill Land-Grant College Act, issued on July 2, 1862, was signed by President Abraham Lincoln in order to grant each state so many acres of federal land, and this land was to primarily be used to provide colleges that emphasized agricultural and mechanical arts (Eddy, 1963; Mumford, 1940; Nevins, 1962). The act was named after Justin Smith Morrill, a representative and later senator of Vermont, who sponsored and promoted the land grants (Lee & Keys, 2013). However, the original bill was not initially agreed upon. The bill was first introduced on December 14, 1857 by Mr. Morrill to the House of Representatives upon the petitions of various northern and southern states, societies, and individuals to include Jonathan B. Turner of Illinois, Horace Greely of the New York *Tribune*, Ezra Cornell (businessman and founder of Cornell University), and Thomas Green Clemson of South Carolina (posthumous founder of Clemson University) (Nevins, 1962). Morrill's sentiment about funding these colleges was that the government would put frugal farmers and their families in a position to overcome poverty by allowing them to enact the skills that they would learn in their theoretical studies in a practical manner and to give them a sense of dignity (Mumford, 1940; Nevins, 1962). Discussions surrounding the proposed bill during this time centered on helping farmers and equalizing the distribution of resources that had already been provided to manufacturers, transportation companies, and schools for lawyers, doctors, preachers, and teachers (Mumford, 1940). The bill was passed by the House of Representatives. After failed adoption by the Senate, the bill was finally passed by Congress. In February 1859, after it was presented to President Buchanan, it was vetoed (Mumford, 1940). There were concerns about the precedent that this bill would set for future monetary requests from the government, including the abuse of federal funds for educational purposes, the interference with the settlement of unoccupied lands, and the

injury to existing colleges (Mumford, 1940). Morrill made a second attempt to have the bill passed, but was unsuccessful under President Buchanan's administration (Lee & Keys, 2013). It was not until President Lincoln's administration was in place that Morrill was successful in presenting the bill on December 9, 1861 and subsequently having the bill passed by the House of Representatives and the Senate, finally being signed into law by President Lincoln on July 2, 1862 (Lee & Keys, 2013). According to Eddy (1963), each state that accepted the terms of the Morrill Land-Grand College Act was required to establish at least one college that included agricultural and mechanical arts in addition to scientific and classical studies and military tactics. The grant was to be responsible for aiding in the founding and further development of 32 state universities, 20 colleges or universities separate from the established state universities, and 16 institutions that primarily served African Americans (Eddy, 1963).

Until the 1850s, American colleges were viewed as rudimentary institutions that catered to wealthy white men who were seeking traditional careers in law, medicine, and ministry (Eddy, 1963); however, the new colleges were advised to break from tradition and adopt a curriculum that could be applicable to the population based on the needs of the common American and general culture. The First Morrill Land-Grant College Act helped to move this agenda forward, which paralleled another break in tradition caused by the Civil War. The grant also provided an educational opportunity for the common person (Eddy, 1963; Mumford, 1940). While it may have seemed as though Morrill and other supporters promoted the land-grant act based on the positive impact that these colleges would have on the general culture, evidence has shown that the act was motivated more so by political concerns rather than educational concerns:

> The principal issue of the day involved the distribution of public land. Those in Congress from the Western states were heatedly opposed to the idea of giving their land to the East. And those from the South had already walked out of Congress. Indeed, if there had been

no Civil War, probably the changes in higher education wrought by these college would have been delayed for many decades. (Eddy, 1963)

Nevertheless, the act provided an opportunity for states to establish colleges that matched the needs of the developing nation. Just as the nation struggled to restructure after the Civil War, so did early land-grant colleges. Many of the colleges struggled financially due to minimal sales from grants of land, scarce enrollments, and a return to traditional curricula (Eddy, 1963). It was not until the Second Morrill Land Grant Act that many of the institutions established under the first act were able to receive the resources needed for them to continue to progress (Eddy, 1963).

While the educational emancipation provided by the First Morrill Land Grant Act of 1862 may have paralleled the emancipation of African-descended people in America from slavery, it actually excluded this group of people from its benefits (Lee & Keys, 2013). Following Lincoln's Emancipation Proclamation, attitudes toward African American people remained --- that they were perceived to be inferior. Although African Americans had been emancipated and were now de jure citizens of the United States of America, they were de facto excluded and discriminated against, as evidenced by the passage of the Civil Rights Act of 1875, prohibiting racial discrimination in public accommodations. (Lawson, n.d.). African Americans were also denied the opportunity to enroll in the schools that had been established by the First Morrill Land-Grant Act (Lee & Keys, 2013).

African Americans experienced progress in the immediate years following the Emancipation Proclamation; however, this all changed when in 1876, Presidential candidate and Republican Rutherford B. Hayes made a political promise in order to secure votes from southerners, a move that he hoped would break the stalemate between electoral college votes between him and his opponent, Democrat, Samuel J. Tilden (R., 1951; The White House, n.d.). His promise, which came to be known as a betrayal or the Compromise of 1877, was that he

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would withdraw federal troops from the south if he was elected (R., 1951; King, 2016; Bennett, 1967). These troops had been put in place following the Civil War in order to maintain civility and ease the assimilation of African Americans into general society, and the withdrawal of these troops would leave African Americans at the mercy of their antagonists without any official protection (R., 1951; King, 2016). In 1877, President Hayes secured the presidential vote and made good on his promise (Proctor, 1966; Bennett, 1967). The result was utter chaos and tyranny, as African Americans became subjected to various attacks to include lynchings and other horrifying forms of vengeance (King, 2016, Bennett, 1967). In addition to the threat of their safety, African Americans' pursuit of education was attack as well.

Discriminatory practices in public and private education were not only common during the years following the Reconstruction period, but they were legal (Toldson, 2014). Landmark Cases of the U.S. Supreme Court (2020) documented such prominent cases as described below. Prior to the 1896 Plessy v. Ferguson decision, Louisiana passed the Separate Car Act of 1890, which allowed rail companies to separate white and non-white passengers in their rail cars as long as they provided equal accommodations for all passengers. In an effort to fight the act, a group of Black citizens decided to challenge the separation with Homer Plessy, a one-eighth black man, who purchased a first-class ticket and proceeded to sit in a rail cart that was designated for white passengers. Following his arrest for violating the Separate Car Act, Plessy went on to argue in state courts and eventually the U.S. Supreme Court stating that the act violated the 13th and 14th Amendments of the Constitution. The U.S. Supreme Court agreed with the decisions of the lower courts. Justice John Marshall Harlan, who wrote the dissent for the decision, indicated that the 14th amendment was not violated because equal services were provided — a decision which set the precedent for the "separate but equal" ideology that

pervaded American civilization for decades to come, notably regarding education (National

Archives, 2016).

The Second Morrill Land-Grant Act of 1890

The general opinion regarding colleges founded under the First Morrill Land-Grant

College Act in the years following its inception was that they did not uphold the intended

purpose and standards for how the funds were to be utilized, as several schools maintained a

professional curriculum that excluded the intended agricultural and mechanical arts curriculum

(Mumford, 1940). In essence, "…the instruction offered was theoretical and not practical"

(Mumford, 1940). Therefore in 1872, Morrill, now a senator, proposed a new bill that would

allow for the government to provide additional funding to further the efforts of the colleges that

were established under the First Morrill Land Grant Act (Mumford, 1940). The language for the

Second Morrill Land Grant Act of 1890 clearly indicated that the funds were to be used

exclusively for instruction in agricultural and mechanical arts as well as other subjects that

emphasized special reference to the intended instruction including English, math, physics, and

science (Mumford, 1940). The Second Morrill Land Grant Act was adopted in 1890, which was

28 years after the initial act (Proctor, 1966).

The adoption of the second act brought about funding for African American schools,

although these funds were meager (Proctor, 1966). These schools were already 28 years behind

the colleges that were previously established under the First Morrill Land Grant Act.

Additionally, African Americans had only been freed from slavery for 27 years and struggled to

find a way of life on their own (Keaveny, 2017). The sojourn toward equality and freedom was

intricately embedded in the desire for higher education for Black people in the years after

Reconstruction, and HBCUs provided an opportunity for them to realize their dreams of attaining a new life as free people (Perry, 2018).

There were some higher education institutions that were available for African Americans before and after the Emancipation Proclamation that were not affiliated with the Morrill Land-Grant Act. These schools were established through funding provided by individual donors (Eskell, 1994). Booker T. Washington, founder and President of one such institution — Tuskegee Normal — gave a speech at the Atlanta Exposition of 1895, during which he acknowledged that Black people must "cast their buckets where they are" (Washington, 2005). What he was referencing in part was the fact that African Americans were not in a position to deny the meager funds and resources that were being provided to them and that they should make use of what they had in order to create more. Washington's ideas provided a stark contrast to those of his contemporary, W.E.B. Dubois, who believed in the idea that a small percentage of the Black population, dubbed the "Talented Tenth," would inevitably lift the Black race from their gruesome past and previous identity in the Americas (Chambers, 1998). It was not until church missionaries such as Episcopalians, Baptists, Methodists, Presbyterians, and Congregationalists joined together, however, that the educational welfare of African Americans was prioritized on a larger scale and emphasis was placed on establishing higher educational institutions for them, as Bracey (2017) noted that "Many HBCUs were established by Christian churches and denominations," while further adding that "…[HBCUs] are rightly devoted exclusively to enabling African American students to graduate, to better their positions in life, and to take their place as leaders in the larger society" (p. 691).

Challenges with Educating African Americans in the Late 19th - Early 20th Century and

Legislation and Social Groups that Impacted Them

Even efforts that were seemingly designed to help or at least benefit African Americans in their educational advancements had a backfiring effect. Although the Second Morrill Land Grant Act of 1890 required states to admit black students to existing land grant colleges or to finance schools for African Americans, many states chose to establish separate schools for African Americans (Lee & Keys, 2013). The Supreme Court ruled in Plessy v. Ferguson (1896), granting states the right to provide separate, but equal, accommodations (including education) for White and African Americans (History.com Editors, Plessy v. Ferguson, 2020). However, many instances proved that African Americans were often provided with sub-par accommodations in every facet of life, particularly impacting HBCUs, which were separate but unequal in educational justice (Bracey, 2017).

Nevertheless, there were some actions which took place during the 20th century that positively impacted African Americans' education and overall livelihood. In 1909, a group of interracial citizens joined together in Illinois in order to discuss ways in which they could advocate for African Americans; this group later created the National Negro Conference, held in New York in May and June of that year (Library of Congress, "Brown v. Board at fifty," n.d.). During this groups second annual meeting the following year, they adopted a formal name — the National Association for the Advancement of Colored People (NAACP), and one of the primary goals of this organization was to advocate for equal educational opportunities as well as equal funding for schools serving both African and White American children (Library of Congress, "Brown v. Board at fifty," n.d.). In 1928, the Southern Association of Colleges and Schools accredited HBCUs, giving them more credibility, which would later impact state legislatures'

decisions for distributing funds (Bracey, 2017); although, research has shown a historical trend

in the disparity in funding that HBCUs have received (Lee & Keys, 2013).

HBCUs continued to grow throughout the mid-20th century. As the U.S. Department of

Education's Office for Civil Rights (1991) reported:

> By 1953, more-than 32,000 students were enrolled in such well known private black
> institutions as Fisk University, Hampton Institute, Howard University, Meharry Medical
> College, Morehouse College, Spelman College, and Tuskegee Institute, as well as a host
> of smaller black colleges located in southern and border states. In the same year, over
> 43,000 students were enrolled in public black colleges. HBCUs enrolled 3,200 students in
> graduate programs. These private and public institutions mutually served the important
> mission of providing education for teachers, ministers, lawyers, and doctors for the black
> population in a racially segregated society.

HBCUs seemed to prosper in some ways despite the many challenges they had encountered.

Over half a century after the Plessy v. Ferguson decision was made (1896), it was rendered

useless when in 1954, The United States Supreme Court ruled in the Brown v. Board of

Education, which ordered desegregation of the nation's school systems (Bracey, 2017). As

before, this decision was meant to benefit African Americans' educational advancement;

however, the minds of many white separatists had not accepted desegregation, which led to

strong resistance (Pruitt, 2018), similar to their experience following Reconstruction (King,

2016, Bennett, 1967). Desegregation also brought about questions about the relevance of

HBCUs.

Triumph of HBCUs and Criticism Regarding their Relevance

In the present day, HBCUs have graduated the highest number of African American

physicians, engineers, and veterinarians and close to one-third of African American's with

bachelor's degrees, despite the small percentage of all colleges and universities that they make

up (Brown & Burnette, 2014; Buzzetto-More, 2008; Jones & Davenport, 2018; Williams &

Ashley, 2004). According to research by the Pew Research Center, HBCUs reached their height

in the 1930s, when they totaled 121 colleges and universities (Anderson, 2017). Since the turn of

the 21st century, however, that number has decreased. As reported by the National Center for

Education Statistics (n.d.), "In 2016, there were 102 HBCUs located in 19 states, the District of

Columbia, and the U.S. Virgin Islands. Of the 102 HBCUs, 51 were public institutions and 51

were private nonprofit institutions..." (National Center for Education Statistics: Historically

Black Colleges and Universities, Response section, para. 2) (see Appendix A). The decrease in

the number of HBCUs may have been attributed to the challenges that they have faced over the

years. Amongst these challenges have been accreditation, funding, and leadership issues (Cantey,

Bland, Mack, & Joy-Davis, 2013).

Despite the many challenges that HBCUs have overcome and accomplishments that they

have had through their arduous history, there have been many criticisms against HBCUs'

relevance and necessity including having relatively segregated populations and lower

endowments, budgets, and graduation rates (Broady, Todd, & Booth-Bell, 2017; Carter, 2016;

Robinson, 2009). In regards to the social, economic, and policy context, Johnson (2019) referred

to criticism about HBCUs not being necessary in a post-segregation society, while also

countering these ideas with more recent incidents of racial conflict at Predominantly White

Institutions (PWIs), prompting even more of a need for HBCUs as safe-spaces for African

American students. PWIs have been defined in contrast to other colleges and universities that

serve minority students, primarily HBCUs (Brown & Dancy, 2010).

Mobley (2017) rebutted the crux of the criticism against HBCUs as follows:

> There is a pervasive myth present within higher education dialogues asserting that
> HBUs are inferior and or 'lesser than' historically White Institutions (HWIs). This
> brand of uniformed reasoning is virulent and dangerous, especially considering

that HBCUs have and continue to take the helm of educating underserved populations who do not traditionally have access to higher education. (p. 1037).

Mobely (2017) went on to acknowledge the fact that the HBCU acronym itself is racialized because it includes the race "Black" in it, which inherently creates implications associated with Blackness being viewed as separate and inferior to Whiteness. Furthermore, Bracey (2017) noted that had the United States lived up to its promise of equality and freedom following the Civil War, there would not be a need for HBCUs. Regardless of the criticisms that HBCUs have faced, the overwhelmingly positive and unique experiences of their students have been well-documented, and HBCUs have continued to thrive as hallmarks of African American history, culture, and higher education in the United States of America.

The HBCU Experience: Why Students Choose to Attend HBCUs

Various perceptions of the HBCU experience have been documented by HBCU students, alumnae, faculty, and scholars. Harris (2012) described the experience of transitioning from a majority African American high school to a predominantly White institution (PWI), then to an HBCU, stating that at the PWI, academic success came at the expense of cultural failure. However, upon transferring to an HBCU, Harris' academic, social, and emotional needs were nurtured. This environment prepared Harris for other cultural, corporate, and educational settings that included predominately White counterparts. Harris (2012) further likened the HBCU environment to that of a village:

> … HBCUs have emerged as villages of meaning, purpose, sustenance, nurture, support, and affirmation. Within the HBCU village, members not only have race in common, but they also have common challenges, common resources, and a common desire to see other members of the village succeed… In the HBCU village, elements that typically threaten the success of village members, such as alienation, instructional subordination, and systematic marginalization are irrelevant. Within the HBCU villages, village pedagogy is practiced beyond in-class lesson plans through mutual commitments, celebrations with one another, shared heritage, and relationships outside of the classroom. (p. 335)

Similarly, in a study exploring the experiences of undergraduate and graduate students and faculty in Science, Technology, Engineering and Math (STEM) programs at a PWI and HBCU, participants at the HBCU viewed their programs and institution as being supporting of their needs, while PWI participants reported feeling excluded (Winkle-Wagner, & McCoy, 2018).

Bracey (2017) noted that the academic programs that HBCUs offered were tailored to the needs of African American students, particularly first-time college students. Bracey (2017) described the environment of HBCUs as "… nurturing black, underserved students, while offering specialized instruction, such as exploring the deepest questions about what it means to be a black college student" (p. 678), going on further to acknowledge HBCUs for providing a welcoming environment for Black students through acceptance and mutual support. Bracey (2017) went on to include that "The context in which education occurs is just as important as the content of the curriculum" (p. 689) and that some PWIs have not demonstrated a consistent commitment to educating Black students in America, instead placing more emphasis on recruiting Black athletes.

In a qualitative research design, Johnson (2018) sought to understand the factors that influenced students to attend HBCUs when there are many other college options. Research participants were recruited from a pool of graduates of 105 HBCUs who graduated with a bachelor's degree between the years 1999-2013. The final selection of participants consisted of 51 African Americans between the ages 23 and 36, with 30 participants being female and 21 participants being male. Their semi-structured interview responses revealed that personal connections, Black achiever isolation, unmet expectations, and cultural exploration were prominent themes from the participants. Many participants shared that interactions through

personal connections helped to form their decision to attend HBCUs, having spoken with parents, teachers and counselors, and significant others who had positive experiences at HBCUs. The majority of the research participants identified as being "high-achievers" (Johnson, 2018, p. 162) prior to attending college. While this seemed ideal for any high-school student planning on attending college, these participants reported feeling isolated because of their academic achievements. Once participant shared that he would disengage himself academically in order to avoid appearing to be too smart so that he would be accepted by other Black people. The HBCU educational experience, however, alleviated these concerns because as Johnson (2018) explained, "HBCUs were viewed as environments where high-achieving African Americans could thrive without having to worry about being ostracized by their peers for their academic achievements" (p. 162-163). Johnson (2018) found that the research participants shared a similar belief regarding HBCUs as a space where they would not be outcast as the only one of their kind and where they would have opportunities to build meaningful connections with their African American peers.

Another revelation from the Johnson's (2018) interviews was that many participants chose to attend HBCUs because they felt as though they had not yet met their academic potential, and some did not come from families who stressed the importance of college or had the financial means to send their children to college. Some of the expectations about HBCUs that were highlighted in the participants' interviews were a family-like environment, spiritual support, and encouragement. One participant indicated that even though he did not view himself as a high-academic achiever prior to attending college, he was motivated by the ongoing support and the encouragement from being told that he was above average while attending college. Another participant indicated that she chose to attend the all-female Spelman college so that she

would be able to engage in African American culture while also exploring her womanhood in an

environment that encourages students to do so through their curriculum. Johnson (2018)

concluded with the following:

> … African Americans continue to choose HBCUs in the twenty-first century because
> they are interested in engaging in an educational environment that reflects their culture,
> promotes their academic achievement, and allows for opportunities to engage socially
> with other Black students, staff, and faculty. (p. 166)

This is consistent with previous research indicating the positive impact that interaction with

faculty and peers has on African American students' success. (Chen, Ingram, & Davis, 2014;

Harvey-Smith, n.d.).

To better understand enrollment trends at HBCUs in more recent years and determine the

motivations for students choosing to attend HBCUs, Johnson (2019) conducted a qualitative

study with HBCU alumnae by organizing the data based on Perna's Conceptual College Choice

Model. This model consisted of the following topics for understanding college choice:

individual's habitus, school and community context, higher education context, and the broader

social, economic, and policy context. Johnson (2019) noted the impact that habitus – a term used

to represent how a person views the world based on socialization throughout life – has on college

selection. Habitus also extended to parentage as well as race and racial identity. In terms of the

school and community context, Johnson (2019) referred to scholars who indicated that students

seeking to further develop their racial identity were likely to enroll in an HBCU and that students

who did not have engagements with other students of color prior to attending college were more

likely to be attracted to HBCUs. In terms of the higher education context, personal connections

at HBCUs were also a noted theme in college selection, as these connections allowed families a

chance to learn first-hand information about the institution's programs and financial aid

opportunities. Campus climate was noted as another influence on college choice, as highlighted

in reports indicating that African American who attend HBCUs experience positive relationships with faculty and with campus activities. This provided a stark contrast to African American students attending PWIs, where students have expressed academic and social isolation and alienation (Winkle-Wagner, & McCoy, 2018).

Drawing on Yosso's Six Forms of Capital for Communities of Color, Johnson (2019) focused this study on experiences reflecting the aspirational, familial, social, navigational, and resistant capital as it related to HBCU college choice. Participants in the study included HBCU alumnae who had earned a bachelor's degree from an accredited HBCU from the year 2000 and later. Participants were identified through informants (whom were also HBCU alumnae) as well as through social media outlets, including Facebook and Twitter. There were 48 individuals (25 female and 23 male) across 21 HBCUs who met the full criteria of the study between the ages of 26 and 36 years of age. Data collection involved an online demographic questionnaire and a semi-structured telephone interview. Johnson's (2019) findings were summarized as follows:

> The primary reason participants chose to apply to and subsequently attend an HBCU was their desire to pursue postsecondary education in an environment that reflected Black culture and Black excellence. Two overarching themes characterized the experiences driving this motivation" "pride" and "prejudice." p. 415

Johnson (2019) went on to further explain that "pride" in college selection related to family pride and how alumnae were motivated to attend HBCUs through the experiences of parents or siblings who attended HBCUs or exposed them to HBCU activities such as football classics, Greek step shows, tailgating, and other traditional homecoming festivities. For one participant, just knowing that an older sibling had already established connections at an HBCU with professors and fraternity members was enough to motivate him to attend because he felt as

though there would already be a support system for him when he arrived. For other participants, contact with HBCU alumnae at their high schools and in their communities helped to foster an appreciation for HBCUs, resulting in their HBCU college of choice. In some cases, the proximity of an HBCU campus helped to build positive perceptions that encouraged participants to want to attend. Black achiever isolation was also a theme that emerged in Johnson's (2019) research, as some students were tracked as high-achieving African American students throughout high-school, which seemed to separate them from other African American peers, creating even more of a desire to go to a college where they would not be isolated based on their achievements. One student, Malcolm, noted in his interview the following conundrum with this achievement isolation, which also resulted in racial isolation:

> The [high] school I went to was a predominantly, *overwhelming*, White school in Atlanta… with kids wearing confederate flag shirts underneath their uniforms. It didn't bother me [but] I didn't want that in college. I wanted to be surrounded by lots and lots of Black kids who were also high-achieving students. I was the only Black male in my grade… the Black students weren't necessarily the high-achieving students. p. 417

Another student, Maria, stated that she looked forward to being in school with Black people for four years, specifically highlighting the camaraderie, fun, and conversations. Although some students expressed that they were able to manage between different environments (being the only Black person and being around other Black people), there were also consequences noted with this "code switching" (Johnson, 2019, p. 417). This was expressed by Carrie, who perfected the art of code switching. Although she was highly involved academically and socially in high school, she stated that she became confused about who she was and who she wanted to be. Another Morehouse College graduate, Justice, stated that although he attended private schools

and was identified as a gifted and talented student, he had difficulty getting into advanced-level courses by the time he reached high school, requiring his parents to intervene. He also stated that he experienced "vicious racism," taunts from classmates, and "hostile situations" during his high school years.

Johnson (2019) concluded that the role of familial capital extended beyond just parents and siblings, but included the support that came with having connections through social capital such as teachers and counselors. Additionally, Johnson (2019) noted that "… explicit experiences of racial conflict, prejudice, and microaggressions (verbal, nonverbal, and/or visual insults)…" were also predominant factors in participants choosing to attend HBCUs. These findings were intended to help build an understanding of the college selection process and degree attainment for students who chose to attend HBCUs.

Impact of the HBCU Experience on Student Outcomes

According to research by the Journal of Blacks in Higher Education or JBHE (2009), higher graduation rates of Black students correlated with higher enrollment of Black students, potentially due to the racial climate. This has been attributed to the idea that black students who are uncomfortable or do not feel welcomed at their college are more likely to drop out or transfer. JBHE summarized its findings as follows:

> A large graduation rate gap may also mean that blacks simply do not feel comfortable on the particular campus. This can be caused by poor race relations among students, a lack of cultural and social activities geared toward African Americans, or a surrounding community that is inhospitable to blacks or that offers no cultural amenities to the African-American community. (p. 68)

Kim and Conrad (2006) conducted a study to determine if HBCUs had an impact on the academic success of African American students based on their degree completion. The dependent variable of this study was bachelor of arts (B.A.) degree completion, and the

independent variables were individual-level predictors (high-school GPA, SAT scores, age, initial degree aspiration, gender, and family's socioeconomic status) and institution-level predictors (Black college status, selectivity, public versus private college status, student enrollment), and other internal college characteristics (expenditure, faculty, curriculum, and peer factors). The expenditure variables were included because of previous research indicating that there was a positive association between instruction-related expenditures and academic success. Additionally, the faculty variable was included based on research suggesting that students who worked with faculty on research are more likely to deepen their involvement with and attachment to the college in addition to their intellectual development. Using a national longitudinal data set containing an extensive database of surveys by African American students, the researchers were able to secure a sample of 401 students from 10 HBCUs and 540 students from historically White colleges and universities (HWCUs). The researchers used a variety of analyses to begin their study, including means, percentages, standard deviations, correlation, t-tests, and cross tabulations. Based on their analyses, the majority of the respondents were female (64%). There was also a significant gap between the combined SAT scores for African American students at HBCUs (736) versus HWCUs (925). Ultimately, the authors found that there was a difference between HBCU and HWCU African American students in terms of academic and parental background characteristics, with HWCUs reflecting families with higher parental income and higher high-school GPA and SAT scores. The college GPA for students at both types of schools, however, was not significantly different. Degree aspirations between the two colleges were also the exact same. There were differences in the degree completion rate of women (66%) and men (49%), and the degree completion rate between HBCUs (55%) and HWCUs (63%).

Kim and Conrad (2006) noted that the environmental factors at each school compensate in different ways:

> … HWCUs tend to have a higher percentage of faculty with a Ph.D., higher average faculty salaries, and a higher proportion of instruction-related expenditure per FTE student than HBCUs…, all of which are positively related to the outcome. On the other hand, HBCUs tend to have a lower student-faculty ratio, lower enrollment, and somewhat higher student-faculty interaction…, all of which are positive predictors of student development in general… (p. 414)

An additional finding in the study was that the transfer rate of HBCU undergraduate students was higher at HBCUs versus HWCUs; however, HBCUs' efforts to retain students through faculty research projects was a positive predictor of degree completion. The authors also used hierarchical non-linear modeling (HNLM) to determine the probability of obtaining a baccalaureate degree, analyzing the individual-level model and the institution-level model. They indicated that contrary to previous research claims that African American students' college grades are a more likely indicator of degree completion than high SAT scores, there was no difference in the GPAs of African American students between the two types of colleges. This suggested that students tended to do better once they were in college despite their high-school scores. In terms of the institution-level model, the authors' noted that there was a slightly lower chance of African American students graduating from a HBCU than a HWCU, although there was not a statistically significant difference. In terms of institution-related expenditures, the researchers found that there was a positive association between the amount of expenditures of the type of school and degree completion, although this too was not statistically significant.

Based on their analysis, Kim and Conrad (2006) noted that "…HBCUs provide or promote more positive college experiences, such as engagement in professors' research projects, for their African-American students than do HWCUs" (p. 418), and that "Human factors might be more powerful than money factor" (p. 418). African American students had a similar

probability of completing their degree regardless of if they attended a HBCU or HWCU. The authors concluded that HBCUs have done just as well as HWCUs in producing African American graduates — a remarkable finding considering that HBCUs tended to have fewer resources and the fact that the academic background of African American students before attending college tended to be lower for HBCU students than HWCU students. This suggested that there was something significant about HBCUs in that they are able to educate their student populations at a standard and rate consistent with those of their HWCU counterparts in spite of the challenges that HBCUs have encountered, historically and presently. As Kim and Conrad (2006) suggested, the human factor and faculty engagement at HBCU may be an influential factor in students being successful at HBCUs. Overall, students who have attended HBCUs have felt a stronger sense of engagement in their learning and satisfaction with their overall college experience (Buzzetto-More, 2008).

Learner-Instructor Interactions in Traditional Courses at HBCUs and with African American Students in Online Courses at a Non-HBCU

The success that HBCUs have had in engaging and nurturing their students through learner-instructor interactions on the traditional campus has been heavily documented. Learner-instructor interaction may be evidenced by an instructor providing information, feedback, or encouragement to assist their students, as well as learners communicating with their instructors by asking questions, for example (Gutierrez, n.d.). Chen, Ingram, and Davis (2014) made reference to a previous study by the Center for Postsecondary Research, which indicated that the best predictor of student satisfaction was students' perception of the level of the support from the college in regards to students' academic and social needs; however, this study lacked empirical data. The authors noted the impact that HBCU environments have on students' success, claiming

that African American students at HBCUs earn better grades, set higher career goals, and experience support, connection, and feelings of acceptance as compared to their PWI counterparts. They also pointed out that gender was a factor in the level of student engagement that HBCU students experienced, citing that males tended to interact with faculty and are more socially engaged on campus than females. Ultimately, the authors attributed "… good peer relationships, more frequent and positive interactions with faculty, and positive experiences with staff and administrators" (p. 567) to the positive campus climate at HBCUs.

One of the reasons that HBCUs have been successful in educating and graduating African American students may be attributed to othermothering. Othermothering has cultural and historical significance, stemming from relationships that were developed between enslaved women and children who had been separated from their biological mothers (cited in Flowers, Scott, Riley, & Palmer, 2015). In an educational context, othermothering has referred to the dedication that black faculty have had toward providing a holistic approach to education regarding not only a student's education, but also their overall wellbeing (Thomas Bernard, Issari, Moriah, Njiwaji, Obgan, & Tolliver, 2012; Griffin, 2013). These types of formal and informal connections helped to strengthen students' self-esteem and self-efficacy in relation to their motivation in being successful in college. Flowers, Scott, Riley, and Palmer (2015) explained the impact of these types of relationships on their students:

> Historically Black Colleges and Universities (HBCUs) were established as an institutional structure that embodied the true nature of support for Black college students. Traditionally, they have emphasized the importance of collective cohesion among all members of the community; as a result, othermothering was socialized as an institutional HBCU value. (p. 60)

Relationships between learners and instructors have been inherent in the structure of the HBCU, and the authors urged for emphasis to be placed upon these relationships in order to further the

goals of the students, indicating that "…faculty members at HBCUs have provided emotional and academic support that has led to greater scholastic achievement for students" (p.61) and Black students had an expectation for their faculty to serve as mentors and role models throughout their matriculation in college (Flowers, Scott, Riley, & Palmer, 2015).

In their qualitative study, Flowers, Scott, Riley, and Palmer (2015) sought to determine how othermothering was embodied at HBCUs and how it affected students, using Tinto's Student Integration Model as a framework. The authors noted the following:

> Tinto's model suggests that students' personal background characteristics, educational and occupational goals, commitment to personal and institutional goals, and the degree of academic and social involvement and investment in the institution interact to determine whether the students will leave the institution before completing a degree program. (p. 67)

The authors distributed an online survey to HBCU graduates in the United States and received 34 participant responses. Their findings indicated that participants believed that the administrators and staff at their HBCUs exceeded their expectations as mere educators and aided in their personal growth and development. Some of the key words and phrases that participants used to describe these interactions included supportive, strong sense of excellence, role models, challenging, connection, concern, wellbeing, dedicated, and family. The authors concluded that the participants' input acknowledged how critical it was for faculty to be caring, dedicated, nurturing, and supportive in their interactions with students in order for their students to be successful because the interactions that Black students have on campus would significantly impact their academic success over time.

The impact of learner-instructor interaction was also a focal point in a study conducted by Salvo, Shelton, and Welch (2019). In a phenomenological qualitative study designed to determine factors contributing to online course completion for African American males, these

researchers conducted interviews with 10 African American undergraduate students who were enrolled in a public university in the southern region of the United States and who had completed an online course with a passing grade. A purposive sampling method was used to allow researchers to select individuals whom would be able to provide well-informed feedback on several factors, including economic, technological, and academic. Semi-structured interviews with research participants revealed some challenges that the students experienced in their online courses—notably their interactions with online faculty. More specifically, participants noted lack of professor interaction, immediate feedback, notifications, teacher-directed instruction, and teacher-mediated assessments. One participant shared the following experience:

> [There was a need for] more interaction with our professor. He was slow getting back to our grades and everything. Be quick to feedback. I mean, I know we're all busy, but feedback needs to be in a timely fashion. A timely manner. And grade-wise, just be pretty punctual at that… p. 29

Feedback from other participants indicated that more immediate responses to questions were important and that email was not sufficient because there were delays in email responses from instructors. In terms of improving online education, a participant offered a suggestion of live lecturing, or some form of communication that is synchronous, allowing for students and instructors to talk back to one another (Salvo, Shelton, & Welch, 2019). This lack of interaction may be why one student completely forgot about completing an exam in an online course, as he shared "I totally forgot about the online class, because I don't sit in front of a computer until I think about it. I'm trying to do this and do that and work, so I just forget. I would just forget, and I still forget now" (p. 29). The aforementioned studies have shown the positive impact that instructor had on their HBCU students contrasted with the negative impact that lack of communication with instructors had on African American students. Learner-instructor

interactions were just one type of interaction offered through online courses that has been

researched. Research on learner-learner interactions have also been documented

Learner-Learner Interactions in Online Courses

Bickle and Rucker (2018) found that although it was generally thought to be challenging

for peers to engage in impactful online communication with their peers, students' satisfaction

with learner-learner interaction significantly increased when they had a method incorporated into

the course that allowed them to interact with one another. Unlike face-to-face courses, which

tended to allow for more organized interactions, asynchronous courses often needed to provide

students with more explicit guidelines regarding when and how to interact, with expectations

being very specific and detailed in order for students to be satisfied with their experience. The

authors also noted that when students felt committed and connected to their courses, they were

more likely to complete the course. The infusion of technology, such as smartphones, and other

technological tools that allowed students to be constantly be connected with others was used as

an incentive in thoughtfully designing asynchronous courses in ways that allowed students to

communicate with their peers. This was why the researchers used a combination of VoiceThread,

a technology that allowed students in online courses to record their responses with audio, in

conjunction with online group assignments. The authors further impressed the impetus behind

their research through the following:

> The isolated learning nature of asynchronous online learning places a higher importance
> on social presence. Students who obtain a sense of social presence are more willing to ask
> one another questions, share information and assist others with assignments. Social
> presence encourages an active student-student learning environment. p. 3

Their research was based on previous findings on the importance of social presence in promoting

students' learning in asynchronous courses, particularly regarding learner-learner interactions,

Bickle and Rucker (2018) noted the following:

This focus is based on the fact that asynchronous online learners have a higher tendency to feel isolated from the classmates and a higher class dropout rate. Dropout rates in asynchronous courses are often attributed to forgetting about the course and not completing assignments. p.2

With this premise in mind, the researchers sought to determine the following based on their research questions regarding online courses: 1.) if structured and systematic group assignments were significant predictors in students' ability to learn, 2.) if the incorporation of learner-to-learner group assignments significantly predicted students' ability to obtain a sense of community in asynchronous online courses, and 3.) if the ability to communicate with group members was a significant predictor of satisfaction with the asynchronous course. Out of 228 respondents for the study, approximately 88% were women (11% men) and approximately 71% were between 18-21 years of age (28% were 22 years old or older). The majority of respondents lived on campus (96%), and the majority of respondents (52%) had taken more than 2 online courses. The researchers conducted a survey using Qualtrics to collect quantitative data from student participants. The survey included 5-point Likert scale questions (strongly disagree-strongly agree; very dissatisfied-very satisfied) to address each of the research questions, and SPSS was used for data analyses. Students were randomly placed into groups of three and instructed to develop a list of rules regarding group communication, guidelines on how the group would function, and expectations. Each group was assigned seven assignments to complete throughout the semester, and each group was required to select from a list of subtopics, allowing for each group member to be responsible for a subtopic.

After analyzing data, Bickle and Rucker (2018) found that all three research questions revealed significant predictors. The first research question was supported, showing that expensive technology was not necessary in order for students to have meaningful interactions in their asynchronous online courses. The second research question in particular was positive

because it focused on the ability to build community, which addressed an overall issue with online courses creating isolated spaces where it became easy for students to hide behind a computer screen. The incorporation of the VoiceThread technology further aided in community building since students were able to meet each other, see one another's faces, and view their living environments (Bickle & Rucker, 2018). The third research question, dealing with satisfaction with asynchronous courses, was also supported, demonstrating that these types of courses may still effectively incorporate humanistic interactions that allowed participants to be comfortable interacting with other participants and conversing through the medium. The researchers conclude that courses that were able to successfully incorporate a method of interaction for online learners, students' satisfaction was significantly increased.

Learner-Content Interactions in Online Courses

The rich history of the African diaspora that has been nurtured and preserved on HBCU campuses has offered a unique setting that has continued to attract students desiring an empowering experience emphasizing their culture through the curriculum and extra-curricular events and activities (Cotton, 2017). Spelman College, listed as the number one HBCU (U. S. News and World Report, 2017) offered an example of cultural infusion into the curriculum and course content. For example, during the spring 2018 semester, the Spelman College English Department offered such culturally relevant courses as Twentieth Century Black Women Writers, The Politics of Black Poetry, Queer of Color's Critiques, and seminars on both Toni Morrison and Langston Hughes (Ellucian Company, 2018). Such culturally relevant and empowering courses highlighted cultural pride and were linked to self-determination, race centrality, and ethnic identity, all elements that have enhanced Black collegians' intrinsic motivation (Chapman-Hilliard et al., 2016).

On the premise that student satisfaction was an important factor in the evaluation of the quality of online courses, Kuo, Walker, Schroder, and Belland (2014) conducted a study that partly examined which learner interactions with faculty, peers, and course content best impacted their satisfaction with their online course experience. The sample population for the study included graduate and undergraduate students at a medium-sized university in the Midwest area of the United States, drawing from online courses in the college of education. Out of the 221 responses, 180 responses from 26 courses were used for analysis. The demographic questions included gender, marital status, age, course level, and hours spent online per week.

In order to test student interactions, the researchers adapted a survey instrument that was used in a previous study to test student interaction and satisfaction in blended courses. They revised the questions in order to tailor them for fully online courses and then proceeded with validity testing. Validity testing was conducted with six professors whom had expertise in researching online education, teaching online courses, or both, and this group analyzed the necessity and adequacy of the questions. Two rounds of content validity testing, based on content validity ratios (CVR), were used to calculate their ratings, and this process resulted in some items being removed and verbiage being altered according to the experts' feedback. The researchers for the study also obtained reliability for the survey instrument by conducting a pilot study during the summer semester prior to the fall semester during which they conducted the final study in order to test the data collection procedures and to gather reliability and content validity details for interaction. The pilot study had 111 undergraduate and graduate respondents who were taking online courses in the college of education and who had similar backgrounds to the participants of their final study.

The procedures used for the study included researchers contacting course instructors via email to determine if they would be willing to include their online students in the survey, and if so, asking them to distribute the survey link through their online communication platform that they typically used for their students (i.e. email, learning management system). The researchers collected data at the end of the fall semester and used correlation analysis to analyze learner interactions. The results indicated that out of the three types of interaction in online courses, learner-content interaction had the highest mean score, followed by learner-instructor interaction, and lastly, learner-learner interaction. Kuo, Walker, Schroder, and Belland (2014) explained possible rationale for these results, as noted in the following statement:

> Online learners are likely to spend most of their time on required reading or assignments, and digest the content they need to learn through thinking, elaboration, or reflections, which are internally intellectual communication of a person with the content during learning processes. p. 43

The results of this study contradicted other studies that have emphasized learner-instructor or learner-learner interactions as having more significant impacts on student satisfaction in online courses (Bickle & Rucker, 2018; Steele, Robertson, & Mandernach, 2018). The researchers went on to explain the additional interaction findings, noting that learner-learner interaction (which had the lowest mean score in their study) may not have impacted students' satisfaction in their online courses unless collaboration was required, which was one aspect that was consistent with Bickle & Rucker's (2018) analysis. Kuo, Walker, Schroder, and Belland (2014) also explained that learner-instructor interaction, being a basic component of the online course, was significant, but not very strongly.

In a three-year study on student satisfaction in online courses with undergraduate and graduate business students at a Southwestern Pennsylvania university, Cole, Shelley, and Swartz (2014) sought to determine factors and experiences that contributed to partially and fully online

course satisfaction. The researchers used a web-based survey, Vovici, with a five-point Likert scale ranging from "very satisfied" to "very dissatisfied," as their survey instrument. A total of 553 students participated in this study. After conducting independent samples t-tests using SPSS, the researchers concluded that there were no statistically significant differences in fully online course satisfaction based on gender, age, or classification (undergraduate or graduate). However, the authors noted that females, members of Generation X, and upper-level undergraduate students were more likely to be satisfied in their online courses than males, Generation Y, and graduate students.

Barnes (2017) conducted a study to analyze perceptions of quality and satisfaction in online courses. A Likert-type scale survey with answer options ranging from "strongly disagree" to "strongly agree" was administered to 350 students at a regional, southwestern university and collected information including major, classification, gender, number of courses taken, and age. Statistical analyses of data revealed that the number of online courses taken in the past was statistically significant; thus, Barnes (2017) concluded that students who had taken more online courses were more satisfied with online learning. These findings contradicted those of Rodriguez, Ooms, and Montañez (2008), who determined that there was a negative correlation between satisfaction and the number of online courses taken for education graduate students at a Midwest university. This study revealed that 23% of students with online learning experience were dissatisfied; additionally, the study noted that … "satisfaction with their experiences was a much stronger predictor of perceived quality of the courses…" as opposed to how comfortable and motivated they were with their use of technology (Rodriguez, Ooms, and Montañez, 2008, p. 115). Because of the evolving nature of society and technology, it is important for e-leaders to be

apt to change and respond just as quickly, while also being effective (Cordie & Liu, 2018; Belsky, 2019).

Evolution of Distance Education

Distance education has transformed significantly over the past few decades, becoming more technology based with rapidly evolving Internet bandwidths, media streaming, and a variety of mobile devices (Dunston, 2016). With all of these advancements, online learning has proven to become an asset in higher education, offering various modes of communication and combinations of interactions (Alston, Moore, & Thomas, 2017). With the intention of helping others to understand the evolution of distance education in order to better mitigate its future improvement, Kentnor (2015) explored the evolution of distance education from correspondence/parcel post, radio, television, and online education. According to Kentnor (2015), "Distance education is defined as a method of teaching where the student and teacher are physically separated" (p. 22). Kentnor (2015) chronicles the evolution of online education over the past 300 years alongside communication technologies innovations, starting with correspondence education. Correspondence education was a type of formal education between instructors and students who were physically separated, whereby an educational institution provided instructional materials through mail or electronic sources for students to complete at their own pace; the interaction between instructors and students was irregular and typically initiated by the student (Southern Association of Colleges and Schools, 2012). By the 1920s, radio became a popular communication tool; although, the United States was slow to adopt it as a form of educational technology (Kentnor, 2015). With the extension of having a voice to go along with instructional materials, radio soon proved to be an inexpensive, timely communication technology that could be quickly changed if needed (Kentnor, 2015). Ironically,

the use of televisions for educational purposes was considered before radio, with television technology being developed as early as the late 1800s; although, it was unavailable to the public until 1927 (Kentnor, 2015). However, due to barriers created by the Federal Communications Commission (FCC), educational institutions were unable to gain immediate access to televised education since there was an overwhelming rush of license applications, resulting in allocation issues and a freeze implemented by the FCC (Kentnor, 2015). Televisions still gained slow popularity as an educational tool, aside from being used as tools to demonstrate and explain concepts and educational broadcasting programs. Furthermore, televised distance education was "…poorly produced," leading to "low viewership" (Kentnor, 2015, p. 27). Kentnor (2015) went on to explain that "These television courses usually involved the instructor simply reading notes, making it difficult to keep viewers' attention" (p. 27-28). This lack of human interaction has been a prominent theme and criticism of online courses and seems to still be an issue that has yet to be mitigated in current distance courses (Lewis, 2019). Also, with the invention of the Internet, there was yet another mode of distance education that educators could experiment with. After the World Wide Web (Web) was introduce to the public in 1991, the University of Phoenix, a for-profit institution, became a pioneer in online education programs (Kentnor, 2015). Several higher education institutions followed suit; however, many did not survive due to the fact that they did not start with a brick-and-mortar traditional education background and they merely provided lecture notes, thinking that this would be sufficient (Kentnor, 2015). Kentnor (2015) concluded that distance education has continued to be an important aspect of education, while providing an affordable option for a college or university degree. Online education has been considered a fixture in higher education, as Kentnor (2015) noted, "Online education is the fastest growing form of distance education and is valued at both traditional and non-traditional

colleges and universities" (p. 30). With the rapid growth of online courses (Witte, Witte, & Westenkirchner, 2011), it is important to assess the quality and satisfaction that the main users experience in order to make improvements.

Paquette, Corbett, and Casses (2015) provided an optimistic review of the growth in numbers and credibility for online courses, including several statistics to support these claims. One way of determining the effectiveness of an online course required useful feedback from students and faculty. It was important to learn about the students' perceptions of technology and online courses since they would be the primary consumers. Through a mixed-methods study, the authors sought to determine how the communication and delivery of online student evaluations affected the completion of the surveys. Particularly, the authors sought to understand how the faculty members encouraged their students to complete the surveys, using reflective thinking as the theoretical framework. They cited previous research articles which stated that online student surveys tended to include a higher percentage of feedback than those that were distributed in traditional classes.

Overall, as stated by Cordie and Lin (2018), "The growth of *e*-learning has been influenced by various factors, including costs, availability of a variety of instructional technologies, and the innate technological skills of the modern learner" (p. 76). Furthermore, while more traditional spaces of learning have excluded students from the curriculum development process, online learning has allowed for students to express their wants from their institutions, shifting to a more student-centered approach (Cordie & Liu, 2018). Although distance learning has had its advantages in the realm of higher education, students' experiences have provided insight as to its true potential and success.

Online Learning and Related Challenges at HBCUs

The positive perceptions expressed about HBCUs provided a testament to their

motivational support and cultural impact; however, this would not be enough for them to sustain

in competition with other institutions of higher education during and beyond the 21st century.

While HBCUs have been successful in engaging and nurturing students in the traditional

classroom, research on their impact in the online classroom was needed. Generally, strong online

presence and web popularity for institutions of higher education has impacted the attention

drawn to these schools, and websites were one way that HBCUs would be better able to

complete with non-HBCUs in the online market (Taylor, 2018). According to Taylor (2018), "…

non-HBCUs are 3.8 times more likely to purchase desktop adwords and 4.3 times more likely to

purchase mobile adwords" (para 1). As HBCUs have continued to prove their relevance and

ability to compete with other state-funded colleges and universities, such as public PWIs, it has

been imperative for HBCUs to provide competitive learning programs, more specifically online

courses (Brown & Burnette, 2014). While previous research has indicated a resistance to online

learning at HBCUs, this is an area that would likely be forced to change in order to prepare

students for a global and web-based economy. Alston, Moore, and Thomas (2017) noted the

historical and current roles that HBCUs have had in responding to the social and educational

needs of the times:

> HBCUs have had the unique honor, challenge, and responsibility to educate a
> diverse population of students in a time of social and political upheaval, and
> because of this, it required them to be innovative in their pedagogical approach. It
> is essential that the faculty who serves these institutions be fully equipped to
> deliver a quality educational experience and provide greater access through online
> education. p. 413

Jones and Davenport (2018) addressed the sources of resistance to online learning at

HBCUs, highlighting seven reasons why HBCUs were resistant to online education: fear of

losing students, inequitable computer access, acceptance of stigma, lack of funding, competition, flaws in organizational structure, and faculty resistance. The authors noted that students who took online courses had a lower retention rate than students who took traditional face-to-face courses, which has been acknowledged by several other scholars (Cochran, Campbell, Baker, & Leeds, 2014; James, Swan, & Daston, 2016; Travers, 2016). Access to on-campus technology was a concern for many HBCUs, which was tied to the lack of funding that they receive (Alfred, 2017; Broady, Todd, & Booth-Bell, 2017; Toldson & Lewis, 2017). This was even more of an issue as technology advanced with society, as Belsky (2019) noted that in order to sufficiently prepare a skilled global workforce, universities would need to invest more than the 3% that was currently allocated for technology in education. Bracey (2017) also noted that HBCUs have been underfunded through their entire history (p.692). Faculty resistance was also a stronghold in progressing toward online education at HBCUs, as many HBCU faculty members were older and possibly more resistant to technology in general (Jones & Davenport, 2018).

While the ability for HBCUs to offer online programs would be ideal in a competitive academic market, there were real financial restraints that must be addressed. Samayoa, Abiola, Thai-Huy, and Commodore (2016) indicated that despite the United States v. Fordice (1992) decision, which resulted in integration of public universities in Mississippi that had still not integrated after Brown v. Board of Education (Fienberg, 1993), it was evident that there still remained a disparity in state spending between HBCUs and PWIs. This was concerning because HBCUs were more vulnerable in economically unstable times (Brown & Burnette, 2014); thus, they were less likely to offer the same types of technological advances that PWIs would be able to offer. The financial strain that HBCUs faced was directly linked to the lack of resources and technology that could have very-well helped them economically if they had the resources

required to implement and launch such technologies to offer online courses (Samayoa, Abiola, Thai-Huy, & Commodore, 2016).

One key consideration regarding online courses has been how online education has impacted students. Kwun, Alijani, Mancuso, and Fulk (2012) conducted a study to determine HBCU students' motivations for taking online courses, using the Expectancy Theory and the Technology Acceptance Model (TAM) as theoretical frameworks. The researchers noted that their literature review did not reveal studies on the motivations of HBCU students taking online courses in metropolitan areas nor of their perceptions regarding courses using a theoretical framework. The authors developed eight hypotheses based on their literature review to determine the factors that motivated HBCU students to take online courses including convenience, quality, perceived ease of use, perceived usefulness, subjective-norm, self-efficacy, and intention (Kwun, Alijani, Mancuso, & Fulk, 2012). After collecting data from a survey questionnaire that was administered to HBCU students in various classes in a metropolitan area, the authors determined that the majority of the students (64%) preferred face-to-face courses as opposed to online and hybrid courses. While the class levels from freshmen to graduate students were well-represented, graduates had the higher percentage of respondents and sophomores had the lowest percentage of respondents. Additional information regarding the student population were that almost half of the students were at least 25 years old, about 95% were African American and intrastate, and that students completed their degrees in an average of 9.5 years (based on a 2009-2010 official report from the school). These results emphasized other findings that implied that the nurturing environment and face-to-face experiences on HBCU campuses were a major deciding factor for students. However, as noted, the majority of respondents in this study were graduate students.

In analyzing their data, Kwun, Alijani, Mancuso, and Fulk (2012) first discussed the validity and reliability of their measurement model including composite reliability (Cronbach's alpha), factor loadings of the items, and average variance extracted (AVE). Next, they discussed the impact predictor variables that were identified in their hypotheses. They concluded that the only significant predictor of HBCU students' intention to take online courses was convenience, presumably based on the characteristics of HBCU students at this location being older, non-traditional students who had work and family responsibilities. However, since 64% of the survey participants indicated that they preferred face-to-face courses, the authors concluded that there were aspects of face-to-face courses that may have better met the needs of HBCU students. Based on their results related to the self-efficacy hypotheses and ease of use, the authors argued that HBCU students were more likely to take online courses if they perceived them to be easy but that they may have lacked the confidence in taking online courses, based on the idea that the older, non-traditional student population was more accustomed to the traditional lecture-style of teaching. They further stated that "As long as HBCUs provide online courses to their students, they need to improve the quality of online courses by paying more attention to the students' needs. This will entail incorporating strengths of traditional face-to-face classes, while providing convenience" (Kwun, Alijani, Mancuso, & Fulk, 2012, p. 115). Essentially, the characteristics that have made the traditional face-to-face HBCU classroom experience unique need to be implemented into their online courses in order to meet the needs of their students. Furthermore, it would be imperative that HBCU faculty be prepared to teach online by ensuring they have the proper knowledge, skills, and resources to provide a quality online education, preferably through university-led professional development opportunities, as this would save the amount of money

that would be required for external professional development costs (Alston, Moore, & Thomas, 2017).

Research has shown that students who did use educationally related technology at HBCUs have had positive experiences. Gordon-Patton (2016) shared some insight regarding HBCU students' perceptions about technology used in the traditional classroom as well as their interactions with the instructor, noting that the majority of research participants were more satisfied with instructors who used technology in the classroom versus instructors who did not use technology in the classroom. Galindo argued that "[u]ndergraduates, mostly Millennials, use technology every day for communicating and socializing with friends and family" (Gordon-Patton, 2016, p. 87). The pre-disposure and positive correlation between Millennial students and social media technology through several web-based platforms has likely transferred over to the ways in which they have experience technology in the classroom. The uses of technology in the classroom have also made the learning experience more engaging, meaningful, and convenient. According to Gordon-Patton (2016), "[s]tudents used their digital devices to capture pictures of information and assignments on the board that they could refer to later or share with other students" (p. 88). Students' perceptions of teachers who use technology in the classroom suggested that these instructors were more respectful towards students, encouraging of student participation, and concerned about student progress (Gordon-Patton, 2016). This research provided a general idea of how HBCU students perceive technology in general, and this also provided insight as to how they viewed technology for their courses.

In an effort to determine if HBCUs can uphold their ideals of personalized and supportive learning environments in an online classroom environment, Dunston (2016) conducted a study with students in a teacher education program at North Carolina Central University (NCCU) in

Durham, North Carolina, seeking information on 1.) why students chose distance education

courses in their program, 2.) why students chose the distance education platform, 3.) beneficial

components of the distance education program, 4.) potential barriers to distance education exist,

and 5.) recommendations for appealing to diverse education students in online courses. The

researchers used Astin's Student Involvement Theory as a framework for this study, and this

theory posited that the more involved students were on campus, the more likely they were to

experience academic and personal development. Dunston's (2016) goal was to apply this theory

to online courses, since students were not able to be involved to the extent that they would if they

were physically on campus. More specifically, Dunston (2016) chose to research students taking

online courses in a teacher preparation program since the nature of the program traditionally

relied on "instructor modeling of effective teaching" (p. 155) in a structured environment.

The participants in the study included 269 undergraduate students (41 male and 228

female), most of whom were working toward their first bachelor's degree (111 students) and

most of whom were Black (67%). Since Dunston (2016) was seeking input on the perceptions --

defined as "ideas based on students' own experiences with online learning, their observations of

friends and classmates in online classes, and their knowledge about online learning in general"

(p. 156) -- that students had regarding online courses, the study was able to include a broader

range of students who could provide various perspectives on how they viewed online courses.

The survey instrument was created using Empliant and was distributed through the students'

online learning management system, Blackboard. The 41-item survey included items regarding

student demographics and individual experiences with online education, which required Likert-

type scale response options. Dunston (2016) defined distance education as "…courses taken

through the Distance Education department, whether 100% online, taught at a site other than

[the] university's campus, or a combination of these two formats" (p. 156). An interesting occurrence that took place during this two-semester long data-collection process was that during the fall semester, the university only allowed students to register for all distance education courses or all face-to-face courses; however, during the spring semester, students were allowed to co-mingle the two types of courses.

The results of Dunston's (2016) study revealed a diverse student profile regarding age, marital status, dependents, employment, and number of online courses taken. The rationale for taking online courses that ranked highest was flexible scheduling (55%), followed by ability to work at their own pace (20%), and commuter/travel needs (10%). In terms of communication, the majority of participants (74%) reported that regular communication with their instructor through online Blackboard course announcements and emails was instrumental in students succeeding in the course. Additionally, thirty-five percent reported that communication with other course participants through online discussion was necessary to succeed in the course. Alternatively, the biggest barrier to success was reported as dealing with computer and technological issues associate with equipment required for the course (65%), followed by instructor guidance and feedback (62%). Although this study provided useful data regarding interactions between learners and instructors and peers, it did not focus on 100% online courses, since it included courses taught at sites other than the university's main campus.

In a study examining HBCU students' perceptions of satisfaction with their online course management systems and features, Buzzetto-More (2008) found that the majority of students had Internet access at their residence that they used daily, with school work being ranked as the third highest use of the Internet. The study also reported that the majority of respondents preferred hybrid courses over traditional face-to-face courses, while preferring traditional face-to-face

courses over fully online courses. This latter result may reveal that the personable aspect of online courses may be lacking since students were satisfied with hybrid and face-to-face courses. Respondents were nevertheless optimistic about taking fully online courses in the future. There were several features of online courses that students found useful, including online lecture notes and hyperlinked calendars.

Jones and Davenport (2018) provided nine research-based steps to effectively implement online courses at HBCUs: (1) engage instructional designers and virtual learning specialists, (2) train online faculty, (3) orient all students to the online learning environment, (4) expand online learning in graduate and upper-level undergraduate courses, (5) select a strategic number of online courses for first and second-year students, (6) market fully online degree programs to a diverse population of students, (7) give extra consideration when enrolling male students in online courses, (8) designate specific advisors to enroll and monitor new and undergraduate male online students, and (9) expand online learning through online and face-to-face student support services. As indicated in the second step, proper training must be provided to online faculty, which was emphasized in the following study.

Harkness (2015) conducted a case study on an HBCU to describe the process of creating an online program at The University of the District of Columbia. The initiative started in 2000 during a summer program to help prepare faculty members to use online resources through the learning and content management system named Blackboard. Over the course of leadership changes and lack of attention to online learning, the program waned, but dedicated faculty members continued to develop their online courses. Finally, a Center for Instructional and Online Technologies was established in 2009, and more emphasis was placed on continuing to develop the online program. One important aspect of this relaunch was to ensure that each college and

school had a voice within the Committee of Online Learning. The Center for Instructional and Online Technologies conducted a survey with faculty members to assess their use and needs regarding Blackboard and instructional technology, and the results revealed that more than half of the faulty were using Blackboard; however, they desired more training with such resources. Content analysis was used to determine how Blackboard was being used. Users were classified based on a four-point continuum (nonusers, minimal users — 1-2 content areas populated; moderate users — 3-5 content areas populated; heavy users — 6 or more content areas populated) (Harkness, 2015). The idea that faculty were interested in more training was encouraging in light of contrasting research indicating a resistance to online education (Jones & Davenport, 2018). Therefore, it was important to note that the faculty members demonstrated self-efficacy in continuing to build their courses after receiving training, despite challenges regarding the change in leadership and waning attention on the training program (Harkness, 2015).

In 2014, North Carolina Agricultural and Technical State University (NCAT) claimed the title of the largest HBCU, a title previously held by Florida Agricultural and Mechanical University (FAMU), and NCAT has planned to grow even more in coming years with the expansion of distance education opportunities (Straumsheim, 2015). Over the past ten years, NCAT has maintained an enrollment of around 11,000 students; however, by 2020, they plan to enroll 13,500 students. In order to do this, university leaders have been working to create new online programs, market courses to non-traditional students including working adults, military members, and students who were unable to complete their degrees for other reasons. Although HBCUs have been reluctant to include online education, they may need to consider this option in light of financial challenges and changing student demographics (Straumsheim, 2015).

Summary

Chapter two has provided an extensive review of literature in order to provide perspective for the current research topic. The lives of African descendants in America has been deeply impacted by their socio-economic conditions throughout history, which inevitably affected their educational status. A brief history of HBCUs was provided, as well as a few legislative acts and organizations that have impacted African Americans' education. Furthermore, the evolution of online learning and how online learning has been realized at HBCUs has been shared.

Although there has been a limited amount of research on HBCUs and online education, there has been enough information to provide evidence of what aspects of online learning have been beneficial and what could be improved. Human interactions and cultural affirmation have been highlighted as strengths that HBCUs have in encouraging and motivating their students. Furthermore, based on the literature review, research has indicated that learner-instructor, learner-learner, and learner-content have all had varying impacts on student engagement and satisfaction in online courses.

Chapter Three: Methods

Overview

The rationale for this research project was to examine the best predictors for online course satisfaction among HBCU undergraduate and graduate students based on interactions in their online courses (learner-instructor, learner-learner, and learner-content). Since the literature on HBCU online course satisfaction among undergraduate and graduate students is minimal, the intentions of this study were to contribute research knowledge that examines HBCU online student satisfaction as a whole, including data from various HBCUs. This chapter described the methods that were used to implement this study, including the content validity test, human subjects research training, reliability tests, a pilot study, cognitive interviews, the final data collection process, the plan for data analyses along with assumptions for the analysis used, and limitations of the study.

Research Questions

The research questions that this study sought to address were as follows:

RQ 1: Is there a relationship between HBCU students' satisfaction in online courses and the following demographics?

  a. Gender (male or female)

  b. Age (traditional 18-22 or non-traditional over 22)

  c. Classification (undergraduate or graduate)

RQ 2: Is there a relationship between HBCU students' satisfaction in online courses and the number of courses that students have previously taken?

RQ 3: Is there a relationship between HBCU students' satisfaction in online courses and the following course interactions?

a. Learner-Instructor

b. Learner-Learner

c. Learner-Content

Research Purpose and Design

This study used quantitative methods in order to determine if HBCU students had similar positive experiences in their online courses as have been documented in traditional face-to-face HBCU courses. As detailed in chapters one and two, research has indicated that HBCUs offer supporting campus environments for students, which was the most significant factor leading to their satisfaction (e.g. Chen, Ingram, & Davis, 2014). Also, while positive interactions at HBCUs on traditional campuses have been documented through qualitative research (e.g. Johnson, 2018), quantitative research on this approach has been minimal.

Population and sample. In the voluntary response sample for the current study, participants who completed the survey, entitled "Students' Satisfaction with Interactions in Online Courses at Historically Black Colleges and Universities (HBCUs)", consisted of students enrolled in an undergraduate or graduate online course at various HBCUs located throughout the southeast, mid-west, and south-central regions of the United States during the Spring 2020 semester. The student enrollment populations of these universities ranged from approximately 1,300 to 9,600. An a priori t-test power analysis was conducted using G*Power2 (Erdfelder, Faul, & Buchner, 1996) in order to estimate the sample size needed for the study. A small effect size (ES) of 0.15 (according to Cohen's d criteria; Cohen, 1988), alpha = .05, and power =.95 indicated that the estimated sample size was N = 74.

Approximately 50% of HBCUs serve 2,500 or fewer students (United Negro College Fund, 2020). According to the National Center for Education Statistics (NCES) (2018),

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approximately 51% of HBCUs were public institutions, and 50% were private non-profit institutions. Additionally, females made up 62% (males 36%) of HBCU enrollments, and 79% of degrees conferred for bachelor and associate undergraduate programs (masters and doctoral degrees 21%) (NCES, 2018). Statistical information regarding the ages of HBCU students overall was unable to be located.

      Content validity test. According to Lawshe (1975), "[C]ontent validity is the extent to which communality or overlap exists between (a) performance on the test under investigation and (b) ability to function in the defined job performance domain" (p. 566). Essentially, content validity refers to a judgement regarding how adequately a survey measures what it is supposed to measure. Lawshe's (1975) approach required using a panel of judges or experts, and this is the approach that was used to test content validity for the current study's survey instrument. For each survey question, a panel of experts assess whether the skill or knowledge measured by a survey item is essential, useful, but not essential, or not necessary; if more than half of the panelists indicated that a survey item is essential, then that item may be considered to have at least some content validity (Cohen, Swerdlik, & Phillips, 1996). Lawshe's (1975) content validity ratio (CVR) was then calculated for each survey item in order to validate the test. According to Lawshe (1975), if the amount of agreement observed had more than a 5% chance of occurring by chance, then the item should be eliminated from the survey instrument. Furthermore, Lawshe (1975) developed a table of CVR minimum values, which corresponded to the 5% level (ensuring that agreement is unlikely to be due to chance) to be used according to the number of panelists in order to determine if a survey item is essential. This same process was used to test the survey instrument for the current study.

The current survey instrument was adapted from a previous study in which validity and reliability were already established (Kuo, Walker, Schroder, & Belland, 2014); however, it was necessary to make some modifications to the original survey instrument to better address the research questions for the current study. In a study to determine the level to which interaction indicated student success in distance education courses, Kuo, Walker, Schroder, and Belland (2014) used a survey consisting of demographic questions and Likert-scale type questions. In addition to the demographic questions, the Likert-scale type questions used on the original survey included scales for learner-learner interactions, learner-instructor interactions, learner-content interactions, Internet self-efficacy, self-regulated learning, and satisfaction. Kuo, Walker, Schroder, and Belland (2014) conducted a pilot study with 111 respondents to test their survey for reliability using Cronbach's alpha, and their respondents included undergraduate and graduate students in an online college of education course during the summer 2009 semester. Cronbach'a alpha test is a widely used reliability test that measures the internal consistency -- or the extent to which all items in a test measure the same concept or construct (Tavakol & Dennick, 2011). The researchers' study revealed reliability information for course interaction (learner-instructor interaction: $\alpha = 0.88$; learner-learner interaction: $\alpha = 0.99$; learner-content interaction: $\alpha = 0.92$) and satisfaction ($\alpha = 0.93$). An acceptable Cronbach's alpha reliability number is generally 0.7 or above (Statistics Solutions, Cronbach's alpha, 2020); therefore, reliability was established for their research instrument. Additionally, the researchers conducted validity testing on their survey instrument by having six professors, with experience as online researchers or teachers, complete two rounds of rating for each survey item. The professors rated each item on the survey for necessity and adequacy. Using a standard critical value ratio (CVR) of .99, they removed or revised questions based on feedback from the professors.

Since the current study's survey was focused on how course interactions impacted student satisfaction, the sections for Internet self-efficacy and self-regulated learning were not included in the modified survey. Also, since marriage status was not a variable that the current study analyzed, it was omitted from the modified survey. There was also a modification to the satisfaction section to the question "I am satisfied with the level of interaction that happened in this course," which was split into three questions specifically focusing on learner-instructor interaction, learner-learner interaction, and learner-content interaction.

To conduct validity testing for the current study's survey instrument using Lawshe's (1975) approach, the modified survey was then distributed through Qualtrics to a panel of eight experts so that they could rate each of the questions on the survey. Out of the eight panelists, there were seven females and one male. Three of the participants had taught online at an HBCU, and three participants were HBCU alumnae. Since the study focused on online course satisfaction, the panelists solicited for this testing included faculty who had experience teaching online courses, and these panelists were recruited and solicited through the researcher's personal contacts, either in-person and through e-mail.

The Qualtrics content validity test homepage presented a brief background of the study, including the research questions, participant population, survey instrument, and instructions for the content validity testing process. There were five categories of questions, including a total of 30 questions, for which participants were asked to review and rate:

- Demographics (5 questions)
- Learner–Instructor Questions (8 questions)
- Learner–Learner Questions (6 questions)
- Learner–Content Questions (4 questions)
- Satisfaction (7 questions)

Based on Lawshe's (1975) approach, the participants were asked to rate each of the 30 question-items as essential, useful but not essential, or not necessary. The instructions for the content validity test also specified for participants to mark a response for all questions using the guidelines presented above and to mark questions as "Essential" if they thought that the question would be useful with revisions. Additionally, there was a "comments" section for participants to leave comments and suggestions regarding their ratings following each of the questions. There were seven participants who did not assign ratings for all question items, and the researcher contacted these participants individually to clarify any misunderstandings and ask them to complete their ratings for the remaining questions.

After all data were collected from content validity test panelists, the researcher used the Lawshe CVR (critical value ratio) Worksheet (Peach, 2017) in order to calculate the critical value ratio of each of the question items to determine which questions would be essential for the survey and which questions would need to be revised or omitted. The standard CVR for a case of eight experts was 0.75 (Lawshe, 1975). The original list of questions included on the content validity test were displayed in Appendix B. Out of the 30 questions on the content validity test, four questions were omitted because they were similar to other questions, one question was omitted because it did not clearly fit into one of the question categories, and one question was omitted because the CVR was smaller than .75. These questions were explained in Table 3.1:

Table 3.1

Explanation of omitted survey questions

Question Category	Original Question #	Original Question	Rationale for Exclusion
Learner-Learner Questions	Q 15	I answered questions of my classmates through different electronic means such as email, discussion boards, instant messaging tools, etc.	Similar to Q 14. I communicated with my classmates about the course content through different electronic means such as email, discussion boards, instant messaging tools, etc.
Learner-Learner Questions	Q 17	I comment on other students' thoughts and ideas.	Similar to Q 16. I shared my thoughts and ideas about the lectures and its application with other students during this class
Learner-Learner Questions	Q 19	Class projects led to interactions with my classmates.	Similar to Q 18. Group activities during class gave me chances to interact with my classmates.
Satisfaction Questions	Q 24	Overall, I am satisfied with this online course.	Similar to Q 25. This course contributed to my educational development.
Satisfaction Questions	Q 26	This course contributed to my professional development.	CVR was too low (.25) and did not meet minimum CVR (.75)
Satisfaction Questions	Q 30	In the future, I would be willing to take a fully online course again.	Did not clearly fit into a question category

Ten of the remaining questions were revised for clarity based on feedback from the panel of experts who completed the content validity test. These revisions were addressed in Table 3.2:

Table 3.2

Explanation of revised survey questions

Question Category	Original Question #	Original Question	Revised Question
Learner-Instructor Questions	Q 6	I had numerous interactions with the instructor in this course during this semester.	I interacted with my instructor online at least once per week.
Learner-Instructor Questions	Q 7	I asked the instructor my questions through different electronic means such as email, discussion boards, instant messaging tools, etc.	I communicated with my online instructor through the following electronic means (select all that apply; add "other" option); Select the frequency with which you used the tools you have indicated.
Learner-Instructor Questions	Q 8	The instructor regularly posted some questions for students to discuss on the discussion board.	The instructor posted discussion questions for students to discuss at least once a week.
Learner-Instructor Questions	Q 9	The instructor replied to my questions in a timely manner.	The instructor replied to my emails/messages/online communication in within 24-48 hours of me sending the message (always, sometimes, never)

Learner-Learner Questions	Q 12	Overall, I had numerous interactions related to the course content with fellow students.	I had meaningful interactions with my classmates online regarding course content.
Learner-Learner Questions	Q 13	I got lots of feedback from my classmates	I frequently received feedback regarding course content from my classmates through peer reviews or discussions.
Learner-Learner Questions	Q 16	I shared my thoughts and ideas about the lectures and its application with other students during this class	I shared my thoughts and ideas about course content and its application with other students in this course
Learner-Learner Questions	Q 18	Group activities during class gave me chances to interact with my classmates.	Class projects and activities gave me the opportunity to interact with my classmates
Learner-Content Questions	Q 22	Online course materials helped relate my personal experience to new concepts or new knowledge.	Online course activities helped relate new concepts or new knowledge to my personal experience.
Satisfaction Questions	Q 25	This course contributed to my educational development.	I am satisfied with what this course has contributed to my educational development.

There was one question that remained on the survey despite receiving a low CVR rating (.5) because the researcher determined that this question would be useful when analyzing final data. This question is explained in Table 3.3:

Table 3.3

Explanation of included question despite CVR

Question Category	Original Question #	Original Question	Feedback and Rectification
Demographic Questions	Q 4	How many hours do you spend in your online course per week? {less than 5 hours, 6-10 hours, 11-15 hours, 16-20 hours, Above 20 hours}	Feedback on the content validity test indicated that this question assumed that students were taking one online course. To rectify this, the researcher specified in the survey's instructions that all responses should be directed toward one online course.

After updating the questions based on the feedback from the content validity test, there were 24 questions remaining on the survey. Upon review, the researcher added three additional items to the survey to provide important information that would potentially be useful for demographic data analyses. These questions were explained in Table 3.4:

Table 3.4

Rationale for additional questions

Question Category	Additional Questions	Rationale for Additional Questions
Demographic Questions	Please select the HBCU you attend. {Select from drop-down menu}	May be useful for descriptive statistical analyses
Demographic Questions	Is this course required for your major? {yes, no}	May be useful for descriptive statistical analyses
Demographic Questions	Is this course part of a fully online degree program? {yes, no}	May be useful for descriptive statistical analyses

The first question was added so that data analysis could factor in if there was a difference in online course satisfaction based on which HBCU participants attended. The second question was added in order to determine if students had a choice in taking the online course depending on if it was required for their major or not, and the third question was added in order to determine if students were in programs that only included online courses. Both of the latter two questions would potentially impact students' satisfaction in online courses based on whether or not they had a choice to take the course online or face-to-face or if they intentionally signed up for an online program. Along with the previous items on the survey, the additional three items increased the total number of questions on the survey to 27.

Final survey development. After validity was established, the final survey, entitled "Students' Satisfaction with Interactions in Online Courses at Historically Black Colleges and Universities (HBCUs)," was revised using the online assessment tool, Qualtrics, which generated a URL link to the survey as well as a quick response (QR) code that could be distributed to potential survey participants. The final survey included five categories of questions, with a total of 27 questions. These questions consisted of eight demographic questions and four matrix-table categories with questions including response options ranging from "strongly disagree" to "strongly agree." The categories included questions relating to learner-instructor interactions (six questions), learner-learner interactions (five questions), learner-content interactions (four questions), and satisfaction (four questions). These questions are also described as follows:

- Demographics (8 questions)
- Learner–Instructor Questions (6 questions)
- Learner–Learner Questions (5 questions)
- Learner–Content Questions (4 questions)
- Satisfaction (4 questions)

This final survey was then prepared for pilot testing distribution.

Human subjects research standards. Prior to beginning this study, the researcher completed the required human subjects research trainings online through the Collaborative Institutional Training Initiative (CITI) (CITI, n.d.) to ensure compliance with research standards. The researcher then sent solicitation emails (see Appendix C) to IRB offices at all 102 HBCUs (see Appendix A), along with a template of a research permission letter for convenience (see Appendix D), in order to obtain consent for the study so that these letters could be included in the researcher's home institution's Institutional Review Board (IRB) application. Some HBCUs asked for the researcher to email the home institution's IRB approval confirmation before they consented to the study. After IRB approval at the home institution was granted (see Appendix E), the researcher followed-up with schools that required prior approval from the home institution in order to obtain research permission letters from their HBCU IRB offices. Once these letters were obtained, the researcher submitted a modification to the home institution's IRB office to request inclusion of the additional sites.

Pilot survey data collection procedures. During the fall 2019 semester, the researcher contacted HBCU administrators and faculty in order to inform them about the study and ask that they share the survey flyer and link with their colleagues and students through email and by posting the flyer in their departments. Since the contact information for these individuals was available through their college and university websites, this open-access information was used to obtain their email addresses and phone numbers. Additionally, the flyer for the survey was posted on Facebook in order to have wider distribution and recruit more participants. There was an incentive offered at the end of the survey in the form of compensation — a chance to enter a drawing for one of five $25 Amazon gift cards. The researcher followed-up with points of

contact at the HBCUs through email, telephone, and text messages to remind them to distribute the survey to their students.

Participants - pilot survey. In order to collect reliability information for the course interaction and satisfaction categories, as well as to identify the practicality of data collection procedures (in addition to what was established by Kuo, Walker, Schroder, and Belland (2014), a pilot test was conducted. A Cronbach's alpha test for the pilot study was used to arrive at a measure of internal consistency for reliability. An alpha of 0.7 or higher was used to be a measure of good reliability (Statistics Solutions, Cronbach's alpha, 2020). Two public HBCUs were included in the pilot study during the fall 2019 semester, and both schools had small student enrollments (1000-5000 students). All participants were taking an online course, and between the two HBCUs, there were 46 participants. SPSS was used to calculate descriptive statistics and frequencies for the pilot study, which showed that females comprised 67.4% (males 32.6%), traditional students who were between 18-22 years of age comprised 52.3% (non-traditional, older than 22 years of age 47.7%), and undergraduate students comprised 100% (graduate students 0%) of respondents. The age ranges were designated based on research which indicated that traditional college students were between the ages of 18-22 years (Pelletier, 2010; Academic Partnerships, 2019).

These characteristics were reflective of the backgrounds for participants in the final study, with the exception of graduate student respondents. Additionally, the majority of respondents indicated that the course they were using as the basis of the study was required for their major (93.3%), that the course was a part of a fully-online degree-program (64.4%), that they spent less than five hours studying in the course per week (36.6%), and that they had previously taken between 4-6 online courses including the current course (44.4%).

Reliability - pilot survey. Chronbach's alpha was used to determine reliability information for all course interaction and satisfaction subscales. The learner-instructor interaction subscale consisted of six questions ($\alpha = .91$), the learner-learner interaction subscale consisted of five questions ($\alpha = .93$), the learner-content interaction subscale consisted of four questions ($\alpha = .94$), and the satisfaction subscale consisted of four questions ($\alpha = .92$).

Cognitive Interviews. After pilot testing concluded at the end of the fall 2019 semester, the researcher then conducted three separate cognitive interviews with two recent HBCU graduates and one current HBCU student who had taken an online course. Two of the interviews were conducted face-to-face with the participants using an iPad to complete the survey, and one interview was conducted via telephone, with the participant using a laptop to complete the survey. The purpose of the cognitive interviews was to observe and listen to participants as they talked through their completion of the pilot survey and to allow them to provide comments or suggestions on question clarity and the overall format of the survey based on the electronic device they were using. These interviews revealed a formatting issue with the survey, as the survey's answer option for the "Strongly Agree" column was not showing on the screen for any of the questions unless participants scrolled over on their devices. One of the participants did not realize that this column was even there until completing over half of the survey. After completing all interviews, the researcher adjusted the format for the Qualtrics survey and previewed it for phone and laptop views to ensure that all answer-options were visible on the screen at one time.

Final Data Collection Procedures. During the Spring 2020 semester, the final survey, entitled "Students' Satisfaction with Interactions in Online Courses at Historically Black Colleges and Universities (HBCUs)," was distributed in order to collect data. It is important to

note that all data were collected before the COVID-19 Coronavirus Pandemic, which caused all colleges and universities to switch to online, remote teaching and learning (Hechinger & Lorin, 2020). This is important to note because this forceful switch to online education had a significant impact on and created another set of concerns specifically regarding HBCUs (Weissman, 2020). Prior to this point, many HBCUs were already facing challenges with implementing online education (e.g. Jones & Davenport, 2018), which may have been exacerbated by this sudden change, thus potentially impacting how students in classes later in the semester experienced online education.

In order to distribute the survey, the researcher sent a cover-letter email (see Appendix F) with a direct link to the study's final Qualtrics survey (see Appendix G), along with an attachment of the designed flyer with the quick response (QR) code for the survey (see Appendix H), to faculty and administrators at 11 HBCUs, out of which eight HBCUs responded and had students to participate in this voluntary response survey. The number of participants in the final study was N = 184. Enrollments numbers and geographical locations have been shielded for ethical considerations. The sample size for multiple regression analysis should be at least 10 times the number of independent variables in order for the analysis to yield valid results (Statistics Solutions, Sample Size Formula, 2020). Based on this calculation, the sample size for this study needed to be at least 80; therefore, the sample size assumption was met. The email included background information about the research project, the purpose of the survey, and a note indicating that the research project had been approved by the researcher's home institution's IRB as well as the HBCUs' IRBs. The email also indicated a deadline by which all responses were expected to be completed. The researcher conducted an Internet search for three of the schools to collect email addresses for instructors who were teaching online. This information was

provided on public course-lookup websites directly connected to the schools. Through personal contacts and contact information obtained through Internet searches, the researcher was able to connect with administrators and faculty at five of the remaining schools, who then shared the cover letter email and flyer with their faculty and colleagues. From there, faculty shared the direct survey link from the email or the flyer with their students by posting the information in their online course announcements. Some faculty also asked students in their traditional courses who were taking another course online to complete the survey as well. Also, some faculty disclosed that they would offer extra credit as an incentive for their students to complete the survey.

Participants - final survey. A Cronbach's alpha test was used to arrive at a measure of internal consistency for reliability for the final study, and an alpha of .7 or higher was used to be a measure of good reliability (Statistics Solutions, Cronbach's alpha, 2020). The learner-instructor interaction subscale consisted of six questions ($\alpha = .86$), the learner-learner interaction subscale consisted of five questions ($\alpha = .89$), the learner-content interaction subscale consisted of four questions ($\alpha = .90$), and the satisfaction subscale consisted of four questions ($\alpha = .90$).

Analysis Plan. Data analyses for all research questions were conducted using SPSS version 26. The reliability of the survey instrument was previously tested and determined to be good based on Chronbach's alpha, and all variables were 0.8 or higher, which exceeded the minimum acceptable alpha of .7 (Statistics Solutions, Cronbach's alpha, 2020). All independent variables were normally distributed with dichotomous variables used in order to meet the level of measurement assumption. Dummy variables were created for gender, age, classification, and number of online courses. Gender was categorized as male (1 = yes; 0 = no). Age was categorized as older than 22 (1 = yes; 0 = no). Classification was categorized as graduate (1 =

yes; 0 = no). The independent variable for the number of courses that students had previously taken was categorized as more than three online courses (1 = yes; 0 = no). Composite scores were created for each subscale (learner-instructor, learner-learner, learner-content) by adding the scores of the items for each subscale to make a total learner-instructor score, total learner-learner score, total learner-content score, and total satisfaction score.

Descriptive analyses were used to calculate basic information and scores for the variables gender, age, classification, if the course was required for participants' major, if the course was part of a fully online degree program, how many hours per week participants spent in their online courses, number of online courses participants took including the course selected for this study. Correlation analyses was used to explore the relationship between gender, age, classification, number of online courses, and the three types of interaction subscales (total learner-instructor, total learner-learner, total learner-content). Multiple regression analyses were determined to be the most appropriate testing model for the current study since the purpose of the study is to determine the best predictors of online course satisfaction by addressing the aforementioned research questions. Multiple regression analysis is a useful statistical tool in order to understand the relationship between and among variables (Rubinfeld, 2011), and this method was performed in order to answer all three research questions using three separate models to determine if there was a relationship between the dependent variable (Total Satisfaction or Total S) and independent variables.

The first regression model included correlations between the dependent variable (Total Satisfaction) and independent variables for gender, classification, and age. The second regression model included correlations between the dependent variable and independent variables for gender, classification, age, and number of online courses. The third regression model included

correlations between the dependent variable and independent variables for gender, classification, age, number of online courses, total learner-instructor, total learner-learner, and total learner-content.

   Assumptions for multiple regression analysis. As each research question was analyzed using multiple linear regression, there were certain assumptions that needed to be met in order for this test results to be considered reliable. These assumptions were described as follows:

   1.) Linear relationship between the dependent variables and independent variables — This assumption was tested with scatterplots to indicate a linear path (Osbourne & Waters, 2002; Dart, 2013).

   2.) No multicollinearity — Independent variables were not correlated with each other and are analyzed separately. This assumption was tested with Pearson Correlation analysis (correlation coefficients should all be smaller than .08) (Statistics Solutions, Assumptions of Multiple Linear Regression, 2020). Tolerance scores were also used to make sure that independent variables were not too highly correlated. The tolerance score measures the influence of one independent variable on all other independent variables and needed to be above .02, and variance inflation factor (VIF) needed be well below 10 for this assumption to be further met (The Open University, 2020)

   3.) No auto-correlation — This assumption uses the Durbin-Watson d statistic to test that the values of the residuals are independent, meaning that individual data points are independent of one another or uncorrelated; this value needed to be close to 2 in order to meet this assumption (The Open University 2020; Statistics Solutions, Assumptions of Multiple Linear Regression, 2020).

4.) Homoscedasticity — This assumption required the variance of error terms to similar across the values of independent variables, and this assumption was met by a scatterplot with residual plots that do not show signs of funneling (Osborne & Waters, 2002).

5.) Multivariate normality — This assumption required all variables to be normally distributed and was tested by looking at a P-P plot for each model; normality was determined by examining dots that were closer to the diagonal line as being closer to normal (Statistics Solutions, Assumptions of Multiple Linear Regression, 2020).

6.) No influential cases biasing the model — This assumption tested for any significant outliers that may have influenced the results of the analysis; using Cook's distance statistic, any value over 1 was indicative of a significant outlier (The Open University, 2020; Statistics Solutions, Checking for Influential Data Points, 2019; National Centre for Research Methods, 2011).

Limitations of the Study

The survey was designed to collect data on asynchronous online courses, and although this information was shared with HBCU faculty and administrators whom were asked to distribute the survey and included on the flyer for the study, the instructions on the survey did not clearly define asynchronous courses nor did it specify that only students taking asynchronous courses should participate. In this case, if a participant shared the link to the study with their peers without sharing the flyer, there was a chance that students who were taking synchronous or hybrid courses participated in the study as well. Additionally, the survey required self-reported data, which relied on accuracy, making it subject to misreporting (Rosen, Porter, & Rogers, 2017). Another limitation was that the survey targeted any online course at an HBCU, which

limited the impact of interpretation because it did not allow for analysis of online course satisfaction for or between specific programs.

The survey instrument itself had limitations because it left certain decisions for participants to make that could have impacted their responses. For instance, the instructions stated for students to base their responses on one online course that they were taking during the spring 2020 semester; their responses could have reflected an online course that they favored or one that they disliked, which could have impacted the results of the study. This led to another limitation in that the survey did not specify a program or department, which would have allowed for more focused feedback. Additionally, classification could have been disaggregated to allow for analyses of specific classifications (i.e. first-year, sophomore, junior, senior).

Summary

This study provided a view into how various factors impacted HBCU students' satisfaction in their online courses during the spring 2020 semester (before campus closures due to COVID-19) primarily based on demographics and course interactions. In an effort to understand if online courses were able to mimic similar positive experiences and interactions in online courses that HBCUs provide in their traditional courses, this study examined online course satisfaction as it relates to demographics (gender, age, and classification) and course interactions (learner-instructor, learner-learner, and learner-content) through a quantitative data analysis that employed descriptive statistics, correlation analysis, and regression analysis to determine if there was a relationship between variables.

Chapter Four: Analysis

Overview

In an effort to determine the best predictors in online course satisfaction for HBCU students, a quantitative study was conducted using multiple regression analysis. Chapter four provided detailed analysis of descriptive statistics, assumptions for regression analysis, three separate models of regression analyses, tables and figures of findings, description of findings, and an overall summary for the chapter.

Research Questions

The research questions that this study seeks to address are as follows:

RQ 1: Is there a relationship between HBCU students' satisfaction in online courses and the following demographics?

   a. Gender (male or female)

   b. Age (traditional 18-22 or non-traditional over 22)

   c. Classification (undergraduate or graduate)

RQ 2: Is there a relationship between HBCU students' satisfaction in online courses and the number of courses that students have previously taken?

RQ 3: Is there a relationship between HBCU students' satisfaction in online courses and the following course interactions?

   a. Learner-Instructor

   b. Learner-Learner

   c. Learner-Content

Reliability for Final Study

Before analyses were conducted, composite scores were created for each subscale (learner-instructor, learner-learner, learner-content) by adding together the scores of the items for each subscale. SPSS was then used to determine the final survey instrument's reliability using Cronbach's alpha for the online course interaction and satisfaction subscales, for which an alpha of .07 or more for each question was indicative of good reliability (Statistics Solutions, Cronbach's alpha, 2020). Validity was previously determined to be good based on a content validity test, which was described in chapter three. Table 4.1 displayed the survey instrument's reliability information for measures, including the reliability alpha for each of the subscales for course interaction and satisfaction and Table 4.2 displayed descriptive statistics for these subscales, including the average scores (*M*) rated by participants for the three types of course interaction and satisfaction.

Table 4.1

Instrument's reliability information for measures of interaction for Students' Satisfaction with Interactions in Online Courses at Historically Black Colleges and Universities (HBCUs) final survey

Subscales	Scale	Number of items	Validity	Reliability (Cronbach's alpha; α)
Learner-instructor interaction	5-Point Likert Scale	6	Good (CVR Survey)	0.868
Learner-learner interaction	5-Point Likert Scale	5	Good (CVR Survey)	0.893
Learner-content interaction	5-Point Likert Scale	4	Good (CVR Survey)	0.906
Satisfaction	5-Point Likert Scale	4	Good (CVR Survey)	0.907

Table 4.2

Descriptive information for each learner interaction scale.

Subscales	Number of items	M	SD	Reliability (Cronbach's alpha; α)
Learner-instructor interaction	6	26.54	7.31	0.868
Learner-learner interaction	5	21.58	6.30	0.893
Learner-content interaction	4	17.69	5.10	0.906
Satisfaction	4	18.14	5.11	0.907

Descriptive Analyses

Participants - final survey. The final "Students' Satisfaction with Interactions in Online Courses at Historically Black Colleges and Universities (HBCUs)" survey was conducted during the spring 2020 semester and included 184 respondents ($N = 184$), which exceeded the minimum number of participants ($N = 74$) needed to test the regression model with seven independent variables (Erdfelder, Faul, & Buchner, 1996). SPSS descriptive and frequency statistical analyses indicated that the majority of respondents were female at 71.7% (males 28.3%), traditional or between the ages of 18-22 at 73.4% (non-traditional or older than 22 years of age 26.1%), and undergraduate students at 94.6% (graduate students 5.4%).

One-way ANOVA was used to determine if satisfaction in online courses varied based on the HBCU students attended. There were no statistically significant differences in satisfaction based on the HBCU that students attended ($F(6,164) = 1.137, p = .343$).

Additionally, the majority of respondents indicated that the course they were using as the basis of the study was required for their major (82.6.3%), that the course was not a part of a

fully-online degree-program (65.8%), that they spent less than five hours studying in the course per week (56.7%), and that they had previously taken between 1-3 online courses including the current course (60.8%). Descriptive statistics for the final study's sample are displayed in Table 4.3.

Table 4.3

Descriptive statistics for Students' Satisfaction with Interactions in Online Courses at Historically Black Colleges and Universities (HBCUs) final survey

Characteristics	Frequency (n)	Percent (%)
Gender		
Male	52	28.3
Female	132	71.7
Age		
Traditional (18-22 years of age)	135	73.4
Non-Traditional (over 22 years of age)	49	26.1
Classification		
Undergraduate	174	94.6
Graduate	10	5.4
Is the online course that you are using as the basis for this study required for your major?		
Yes	152	82.6
No	32	17.4
Is the course that you are using as the basis for this study part of a fully online degree program?		
Yes	63	34.2
No	121	65.8

How many hours do you spend in your online course per week?

Less than 5 hours	101	56.7
6-10 hours	60	33.7
11-15 hours	8	33.7
16-20 hours	4	2.2
More than 20 hours	5	2.8

How many online courses have you taken, including your current course?

1-3 online courses	110	60.8
4-6 online courses	45	24.9
7-9 online courses	10	5.5
10 or more online courses	16	8.8

Before multiple regression analyses were conducted, the researcher created dummy variables for gender (male; 1 = yes , 0 = no), age (older than 22 years of age; 1 = yes; 0 = no), classification (graduate; 1 = yes; 0 = no), and number of online courses taken (more than three; 1 = yes; 0 = no) in order to run descriptive statistical analyses. Frequencies were run on these dummy variables and compared to the original frequencies for ages and number of online courses taken to determine consistency. All variables were consistent. The mean age of participants was 22.4 (SD = 6.293). Table 4.4 showed the original frequencies for gender, classification, and number of online courses taken. Table 4.5 displayed the frequencies for the dummy variables for male, age, and the number of online courses taken.

Table 4.4

Original frequencies and percentages for gender, classification, and number of online courses taken

Characteristics	Frequency (n)	Percent (%)
Gender		
Male	52	29.9
Female	122	70.1
Classification		
Undergraduate	174	94.6
Graduate	10	5.4
Number of online courses		
1-3 online courses	107	62.6
4-6 online courses	40	23.4
7-9 online courses	8	4.7
10 or more online courses	16	9.4

Table 4.5

Frequencies and percentages for dummy variables for gender, age, and number of online courses taken

Measure	Frequency (n)	Percent (%)
Male		
Yes	52	29.9
No	122	70.10
Older than 22 years of age		
Yes	40	23.00
No	134	77.00
Graduate Student		
Yes	10	5.4
No	174	94.6
More than 3 online courses		
Yes	64	37.4
No	107	62.6

Correlation Analysis

The results of the Pearson correlation indicated that there were significant and positive correlations between satisfaction and learner-instructor interactions ($r = .779$, $p < .01$), learner-learner interactions ($r = .632$, $p < .01$), and learner-content interactions ($r = .797$, $p < .01$). Table 4.6 displayed the relationships among males, participants over 22 years of age, graduate students, participants who had taken more than three online courses, and the three types of learner interactions (learner-instructor, learner-learner, and learner-content).

Table 4.6

Correlations between satisfaction and independent dummy variables (n = 168)

	Males	Over 22 years of age	Graduate student	More than three online courses	Learner-instructor	Learner-learner	Learner-content	Satisfaction
Males	—	-.018	-.144	-.033	-.050	-.020	-.006	.052
Over 22 years of age		—	.323	.324	.099	.059	-.007	-.078
Graduate student			—	.127	-.048	-.042	.022	-.059
More than three online courses				—	.157	.121	.141	-.081
Learner-instructor					—	.601	.701	.779*
Learner-learner						—	.616	.632*
Learner-content							—	.797*
Satisfaction								—

*$p < .05$ (2-tailed).

Regression Analyses

Three regression analyses were conducted using three different models in order to determine best predictors of HBCU students' online course satisfaction based on the independent variables. Before running multiple regression analysis, the assumptions for this type of analysis were tested.

Assumptions. Scatterpolots demonstrated that there was a linear relationship between the three learner interaction variables (learner-instructor, learner-learner, learner-content) and the dependent variable (satisfaction), which met the assumption for a linear relationship between the dependent variable and dependent variable (Osbourne & Waters, 2002; Dart, 2013). Dummy variables were already considered linear and did not need to meet linearity assumption (Darlington & Hayes, 2017). Analysis of collinearity statistics showed that this assumption was met for all models, as variance inflation factor (VIF) scores were well below 10 and tolerance scores were above 0.2 (see Table 4.7). Therefore, all models met the assumption of no multicollinearity (The Open University, 2020). The Durbin-Watson statistics showed that the assumption of no auto-correlation was met for all three models, as the obtained value was close to 2 (see Table 4.8) (The Open University 2020; Statistics Solutions, Assumptions of Multiple Linear Regression, 2020). The plot of standardized residuals versus standardized predicted values did not show any obvious signs of funneling, which suggested that the assumption of homoscedasticity was met (Osborne & Waters, 2002). The P-P plot for Model 1 and Model 2 suggested that the assumption of normality of the residuals may have been violated, although there did not appear to be any extreme deviations; however, the P-P plot for Model 3 (Figure 4.1) suggested that the assumption of normality of the residuals were met (Statistics Solutions, Assumptions of Multiple Linear Regression, 2020). Lastly, Cook's distance values were all under 1, which met the assumption of no influential cases biasing the model since values over 1 would have indicated outliers (The Open University, 2020; Statistics Solutions, Checking for Influential Data Points, 2019; National Centre for Research Methods, 2011).

Model constructions. Model 1 included satisfaction as the dependent variable and gender, age, and classification as the independent variables. Model 2 included satisfaction as the

dependent variable and gender, age, classification, and number of online courses taken as dependent variables. Model 3 included satisfaction as the dependent variable and gender, age, classification, number of online courses they had taken, learner-instructor interactions, learner-learner interactions, and learner-content interactions as dependent variables.

Table 4.7

Variance inflation factor (VIF) and tolerance values for analysis of collinearity

Variable	Model 1	Model 2	Model 3
Male	1.022 (.979)	1.022 (.978)	1.030 (.971)
Over 22 years of age	1.118 (.894)	1.231 (.812)	1.273 (.785)
Graduate student	1.141 (.876)	1.141 (.876)	1.175 (.851)
More than three online courses	—	1.120 (.893)	1.146 (.872)
Learner-instructor	—	—	2.246 (.445)
Learner-learner	—	—	1.783 (.561)
Learner-content	—	—	2.317 (.432)

Note. Tolerance values are indicated in parentheses beneath the VIF values

Table 4.8

The variance in satisfaction explained by variables in all models

Model	R	R_2	Adj. R_2	SE of the estimate	Durbin-Watson
1	.098	.010	-.008	5.138	2.267
2	.150	.023	-.001	5.144	2.247
3	.872	.761	.750	2.577	2.082

Figure 4.1

P-P plot for Model 3 to show that multivariate normality was met; the values of the residuals were normally distributed
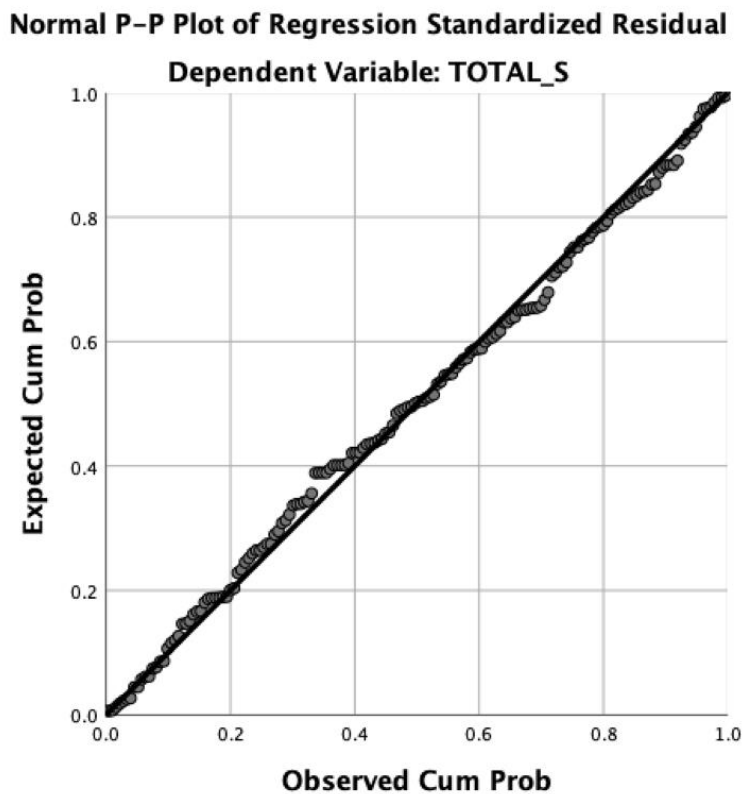
Results

For Model 1, a significant regression equation was not found ($F(3,167)) = .535$, p = .659), with an R^2 of .01, meaning that only 1.0% of the variance of satisfaction was explained by gender, age, and classification. Participants' predicted satisfaction was equal to 18.236 – .756 (over 22 years of age) - .675 (graduate) + .570 (male), where over 22 years of age is coded as 1 = yes, 0 = no, graduate was coded as 1 = yes, 0 = no, and male was coded as 1 = yes, 0 = no. In this model, gender, age, and classification were not significant predictors of HBCU students' satisfaction in online courses.

Model 2 also showed that a significant regression equation was not found ($F(4,164)) = .945$, $p = .439$), with an R^2 of .023, meaning that only 2.3% of the variance of satisfaction were explained by the variables included in this model. Participants' predicted satisfaction was equal to 17.879 – 1.219 (over 22 years of age) - .748 (graduate) + .569 (male) + 1.262 (more than three courses), where over 22 years of age is coded as 1 = yes, 0 = no, graduate was coded as 1 = yes, 0 = no, male was coded as 1 = yes, 0 = no and more than three courses is coded as 1 = yes, 0 = no. In this model, gender, age, classification, and number of courses were not significant predictors of HBCU students' satisfaction in online courses.

Model 3 revealed that a significant regression equation was found ($F(7,160)) = 72.618$, $p < .05$), with an R^2 of .761, meaning that 76% of the variance of satisfaction were explained by the variables included in this model. Participants' predicted satisfaction was equal to .484 – 1.375 (over 22 years of age) - .214 (more than three courses) + .899 (Male) + .243 (Graduate) + .303 (learner-instructor) + .103 (Total learner-learner) + .427 (Total learner-content), where over 22 years of age is coded as 1 = yes, 0 = no, more than three courses is coded as 1 = yes, 0 = no, male was coded as 1 = yes, 0 = no, graduate was coded as 1 = yes, 0 = no, and learner-instructor, learner-learner, and learner-content were measured continuously. Participants' satisfaction

increased based on learner-instructor interaction ($B = .303$, $p < .05$) and learner-content

interaction ($B = .427$, $p < .05$). Participants' age was close to being a predictor of satisfaction, as

results indicated that participants' satisfaction decreased ($B = -1.375$, $p = .007$) if they were over

22 years of age based on the variables included in this model. The variance in satisfaction

explained by these demographic predictor variables for all models were explained in Table 4.8,

and the results of all multiple regression models were shown in Table 4.9.

Table 4.9

Regression results for Models 1, 2, and 3

Independent Variables	Model 1		Model 2		Model 3	
	B (SE B)	p	B (SE B)	p	B (SE B)	p
(Constant)	18.236 (.524)	.000	17.879 (.590)	.000	.484 (.850)	.569
Male	.570 (.896)	.526	.569 (.905)	.531	.899 (.456)	.050
Over 22 years of age	-.756 (.931)	.418	-1.219 (.980)	.215	-1.375 (.500)	.007*
Graduate student	-.675 (1.880)	.720	-.748 (1.883)	.692	.243 (.957)	.800
More than three online courses			1.262 (.854)	.141	-.214 (.434)	.622
Learner-instructor					.303 (.041)	.000*
Learner-learner					.103 (.042)	.015*
Learner-content					.427 (.060)	.000*
n	171		169		168	
R2	.010		.023		.761	

Note. Dependent variable: satisfaction.
*p is significant at $< .05$.

Conducting these three models allowed for the R_2 to be compared for predictive power. The first model which included independent variables for gender, age, and classification only had 1% predictive power. The second model added the independent variable for number of online courses, which slightly increased predictive power to 2.3%. Finally, the third model added the independent variables for learner-instructor, learner-learner, and learner-content interactions, which significantly increased the predictive power to 76%. Therefore, the combination of all independent variables in this study led to a stronger predictive power of the results online course satisfaction at HBCUs that may be applied to the broader population beyond the sample described in this study. The correlation analysis of all variables revealed significant correlations between satisfaction and the three learner interaction scales (see Table 4.6). The regression analyses provided more information on the significance of these variables. The results of the multiple regression analyses as they pertained to each research question are explained below.

The first research question sought to determine if there was a significant relationship between satisfaction and gender, age, or classification. Model 3 revealed that there was not a significant relationship between gender and classification and satisfaction; however, age was a predictor of satisfaction based on its significance value ($p = .007$), with $p < .05$ being the significance value. Also, the beta value for age in model three ($B = -1.375$) indicated that students who were over the age of 22 were less satisfied in online courses than students between 18-22 years of age. Model 1 and Model 2 revealed that there was not a significant relationship between gender, age, and classification in terms of online course satisfaction.

The second research question was designed to determine if there was a significant relationship between satisfaction and the number of online courses students had previously

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taken. Model 2 and Model 3 revealed that there were not significant relationships between the number of online courses taken and satisfaction in online courses.

The third research question was designed to determine if there was a significant relationship between satisfaction and learner-instructor interaction, learner-learner interaction, and learner-content interaction. Model 3 revealed that there was a significant relationship between each of the three interaction subscales: learner-instructor ($p < .05$), learner-learner ($p < .05$), learner-content ($p < .05$), and satisfaction. The beta value for learner-content in model three ($B = .427$) indicated that this was the highest predictor of online course satisfaction, followed by learner-instructor ($B = .303$) and learner-learner ($B = .103$).

Summary

In order to determine the best predictors in online course satisfaction at HBCU's the researcher conducted correlation analysis and regression analyses, with satisfaction being the outcome variable and gender, age, classification, number of online courses, learner-instructor interaction, learner-learner interaction, and learner-content interaction as predictor variables. Three models were conducted in order to determine the predictive power of the variables. Model 1 focused on demographics (gender, age, classification), Model 2 added the number of online courses to the previous variables, and Model 3 added the interaction subscales to the previous variables. Model 3 provided the strongest predictive power (76%). Additionally, the results revealed that age, learner-instructor interaction, learner-learner interaction, and learner-content interaction were predictors in course satisfaction at HBCUs. Gender was approaching significance as well.

Chapter Five: Discussion and Implications

Overview

The purpose of the current study was to determine the best predictors in HBCU students' satisfaction in online courses. Previous research on online course satisfaction related to course interactions at HBCUs was scarce. This chapter will discuss the research questions and hypotheses as they relate to the existing literature and address how findings extend the existing literature. The chapter will also address the discussion, implications for practice, recommendations for future research, and concluding remarks. During the spring 2020 semester, the final survey to collect data for the study was distributed and analyzed. Regression and correlation analyses were used to analyze the data in order to address the research questions.

Research Questions

The research questions that this study sought to address were as follows:

RQ 1: Is there a relationship between HBCU students' satisfaction in online courses and the following demographics?

   a. Gender

   b. Age

   c. Classification

RQ 2: Is there a relationship between HBCU students' satisfaction in online courses and the number of courses that students have previously taken?

RQ 3: Is there a relationship between HBCU students' satisfaction in online courses and the following course interactions?

   a. Learner-Instructor

   b. Learner-Learner

   c. Learner-Content

Discussion

Overall, the regression analysis confirmed that there was a positive correlation between satisfaction and online course interactions at HBCUs; however, the remaining independent variables did not indicate significantly significant correlations. Each research question was discussed below based on the current study. Also, comparisons between the results of the current study and the literature review were discussed.

Research Question 1: Is there a relationship between HBCU students' satisfaction in online courses and the following demographics? (gender, age, classification)

H_0 = There is not a significant relationship between HBCU students' satisfaction in online courses based on gender, age, and classification

H_1 = There is a significant relationship between HBCU students' satisfaction in online courses based on gender, age, and classification.

Based on the results of the multiple regression analysis for the current study, the researcher failed to reject the null hypothesis for gender and classification in research question one. The null hypothesis for age, however, was rejected. The results showed that there were no statistically significant differences in satisfaction based on gender and classification; however, there was a negative correlation between age and satisfaction, which indicated that students who were over 22 years of age were less satisfied that those who were 18-22 years of age. This partially resembled Cole, Shelley, and Swartz's (2014) study, which concluded that gender, age and classification did not significantly impact students' satisfaction in online courses, although there was a difference in the findings with age compared to the current study. Although gender was not statistically significant based on its significance value in the current study, it was close enough to indicate that more research should be done regarding gender, especially since prior research has indicated there was a correlation between gender and student engagement, with males being more socially engaged than females (Chen, Ingram, & Davis, 2014)

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Research Question 2: Is there a relationship between HBCU students' satisfaction in online courses and the number of courses that students had previously taken?

H_0 = There is not a significant relationship between HBCU students' satisfaction in online courses based on the number of online courses that students had previously taken.

H_1 = There is a significant relationship between HBCU students' satisfaction in online courses based on the number of online courses that students had previously taken.

Based on the results of the multiple regression analysis in the current study, the researcher failed to reject the null hypothesis for research question two. The results of the current study revealed that there was not a significant difference in online course satisfaction based on the number of online courses students had previously taken. This finding was inconsistent with Barnes (2017), who found that students' satisfaction in online courses increased with the number of online courses they took. One possibility for the insignificant finding could be that students in the current study were more technologically advanced or were able to learn how to navigate online courses — that the online course was simply a mode to complete courses but not what they relied on for overall satisfaction. The findings of the current study were also inconsistent with Rodriguez, Ooms, and Montañez (2008), whose study revealed that satisfaction and the number of online courses were negatively correlated and that their perceptions were based on the quality of the course. The contradictory findings of the current study to these results indicated that more research should be conducted on the impact the number of online courses has on student satisfaction because satisfaction with previous online courses could set the prevailing standard for how successful online courses are in the future (Rodriguez, Ooms, and Montañez, 2008).

Research Question 3: Is there a relationship between HBCU students' satisfaction in online courses and the following course interactions? (learner-instructor, learner-learner, learner-content)

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H_0 = There is not a significant relationship between HBCU students' satisfaction in online courses based on course interactions (learner-instructor, learner-learner, learner-content).

H_1 = There is a significant relationship between HBCU students' satisfaction in online courses based on course interactions (learner-instructor, learner-learner, learner-content).

Based on the results of the multiple regression analysis, the researcher rejected the null hypothesis for each of the interaction subscales in research question three. This study did in fact reveal significant relationships between each of the learner interaction scales and satisfaction, all of which showed positive correlations. Learner-content was the highest predictor of course satisfaction, followed by learner-instructor and learner-learner. These results were directly in line with the results of Kuo, Walker, Schroder, and Belland (2014), whose study found the same pattern of predictive power among the learner interaction scales. One reason why learner-content was the highest predictor of online course satisfaction could have been that students spend most of their time interacting with the content in an online course (Kuo, Walker, Schroder, and Belland, 2014). It could have also been due to students having more control over how often they interacted with online course content as opposed to interactions with instructors and other learners, for which they would have to wait for a response.

Additionally, the findings of the current study supported previous findings related to learner-instructor interactions. For instance, the concept of "othermothering," was shown to be a contributing factor in HBCU students' personal growth and development (Flowers, Scott, Riley, & Palmer, 2015). Salvo, Shelton, and Welch's (2019) findings, which found that the lack of interaction with instructors was a prominent challenge that online African American undergraduate students faced, were supported by the current study as well because it showed that

there was in fact a significant relationship between learner-instructor interactions and online course satisfaction.

Although it had the least predictive power in the current study, Learner-learner interaction was still a significant predictor in online course satisfaction at HBCUs. This finding was in line with the findings of Bickle and Rucker (2018); although, their findings did not clearly indicate the extent to which learner-learner interactions were significant, and there was also a technological tool incorporated into their study called VoiceThread, which allowed learners to more closely interact with other learners and their instructors through video recordings that were shared in their online courses.

More generally, the analysis confirmed that interaction with faculty and other learners had a positive impact on African American students (Chen, Ingram, & Davis, 2014; Johnson, 2019; Dunston, 2016; Harvey-Smith, n.d.) and that an environment that reflected Black culture was a determining factor in choosing to attend HBCUs (Johnson, 2019). Overall, as Buzzetto-More (2008) found, students have tended to appreciate the personable aspects that face-to-face courses offer. If these same personable approaches were more deeply integrated into online courses at HBCUs, there would likely be similar positive experiences, leading to greater satisfaction and, ideally, greater success.

The results of this study extended the literature because it supported the concept of the HBCU experience in general in that there was a shared positive experience on the traditional campus. Based on the ANOVA analysis, the level of satisfaction that students had between the different HBCUs involved did not show any differences. This was an important finding because it supported the idea that there was a unique shared HBCU experience regardless if the courses were traditional or online.

Implications for Practice

The results of this study provided data that may be used to build or improve online courses at HBCUs, especially since all HBCUs were forced to transition to remote learning due to the COVID-19 Coronavirus pandemic during the late spring 2020 semester (Hechinger & Lorin, 2020). However, one notable outcome of the study was that there were no significant differences in satisfaction based on which HBCU participants attended, which corroborated previous qualitative research indicated that HBCU students had positive and nurturing experiences in their traditional classes and interactions on campus overall. The results of this study may be used to focus on how to improve and promote the types of interactions that learners have with instructors, other learners, and content in online courses. For instance, although learner-learner interactions had the least amount of power in terms of predicting online course satisfaction, it was still positively correlated with satisfaction. With the inclusion of interactive technology, as suggested by Bickle and Rucker (2018), learner-learner interaction could possibly become a more powerful predictor of online course satisfaction, and potentially online course success.

Additionally, this study's data could be used for non-HBCUs to explore approaches that may better engage African American students, who have traditionally felt disconnected from faculty and peers at PWIs, for instance (i.e. Winkle-Wagner, & McCoy, 2018).

Recommendations for Future Research

This study left room for several future research recommendations. These recommendations were made based on the literature review and data from the current study. Topics for future research related to online course satisfaction included graduate students, degree

programs, age, online course success, interactive technology, and African American students at PWIs.

Graduate students —A larger sample of graduate students would provide greater power for data analyses in determining significant differences in online course satisfaction between undergraduate and graduate students.

Degree programs — Specific degree programs or courses would be one way to determine if there were differences in online course satisfaction based on the program or type of course that students were taking. This would reveal if there were certain programs or courses that relied more heavily on human interactions in order for students to succeed.

Age — Since age was a significant predictor (showing a negative correlation) of online course satisfaction, this information may be used to further research to determine reasons why students over the age of 22, or non-traditional students, were less satisfied with online courses. This would provide an opportunity to identify the needs of non-traditional students so that schools may explore ways to best meet their needs in the online course format.

Online course success — A next step to this study would also be to determine if course satisfaction was correlated with course success or course grades. As Kim and Conrad (2006) suggested, the human factor and faculty engagement at HBCUs were influential factors in students being successful. Additionally, studies have shown that online course satisfaction was linked to retention (i.e. Dziuban, Moskal, Thompson, Kramer, DeCantis, & Hermsdorfer, 2015). This would be a highly relevant extension of research because it would show if more emphasis would need to be placed on human interactions in online courses in order to improve or increase retention and graduation rates.

Interactive technology — One factor that has contributed to learner-learner satisfaction in online courses was interactive technology (Bickle and Rucker, 2018). This would create a couple of research opportunities to explore the impact of interactive technology in online courses at HBCUs on satisfaction and age. This could also be extended to compare the same courses, with some that used interactive technology and some that did not use interactive technology, as this would allow for a side-by-side comparison.

PWIs — Historically, the majority of students served at HBCUs have been African American (New America, 2015). However, since African American students also attend non-HBCUs, it would be interesting to research if the results of this study were consistent with African American students taking online courses at PWIs, especially since prior research has reported African American students as feeling isolated at PWIs (i.e. Winkle-Wagner, & McCoy, 2018).

Conclusion

This study was very valuable and provided insights into online learning at HBCUs. The primary purpose of this study was to explore the best predictors in online course satisfaction at HBCUs. The independent variables included gender, age, classification, number of online courses taken, learner-instructor interactions, learner-learner interactions, and learner-content interactions. By using SPSS to conduct correlation and multiple regression analyses, the researcher sought to determine if there were any significant correlations between satisfaction and any of the independent variables. These results have helped to identify areas that needed to be more heavily emphasized in order to improve online course satisfaction at HBCUs, which have traditionally been resistant to online courses and programs before the COVID-19 pandemic. This

study was exploratory and non-experimental in nature due to the lack of prior research on online course satisfaction at HBCUs as it related to the aforementioned independent variables.

Overall, based on multiple regression analyses, the results of the study supported the third hypothesis for this study, showing positive correlations between online course satisfaction and learner-instructor, learner-learner, and learner-content interactions. The results also showed support for the age demographic in the first hypothesis; although, a negative correlation was observed between online course satisfaction and age. This study has provided results that have been consistent with prior research on online course satisfaction at non-HBCUs, and thus has provided further reliability to the study as well as another branch from which research regarding online education at HBCUs may continue to grow.

The most unique aspect of this study was that data collection was completed just two days before all colleges and universities transitioned to online courses because of COVID-19. In-person interaction was suddenly lost, creating a potential opportunity for a longitudinal study over next year while pandemic plays out. Due to the pandemic, the sample size for this type of study has increased, generating opportunities to reassess satisfaction based on current circumstances. The insight that was gained from this study may hopefully be used to further assist HBCUs, as well as other institutions, as they adjust to the conditions that COVID-19 has created for courses in higher education.

Appendix A

List of 101 Historically Black Colleges and Universities (HBCUs) as of Spring 2020

HBCU Name	State
Alabama A&M University	AL
Alabama State University	AL
Bishop State Community College	AL
Gadsden State Community College	AL
H Councill Trenholm State Technical College	AL
J F Drake State Community and Technical College	AL
Lawson State Community College	AL
Miles College	AL
Oakwood University	AL
Selma University	AL
Shelton State Community College	AL
Stillman College	AL
Talladega College	AL
Tuskegee University	AL
Arkansas Baptist College	AR
Philander Smith College	AR
Shorter College	AR
University of Arkansas at Pine Bluff	AR
Delaware State University	DE
Howard University	DC
University of the District of Columbia	DC
Bethune-Cookman University	FL
Edward Waters College	FL
Florida A&M University	FL
Florida Memorial University	FL
Albany State University	GA
Clark Atlanta University	GA
Fort Valley State University	GA
Interdenominational Theological Center	GA
Morehouse College	GA
Morehouse School of Medicine	GA
Paine College	GA
Savannah State University	GA
Spelman College	GA
Kentucky State University	KY

Simmons College of Kentucky	KY
Dillard University	LA
Grambling State University	LA
Southern University and A&M College	LA
Southern University at New Orleans	LA
Southern University at Shreveport	LA
Xavier University of Louisiana	LA
Bowie State University	MD
Coppin State University	MD
Morgan State University	MD
University of Maryland, Eastern Shore	MD
Alcorn State University	MS
Coahoma Community College	MS
Hinds Community College, Utica Campus	MS
Jackson State University	MS
Mississippi Valley State University	MS
Rust College	MS
Tougaloo College	MS
Harris-Stowe State University	MO
Lincoln University	MO
Bennett College	NC
Elizabeth City State University	NC
Fayetteville State University	NC
Johnson C Smith University	NC
Livingstone College	NC
North Carolina A&T State University	NC
North Carolina Central University	NC
Saint Augustine's University	NC
Shaw University	NC
Winston-Salem State University	NC
Central State University	OH
Wilberforce University	OH
Langston University	OK
Cheyney University of Pennsylvania	PA
Lincoln University	PA
Allen University	SC
Benedict College	SC
Claflin University	SC
Clinton College	SC
Denmark Technical College	SC

Morris College	SC
South Carolina State University	SC
Voorhees College	SC
American Baptist College	TN
Fisk University	TN
Lane College	TN
LeMoyne-Owen College	TN
Meharry Medical College	TN
Tennessee State University	TN
Huston-Tillotson University	TX
Jarvis Christian College	TX
Paul Quinn College	TX
Prairie View A&M University	TX
Saint Philip's College	TX
Southwestern Christian College	TX
Texas College	TX
Texas Southern University	TX
Wiley College	TX
Hampton University	VA
Norfolk State University	VA
Virginia State University	VA
Virginia Union University	VA
Virginia University of Lynchburg	VA
Bluefield State College	WV
West Virginia State University	WV
University of the Virgin Islands	VI

Appendix B

Content Validity Test Questions

Question #	Demographic Questions
1	Gender -Male -Female -Other
2	Age -[Enter age]
3	What is your classification? - Undergraduate Level - Graduate Level
4***	How many hours do you spend in your online course per week? - less than 5 hours - 6-10 hours - 11-15 hours - 16-20 hours -Above 20 hours
5	How many online course have you taken, including your current course? - 1-3 - 4-6 - 7-9 - 10 +
	Learner-Instructor Questions
6**	I had numerous interactions with the instructor in this course during this semester.
7**	I asked the instructor my questions through different electronic means such as email, discussion boards, instant messaging tools, etc.
8**	The instructor regularly posted some questions for students to discuss on the discussion board.
9**	The instructor replied to my questions in a timely manner.
10	I replied to messages from the instructor.
11	I received enough feedback from my instructor when I needed it.
	Learner-Learner Questions
12**	Overall, I had numerous interactions related to the course content with fellow students.
13**	I got lots of feedback from my classmates
14	I communicated with my classmates about the course content through different electronic means such as email, discussion boards, instant messaging tools, etc.
15*	I answered questions of my classmates through different electronic means such as email, discussion boards, instant messaging tools, etc.
16**	I shared my thoughts and ideas about the lectures and its application with other students during this class
17*	I comment on other students' thoughts and ideas.
18**	Group activities during class gave me chances to interact with my classmates.
19*	Class projects led to interactions with my classmates.
	Learner-Content Questions
20	Online course materials helped me to better understand the course content.
21	Online course materials stimulated my interest for this course.
22**	Online course materials helped relate my personal experience to new concepts or new knowledge.
23	It was easy for me to access the online course materials.
	Satisfaction Questions
24*	Overall, I am satisfied with this online course.

25**	This course contributed to my educational development.
26*	This course contributed to my professional development.
27	I am satisfied with the level of interaction that I had in this online course with my instructor.
28	I am satisfied with the level of interaction that I had in this online course with my classmates.
29	I am satisfied with the level of interaction that I had in this online course with the course content
30*	In the future, I would be willing to take a fully online course again.

* Omitted from final survey — see Table 3.1

** Revised for final survey — see Table 3.2

*** Included in final survey despite CVR and based on suggested revisions — see Table 3.3

Appendix C

Solicitation Email for the "Students' Satisfaction with Interactions in Online Courses at

Historically Black Colleges and Universities (HBCUs)" Survey

Dear IRB Committee:

Good afternoon! My name is Sherrie Gilbert, and I am a Doctoral Candidate in the Department of Educational Foundations, Leadership, and Technology at Auburn University. I am also a proud HBCU alumna. While research shows that HBCU students have positive interactions with faculty and students on campus, it is unclear how these interactions manifest for online students. My dissertation will focus on the satisfaction levels of HBCU students with their online course interactions (involving their instructors, peers, and course content).

Currently, I am looking into outlets through which I may distribute my pilot survey this fall and final survey next spring. A permission letter is required from each outlet before I can submit my IRB. May I have your permission to conduct research at your school?

If so, I have prepared the text for the permission letter for your convenience and ask that you please do the following:

- copy and paste the contents in the attached document onto the **letterhead** for your college/university
- sign the document
- scan and email the signed permission letter to my email sag0004@auburn.edu

Feel free to contact me if you have any questions. I look forward to your response.

Thank you,
Sherrie

_____
Sherrie Gilbert
Doctoral Candidate
Adult Education
Department of Educational Foundations, Leadership, and Technology
Auburn University
sag0004@auburn.edu

Appendix D

Template for Permission Letter to Conduct Research at HBCUs

Dear IRB Review Committee:

Please note that Ms. Sherrie Gilbert, Auburn University Graduate Student, has the permission of **{name of HBCU}** to conduct research at our college for her study, "Students' Satisfaction with Interactions in Online Courses at Historically Black Colleges and Universities (HBCUs)"

The purpose of the study is to determine the satisfaction levels that online students have with their interactions with instructors, peers, and course content in online courses at HBCUs. Only students who are 18 years of age and up, or the legal age of consent, are eligible to participate.

Ms. Gilbert may contact faculty members in order to email details regarding the study and the survey link to online faculty in order to recruit online students and collect data for both the pilot study and the final study. Her research activities will be finished by August 30, 2020.

Ms. Gilbert has also agreed to provide to my office a copy of the Auburn University IRB-approved, stamped consent document before she recruits participants on campus, and will also provide a copy of any aggregate results. Any data collected by Ms. Gilbert will be kept confidential and will be stored electronically on a secured device.

If there are any questions, please contact my office.

Signed,

Appendix E

Auburn University IRB Approval Email

Gilbert, Approval, Exempt Protocol #19-421 EX 1909, "Students' Satisfaction with Interactions in Online Courses at Historically Black Colleges and Universities (HBCUs)"

IRB Administration
Tue 10/1/2019 11:51 AM
To: Sherrie Gilbert <sag0004@auburn.edu>
Cc: Maria Witte <wittemm@auburn.edu>; Sheri Downer <downesh@auburn.edu>

🔋 2 attachments (4 MB)
Investigators Responsibilities rev 1-2011.docx; Gilbert 19-421 EX 1909 Revisions 1.pdf;

Use IRBsubmit@auburn.edu for protocol related submissions and IRBadmin@auburn.edu for questions and information. The IRB only accepts forms posted at https://cws.auburn.edu/vpr/compliance/humansubjects/?Forms and submitted electronically.

Dear Sherrie,

Your protocol titled, "Students' Satisfaction with Interactions in Online Courses at Historically Black Colleges and Universities (HBCUs)" was approved by the AU IRB as "Exempt" under federal regulation 45 CFR 46.101(b)(1, 2(i)).

Official notice:
This e-mail serves as notice the protocol has been approved. A formal approval letter will not be sent unless you notify us that you need one. By accepting this approval, you also accept your responsibilities associated with this approval. Details of your responsibilities are attached. Please print and retain.

Information Letter:
Attached is a copy of the approved, IRB- stamped information letter and study documents.

Electronic Information Letter:
A copy of your approved protocol is attached. However you still need *to add the following IRB approval information to your information letter(s):* **"The Auburn University Institutional Review Board has approved this document for use from September 30, 2019 to ------- Protocol #19-421 EX 1909"**

You must use the updated document(s) to consent participants. *Please forward the actual electronic letter(s) with a live link so that we may print a final copy for our files.*

Expiration – Approval for three year period:
Continuing review of this Exempt protocol is not required; however, all modification/revisions to the approved protocol must be reviewed and approved by the IRB.

When you have completed all research activities, have no plans to collect additional data and have destroyed all identifiable information as approved by the IRB, notify Office of the IRB via e-mail. A final report is NOT required for Exempt protocols.

If you have any questions, contact our office.

Appendix F

Cover Letter Email for Final Study

Dear _____,

I would like to invite you to participate in my research study, "Students' Satisfaction with Interactions in Online Courses at Historically Black Colleges and Universities (HBCUs)," which seeks to understand the interactions of students taking online courses at HBCUs. Participation in this study is voluntary. This research project is being conducted as part of my graduate studies, and will be published in the form of a dissertation.

Eligibility: Survey participants must be 18 years of age and up, a current HBCU student, and currently taking an online course in order to voluntarily participate in this study.

Participants will be asked to identify one online business course in which they are currently enrolled as the basis for survey responses. They will then complete an online Qualtrics survey, which should take approximately 5-7 minutes.

Are there any risks or discomfort? The risks associated with this study are minimal. Data will be anonymous, and participants' identification will be unknown to the researcher. Participants in this study will not incur any costs as a result of their participation. Participants who volunteer to complete the survey may withdraw from the study at any time by closing out of the Qualtrics survey site.

Compensation Participants who complete the survey may enter into a drawing for one of five $25 Amazon gift cards.

If you have any questions about this study, please contact Sherrie Gilbert at sag0004@auburn.edu or (706) 575-3437, or you may contact my advisor, Dr. Maria Witte, at wittemm@auburn.edu. If you have questions about your rights as a research participant, you may contact the Auburn University Office of Research Compliance or the Institutional Review Board at IRBadmin@auburn.edu or (334) 844-5966.

The link to the survey may be accessed through the following link:

https://auburn.qualtrics.com/jfe/form/SV_3ecF6kypFJRAn4N

Thank you for your consideration,

Sherrie Gilbert
Doctoral Candidate
College of Education
Auburn University
sag0004@auburn.edu

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Appendix G

Survey Questions for "Students' Satisfaction with Interactions in Online Courses at Historically

Black Colleges and Universities (HBCUs)" Survey

Demographics
Instructions: This category includes Demographic survey items. Throughout this survey, focus on only one online course that you are currently taking. Please select the appropriate response for each item.

Q1. Please select the HBCU that you currently attend.

Q2. Please select your gender.

☐ Male

☐ Female

☐ Other (Please State)

Q3. Please enter your age.

Q4. What is your classification?

☐ Undergraduate Level

☐ Graduate Level

Q5. Is the online course that you are using as the basis for this study required for your major?

○ Yes

○ No

Q6. Is the course that you are using as the basis for this study part of a fully online degree program?

○ Yes

○ No

Q7. How many hours do you spend in your online course per week?

☐ Less than 5 hours

☐ 6-10 hours

☐ 11-15 hours

☐ 16-20 hours

☐ More than 20 hours

Q8. How many online course have you taken, including your current course?

☐ 1-3 online courses

☐ 4-6 online courses

☐ 7-9 online courses

☐ 10 or more online courses

Learner-Instructor

Instructions: This category includes Learner-Instructor survey items. Using the same online course that you are currently taking as your basis, rate your responses for the following items on the scale below ranging from "Strongly Disagree" to Strongly Agree."

		Learner-Instructor Interactions					
		Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
Q9.	I interacted with my instructor online at least once per week.	○	○	○	○	○	○
Q10.	I communicated with my online instructor through electronic means (such as email, comments, discussion boards, etc.)	○	○	○	○	○	○
Q11.	The instructor posted discussion questions for students to discuss at least once a week.	○	○	○	○	○	○
Q12.	The instructor replied to my emails/messages/online communication in within 24-48 hours of me sending the message (always, sometimes, never).	○	○	○	○	○	○
Q13.	I replied to messages from the instructor.	○	○	○	○	○	○
Q14.	I received enough feedback from my instructor when I needed it.	○	○	○	○	○	○

Learner-Learner

This category includes Learner-Learner survey items. Using the same online course that you are currently taking as your basis, rate your responses for the following items on the scale below ranging from "Strongly Disagree" to Strongly Agree."

		Learner-Learner Interactions					
		Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
Q15.	I had meaningful interactions with my classmates online regarding course content.	○	○	○	○	○	○
Q16.	I frequently received feedback regarding course content from my classmates through peer reviews or discussions.	○	○	○	○	○	○
Q17.	I communicated with my classmates about the course content through different electronic means such as email, discussion boards, instant messaging tools, etc.	○	○	○	○	○	○
Q18.	I shared my thoughts and ideas about course content and its application with other students in this course.	○	○	○	○	○	○
Q19.	Class projects and activities gave me the opportunity to interact with my classmates.	○	○	○	○	○	○

Learner-Content

This category includes Learner-Content survey items. Using the same online course that you are currently taking as your basis, rate your responses for the following items on the scale below ranging from "Strongly Disagree" to Strongly Agree."

		Learner-Content Interactions					
		Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
Q20.	Online course materials helped me to better understand the course content.	○	○	○	○	○	○
Q21.	Online course materials stimulated my interest for this course.	○	○	○	○	○	○
Q22	Online course activities helped relate new concepts or new knowledge to my personal experience.	○	○	○	○	○	○
Q23	It was easy for me to access the online course materials.	○	○	○	○	○	○

Satisfaction

This category includes Satisfaction survey items. Using the same online course that you are currently taking as your basis, rate your responses for the following items on the scale below ranging from "Strongly Disagree" to Strongly Agree."

		Satisfaction Items					
		Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
Q24.	I am satisfied with what this course has contributed to my educational development.	○	○	○	○	○	○
Q25.	I am satisfied with the level of interaction that I had in this online course with my instructor.	○	○	○	○	○	○
Q26.	I am satisfied with the level of interaction that I had in this online course with my classmates.	○	○	○	○	○	○
Q27.	I am satisfied with the level of interaction that I had in this online course with the course content.	○	○	○	○	○	○

Appendix H

Flyer for the "Students' Satisfaction with Interactions in Online Courses at Historically Black Colleges and Universities (HBCUs)" Survey

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