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THE RELATIONSHIP BETWEEN FACULTY DIVERSITY AND GRADUATION
TRANSFER AND DROP-OUT RATES IN PUBLIC COMMUNITY COLLEGES

by

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Dedication

This dissertation is dedicated to my many students, teachers, mentors, and colleagues. There are three who have been my primary source of support and inspiration.

First, this dissertation is dedicated to my friend, wife, and partner Moira who has steadfastly stuck with me through this very long and arduous process. Moira has been my constant coach, mentor, critic, and a voice of reason that kept me grounded and moving forward. I am better because of her. I am wiser because I listen to what she says. I am looking forward to our next adventure together.

Second, this dissertation is dedicated to my late friend, teacher, and mentor Dr. Michele Kahn. After many years of working in the field of Higher Education Access and Equity, it was in my first Intercultural Communications class with Michele that I really came to understand and accept my position of power and privilege and potential for making positive change. As my initial Dissertation Chair she (sometimes relentlessly) pushed and challenged me to go further and deeper in my work to address race, ethnic, and gender disparities in Higher Education. I missed you at my defense Michele. You will always be my teacher. Rest in peace.

Thirdly this dissertation is dedicated to my son Seth. Seth is fearless, independent, and strong in his commitments. He succeeds as a student, leader, and father. He inspires me with his love for his wife Trisha and our grandchildren Ian and Katelyn. Seth and his family represent the future in a world where border crossing will be commonplace, and inclusion will be an expectation.

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My goal for entering a doctoral program was to get my arms around the history, language, and challenges regarding diversity and inclusion in higher education. I have been able to do this in the Educational Leadership Doctoral Program at the University of Houston Clear Lake. I am grateful to this program for allowing me the flexibility to specialize in both Higher Education Leadership and Special Populations areas. Community colleges are all about teaching special populations. I have come full circle from my first teaching role as a high school special education teacher to serving as a college administrator working with issues of equity and access.

I was welcomed with open arms into Cohort 6 and became a part of a learning community that included Higher Education and K-12 professionals who were already experts. As I plodded through this program succeeding cohorts welcomed me as an ‘ad hoc’ member. This allowed me to expand my professional network and insights into the complexities of higher education management today. Face to face contact with these emerging thought leaders and our professors has been a joy and an incredible experience in learning.

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ABSTRACT

THE RELATIONSHIP BETWEEN FACULTY DIVERSITY AND GRADUATION TRANSFER, AND DROP OUT RATES IN PUBLIC COMMUNITY COLLEGES

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University of Houston Clear Lake, 2019

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Previous research has found that overall graduation rates for underrepresented minority (URM) students of all races and ethnicities were positively affected by increased diversity of their faculty. Using 2017 archival IPEDS data from 120 public community colleges this mixed-methods study replicated and expanded previous research by Stout, Archie, Cross, and Carman (2018) by calculating an institutional Diversity Score as a common measure of diversity and ranking the community colleges by their overall faculty level of race/ethnic and gender variance. The findings suggest that there was a significant strong positive relationship between graduation, transfer, and drop-out rates for URM students of all race/ethnic categories when there are increases in faculty diversity. There were no significant findings regarding the relationship between faculty gender to student graduation, transfer, or drop-out rates. In the qualitative component of this study six community college presidents and 15 former community college students were interviewed to understand their perceptions regarding the relationship faculty race,

ethnic, and gender diversity and student success. Analysis of president responses from qualitative interviews revealed three themes regarding their perception of faculty diversity and student success. These themes were: (a) changes in our communities drive the need for change in our colleges, (b) inclusion is a process of accommodation, and (c) mentoring and role modeling are critical. Analysis of student responses revealed two themes: (a) individual connections are important, and (b) female teachers matter to female students. Findings suggest that positive interactions with URM faculty can provide URM students with a role model that increases their sense of welcome, acceptance, and motivation to succeed. When students are exposed to a diverse faculty, they feel more comfortable and have better outcomes. Increasing faculty diversity can be an important step for improving an environment for student success.

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CHAPTER I: INTRODUCTION

Community colleges generally have a greater range of student racial and ethnic diversity and a smaller range of faculty diversity than four year higher education institutions (Stout, Archie, Cross, & Carman, 2018; Robinson, Byrd, Louis, & Bonner, 2013; Office of Planning, Evaluation and Policy Development, 2016; Espinosa, Turk, Taylor, & Chessman, 2019). Community colleges play a special role in creating opportunities for both academic and vocational success for students representing a wide range of special populations (Gillett-Karam, Roueche, & Rouech, 1991; Tovar, 2014; Spangler, 2008). Much of the literature addressing student success and graduation, particularly with regard to race and ethnicity, has largely focused on four year institutions while devoting less attention to community college success outcomes (Tovar, 2014).

Community colleges are often the most accessible point of entry to higher education, particularly for underrepresented minority (URM) students and students from low socioeconomic communities (Cohen, Brawer, & Kisker, 2014; McFarland, et al., 2017). Community colleges are usually more geographically accessible and affordable than traditional four-year colleges and universities. Community colleges, like their four-year counterparts, experience a significant disparity in the retention and graduation of URM students in relation to non-URM students (Community College Research Center, 2017; Espinosa, Turk, Taylor, & Chessman, 2019).

Research Problem

The persistence of high levels of student attrition and poor graduation rates in particular drive the need to study the relationship between faculty diversity and student graduation rates in the public community college setting (McFarland, et al., 2017). Significant gaps in graduation rates continue to exist across all race and ethnic

populations for community college students (Kirsch, Brann, Yamamoto, & Sum, 2007; U.S. Department of Education, 2015; Espinosa, Turk, Taylor, & Chessman, 2019).

Push for Accountability and Efficiency

Federal and local pressure for community colleges to have better outcomes is driving college governing boards and administrations to make important decisions about how to improve their student outcomes that include higher graduation rates, certificate completions, and transfers to four-year colleges and universities. If community colleges are unsuccessful they face the consequences of the loss of funding and in more serious cases the loss of accreditation (Cohen, Brawer, & Kisker, 2014). In recent years there has been an increase in the nationwide debate on community college funding and its effect on student performance. Tightening state and local budgets are compelling legislators and taxpayers to call on our community colleges to become more efficient and effective with the services that they provide to students without increasing taxes (Cohen, Brawer, & Kisker, 2014; Robinson, Byrd, Louis, & Bonner, 2013; Spangler, 2008).

The Charge to Diversify

Community leaders, particularly race and ethnic minority leaders, have maintained constant pressure on governments and schools to change the ethnic makeup of higher education students and faculty to reflect the demographics of the communities that they serve (Cohen, Brawer, & Kisker, 2014; Gillett-Karam, Roueche, & Roueche, 1991). Historically post-secondary education was only accessible to young affluent Caucasian males (Fincher, Katsinas, & Bush, 2010). Today there are broad expectations that community college leaders consider the question of race when making long-term decisions that affect their colleges. Race and ethnicity are factors to consider regarding both student and faculty diversity (Bowen & Bok, 1998).

Early in practitioners in corporate diversity and inclusion work have advocated taking a broad brush approach to addressing diversity issues (Hubbard, 2004; Thomas Jr., 1999; Ladson-Billings & Tate, 1995). R. Roosevelt Thomas Jr., an early pioneer in business and industry diversity research, proposed that to manage diversity successfully organizations must recognize that race and ethnicity are only two of many diversity factors that should be considered (Thomas R. , 1992). This argument, while useful in describing what an inclusive culture mosaic might look like, fails to acknowledge the unequal treatment and limited opportunities that are sometimes experienced by those who differ from the dominant culture. Race matters and as cultural demographics continue to shift worldwide the pressure for minority representation in faculty ranks will continue to rise. This same community pressure will continue to push community college administrators to diversify their faculty to reflect community demographics (American Council on Education, 2010; Calahan, Perna, Yamahita, Ruiz, & Kranklin, 2016; Espinosa, Turk, Taylor, & Chessman, 2019).

Campus Climate

Promoting diversity and inclusiveness across all levels of the community college, including the college administration and faculty, can be an important step toward creating an inclusive campus climate. The challenge of diversifying faculty is significant. The Office of Planning, Evaluation and Policy Development (2016) reported that in 2013-14 less than one in ten higher education faculty members were Hispanic or Black (p. 73). Faculty curricular decisions and pedagogy, including their individual interactions with students, can foster inclusive climates (Hurtado & Guillermo-Wann, 2013; Museus, 2014). A diverse climate can positively effect student success and ultimately improve student outcomes such as a feeling of acceptance or reduced attrition (Hurtado, Alvarado, Guillermo-Wann, Cuellar, & Arellano, 2012). Research suggests that greater

representation of URM faculty may increase students' sense of academic validation (Hurtado & Alvarado, 2013). For example, research at the K-12 level demonstrates that URM teachers may have higher expectations for URM students and that they may have a deeper understanding of their students (Egalite & Kisida, 2016; Dee, 2005). Faculty, either individually or collectively create the curricula that is presented to students. The faculty have the responsibility and discretion to select the educational content and the delivery and educational experiences provided to students in the classroom. Curriculum and classroom interactions greatly impact all students and can be particularly important to URM students (Michael, 2015; Hernandez-Gravelle, O'Neil, & Batten, 2012).

This research attempts to shed light on how faculty race/ethnic diversity impacts student graduation, particularly underrepresented minority (URM) student graduation, in public community colleges. This study examined the relationship between community college faculty racial, ethnic, and gender diversity and the graduation, transfer, and drop-out rates of community college students using the most recent archival data for 120 public community colleges available from the U.S. Department of Education Integrated Post-Secondary Educational Data System (IPEDS). This research also explored the perceptions of six community college presidents and 15 former community college students regarding faculty diversity and student success.

Significance of Study

Globalization, mobility, and technology are catalysts for a changing society. These forces are expanding opportunities for individuals to interact with others who present a wide array of diversity differences (Johansson, 2006). These forces are also impacting higher education where student diversity is growing faster than faculty diversity (Chen, 2017; Williams & Wade-Golden, 2008). When students are exposed to a diverse faculty, they feel more comfortable and have better outcomes (Hurtado,

Alvarado, Guillermo-Wann, Cuellar, & Arellano, 2012; Stout, Archie, Cross, & Carman, 2018). Any level of college completion is an important asset in our world today with long term economic implications for both the student and society. Improving student graduation involves intrinsic factors like motivation, campus climate, and satisfaction but may also include recognizing the impact of URM faculty diversity on URM student success (Bowen & Bok, 1998; Hurtado, Alvarado, Guillermo-Wann, Cuellar, & Arellano, 2012).

Little research exists that explores the relationship of faculty diversity and student graduation rates for URM students (Stout, Archie, Cross, & Carman, 2018). Given that there is an emerging emphasis placed upon student graduation rates in public community colleges, community college governing boards, and administrators need ways to predict and measure their resource and workforce needs for the most effective results (Chen, 2017; Cohen, Brawer, & Kisker, 2014; McClain & Perry, 2017).

Many community colleges have open door admissions policies and accept any student who has demonstrated college level skills (Cohen, Brawer, & Kisker, 2014). The community college also provides a pathway to higher education by accepting students who need additional developmental instruction to attain a college performance level. The present study has the potential to be beneficial to community college administrators who must make program and workforce decisions that drive student success. Moreover, the findings of this research provides insights regarding how to make workforce decisions that may improve low student attrition and poor graduation rates. In addition, the findings could also impact how community colleges respond to the current political focus on accountability and efficiency.

Stout et al. (2018) conducted a study to examine the relationship between faculty racial/ethnic diversity and graduation rates of undergraduate students, in particular those

from underrepresented racial and ethnic minority populations. Using IPEDS data, the researchers calculated a Diversity Score for each institution. Findings suggest that U.S. faculty diversity is lower than in the U.S. national population. Overall graduation rates for URM students of all races/ethnicities are positively affected by increased diversity of their faculty. This study was conducted on 79 two and four year public and private colleges randomly selected from across the U.S (Stout, Archie, Cross, & Carman, 2018). The present research replicates and expands on Stout et al. (2018) in order to determine if similar results would be found regarding the relationship between faculty diversity and student graduation rates in the public community college setting. This score may provide a tool that can be used by community college governing boards and administrators to measure their resource and workforce diversity needs for the most effective student success results.

What is missing is a method to assess institutional diversity that can drive program and workforce decisions to create the best environment for student success. This research replicates the study pioneered by Stout et al. (2018) and further develops the diversity score as a tool to assess an institution's level of diversity providing a weighted outcome to assess the value of increasing the diversity of faculty. Measures of faculty race/ethnic and gender variance that can identify and compare the level of faculty over time and across colleges and universities may provide helpful data for establishing workforce goals and policy.

Replication studies, although important for validation, are not popular in research practice. Makel, Plucker, and Hegarty (2012) found that the replication rate for quantitative studies in psychology was just 1% since 1900. This researcher suggests that when studies are replicated and show similar findings then the previous findings are supported. When replicative studies show different findings, new information is added to

the original body of work bringing more accuracy and the opportunity to consider worthwhile alternatives.

This research extends the original study by Stout et al. (2018) to explore the perceptions and lived experiences of community college presidents and students by conducting interviews and focus groups. The data obtained from the interviews and focus groups was used to make meaning of the qualitative results in order to assess its relevance to student success and completion.

Research Purpose and Questions

The purpose of this research study was to quantify the relationship between faculty diversity and student graduation, transfer, and drop-out rates in the public community college and to interview community college students and presidents regarding their perception, if any, of the relationship between faculty diversity and student graduation, transfer, and drop-out rates. For the purpose of this study the independent variables are be race, ethnicity, and gender. The dependent variables are be student graduation rates, transfer rates, and drop-out rates.

Quantitative Research Questions

1. Is there a difference between graduation, transfer, and drop-out rates of URM students and non-URM students in public community college?
 - A. Is there a difference between the graduation rates of URM students and non-URM students?
 - B. Is there a difference between the transfer rates of URM students and non-URM students?
 - C. Is there a difference between the drop-outs rates of URM students and non-URM students?

2. Is there a difference between the graduation rates of male and female students in public community colleges?
 - A. Is there a difference in the graduation rates of male and female students?
 - B. Is there a difference in the transfer rates of male and female students?
 - C. Is there a difference in the drop-out rates of male and female students?
3. To what degree is there diversity variation among community college faculty?
 - A. To what degree is there race and ethnic variation among faculty?
 - B. To what degree is there gender variation (males & females) among faculty?
4. Is there a relationship between faculty diversity and student graduation rates in public community college?
 - A. Is there a relationship between faculty race and ethnic diversity and student graduation rates?
 - B. Is there a relationship between faculty gender diversity and student graduation rates?
5. Is there a relationship between faculty diversity and student transfer rates in public community college?
 - A. Is there a relationship between faculty race and ethnic diversity and student transfer rates?
 - B. Is there a relationship between faculty gender diversity and student transfer rates?
6. Is there a relationship between faculty diversity and student drop-out rates?
 - A. Is there a relationship between faculty race and ethnic and student drop-out rates?
 - B. Is there a relationship between faculty gender diversity and student drop-out rates?

Qualitative Research Questions

7. How do community college presidents perceive the relationship, if any, between faculty diversity and student graduation, transfer, and drop-out rates?
8. How do community college students perceive the relationship, if any, between faculty diversity and student graduation, transfer, and drop-out rates?

Definition of Key Terms

The following are the definitions for the key terms used throughout this dissertation.

Campus Climate - Campus climate is characterized by the current attitudes, behaviors and standards of students, faculty, and staff concerning the level of respect for individual needs, abilities and potential. Campus climate is often noted as a key factor in recruitment, satisfaction, productivity, and retention of students (Gillett-Karam, Roueche, & Rouech, 1991; Hurtado & Guillermo-Wann, 2013; Museus, 2014).

Community College - Community College will be defined as a college that provides two-year academic and vocational programs and awards two-year associate degrees.

Diversity – Race and ethnic diversity will be defined using racial/ethnic categories accepted by the U.S Department of Education and used by the Integrated Post-secondary Educational Data System (IPEDS). These categories are: (1) Hispanic/Latino; (2) American Indian or Alaska Native; (3) Asian; (4) Black or African American; (5) Native Hawaiian or other Pacific Islander; (6) White. This research will not consider the IPED's classification of (7) Two or More Races (8) Non-Resident and (9) Race and Ethnicity Unknown. Gender diversity will be defined as male and female as identified by the U.S. Department of Education.

Graduation - Graduation will be defined as completion of the academic or vocational program within 150% of continuous enrollment (three years).

Drop-out - Students who have been identified as no longer enrolled in a post-secondary institution who have not completed their educational program or who have not transferred to another post-secondary institution.

Integrated Post-Secondary Educational Data System (IPEDS) - IPEDS is an open-source, archival data system that collects data from all public and private higher education institutions that accept federal financial aid.

Transfer: Collected since 1997-98, IPEDS collects data on students who transfer from one post-secondary institution to another. Data users can calculate the transfer-out rates of first-time, full-time students by race/ethnicity and gender for each institution that reports transfer-out data. NCES requires the reporting of transfer-out data if the mission of the institution includes providing substantial preparation for students to enroll in another eligible institution without having completed a program (IPEDS, 2019).

URM - Underrepresented minorities for both students and faculty will be referred to as URMs. Underrepresented populations included in study include: (a) Hispanic/Latino, (b) American Indian/Alaska Native, (c) Asian, (d) Native Hawaiian/Pacific Islander, and (e) Black/African American.

Non-URM - Faculty and students who represent non-underrepresented minorities will be identified as Non-URMs.

Conclusion

Many colleges are making serious attempts at charting new ‘pathways of learning’ designed to help students achieve success through a variety of opportunities such as peer tutoring, student success courses, and mentoring programs (Tinto, 2006; Chen, 2017; Quaye, Griffin, & Museus, 2015). Research has shown that faculty race and ethnic diversity in higher education contributes to the development of essential skills students need to succeed in society (Williams & Wade-Golden, 2008; Hurtado &

Guillermo-Wann, 2013; Levin, Haberler, Walker, & Jackson-Boothby, 2014; Office of Planning, Evaluation and Policy Development, 2016; Tovar, 2014). Improving student retention and graduation rates will likely come from a wide array of strategies that are now being tested in many public community colleges. Creating a more diverse faculty body may also help create a climate for success for students, particularly URM students. The following chapter will present a literature review that will discuss the issues and challenges regarding student graduation rates, faculty diversity problems and practices, and a discussion of theoretical frameworks that may guide this work.

CHAPTER II: LITERATURE REVIEW

Graduation from a college of higher education is a significant milestone for students and prepares them for the roles and responsibilities of a contributing member of society. Colleges provide the opportunity for students to learn new skills and information. They also provide opportunities to interact with other students who have their own aspirational interests. A college degree is often the key to making a career choice that provides for financial success and career development. However, not all potential students have the same opportunity for access to the best programs and universities (Bowen & Bok, 1998; McFarland, et al., 2017; McClain & Perry, 2017).

Chapter one notes that high levels of student attrition and poor graduation rates drive the need to study the relationship between faculty diversity and student graduation rates in the public community college setting. This need is fueled by calls for greater accountability and efficiency in higher education, the charge to diversify both faculty and student bodies, and emerging research that suggests that a diverse campus climate can positively affect student success.

Student and faculty race and ethnicity and student success are interrelated, and this research sought to investigate the connections that exist between faculty race and ethnic diversity and graduation rates. Faculty racial and ethnic diversity can be one of the lenses available for identifying and developing a workforce that fosters a welcome and equitable environment and supports a culture of student success (Egalite & Kisida, 2016; Chen, 2017; Dee, 2005). Community college presidents can think about faculty recruitment in the context of how to relate to the needs of the learner (Cohen, Brawer, & Kisker, 2014). Effective community college presidents build accountability into their systems by expecting deans and program department chairs to take responsibility for

creating a diverse and inclusive work environment that drives student and faculty success (Cohen, Brawer, & Kisker, 2014; Levin, Haberler, Walker, & Jackson-Boothby, 2014; Gillett-Karam, Roueche, & Roueche, 1991; Victorino, Nylund-Gibson, & Conley, 2013).

This chapter highlights the current literature that addresses the disparity of educational success experienced by URM students and non-URM students in higher education as well as the disparity of workplace success experienced by URM faculty and non-URM faculty. Additionally, this chapter reviews current literature regarding creating an inclusive campus climate that supports academic and workplace success for all members of the college community. Finally, this chapter explores the roles of the community college and types of inclusive strategies to help close the gap between the success rates of URM students and non-URM students.

Theoretical Framework

To frame this research, it is necessary to explore the fundamentals associated with Critical Race Theory (CRT) and its application to educational research.

Critical Race Theory

Critical race theory (CRT) was introduced as an educational framework in 1995 and for over twenty years the theory has been used to examine People of Color's (POC) experiences with racism in higher education. As a part of CRT, educators are called upon to extend their commitment to social justice and to identify and eliminate racism and other forms of oppression (McCoy & Rodricks, 2015).

Critical Race Theory (CRT) is actually more of a perspective than a theory and is interpreted as a set of interconnected beliefs regarding race relations and theory applications to U.S. society (Gillborn, 2006). CRT developed in the mid-1970's with the early work of Derrick Bell and Alan Freeman who were concerned about the slowing pace of racial reform in the U.S. (Ladson-Billings & Tate, 1995). It began as a

theoretical movement in American law schools that examined society and culture within the context of law and power and race (Gillborn, 2006).

Ladson-Billings and Tate (1995) proposed that critical race theoretical perspectives be considered in education in a similar manner to its use in legal scholarship. To do so they developed three propositions:

1. Race continues to be a significant factor in determining inequity in the United States.
2. U.S. Society is based on property rights.
3. The intersection of race and property creates an analytic tool through which we can understand social (and school) inequity (p. 48).

These propositions are used to focus on race conflict. Power and privilege are inherent to CRT and can be manifested in both macro and micro-aggressions taken by those with privilege against those without privilege (Gillborn, 2006). Ladson-Billings and Tate (1995) have proposed that the concept of ‘diversity’, a term used to explain all types of difference, represents the attempt to bring together both students and faculty from a variety of cultures to exist together in an “atmosphere of respect and tolerance” (p. 61). This concept reflects a growing awareness of multiculturalism but may not address the tensions that exist between and among various groups that work and learn today in U.S. schools. Privilege, based on a real or perceived position of power, can be used to limit individual rights in many areas: legal, political, educational, and social (Ladson-Billings & Tate, 1995).

CRT suggests that the values and beliefs held by the majority (White) population are accepted as the social standard and that any change from their perspective will elicit and open and publicly targeted reaction (Taylor, 1998). Archie (2015) goes so far as to suggest that as postsecondary institutions are becoming more racially diverse, ignoring

the critical nature of race in education can cause “more damage and harm than assistance to minority groups” (p. 21).

Historically, theoretical frameworks to address how cultural climate affects student success showed a lack of attention to the cultural and racial realities faced by URM students on the college campus (Hurtado, Alvarado, Guillermo-Wann, Cuellar, & Arellano, 2012; McClain & Perry, 2017; Museus, 2014). Existing models for addressing campus culture and academic success for diverse college student populations such as the Transformational Tapestry Model put forth by Rankin and Reason (2008) and Tinto’s (1982) Interactionalist Model are multilayered and more complex than previous frameworks but do not address the issue of equity in representation of URM-faculty or how these ratios can impact campus climate (Museus, 2014; Rankin & Reason, 2008).

Using CRT as a basis of inquiry, two theoretical lenses for exploring the relationships between campus climate, compositional diversity and student success will also be used. The proposed theoretical frameworks and assessments, the Multi-contextual Model for Diverse Learning Environments (MMDLE) and the Culturally Engaging Campus Environments (CECE) Model reflect the life-experiences of racially diverse student populations. These models go beyond previously existing models for student success into exploring concepts of race, power, and privilege that impact the college community in a broader context. These models explore the voices of URM students and include them in the context of their personal experiences (Museus, 2014).

Multi-contextual Model for Diverse Learning Environments (MMDLE)

Campus racial climate can affect student success for all students in positive and negative ways (Cervantes, Mai, Morin, Otoo, & Williams, 2017; Bowen & Bok, 1998; Tovar, 2014; Hurtado, Griffin, Arellano, & Cuellar, 2008). Hurturo et al. (2012) suggests that student identities are at the center of curricular and curricular spheres when they are

engaged in a learning environment. The student curricular sphere encompasses the experience of the student's learning in the digital age. It takes into account the nature of literacies, learning, and technologies and how these intersect in student lives as learners (Jones & Lea, 2008). In this environment students interact in a dynamic relationship with both faculty and staff identities. These interactions provide opportunities for both faculty and staff to positively engage students through practices that involve content (educational programming) and process (pedagogies and practice). This framework expands upon previous student success frameworks by including all stakeholders (faculty, staff, students, administration, community) involved in the educational environment and expanding upon the complexities of a campus climate to include the variety of voices to be heard (Hurtado, Alvarado, Guillermo-Wann, Cuellar, & Arellano, 2012). They define campus racial climate as the current beliefs, judgments and outlooks within an academic society about race, ethnicity, and diversity. Hurtado et al. (1999) identified four crucial components of campus racial climate:

- *Institutional historical legacy of inclusion or exclusion* explores the environment experienced by both the institution and the student. Home, K-12 experiences and development social interactions provide a basis from which students learn about social norms and behaviors that they bring with them to the college environment. Institutional history and experience also impact institutional perceptions and behaviors and must be considered when evaluating the climate for learning.
- *Compositional diversity* addresses the diversity environment or other aspects of difference between individuals in an educational community particularly regarding race and gender. This component evaluates representation in all

institutional areas to include students, faculty, staff and community constituencies.

- *Psychological climate* considers factors that impact emotion and cognitive assessment of safety and welcomeness. The psychological climate for URM faculty and students may be explored through the assessment of interactions between individuals and the degree to which discriminatory and harassing acts (assault, bullying, and exclusion from activities) and macroaggressions (racial slurs, unintended bias expressions, insensitivity) impact perception and behavior.
- *Behavioral climate* focuses on actions and activities, their meaning, and their impact in defining safety and individual autonomy. The behavioral climate regulates individual actions and defines normative rules for how a community will act (Hurtado, Alvarado, Guillermo-Wann, Cuellar, & Arellano, 2012).

A fifth component, structural diversity was later added by Milem, Dey and White (2004).

- *Structural diversity* assesses the college infrastructure and considers how institutions can and should structure environments, programs, and practices to maximize success among diverse populations that include students, faculty staff and community.

Although all areas should be considered within the complexity of the MMDLE model, the category most relevant to this research, compositional diversity, relates to the numerical and comparative display of various members of color or ethnicity on the college campus and is a factor affecting students, staff and faculty (Quaye, Griffin, & Museus, 2015). Quaye et al. (2015) suggest that improvements in compositional diversity come from any effort to increase the population of students, faculty and staff from under-represented races and ethnicities. With respect to student retention,

compositional diversity that reflects a lack of representation of URM faculty can negatively impact student retention since URM faculty can be seen as role models and a source of security and acceptance (Quaye, Griffin, & Museus, 2015). Moreover, as students matriculate into postsecondary programs, URM faculty can serve as mentors and positive examples for URM students. Considering that NCES reports that all URM faculty race and ethnicity categories together represent less than 21% of total postsecondary faculty in 2015, it can be challenging to find faculty of color to serve as mentors (NCES, 2017).

Campus climate can be a major factor affecting student achievement including outcomes such as retention and graduation rates (Hurtado, Alvarado, Guillermo-Wann, Cuellar, & Arellano, 2012; Hurtado, Milem, Clayton-Pederson, & Allen, 1999). The Multi-contextual Model for Diverse Learning Environments (MMDLE) allows for the exploration of the relationship between a community college's compositional diversity and student graduation rates. The MMDLE links campus climate for diversity to educational practices and learning outcomes and is a tool that can guide researchers and practitioners who are engaging institutions in transformational change. The MMDLE suggests that increasing faculty diversity may help create a positive organizational climate leading to more favorable student outcomes (Hurtado, Alvarado, Guillermo-Wann, Cuellar, & Arellano, 2012).

The MMDLE pulls from several converging areas of research on diversity dynamics in the college and university setting. The model explores how different components of campus life, including the diverse campus climate, influences important student success outcomes. The MMDLE serves to guide research and practice in creating the conditions for student success in diverse learning environments. The MMDLE places the multiple social identities of students at the center of educational contexts regarding

climate. This model also includes the social identities of faculty, staff, and campus administration. The MMDLE identifies and explores the interactive dynamics within several areas of campus life and educational practice and illustrates how they are related to campus climate and student outcomes (Hurtado, Alvarado, Guillermo-Wann, Cuellar, & Arellano, 2012).

Culturally Engaging Campus Environments (CECE)

In 2014, Museus (2014) proposed a theoretical perspective that was designed to provide a foundation for future research regarding diverse college student success. The Culturally Engaging Campus Environment (CECE) Model takes a deeper dive into the multi-layered complexities of campus climate in higher education. The CECE model addresses the reality that students of color face substantial racial and ethnic disparities in college persistence and graduation. A substantial body of research suggests that while all students can encounter an unwelcoming campus environment in college, students of color more frequently report encountering hostile racial climates than white students (Cervantes, Mai, Morin, Otoo, & Williams, 2017; McClain & Perry, 2017; Museus, 2014). The CECE model has been proposed to guide ongoing research on student success that more accurately reflects the realities of the lived experiences of both URM and non-URM students, faculty and staff.

The CECE model (1) takes previous climate models into account, (2) incorporates the actual voices of diverse populations into its explanation of college success, and (3) offers a theoretical model that can be quantified, tested, and validated. Museus (2014) argues that sense of belonging is positively associated with success for racially diverse student populations in the college setting and offers this framework as an alternative construct to previous concepts of social integration.

The CECE model posits that undergraduate students who experience a more culturally engaging college campus environment are more likely to exhibit a greater sense of belonging and higher levels of academic performance and ultimately are more likely to persist in graduation. This model measures diversity and equity on college campuses based on nine indicators within two categories, cultural relevance and cultural responsiveness (Wexler, 2016; Museus, 2014). The first category cultural relevance addresses how well the atmosphere of a college campus reflects a student's background. The second category, cultural responsiveness provides a structure to gauge how different support systems on a college campus(s) respond the diverse student needs. The model contains nine indicators, five for cultural relevance and four for cultural responsiveness. They are identified as follows:

Cultural Relevance

- *Cultural Familiarity:* The campus has spaces for students to connect with faculty, staff, and peers who understand their cultural backgrounds, identities, and experiences.
- *Culturally Relevant Knowledge:* There are opportunities for students to learn about their own cultural communities via culturally relevant curricular and co-curricular opportunities.
- *Cultural Community Service:* There are opportunities for students to give back and positively transform their home communities.
- *Meaningful Cross-Cultural Engagement:* There are programs and practices that facilitate educationally meaningful cross-cultural interactions among their students that focus on solving real social and political problems.
- *Cultural Validation:* The campus has a culture that validates the cultural backgrounds, knowledge, and identities of diverse students.

Cultural Responsiveness

- *Collectivist Cultural Orientations:* The campus has a culture that emphasizes a collectivist, rather than an individualistic cultural orientation that is characterized by teamwork and pursuit of mutual success.
- *Humanized Educational Environments:* There is an availability of opportunities for students to develop meaningful relationships with faculty and staff members who care about and are committed to their success.
- *Proactive Philosophies:* There are philosophies that lead faculty, administrators, and staff to proactively bring important information, opportunities, and support services to students, rather than waiting for students to seek them out or hunt them down on their own.
- *Holistic Support:* Student have access to at least one faculty or staff member that they are confident will provide the information they need, offer the help they seek, or connect them with information or support they require regardless of the problem or issue they face (University of Indiana: National Institute for Transformation and Equity, 2017).

The CECE model may prove to be a useful model for higher education leaders to better understand the ways in which their college environments might be influencing the experiences and outcomes of their diverse student body. CECE model constructs attempt to guide the extent to which college environments engage the cultural identities of racially diverse students and meet the needs of these students (Museus, 2014).

The first of nine CECE indicators put forth by Museus (2014) to consider when assessing campus is cultural familiarity. He suggests when college students have opportunities to connect with faculty, staff, and peers with whom they share common backgrounds through face to face contact and interactions and through curricular and co-

curricular activities is positively associated with greater likelihood of success. CECE indicator seven, Humanized Educational Environments, suggests that such validation has a positive impact on adjustment, sense of belonging, academic dispositions, and success of racially diverse students (p. 212). Museus states, “Specifically, the focal area of the model suggests that the degree to which culturally engaging campus environments exists at a particular postsecondary institution is positively associated with more positive individual factors and ultimately greater college success” (Museus, 2014, p. 207).

URM Student Success

Students from low and middle income families, students of color, international students, English language learners and other special populations often find barriers in gaining access and sticking with their college programs until graduation (Cohen, Brawer, & Kisker, 2014; Hurtado & Guillermo-Wann, 2013; Espinosa, Turk, Taylor, & Chessman, 2019). Research reports that this is particularly true of race and ethnicity of URM students at predominately white institutions (McClain & Perry, 2017). The negative individual consequences that result from low success rates include lower lifetime earnings and higher rates of poverty (Museus, 2014; Cohen, Brawer, & Kisker, 2014).

Student Retention and Attrition

Student attrition is one of the most widely studied areas in higher education (Tinto V. , 2006; Tinto V. , 1982; Tinto V. , 1993; McClain & Perry, 2017; Quaye, Griffin, & Museus, 2015). Colleges are learning that providing classroom and campus environments with opportunities for developmental and academic growth increases student success bringing higher graduation rates (Hurtado & Guillermo-Wann, 2013; Quaye, Griffin, & Museus, 2015; Scrivener, et al., 2015).

Nationally, the number of high school graduates in the U.S. was at its highest peak in 2011 and has been declining since (Western Interstate Commission for Higher Education, 2012). With fewer available high school graduates, colleges must focus on retaining their current students if they wish to maintain current enrollment levels. Community colleges must pay attention to student retention. In the fall of 2015, 38% of undergraduate students attended public and private two-year colleges (Community College Research Center, 2017). The greatest percentages of students that leave do so in the first year of their college experience. These departures have serious consequences for students, particularly URM students. They also present difficult problems for many institutions because of their reliance on tuition revenue to support academic programs, manage physical plants, and deliver student services (Cohen, Brawer, & Kisker, 2014; Tinto V. , 1993).

Early theoretical models developed to study retention such as Austin's Involvement Model, Bean's Psychological Model and Tinto's Interactionalist Model were created to help explain the phenomena of student departure (Mertes, 2018). Tinto (1993) highlighted the significance of the essential transitional benchmarks that included opportunities for development and academic progress developing the Institutional Integration Theory. Informal interaction with both fellow students and faculty appeared to significantly influence institutional integration, positively impacting student graduation rates (Tinto V. , 1982, p. 172). By encouraging faculty to interact with students, sponsor diverse student events and activities, and even eat in student dining areas they positively impacted successful student environmental integration, effectively reducing student feelings of isolation and rejection.

Museus (2014) raises concerns regarding Tinto's (1975; 1993) Interactionalist Model noting that the cultural foundations of Tinto's theory are culturally biased. He

suggest that it disproportionately disadvantages student of color who are more likely to come from cultures and communities that are different from those found on college campuses (Museus, 2014, p. 196). Museus also notes that research addressing the theory's relevance to commuter campuses and that evidence for the validity of the theory is mixed with regard to the degree completion of two-year college students (Crisp, 2010).

Grades, retention rates, and graduation rates are commonly used to evaluate the outcomes of student equity initiatives (Hanover Research, 2018; Chen, 2017). Students of color and other underrepresented groups typically experience lower enrollment and graduation rates than students who are white (Washington Student Achievement Council, 2013). These students are also more likely to be first-generation college students, come from families with a lower socio-economic status and be English language Learners. (Washington Student Achievement Council, 2013; Kirsch, Brann, Yamamoto, & Sum, 2007; McClain & Perry, 2017).

In 2016 the U.S. Office of Planning, Evaluation, and Policy Development (USOPEPD) issued a comprehensive report addressing key data highlights focusing on race and ethnicity in higher education (Office of Planning, Evaluation and Policy Development, 2016). This report supports a large body of research that indicates that there are continuing educational inequities and opportunity gaps in accessing and completing a quality education for students of color, particularly Black and Hispanic students. The following key findings were highlighted by the USOPEPD report:

- Higher education is a key pathway for social mobility in the United States.
- During the past 50 years, the U.S. has seen racial and ethnic disparities in higher education enrollment and attainment, as well as gaps in earnings, employment, and other related outcomes for communities of color.

- Gaps in college opportunity have contributed to diminished social mobility within the United States, and gaps in college opportunity are in turn influenced by disparities in student's experiences before graduating from high school.
- The participation of underrepresented students of color decreases at multiple points across the higher education pipeline including at application, admission, enrollment, persistence, and completion (Office of Planning, Evaluation and Policy Development, 2016, pp. 1-2).

These findings highlight the continued need for developing retention and student support strategies that ameliorate the trauma and stress sometimes experienced by URM students.

In 2017 the National Center for Education Statistics (NCES) reported that 70% of all first-time postsecondary students who began at two and four year institutions in 2011-2012 were still enrolled or had attained a certificate or degree by the spring of 2014 (McFarland, et al., 2017, p. 22). The NCES study also noted that the persistence rate varies by a variety of institutional, academic, and student characteristics such as two- or four-year institutions, public or private, profit or non-profit status, student age and race/ethnicity.

McFarland, et al. (2017) noted that spring 2014 graduation rates of first-time postsecondary students attending two year colleges mirror the graduation rates of students attending four year college but at a substantially lower level. A gap was observed between the graduation rates of two- and four-year colleges for students who were White, Black, Hispanic, Asian, and Two or More races. The difference in graduation rates for students who began at two and four year institutions ranged from 19 percentage points for Hispanics (59% vs 79%) to 25 percentage points for both White students (58% versus 82%) and Asian students (65% versus 90%) (McFarland, et al.,

2017). The overall graduation rate for students attending two-year colleges was 57%, while the overall rate of students attending four year colleges was 80%. The graduation rate for Black students in two-year programs was 48% and 69% in four year colleges (McFarland, et al., 2017).

Students from high school non-completers, and completers with poor grades from low socioeconomic backgrounds were less likely to enroll at four year colleges and universities and less likely to complete their studies than their peers (McFarland, et al., 2017; U.S. Department of Education, 2015). Community colleges play a pivotal role in providing a pathway to future success for low- and middle-income students (Scrivener, et al., 2015). They are institutions providing technical and career-oriented education in the United States (Scrivener, et al., 2015). In the fall of 2015, 10.5 million undergraduate students attended four-year institutions while 6.5 million attended two year colleges. Students at four year colleges are more likely to be full time with 77 % percent of undergraduate students at four year colleges attended full time compared with 39% full time attendance at 2 year institutions (McFarland, et al., 2017). The NCES reports that, while the overall persistence rate for postsecondary students is 70%, the persistence for students who began at two year institutions (57%) was 23 percentage points lower than for students who began a four year colleges and universities (80%) (McFarland, et al., 2017, p. 22).

Students of Color

Many predominately white institutions are not experiencing success in retaining and graduating students of color (Zaback, Carlson, Laderman, & Mann, 2016; U.S. Department of Education, 2015). Although institutions strive to be inclusive, many colleges still experience high dropout and transfer rates among students of color. McClain and Perry (2017) report that campus racial climate contributes to the retention of

students within a college. Their research suggests that discriminatory acts that occur on college campuses create barriers to retention and graduation for URM students.

Students report that they continue to experience discrimination, bias and harassment across many social identities such as race, class, gender, age, and sexual orientation (Cervantes, Mai, Morin, Otoo, & Williams, 2017; McClain & Perry, 2017). Students do not frequently report these abuses to campus police or officials out of fear of retaliation or being singled out for being a problem. (Hurtado & Guillermo-Wann, 2013; McClain & Perry, 2017). Hurtado and Guillermo-Wann (2013) note that students representing different races and ethnicities experience campus climate differently, and that URM students report and perceive that they receive lower levels of academic and interpersonal validation than white students. African American students report experiencing hostile climates more frequently and more frequently express that racial stereotypes are their greatest barriers to academic success (Cervantes, Mai, Morin, Otoo, & Williams, 2017; Hurtado & Guillermo-Wann, 2013). Hurtado and Guillermo-Wann (2013) also report that Asian American and multiracial-identifying students (Two or More Races) indicate higher frequencies of discrimination and bias than some racial groups dispelling the common assumption that multiracial students experience less discriminatory treatment on campus (Hurtado & Guillermo-Wann, 2013).

Nora and Cabrera (1996) conducted a quantitative analysis of 831 students at a predominately White institution and found that students of color reported more negative racial climates, higher levels of discrimination from faculty, and greater insensitivity in the classroom than their white peers. Rankin and Reason (2005) surveyed 7,347 students across 10 campuses and found that students of color perceived their campuses to be more racist and less tolerant than their white peers.

There is compelling evidence that the failure of previous student success models to take into consideration the racial and cultural realities of URM students attending colleges, predominately White colleges, can have harmful consequences to URM students and their potential for college success (Museus, 2014; McClain & Perry, 2017).

Community College Enrollment

Hispanic and Black students enroll in college (particularly four-year colleges) at a lower rate than their white and Asian counterparts (Office of Planning, Evaluation and Policy Development, 2016; McFarland, et al., 2017; McClain & Perry, 2017). Survey data also shows that two-year institutions are a common postsecondary option for Hispanic high school graduates (Office of Planning, Evaluation and Policy Development, 2016). Research indicates that, over time, disparities by race and ethnicity in enrollments appear to be closing (Calahan, Perna, Yamahita, Ruiz, & Kranklin, 2016). This trend is partly attributed to gradual increases in the enrollment rates of Hispanic and Black students who have chosen to attend community colleges or other less selective schools (Farina, 2014).

Black and Hispanic students are also more likely to place into remedial education courses than white or Asian students. More than 70% of Black students and 60% of Hispanic students enroll in at least one remedial course, compared with just over 50% of white and Asian students (Zaback, Carlson, Laderman, & Mann, 2016). In four-year programs Black students are more than twice as likely to be enrolled in remedial education as white or Asian students.

College affordability is also an important factor in student success. Black, Hispanic, and Asian students often do not have adequate resources to pay for college when compared with their colleagues (Bowen & Bok, 1998; Zaback, Carlson, Laderman, & Mann, 2016; Robinson, Byrd, Louis, & Bonner, 2013). More than 80% of Hispanic,

Black, and Asian students had a gap between their financial need and grants and scholarships compared with 71% white undergraduate students. Hispanic and Black students are also more likely to assume more debt than they can afford and struggle to repay their loans than white students.

It is more difficult for students of color regardless of race or gender, to gain access to four-year colleges and universities due to racial inequities regarding enrollment, academic skill level, and prohibitive costs. For many URM and low social-economic level students the community college becomes the most accessible higher education institution available. Community colleges are affordable, often located with-in the students neighborhood or on transit lines accessible to low income and mobility impaired students and offer remedial and transition programs to potential students (Office of Planning, Evaluation and Policy Development, 2016; Cohen, Brawer, & Kisker, 2014; Tovar, 2014).

While community colleges are more accessible to certain groups of students, community colleges also struggle to hold on to them until they graduate. The National Center for Educational Statistics using longitudinal data previously collected looked at the rates at which first-time college students persist toward graduation with a degree or certificate. Looking at first-time College students attending in 2011-2012, they found that after three years the percentage of students who had graduated or were still enrolled was 80% for students in four-year colleges and 57% for students in 2-year colleges (McFarland, et al., 2017, p. iii).

Students' Perceptions of Faculty Diversity

In the fall of 2015, of the 842,000 full time faculty working at postsecondary degree-granting institutions, 42% were White males, 35% were White females, 6% were Asian/Pacific Islander males, 4% were Asian/Pacific Islander females, 3% each were

Black females and males, and 2% of each were Hispanic males and Hispanic females. Two or More races and American Indian/Alaska natives accounted for less than 1% each (McFarland, et al., 2017).

Cervantes, Mai, Morin, Otoo, and Williams (2017) conducted a study at Rice University to assess student response to URM representation within Rice faculty. Specifically, they explored the potential benefits and harms that the presence or absence of URM faculty, both as teachers and mentors, had on URM students. The researchers found that Black students were more likely to care the most about diversity within the faculty. Black students were also more likely to be dissatisfied with the current level of faculty diversity at Rice University. Additionally, the researchers found that although the majority of students agreed that representation within faculty was important, many also felt that quality was a more important determinant for hiring faculty than racial diversity (Cervantes, Mai, Morin, Otoo, & Williams, 2017).

The Importance of Having URM in Community Colleges

Rational for Race/Ethnic Diversity

Rachel Franklin (2012) conducted a study which combined data from the national center for Education Statistics (NCES) with U.S. Census Bureau population estimates data to provide a point of comparison for state universities. This research had the two goals of creating a diversity statistic from the comparison of the data that would enable cross-comparison of higher education institutions and conducting an analysis regarding university student populations compared to the population (state population) that the university was originally intended to serve. The results of the analysis indicated that in more than half of public, four-year schools surveyed White non-Hispanic students were well-represented. However, Black or Hispanic groups appear to be grossly under-represented in public, four-year colleges in the United States when compared to the

university's regional race and ethnic diversity. Franklin (2012) suggests that student diversity can be benchmarked, assessed and measured for progress in public four-year universities. She notes that Blacks and Hispanics are underrepresented in four year universities and that community colleges and for-profit institutions benefit regional populations by absorbing some share of the Black and Hispanic student population (Franklin, 2012).

There is little research currently published to address the impact of faculty race and ethnic diversity on student graduation rates in any area of higher education whether it is a public or private, open admission or closed admission, two or four-year college. One study reported significant findings when comparing institutional graduation rates to the faculty and ethnic diversity of the faculty teaching in correlating colleges across the U.S. (Stout, Archie, Cross, & Carman, 2018). Stout et al. (2018) sought to quantify the relationship between faculty race and ethnic diversity and student graduation rates.

Stout et al. (2018) reported that the higher the variation of race and ethnic diversity of the faculty, the higher the student graduation rates were overall among all ethnic groups. They found that a more racially and ethnically diverse faculty yielded higher graduation rates among all student populations. All student race and ethnic groups showed a significant relationship with faculty members who were of their same ethnic group. This correlational study found a significant effect regarding students identifying and interacting with a diverse faculty body. Stout et al. (2018) strongly advocates that an intentional effort must be made to represent all ethnic groups among college and university faculty and staff populations.

Stout et al. (2018) suggest that further research should be conducted using the new Diversity Score to explore the effects of faculty diversity and gender on student graduation rates and suggested further exploration of the effects of faculty diversity on

other student outcomes. They propose that using a larger sample would allow for more disaggregation of data. They also propose that research should be conducted in different types of higher education institutions (HBCU, 2 vs 4-year) and regions (Stout, Archie, Cross, & Carman, 2012).

Some students are looking for diversity in their education and are taking steps to learn from the race and ethnic diversity around them. Ngai (2011) conducted a study to explore the experiences of “Border Crossers.” Ngai defined “border crossers” as students who were involved in cultural programs and student organizations that did not reflect their own race and ethnicity. Her research sought to identify why some students choose to become Border Crossers and how they perceive and interpret their experiences in different cultural contexts. Using a phenomenological approach with in-depth interviews of 37 students, Ngai found that two qualities emerged as characteristics of Border Crossers: 1) Border Crossers possessed the desire to explore cultural experiences different from their own. 2) Border Crossers possessed a willingness to take some degree of risk and learn from new experiences. Ngai posits that by creating more opportunities for diverse interactions to occur at the beginning of a student’s college careers, institutions can help cultivate more open-minded attitudes toward diversity as students move through the institution (Ngai, 2011).

Faculty of Color

Victorino, Nylund-Gibson, and Conley (2013) investigated the relationship between three dimensions of campus racial climate and faculty satisfaction by using a multilevel structural equation model to analyze archival data collected in a 2004-2005 survey of higher education faculty conducted by the Higher Education Research Institute (HERI) at the University of California, Los Angeles.

The purposes of this study was: (1). To examine the relationship between campus racial climate and faculty satisfaction at both the individual and institutional levels, (2). To analyze the effects of gender, race/ethnicity, and tenure status at the individual level, (3). To determine the effect of various institutional types on campus faculty attitudes regarding campus racial climate and satisfaction, and (4). To investigate whether campus faculty attitudes at the institutional level influence faculty perceptions of campus racial climate and satisfaction at the individual level (Victorino, Nylund-Gibson, & Conley, 2013, pp. 772, 778).

Prior studies of campus racial climate and faculty satisfaction had not addressed multi-dimensional campus climate as it relates to faculty satisfaction at both the individual and institutional level. Victorino et al. (2013) used three components of a multi-dimensional, multi-contextual model for describing campus climate framework originally proposed by Hurtado, Griffin, Arellano, and Cuellar (2008, p. 771) as a framework for conducting this study. This study was also grounded in earlier studies of organizational climate and job satisfaction from an organizational psychology perspective (p. 772).

Faculty responses to questions addressing job satisfaction factors such as salary levels, assignments, and opportunities for scholarly pursuits provided a broad context in which to examine faculty perceptions. Victorino et al. (2013) developed a multilevel structural equation model (ML-SEM) to analyze faculty perceptions of racial campus climate and faculty satisfaction level at both the individual and institutional level and to also allow for the investigation of both constructs at the areas of intersection.

Archival data regarding campus racial climate and satisfaction from a 2004-2005 survey of 65,124 higher education faculty members representing 522 two and four-year colleges conducted by the University of California at Los Angeles, Higher Education

Research Institute (HERI) were used to conduct this study. Victorina et al. (2013) used a data subset from 29,169 tenure track faculty from 426 of the four-year colleges and universities involved in the original data collection (p. 781). Survey questions elicited perceptions regarding structural diversity (representation), psychological climate (racism/sexism), and behavioral climate (conflict).

The results of their analysis indicated that after controlling for gender, race/ethnicity and tenure status, faculty perceptions of campus racial climate had a “positive, large, and highly significant effect on (faculty) satisfaction” (p. 787). Moreover, faculty with positive perceptions of their campus racial climate indicated that they also had higher levels of satisfaction regardless of gender, race/ethnicity, and tenure status while faculty with less positive perceptions of their campus racial climate indicated lower levels of job satisfaction. Although these perceptions varied slightly among the different gender and race/ethnicity categories, the ML-SEM model developed for this study indicated that campus faculty attitudes at an institutional level had a significant effect upon individual perceptions regarding campus racial climate and faculty satisfaction (p. 791).

Victorino et al. (2013) concluded that campus racial climate matters to all faculty and posited that there is a “direct and powerful connection between campus racial climate and faculty satisfaction for tenure-line faculty at four year institutions” (p. 795). They advocate that campus leadership present a clear vision for diversity at their organizations that includes preventing racial bias, discrimination, and conflict before they occur. They further suggest that colleges and universities that take steps to transform and improve their campus racial climates will significantly increase levels of faculty satisfaction and create opportunities to engage a broader range of perspectives regarding research, teaching, and service.

The conclusions suggested by this study may also be relevant to the community college setting. Cohen, Brawer, and Kisker (2014) note that institutional support practices have a significant effect on faculty in the community college setting (p. 100). They also note that there has been an increase in the number of minority and women faculty over the past 30 years (p. 82). But there is little discussion regarding the relationship between faculty gender and ethnic diversity and faculty job satisfaction or dissatisfaction in community colleges. Recognizing that there may be relationships between faculty diversity and job satisfaction adds to the base of knowledge needed by college administrators to identify policies and actions to improve campus racial climates. This may result in an increase of faculty satisfaction which could foster more positive and productive environments for faculty and also for improved student outcomes.

Business and industry have also weighed in on the need for racial and ethnic diversification of their workforce in order to better attract and serve their customers (Kreitz, 2007). More than thirty years ago Shell Oil, IBM and other corporations created race and ethnic employee resource groups to learn about the needs, barriers, and wants of their diverse workforce (Thomas R. , 1992).

In the 1980's IBM established employee affinity groups representing a variety of diversity populations to include Asians, Blacks, GLBT, Hispanics, White men, Native Americans, Persons with disabilities and women. These constituency groups were asked to identify barriers, needs, and opportunities that were associated with their constituency. They were then charged to make recommendations to develop more inclusive workplace policies, products, and customer service. IBM was able to identify an additional profit of 300 million dollars per year within 10 years as a result of the input from their employee affinity groups (Thomas D. A., 2004). Learning to attract new cultural markets and products has become a common strategy for increasing profits. Smart companies have

learned that one of the best methods to gain a business edge is learning from a diverse employee base (Hubbard, 2004; Thomas R. , 1992). Modern organizations are promoting diversity in many arenas. Demographic changes in customer and workforce composition combined with international competition and globalized markets are increasing the amount of diversity organizations must be able to manage (Hubbard, 2004; Thomas R. , 1992).

Benefits of Diverse Faculty

Research has suggested that a racially and ethnically diverse student body can benefit from exposure to a racially and ethnically diverse faculty (Stout, Archie, Cross, & Carman, 2018; Hurtado, Milem, Clayton-Pederson, & Allen, 1999). .

URM faculty can bring a different perspective regarding their understanding of the backgrounds and needs of URM students. Levin, Harberler, Walker and Jackson-Boothby (2014) examined the ways in which community college faculty of color construct their understandings of institutional culture by interviewing 34 faculty of color in four community colleges. Faculty of color saw the community college workplace from a different perspective than White faculty. They also viewed the community college as comprised of divided professional worlds where they felt subordinated to the White faculty thus contributing to the fact that their social and cultural identities were suppressed (Levin, Haberler, Walker, & Jackson-Boothby, 2014, p. 64).

Many colleges and universities have publicly affirmed their commitment to increase their student and faculty race and ethnic diversity (Calahan, Perna, Yamahita, Ruiz, & Kranklin, 2016) (Chen, 2017). This affirmation often references an ultimate goal of creating inclusion for all members of their college community (Insight Into Diversity, 2017). Student and faculty race and ethnic diversity is put forward as a strategic objective for colleges and universities and key performance indicators are identified to

foster even more diversity (Association of American Colleges and Universities, 2015). In a survey of 78 colleges and universities identified as benchmark institutions for diversity conducted by Insight into Diversity Magazine, 94% of the institutions reported having embedded diversity and inclusion goals into their college strategic plans (Insight Into Diversity, 2017). Bringing meaning to diversity in higher education has been the focus of much research (Chen, 2017; Kreitz, 2007) but answers to questions about the benefits of a diverse body of faculty to support student success and completion are still unclear (Cervantes, Mai, Morin, Otoo, & Williams, 2017; Hurtado, Milem, Clayton-Pederson, & Allen, 1999; Museus, 2014; Stout, Archie, Cross, & Carman, 2018). Taking affirmative action to increase the number of URM-faculty and staff has been the focus of much discussion in higher education and government (Bowen & Bok, 1998; Chen, 2017). How does faculty diversity impact student graduation, or does it? Is more faculty diversity good for students? Is faculty diversity a subject that administrators should even consider when making hiring choices?

The University of Washington (UW) and the University of North Carolina at Greensboro (UNCG) are two universities that have taken action to diversify their faculty. Both began their initiatives by establishing an executive level diversity officer position to guide the development of an inclusive culture on campus and aggressively recruit qualified URM faculty. The diversity officer capability is a recommended strategy for a campus to more deeply institutionalize its commitment to inclusion (Williams & Wade-Golden, 2008).

UW (2019) developed a Handbook of Best Practices for hiring and retaining a diverse and inclusive faculty across its three campuses. The handbook is supported by an online toolkit of sample materials and provides additional resources for search committees and managers. UW links recruitment to institutional culture. The Handbook

of Best Practices provides guidance on topics such as multi-year planning for hiring, enlarging the pool of applicants, creating and implementing an assessment plan to work against bias, and the importance of ongoing mentoring and support after the search is completed (University of Washington, 2019).

The UNCG College of Arts and Sciences (2019) provides guidance to faculty hiring committees and managers regarding specifics of the recruitment and selection process like creating position advertisements, planning the search, conducting on campus interviews and onboarding the successful candidate. UNCG recommends seeking candidates who are also inclusive in their thinking. The University asks each candidate interviewed to provide a diversity statement reflecting on their understanding of diversity and how they see their work contributing to diversity. UNCG understands that an inclusive culture is not built immediately and must be encouraged over the course of time (University of North Carolina Greensboro, 2019).

Community colleges may find guidance on finding, recruiting, hiring, and retaining a more diverse faculty body by looking at the best practices of the many four-year colleges and universities who are already doing so (Williams & Wade-Golden, 2008; Calahan, Perna, Yamahita, Ruiz, & Kranklin, 2016; Association of American Colleges and Universities, 2015; Egalite & Kisida, 2016). They may also find guidance from professional organizations aligned with teaching disciplines that are calling for a more diverse faculty representation.

The Conference of College Composition and Communication (CCCC) (2019) has published a Statement of Best Practices in Faculty Hiring for Tenure-Track and Non-Tenure-track Positions in Rhetoric and Composition/Writing Studies. This statement included best practices for ensuring a diverse candidate pool and best practices for hiring international candidates. The CCCC notes that a lack of diversity among faculty ranks

often stems from problems in the search and hiring practice (Conference on College Composition and Communication, 2019).

The search for qualified URM candidates will continue to be difficult for all colleges and universities. There are not enough candidates in the pipeline to fill the need for URM faculty (Espinosa, Turk, Taylor, & Chessman, 2019; Levin, Haberler, Walker, & Jackson-Boothby, 2014). Espinosa et al. (2019) reports that racial and ethnic diversity among college faculty still doesn't reflect that of today's college students. They report that between 1996 and 2016 the URM share of undergraduates grew from 29.6% to 45.2%. The URM share of graduate students grew from 20.8% to 32% (Espinosa, Turk, Taylor, & Chessman, 2019). Although the student body is diversifying, college faculty, staff and administrators remain mostly White (Koedel, 2017; McFarland, et al., 2017).

Gender Barriers to College Success

Jill Biden, the former Second Lady and an English professor at Northern Virginia Community College announced in February 2019 that the Biden Foundation is partnering with Achieving the Dream (ATD). Together they are launching a new initiative called "Community College Women Succeed" (Wilson, 2019). This new program is focused on helping adult women learners succeed and complete community college.

Most students attending a postsecondary institution are women (McFarland, et al., 2017). Yet women remain underrepresented in Science, Technology, Engineering, and Mathematics (STEM) fields, are on the losing end of the gender wage gap, and often hit the glass ceiling for executive positions and particularly in four-year colleges and universities.

In 2013 the American Association of University Women released a call to action report titled, *Women in Community Colleges: Access to Success* which highlighted the two major barriers to success for women in college, the limited availability of on-campus

child care and the fact that women remain underrepresented in high-demand, traditionally male fields such as science and technology (St. Rose & Hill, 2013). These issues remain barriers today.

Single Mothers

Cruise, Gault, Suh, and DeMario (2018) report that just 28% of single mothers graduate with a degree or certificate within six years. They note that another 55% leave school before earning a college credential. Single mothers spend an average of nine hours each day on childcare and housework activities. Women students without children spend an average of two hours each day on these tasks. The demands on a single mother leaves less time for them to focus on their coursework, threatens their academic success and puts their financial aid eligibility at risk (Cruise, Gault, Suh, & DeMario, 2018; American Council on Education, 2010; Institute for Womens Policy Research, 2018).

Women who have children often must juggle childcare and other family responsibilities which makes it difficult for them to complete a certificate or degree or transfer to a four-year college. Single and low income mothers are likely to drop out of school for long periods of time due to time and money constraints (St. Rose & Hill, 2013).

On campus childcare can be more affordable for students and is often of a high quality because it is likely to be a child care professional training facility. In 2015, 44% of community colleges, where single mothers are most likely to be enrolled, reported having at least one on-campus or near-campus childcare facility. But in recent years that number has decreased (Cruise, Gault, Suh, & DeMario, 2018).

Single mothers with college degrees are less likely to live in poverty. Earning a college degree is an established pathway out of poverty especially for single women raising children. Over 41% of single mothers with a high school diploma live in poverty

compared to only 13% of single mothers with a bachelor's degree (Institute for Womens Policy Research, 2018). Researchers and practitioners note that greater access to supportive services such as affordable child care, targeted financial aid, and case management would improve a single mother's ability to enter college and persist to obtain a degree (Cruise, Gault, Suh, & DeMario, 2018; St. Rose & Hill, 2013; Wilson, 2019).

Women in STEM

The National Science Board (NSB) has highlighted the persistent shortage of qualified college graduates in STEM fields and in 2015 began to call for the expanding and diversifying the number of students who are entering STEM related courses (National Science Board, 2015). The NSB asks researchers to collect data, "that should enhance our understanding of the factors that influence career pathways, especially for women, underrepresented minorities, veterans, and persons with disabilities" (p. 25).

Gender stereotypes, a lack of information, and on-sight support are barriers to women's participation in STEM and other nontraditional fields in community colleges (St. Rose & Hill, 2013). Despite these barriers, research has noted that recruiting community college women may be the key for addressing the national shortage of STEM professionals in business and industry. Wickersham and Wang (2016) note that community colleges contain an often over-looked supply of women students could help diversify and close the gender gap for baccalaureate recipients in STEM. These researchers suggest that it is important to consider factors outside of the community college and how they influence female students, their vocational choices, and their transfer intent. They note that factors like classroom environment, advising, emotional support, and confidence in their abilities have an important influence on how and why women students, and particularly women with children, move forward. In their study

Wickersham and Wang followed the progress of two community college women who were pursuing STEM certifications. They concluded, “It is the marrying of what occurs inside with what happens outside of college that brings us to a much deeper understanding of how these function and shape female community college students’ intent to transfer” (Wickersham & Wang, 2016, p. 1010). Paying attention to supporting the STEM success of women during their community college experience can strengthen their opportunities for successful transfer to a four-year college or university and eventual attainment of a Baccalaureate degree.

Things have improved in recent years regarding the representation of women in STEM, but disparities still exist. Women now earn more than half of all bachelor’s degrees, half of all professional and doctoral degrees, and 40% of all advanced degrees in science and engineering (STEM). The number of women earning advanced degrees in (STEM) has increased while the number of men earning degrees has declined (McFarland, et al., 2017). While representation of minorities and women in other academic areas is increasing, Koedel (2017) notes that “...the underrepresentation of minority and female professors among faculty overall is driven predominately by a lack of diversity in STEM fields”. Women account for 47.1% -53.2% of faculty in non-STEM fields and only 18.1%-31.1% of faculty in STEM fields (Koedel, 2017, p. 3). Researchers note that despite substantial gains in representational equity, women remain underrepresented in all ranks of the academic hierarchy in the STEM fields and in professor and tenured professor positions in all areas (Koedel, 2017; McFarland, et al., 2017; Glass & Minnotte, 2010). Although women outperform men in college in many respects, they remain substantially underrepresented in the key positions which may lead to higher paying positions. Koedel (2017) postulates that if there are more female and minority professors in non-stem fields female and minority students may be drawn

disproportionately to non-stem fields. This finding reinforces the current diversity structure and may serve to reinforce STEM/non-STEM diversity gaps.

Kodel suggests that bringing more women and minorities into STEM teaching roles would attract more women and URM students to the STEM fields (Koedel, 2017).

Equal Pay for Equal Work

Lai (2017) conducted a study on community college students exploring gender differences in expectations and preferences considered in deciding upon a college business major. Her studies found that men expect higher earnings and are willing to take more risks while women place more emphasis on family. Lai notes that these factors are key contributors to segregation and the gender wage gap in the workplace (Lai, 2017).

Average faculty salaries also vary by gender. The average salary for a full-time instructional faculty member at a degree granting college or university was \$89,200 for males and for \$73,800 for females and the gap is increasing. Between 1995-1996 and 2015-2016 the male-female salary gap increased from \$11,800 to \$18,100 (McFarland, et al., 2017).

A disparity is evident not just in salary but also in the opportunity for employment. Natasha (2018) conducted an audit study by submitting over 2000 applications to 261 hiring decision makers that manipulated the information regarding the applicants' GPA, gender and college major. She found that women benefitted from moderate achievement but not high achievement. She reported that high-achieving men were called back twice as often as high achieving women and that for math majors the rate was 3-1 in favor of high achieving men (Natasha, 2018). Gender bias appears to be held most strongly against high achieving women.

In 2015, 42% of all full-time faculty at degree-granting postsecondary institutions were White males and 35% were White females (McFarland, et al., 2017, p. 255). There

was parity between sexes for Black males and females making up 3% each and with Hispanic males and females with 2% each. Asian males held 6% of faculty positions and Asian females held 4%. While more women held lecturer, instructor, and assistant professor positions, men held more associate professor and full professor positions (p. 255). Times are changing, but in four-year colleges and universities men still hold most senior leadership faculty positions in the U.S. (McFarland, et al., 2017).

Women are well represented among community college campuses. In 2016 women held 57% of community college management positions in the United States. They made up 53% of the instructional staff and 65% of student academic affairs and other educational services staff (American Association of Community Colleges, 2016).

Community colleges provide opportunities for access, opportunity, more research needs to be done to study the relationships that can exist between female students, particularly URM-female students and female faculty members and how those relationships can foster educational success.

Conclusion

Stout et al. (2018) suggests that intentional effort should be made to represent all racial and ethnic diversity groups among higher educational faculty populations. They reported significant findings within the U.S., comparing institutional graduation rates to variation of race and ethnic diversity of faculty teaching at colleges and universities. Student and faculty race and ethnicity and student success are interrelated, and this research sought to investigate the connections that exist between faculty race and ethnic diversity and graduation rates. The Diversity Score Measure developed by Stout et al. (2018) was used to seek further understanding regarding how or if faculty diversity can be quantified and measured.

The MMDLE and CECE models may prove to be useful conceptual lenses through which to examine and illuminate how to cultivate more culturally engaging campus environments that can maximize success among their racially diverse student populations. This research will specifically focus on MMDLE indicator number two, compositional diversity and CECE indicators one, cultural familiarity, and six, humanized educational environments as frameworks for exploring faculty diversity and student graduation, transfer, and drop-out rates.

CHAPTER III: METHODOLOGY

Overview of the Research Problem

Globalization, mobility, and technology are catalysts for a changing society that is growing more diverse (Johansson, 2006; Rice/Kinder Institute for Urban Research, 2018). Student diversity is growing faster than faculty diversity (McClain & Perry, 2017; McFarland, et al., 2017). Research has informed us when students are exposed to a diverse faculty they feel more comfortable and have better outcomes (Hurtado & Guillermo-Wann, 2013; Museus, 2014). There is emerging research that is beginning to explore how student learning outcomes can be influenced by a diverse environment (Stout, Archie, Cross, & Carman, 2018; Hurtado, Alvarado, Guillermo-Wann, Cuellar, & Arellano, 2012; Museus, 2014). There is little research that explores the relationship of faculty diversity to student graduation, transfer, and dropout rates for under-represented minority (URM) students (Stout, Archie, Cross, & Carman, 2018). Given that there is an emerging emphasis placed upon student graduation in public community college, there is a need to explore the relationship between faculty diversity and student graduation rates, transfer, and drop-out rates in the public community college setting.

Operationalization of Theoretical Constructs

This study explored community college faculty racial, ethnic, and gender diversity and its relationship with student graduation, transfer, and drop-out rates. The seven variables examined were: (1) Faculty race and ethnic diversity; (2) Faculty gender diversity; (3) Student race and ethnic diversity; (4) Student gender diversity; (5) Student graduation rates; (6) Student transfer rates; and (7) Student drop-out rates. Student and faculty race and ethnicity refers to race and ethnicity data from established categories defined by the United States Department of Education. These categories are: (1) Non-

resident Alien; (2) Hispanic/Latino; (3) American Indian or Alaska Native; (4) Asian; (5) Black or African American; (6) Native Hawaiian or other Pacific Islander; (7) White; (8) Two or More Races; or (9) Race or Ethnicity Unknown. This research did not address the categories of Non-resident Alien, Two or More Races, or Race or Ethnicity Unknown to maintain statistical significance due to their low frequencies.

These constructs were operationalized by drawing data from the United States Government Integrated Post-Secondary Educational Data System (IPEDS). An open-source, archival data system supported by the National Center for Educational Statistics (NCES), IPEDS collects data from all public and private higher education institutions that accept federal financial aid. The demographic/independent variables used in this study were faculty and student race, ethnicity and student gender. The academic/dependent variables used were graduation, transfer, and drop-out rates. Public community college has been defined as a publicly funded college that provides two-year academic and vocational programs. Graduation has been defined as completion of the academic or vocational program within 150% of continuous enrollment (three years). Diversity has been defined as racial and ethnic variance using racial categories accepted by the U.S Department of Education and used by IPEDS. Underrepresented minorities for both students and faculty are referred to as URMs. Faculty and students who represent non-underrepresented minorities are identified as non-URMs.

Research Purpose and Questions

The purpose of this research study was first to quantify the relationship between faculty diversity and student graduation, transfer, and drop-out rates in public community colleges. This research then collected data from community college students and presidents regarding their perceptions of the relationship between faculty diversity and student graduation, transfer and drop-out rates. For the purpose of this study the

independent variables used were race, ethnicity and gender. The dependent variables used were student graduation rates, transfer rates, and drop-out rates.

Quantitative Research Questions

1. Is there a difference between graduation, transfer, and drop-out rates of URM students and non-URM students in public community college?
 - A. Is there a difference between the graduation rates of URM students and non-URM students?
 - B. Is there a difference between the transfer rates of URM students and non-URM students?
 - C. Is there a difference between the drop-outs rates of URM students and non-URM students?
2. Is there a difference between the graduation rates of male and female students in public community colleges?
 - A. Is there a difference in the graduation rates of male and female students?
 - B. Is there a difference in the transfer rates of male and female students?
 - C. Is there a difference in the drop-out rates of male and female students?
3. To what degree is there diversity variation among community college faculty?
 - A. To what degree is there race and ethnic variation among faculty?
 - B. To what degree is there gender variation (males & females) among faculty?
4. Is there a relationship between faculty diversity and student graduation rates in public community college?
 - A. Is there a relationship between faculty race and ethnic diversity and student graduation rates?

- B. Is there a relationship between faculty gender diversity and student graduation rates?
- 5. Is there a relationship between faculty diversity and student transfer rates in public community college?
 - A. Is there a relationship between faculty race and ethnic diversity and student transfer rates?
 - B. Is there a relationship between faculty gender diversity and student transfer rates?
- 6. Is there a relationship between faculty diversity and student drop-out rates?
 - A. Is there a relationship between faculty race and ethnic diversity and student drop-out rates?
 - B. Is there a relationship between faculty gender diversity and student drop-out rates?

Qualitative Research Questions

- 7. How do community college presidents perceive the relationship, if any, between faculty diversity and student graduation, transfer, and drop-out rates?
- 8. How do community college students perceive the relationship, if any, between faculty diversity and student graduation, transfer, and drop-out rates?

Research Design

This study sought to identify if there is a relationship between faculty diversity and student graduation rates in public community college settings. An explanatory sequential mixed methods design was used involving collecting quantitative data first and then supporting the quantitative results with in-depth qualitative data. In the first quantitative phase of the study, faculty and student race and ethnicity data was collected from IPEDS a component of the NCES to assess whether faculty race and ethnicity relate

to student graduation, transfer, and drop-out rates in the community college setting. In the second quantitative phase of the study, faculty and student gender data was collected from IPEDS to assess whether faculty gender relates to student graduation, transfer, and drop-out rates in the community college setting.

A qualitative study has been conducted as a follow-up to the quantitative results in order to help explain the quantitative results. This follow-up explores perceptions regarding the relationships, if any, between faculty diversity and student graduation rates with (1) fifteen former community college students and (2) six college presidents all selected from community colleges in the Texas Gulf Coast geographic area. This exploration used the same questions posed in the same manner to each president and the same questions posed in the same manner to each student focus group although the questions sometimes varied between the president and student groups to maintain relevance with the population being investigated.

Population and Sample

Quantitative

The population researched in this study was public community colleges within the United States boundaries and territories. This population included colleges that offer two-year academic and vocational programs. The community colleges were publicly funded and accept federal financial assistance. This population included community colleges with large student populations and community colleges with small student populations. They were in urban and rural settings. Some colleges may have three or four-year vocational programs such as nursing or industrial technology areas in addition to one and two-year programs.

This research conducted a stratified random sampling of community colleges from eight of the nine IPEDS geographical reporting regions (N=120). Data submitted

to IPEDS by the participant colleges for the 2017 academic year, the most recent academic year for which data was available, was used. The purpose of this sampling was to select colleges that were representative of the broad national spectrum of public community colleges. To narrow the sample, the selected colleges had the words ‘Community College’ as part of their official title.

This study randomly sampled from eight of the nine geographical regions, as reported to IPEDS. No schools were sampled from the Outlying Areas region, as the region contained no schools that met the search criteria. The search was limited to two-year public degree granting public community colleges (n = 120). The nine academic districts used by IPEDS are as follows on Table 3.1.

Table 3.1

IPEDS Regions and States Included in Each Region

IPEDS Region – State ID
New England: CT, ME, MA, NH, RI, VT
Mid-East: DE, DC, MD, NJ, NY, PA
Great Lakes: IL, IN, MI, OH, WI
Plains: IA, KS, MN, MO, NE, NS, SD
Southeast: AL, AR, FL, GA, KY, LA, MS, NC, SC, TN, VA, WV
Southwest: AZ, NM, OK, TX
Rocky Mountains: CO, ID, MT, UT, WY
Far West: AK, CA, HI, NV, OR, WA
Outlying Areas: AS, FM, GU, MH, MP, PR, PW, VI

The following steps were used for pulling quantitative IPEDS data from each of the colleges sampled from the IPED's statistical data site.

IPEDS <https://nces.ed.gov/ipeds/use-the-data>

1. Use the Data ►
2. Look Up an Institution ►
3. Use final release data – continue ►
4. Fill in institution number – select ►
5. Check Box next to college ID & name and continue ►
6. Click on College Name ►
7. Choose Reported Data ►
8. Select Human Resources ►
9. Go to: Part A3 Total Number of Full-time Instructional Staff as of November 1, 2016 (one table)
10. Enter data into SPSS Spreadsheet
11. When finished use back arrow to return to College
12. Select Reported Data ►
13. Select Graduation Rates ►
14. Go to third set of tables: Transfers/exclusions
15. Enter cohort data (first column) for male and female students
16. Enter Total Completers within 150% (second column) for males and females
17. Enter Total Transfer-Out Students (Third Column) for males and females
18. Enter data from 'No Longer Enrolled' (Last Column) for both men and women
19. Click 'Change Institution' at top of page ►
20. Click Change, Enter institution number in text box ►
21. Click Search ►

22. Go to step 8 and repeat

Five of the randomly selected schools did not report transfer rates, therefore these colleges were eliminated from this sample and an alternative school from the same IPEDS region was randomly selected and substituted. By choosing to use stratified random sampling across the pre-selected demographic categories, the research goal was to be able to generalize the findings across the entire U.S. Higher Education platform. Institutions randomly chosen for this sample ranged from colleges within large multi-campus/multi-college systems to small single campus colleges. The range of faculty per campus was from 5 to 579 with a mean of 123.1 ($d = 8.6$) faculty members per campus. Campus locations ranged from large, urban, downtown locations to rural and small-town colleges. Tables 3.2 and 3.3 provide additional information about the college sample.

Table 3.2

College Sample: Faculty

	Faculty		American Indian/Alaska		Native Hawaiian/ Pacific		
	<u>Total</u>	<u>Hispanic</u>	<u>Native</u>	<u>Asian</u>	<u>Black</u>	<u>Islander</u>	<u>White</u>
Minimum	5	0	0	0	0	0	4
Maximum	579	65	17	56	94	17	462
Mean	123.10	5.55	.68	4.65	9.00	.24	101.39
Median	87.00	1.50	.00	2.00	3.00	.00	73.00
Std. Dev.	107.41	11.68	1.78	8.41	16.28	1.59	84.23

Table 3.3

Faculty Sample: Gender

	<u>Total Male/Female</u>		<u>Male</u>		<u>Female</u>	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Total	14772	100	6443	43.6	8299	56.2
White	12167	100	5198	42.7	6969	57.3
URM	2415	100	1075	44.5	1340	55.5

The range of students per college was from 11 to 4603 with a mean of 819.3 (d = 738.3) students per campus. Campus locations ranged from large, urban, downtown locations to rural and small-town colleges. Tables 3.4 and 3.5 provide additional information about the faculty sample.

Table 3.4

College Sample: Student

	<u>Student</u>		<u>American</u>		<u>Native</u>		
	<u>Total</u>	<u>Hispanic</u>	<u>Indian/Alaska</u>	<u>Asian</u>	<u>Black</u>	<u>Hawaiian/ Pacific</u>	<u>White</u>
Minimum	11	0	0	0	0	0	0
Maximum	4603	1368	214	348	883	42	2616
Mean	819.3	138.30	8.28	31.03	122.00	2.31	454.61
Median	521.5	39.50	3.00	8.00	56.50	1.00	346.00
Std. Dev.	738.33	213.18	24.71	56.16	176.37	6.48	406.66

Table 3.5

Student Sample Gender

	<u>Total Male/Female</u>		<u>Male</u>		<u>Female</u>	
	n	%	n	%	n	%
Total	98316	100	49175	50.1	49028	49.9
Non-URM	54553	100	27511	50.4	27042	49.6
URM	36250	100	17680	48.8	18570	51.2

Upon receiving institutional review board approval IPEDS was queried to determine the number of qualifying schools ($n = 1438$). Data was then extracted from IPEDS, and institutions that had missing data were contacted to obtain accurate data wherever possible. Data was then cleaned, computed, and analyzed by use of SPSS software.

This study-maintained uniformity with IPEDS by utilizing their existing classifications established for postsecondary schools. This research employed a broad category of URM to broadly cover all persons of color who are currently underrepresented in faculty positions (Taylor, Apprey, Hill, McGrann, & Jianping, 2010). For examining statistical difference, the racial categories of students were merged into an URM ($n = 28,792$) and non-URM ($n = 54,653$) categorical breakdown.

Qualitative

Two community college populations were sampled in this qualitative study: 1). Public community college administrators who currently hold or have held the position of president and 2). Former community college students. The purpose of these selections was to identify college presidents and students who were representative of the broader public community college spectrum.

Using sampling with purposeful selection process, six community college presidents were selected to be interviewed ($n = 6$). To narrow the selection, the participants had at least 10 years of community college experience, were currently employed, and were available and willing to participate in the study. This researcher used presidents with at least 10 years of community college experience in order to ensure that the selected candidates were able to share their perspectives about changes in the policies and the environment over time. The interview subjects had the role of college president in at least one of their previous or current positions. This ensured that the participants had responsibility over a broad range of community colleges roles and areas that included academics, student services, administration, and finance. The interviews were conducted in each president's office at their college locations.

Using sampling with purposeful selection process, fifteen ($n = 15$) former community college students were selected to be interviewed. To narrow the selection, the participants were former students who had attended a public community college within the past two years from the start date of the study and were willing to participate in the study.

Seven male and eight female students who were currently attending a local Texas Gulf Coast four-year university were interviewed. All the students had previously attended a public community college within the same region. Five local community colleges were represented. Four of the students identified as White, eight as Hispanic/Latino, one African American, one Asian, and one Native American. See table 3.6 for student sample demographic

Table 3.6

Student Subject Gender/Ethnicity

<u>Race/Ethnicity</u>	Male	<u>Female</u>	<u>Total</u>
White	1	3	4
Hispanic	4	4	8
Black	1	0	1
Asian	1	0	1
Native American	0	1	1
Total	7	8	15

Instrumentation

Data used for the quantitative study was drawn from publicly available, archival data that is collected and stored in the federal Integrated Post-secondary Educational Data System (IPEDS). A system of interrelated surveys and data reports that are collected bi-annually by the U.S. National Center for Education Statistics, IPEDS gathers information from every degree granting college, university, technical, and vocational program that receives federal financial aid funding, collects enrollment, faculty, student, and administrative data including student graduation, transfer, and drop-out rates from its member institutions, and is supported by the National Center for Educational Statistics (McFarland, et al., 2017). The National Center for Educational Statistics is a federally funded agency established by the federal government to make educational statistical data available to the public for research and to promote transparency. An individual or institutional account which is available free of charge is helpful when using IPEDS data.

Data Collection Procedures

Quantitative

After receiving CPHS approval for the research project, IPEDS was queried to collect faculty and student race and ethnicity data and student graduation, transfer, and drop-out rate data. Data reported to IPEDS for the year 2017, the most recent year available, was retrieved. This researcher attempted to complete any missing data by reviewing websites of colleges that have reported incomplete data to IPEDS. Subsequently, any college still with incomplete or missing data was removed from the sample and another randomly drawn college from the same geographical region was used. After the data was extracted it was cleaned and computed using SPSS.

This research maintained uniformity with IPEDS by utilizing their existing classifications established for postsecondary community college schools. This research limited data retrieved to two-year public institutions although some colleges may have some specialized three or four year programs in specific vocational areas such as nursing and technology in addition to one and two-year offerings. Additionally, this research further limited the definition of completion to those who have graduated within 150 percent of continuous enrollment (three years for most associate degrees). This study limited its definition of ethnic diversity to the standardized racial categories and employed breakdowns reported in IPEDS and found in archival data. Initially, this research employed an URM/non-URM categorization and followed-up with a more detailed ethnic breakdown. This study employed a broad category of URM to cover all persons of color who are currently underrepresented in faculty positions. For examination of statistical difference, this study took the racial categories of students and merged them into an URM ($N = 26,250$) and non-URM ($N = 54,553$) categorical breakdown.

Qualitative

Community college presidents and community college students who were selected and were willing to be interviewed were provided information regarding the intent of the research study. The participants represented different community college organizations and represented a variety of races or ethnicities. The subjects were asked to sign an informed consent form to participate in the study. Conducting interviews was an appropriate method for this study because they provided the necessary structure to collect a substantial amount of data while capitalizing on an authentic trust relationship with the participants. Solomon and Flores (2001) propose that authentic trust is the best type of relationship in a professional setting because it is necessary to understand both the risks and the opportunities available in the trusting relationship. The participants were asked to select a pseudonym to use during the interview to protect their identities and reduce the potential for a conflict of interest. Data was collected through semi-structured interviews that lasted from 45 to 60 minutes. Open ended questions were used to generate the detailed data needed to gain an understanding about participant perspectives. The interviews were recorded and encrypted using both my iPhone and iPad in order to ensure a quality recording. The interviews were then transcribed by hand into a computer word file for review and analysis. Interview questions used for presidents are listed in Appendix C.

Five questions were used for interviewing former community college students used for this study. The questions are listed in Appendix B.

Data Analysis

Quantitative

To answer quantitative research questions one through four, data was collected from IPEDS then cleaned, computed, and analyzed by using SPSS software.

Research question one was answered by computing the percentages of student racial/ethnic groups within each college to establish a mean score. A paired sample *t* test was used to evaluate if there was a difference between the graduation, transfer, and drop-out rates of URM and non-URM students. To ensure that the sample was representative, the first research question was explored as a test of the sampling procedure. Nationally URM students graduate at a lower rate than non-URM students (Espinosa, Turk, Taylor, & Chessman, 2019; Community College Research Center, 2017; Aud, et al., 2011). This study shows that the graduation rates of URM students in this sample was significantly lower than the graduation rates of non-URM students which provided greater confidence that the stratified sample was representative. The results indicated that the mean number of non-URM students graduating was significantly greater than the mean number of URM students graduating. A significance value of .05 was used for this study.

Research question two was answered using the same process used for research question one. Gender was used in place of race and ethnicity. A paired sample *t* test was used to evaluate if there is a difference between the graduation, transfer, and drop-out rates of male and female students. To ensure that the sample was representative, the second research question was explored as a test of the sampling procedure. Nationally, male students graduate at a lower rate than female students (McFarland, et al., 2017). The results indicated that the mean number of females graduating was significantly greater than the mean number of males graduating. This study showed that the graduation rates of male students in this sample was significantly lower than the graduation rates of female students. These results indicate that the sample is representative of the population being studied. A significance value of .05 has been used for this study.

Research question three was answered by creating two diversity scores for each college used in the sample showing their degree of overall faculty ethnic and gender

diversity. A Diversity Score was created to represent ethnic diversity and a separate diversity score was created to represent faculty gender diversity. The Diversity Score was created by using several steps. First, the percent of faculty in each ethnic group or gender group was calculated by dividing the number of faculty in each group by the total number of faculty at each institution. Using percentages allowed for differences in school size between institutions. After the percentages were calculated the standard deviation of faculty percentages for race, ethnicity, and gender were calculated for each institution. This provided, on average, how much the faculty percentages differ across racial, ethnic, and gender groups within each institution. For the race, ethnic, and gender Diversity Score to be more readily understandable, this researcher subtracted the calculated standard deviation away from one and multiplied the result by 100, rounding to the nearest whole number, resulting in a possible range of Diversity Scores from 55-100.

The Diversity Scores represent the distribution of faculty by ethnicity and gender within each community college selected. For the racial/ethnic Diversity Score, colleges that had a more equal distribution of faculty across the seven racial/ethnic groups measured in IPEDS had earned a higher Diversity Score. A higher Diversity Score indicates that the faculty is more racially and ethnically diverse. Lower Diversity Scores indicate less faculty race and ethnic diversity at a community college. A college that has an equal distribution across the seven racial/ethnic groups utilized earned a Diversity Score of 100. A college comprised solely of faculty of a single ethnic group earned the lowest score of 55. For the gender Diversity Score, colleges that had a more equal distribution of faculty across male and female groups measured in IPEDS earned a higher Diversity Score. A higher Diversity Score indicated that the faculty is more gender diverse. Lower diversity scores indicated less faculty gender diversity at a community

college. A college that had an equal distribution across male and female groups earned a diversity score of 100. A college comprised solely of a single gender (male or female) would earn the lowest score of 55.

To answer question four the faculty Diversity Scores were used to determine if there was a relationship between faculty diversity (race/ethnicity and gender) and student graduation rates. The number of students in each race and ethnic group at each institution was converted to a percentage to account for differences in school size. A Pearson product-moment correlations analysis was run to examine the relationships between the Diversity Scores (race/ethnicity and gender) and student graduation, transfer and drop-out rates. A significance value of .05 has been used for this study.

The same process used to answer question four was used to answer question five regarding the relationship of faculty diversity with student transfer rates and to answer question six regarding student drop-out rates.

Qualitative

In order to answer qualitative research question seven this researcher purposefully selected six ($n = 6$) college presidents to demonstrate a high level or variable in regard to their perceptions of their community college experience.

In order to answer qualitative research question eight, this researcher purposefully selected 15 former community college students. Students representing different races, ethnicities, and gender diversity were selected to demonstrate a high level or variable in regard to their perceptions of their community college experience. Before each interview the examiner reviewed the purpose of the research and informed participants that the focus group discussion would be recorded. The student focus groups lasted from 15-30 minutes each.

Both iPhone and iPad digital recording applications were used to provide a backup to the single recording. Each participant was given the opportunity to provide any follow-up information, ask any questions, or continue their train of thought regarding the process.

Semi-structured interviews and open-ended questions provided the space for a variety of answers and observations during the interview. In order to make meaning of the data, an open coding process that focused on words and phrases was utilized to identify participants' thoughts, meanings, and ideas. Open coding is the process of breaking down, examining, comparing, conceptualizing, and categorizing data when engaging in a Grounded Theory analysis (Strauss & Corbin, 1990). A constant comparative method was used to collect the participant's words and phrases to identify common themes and to expose concepts that were used to understand the perception of community college administrators who have been practicing in the field (Glaser & Strauss, 1967). The constant comparative method is a method for analyzing data in order to develop a grounded theory. Glaser and Strauss (1967) suggest that the comparative analytical method can be applied to social units of any size. The process, according to Glaser and Strauss (1967, pp. 28-52) involves identifying a phenomenon, object, or event or setting of interest. After a few local principals, structural, or process features are identified; this researcher attempted to make decisions regarding initial collection based on an initial understanding of the phenomenon and make meaning of the community college diversity experience.

A phenomenological reduction process was used to define the essence and make meaning of the data that was obtained. The phenomenological reduction process is an analysis regimen designed to transform the researcher into a phenomenologist by using a species of meditation that requires rigorous, persistent effort to liberate oneself from

preconceived knowledge and bias (Moustakas, 1994; Husserl, 1965). Data was analyzed and classified to identify common themes in the attempt to understand the lived experiences of the interview subjects. Bracketing was used to unpack the phenomena as it is perceived by each participant. Bracketing is the process of setting aside personal experiences, biases, and preconceived notions about the research topic in order to understand the views of the participants instead of manipulating or trying to make their views fit with the researcher's views (Farina, 2014). Bracketing also involves setting aside the researcher's prior knowledge, findings, and research in order to focus on the data currently being collected (Farina, 2014; Creswell, 2007). Exploratory comparisons are critical in finding the similarities and differences between individuals, groups or incidents. Data analysis and interpretation in grounded theory requires that the researcher begin the coding process soon after the first piece of data is collected and examined. The first pieces of data will serve as a foundation for further data collection and analysis (Corbin & Strauss, 2008; Creswell, 1998).

Ongoing peer and instructor review were utilized to gather feedback and refine the study. Responses were triangulated across participants and cross-referenced to promote validity.

Throughout this study this researcher constantly reflected on my potential for bias and took active steps to minimize personal bias by using a process of journaling to record observations, notes, definitions, codes, and any additional information that could add to the meaning of the observations and interviews.

Researcher Identity

This doctoral program has been a catalyst for developing knowledge of the diversity and inclusion phenomena and this researcher has used it as a backdrop for learning and embracing the language of inclusion. This knowledge plus a background

with special populations and mental health has helped me to develop questions and strategies that elicit thoughtful and straight forward responses. Over 25 years of professional conflict resolution experiences and a strong philosophy regarding how people should be engaged and treated has enabled me to look past negative information and usually promote the positive aspects of inclusion. I know I can sometime elicit action through the force of my personality or position. To address this concern presidents have been selected whom I believe gave thoughtful, honest, and straightforward feedback.

Privacy and Ethical Considerations

CPHS approval was obtained before beginning this study. All college names, interviewees, and focus group participants are anonymous. As the IPEDS data are open source no consent was needed for use. Interview participants were given the opportunity to select a pseudonym that was used to identify their responses. All human subject participants were asked to sign an informed consent form before being interviewed. All quantitative and qualitative data has been stored on a computer hard drive and password protected for security. All data will be destroyed after three years from the conclusion of this study.

Conclusion

Historically low graduation rates for URM students have become a focal point for educational, community, and political leaders across the United States. This mixed methods study sought to examine the relationship between faculty diversity and student graduation rates in public community colleges. It was conducted to address the need for additional insight regarding how faculty diversity can be viewed and managed to improve programs and services and promote success for public community college students, particularly URM students.

CHAPTER IV:

RESULTS

The purpose of this mixed methods research study was to quantify the relationship between faculty diversity and student graduation, transfer, and drop-out rates in the public community college and to interview community college students and presidents regarding their perception, if any, of the relationship between faculty diversity and student graduation, transfer, and drop-out rates in their community college experience. This chapter outlines the detailed findings of the data collected and analyzed from the 120 institutions, 15 community college students and 6 community college presidents selected in this study.

Quantitative Research Questions

Research Question 1

Is there a difference between graduation, transfer, and drop-out rates of Underrepresented Minority (URM) students and non-URM students in public community college?

- A. Is there a difference between the graduation rates of URM students and non-URM students?*
- B. Is there a difference between the transfer rates of URM students and non-URM students?*
- C. Is there a difference between the drop-outs rates of URM students and non-URM students?*

In order to answer question one, a series of paired-sample *t* tests were used to conduct a matched-subject design with no intervention analysis. Total non-URM students and total URM students were the two variables used for each sub-question for

each participant college ($n = 120$). The primary question was whether the mean difference rates between non-URM students and URM students differed significantly from zero. The results indicate that there is a significant difference between graduation, transfer, and drop-out rates of URM students and non-URM students.

A paired-sample t test was conducted to determine if there was a difference between the graduation rates of URM students and non-URM students in public community college. The results indicated that the mean for total non-URM graduates ($M = 123.97$, $SD = 110.58$) was significantly greater than the mean for total URM graduates ($M = 52.08$, $SD = 82.34$), $t(119) = 7.52$, $p < .05$. The standardized effect size index, d , was .69 indicating a medium to large effect. The 95% confidence level interval for the mean difference between the two ratings was 52.93 to 90.84.

A paired-sample t test was then conducted to determine if there was a difference between the transfer rates of URM students and non-URM students in public community college. The results indicated that the mean for total non-URM transfers ($M = 87$, $SD = 84.88$) was significantly greater than the mean for total URM transfers ($M = 54.47$, $SD = 63.11$), $t(119) = 5.12$, $p < .05$. The standardized effect size index, d , was .47 indicating a medium effect. The 95% confidence level interval for the mean difference between the two ratings was 19.95 to 45.12. URM students do not transfer at the same frequency as non-URM students.

A paired-sample t test was conducted to determine if there was a difference between the drop-out rates of URM students and non-URM students in public community college. The results indicated that the mean for total non-URM drop-outs ($M = 182.86$, $SD = 178.62$) was significantly greater than the mean for total URM drop-outs ($M = 110.07$, $SD = 178.62$), $t(119) = 4.54$, $p < .05$. The standardized effect size index, d , was

.41 indicating a medium effect size. The 95% confidence level interval for the mean difference between the two ratings was 41.04 to 104.54.

Research Question 2

Is there a difference between the graduation, transfer, and drop-out rates of male and female students in public community colleges?

- A. Is there a difference in the graduation rates of male and female students?*
- B. Is there a difference in the transfer rates of male and female students?*
- C. Is there a difference in the drop-out rates of male and female students?*

In order to answer question two. A series of paired-sample t tests were used to conduct a matched-subject design with no intervention analysis. Two variables, male and female, were used for each sub-question for each participant college ($n = 120$). The primary question was whether the mean difference rates between non-URM students and URM students differed significantly from zero. The results indicate that there is a significant difference between graduation and drop-out rates of male and female students in public community colleges. The results also indicate that there was no difference found between the transfer rates of male and female students.

A paired-sample t test was conducted to determine if there was a difference between the graduation rates of male and female students in public community college. The results indicated that the mean for total male graduates ($M = 87.38$, $SD = 80.62$) was significantly lower than the mean for total female graduates ($M = 101.16$, $SD = 100.11$), $t(119) = 3.58$, $p < .05$. The standardized effect size index, d , was .33 indicating a small to medium effect size. The 95% confidence level interval for the mean difference between the two ratings was 21.38 to 6.16.

A paired-sample t test was conducted to determine if there was a difference between the transfer rates of male and female students in public community colleges.

The results indicated that there was not a significant difference in the mean for male transfer students ($M = 75.55$, $SD = 74.52$) and the mean for female transfer students ($M = 78.37$, $SD = 71.88$, $t(119) = 1.48$, $p > .05$). The standardized effect size index, d , was .13 indicating a small effect size. The 95% confidence level interval for the mean difference between the two ratings was 6.58 to .95.

A paired-sample t test was conducted to determine if there was a difference between the drop-out rates of male and female students in public community college. The results indicated that the mean for total male drop-outs ($M = 191.93$, $SD = 201.76$) was significantly higher than the mean for female drop-outs ($M = 166.74$, $SD = 163.59$), $t(119) = 4.14$, $p < .05$. The standardized effect size index, d , was .38 indicating a small to medium effect size. The 95% confidence level interval for the mean difference between the two ratings was 13.14 to 37.23.

Research Question 3

To what degree is there diversity variation among community college faculty?

The Diversity Score represents the distribution of faculty by ethnicity within each community college in the sample. Community colleges that have a more equal distribution of faculty across the six racial/ethnic groups measured in IPEDS earn a higher Diversity Score. The higher the Diversity Score, the more diverse the faculty is. Lower Diversity Scores indicate less diversity at the institution. A community college that had equal distribution across the six racial/ethnic groups would earn a racial/ethnic Diversity Score of 100, whereas a college comprised solely of faculty of a single race/ethnic group would earn the lowest score of 55.

This research also created a gender Diversity Score for each institution. This score reflected the variance between the number of male and female faculty at each college.

The racial ethnic Diversity Score was created in two steps. First, the percent of faculty in each racial/ethnic group was calculated by dividing the number of faculty in each group by the total number of faculty at each institution. Using percentages allowed for differences in school size between institutions. Second, using the percentages found the standard deviation of faculty percentages was calculated for each institution. This score was used to show how much the faculty percentages differ across racial/ethnic groups within each community college in the sample. For the Diversity Score to be more readily understandable, the calculated standard deviation was subtracted from one and multiplied by 100, rounding to the nearest whole number. This process resulted resulting in a possible range of Diversity Scores from 55-100.

The range of the racial/ethnic Diversity Scores in this sample was 59 to 89, with a mean of 66.06($SD = 5.44$) across all institutions.

The range of the gender Diversity Scores in this sample was 58 to 100, with a mean of 87.48 ($SD = 8.59$) across all institutions.

Research Question 4

Is there a relationship between faculty diversity and student graduation rates in public community college?

- A. Is there a relationship between faculty race and ethnic diversity and student graduation rates?*
- B. Is there a relationship between faculty gender diversity and student graduation rates?*

Race/Ethnicity

The number of graduates in each ethnic/racial group at each community college was converted to a percentage to account for differences in school size, and Pearson product-moment correlations were run to examine the overall relationship between the

Diversity Score and student graduation rates. Correlations ranged from $r = .144$ to $r = .783$. Six of the correlations were statistically significant at $p \leq .01$. All the correlations were positive with the exception of the relationship between Diversity Score and percentage of White graduates. The relationship between the Diversity Score and Native Hawaiian and Pacific Islander graduates was found not significant with a correlation of $r = .144$ and a p score of .116. Table 4.1 displays all the correlations and p values for the analysis.

A second correlation was run to explore the overall relationship between URM faculty and URM graduates. The result was a strong and positive relationship $r = .787$, $p < .01$.

Table 4.1

Correlations between Race/Ethnic Score and Student Graduation Rate

Group	r	p
URM graduates	.783	.000
White	-.715	.000
Hispanic/Latino	.380	.000
Asian	.437	.000
Native Hawaiian/Pacific Islander	.144	.116
American Indian/Alaska Native	.350	.000
Black	.539	.000

In order to explore the relationship between faculty diversity and student graduation at a finer level, a third correlation matrix was constructed. It examined the relationships between percentages of faculty of each racial/ethnic group and student graduation rate by ethnicity/race. The magnitude of the significant correlations ranged from $r = .206$ to $r = .921$. Results of the Pearson product moment correlations test showed statistically significant relationships between 20 of the 36 correlations with at least $p < .05$. Table 4.2 displays the results of the correlation matrix analysis. All but one of the racial/ethnic graduation rates showed the highest strong and positive correlation with the faculty who were of their own racial/ethnic group. Native Hawaiian/Pacific Islanders showed the highest correlation rate with Asian Faculty $r = .368, p < .01$.

Table 4.2

Correlations between Faculty and Student Graduation by Race/Ethnicity

Faculty	<u>Graduates</u>					
	Hispanic /Latino	American Indian/ Alaska Native	Asian	Native Hawaiian/ Pacific Islander	Black/ African American	White
Hispanic/ Latino	.614**	.456**	.143	.100	.044	-.518**
American Indian/ Alaska Native	-.004	.921**	.002	-.027	.206*	-.248**
Asian	.118	.065	.796**	.368**	.030	-.387**
Native Hawaiian/ Pacific Islander	-.040	.459**	.560**	.366**	.081	-.287**
Black/ African American	-.006	-.053	.041	-.071	.843**	-.452**
White	-.277**	-.303**	-.410**	-.155	-.645**	.698**

* $p < .05$. ** $p < .01$.

Gender

The number of male and female graduates at each community college was converted to a percentage to account for differences in school size, and Pearson product-moment correlations were run to examine the overall relationship between the Gender Diversity Score and student graduation rates. The relationship between both male and

female graduates and the Gender Diversity Score were not found to be significant. The relationship between the Gender Diversity Score and male graduation rates was not significant with a correlation of $r = -.061$, $p = .508$. The relationship between the Gender Diversity Score and female graduation rates was not significant with a correlation of $r = .019$, $p = .835$. Table 4.3 displays all the correlations and p values for the analysis.

Table 4.3

Correlations between Gender Diversity Score and Student Graduation Rate

Group	r	p
Male	-.061	.508
Female	.019	.835

Research Question 5

Is there a relationship between faculty diversity and student transfer rates in public community college?

- A. *Is there a relationship between faculty race and ethnic diversity and student transfer rates?*
- B. *Is there a relationship between faculty gender diversity and student transfer rates?*

Race/Ethnicity

The number of transfer students in each racial/ethnic group at each community college was converted to a percentage to account for differences in school size, and Pearson product-moment correlations were run to examine the overall relationship between the Diversity Score and student transfer rates. Correlations ranged from $r = .213$ to $r = .713$. All seven of the correlations were statistically significant at $p \leq .05$ and six

were statistically significant at $p \leq .01$. All of the correlations were positive except for the relationship between Diversity Score and percentage of White graduates. The relationship between the Diversity Score and Native Hawaiian and Pacific Islander graduates was significant with a correlation of $r = .213, p \leq .05$. Table 4.4 displays all the correlations and p values for the analysis.

A second correlation was run to explore the overall relationship between URM faculty and URM transfers. The result was a strong and positive relationship $r = .738, p < .01$.

Table 4.4

Correlations between Race/Ethnic Diversity Score and Student Transfer Rates

Group	r	p
URM graduates	.713	.000
White	-.604	.000
Hispanic/Latino	.374	.000
Asian	.380	.000
Native Hawaiian/Pacific Islander	.213	.020
American Indian/Alaska Native	.365	.000
Black	.311	.001

In order to explore the relationship between faculty diversity and student transfer rates at a finer level a third correlation matrix was constructed, examining the relationships between percentages of faculty of each ethnic/racial group and student transfer rate by ethnicity/race. Results of the Pearson correlations showed statistically

significant relationships between 21 of the 36 correlations with at least $p < .05$. The magnitude of the significant correlations ranged from $r = .244$ to $r = .909$. Table 4.5 displays the results of the correlation matrix analysis. Five racial/ethnic group transfer rates showed the highest strong and positive correlation with the faculty who were of their own ethnic/racial group. The Native Hawaiian/ Pacific Islander group showed the same relation with Asian faculty as with Native Hawaiian/ Pacific Islander faculty $r = .686, p < .01$.

Table 4.5

Correlations between Faculty and Student Transfer Rate by Ethnicity/Race

Faculty	<u>Transfers</u>					
	Hispanic /Latino	American Indian/ Alaska Native	Asian	Native Hawaiian/ Pacific Islander	Black/ African American	White
Hispanic/ Latino	.659**	.483**	.135	-.005	-.193*	-.400**
American Indian/ Alaska Native	-.005	.909**	-.060	.034	-.102	-.235**
Asian	.141	.097	.651**	.686**	-.023	-.332**
Native Hawaiian/ Pacific Islander	-.061	.482**	.390**	.686**	-.103	-.251**
Black/ African American	-.034	-.075	.084	-.082	.755**	-.420**
White	-.270**	-.316**	-.349**	-.244**	-.407**	.594**

* $p < .05$. ** $p < .01$.

Gender

The number of male and the number of female transfers at each community college was converted to a percentage to account for differences in school size, and Pearson product-moment correlations were run to examine the overall relationship between the gender diversity score and student transfer rates. The relationships between

both male and female transfer students and the gender diversity score were not found to be significant. The relationship between the gender diversity score and male transfer rates was not significant with a correlation of $r = .109$, $p = .205$. The relationship between the gender diversity score and female transfer rates was not significant with a correlation of $r = -.110$, $p = .232$. Table 4.6 displays the correlations and p values for the analysis.

Table 4.6

Correlations between Gender Diversity Score and Student Transfer Rate

Group	r	p
Male	.209	.235
Female	-.110	.232

Research Question 6

Is there a relationship between faculty diversity and student drop-out rates?

- A. *Is there a relationship between faculty race and ethnic diversity and student drop-out rates?*
- B. *Is there a relationship between faculty gender diversity and student drop-out rates?*

Race/Ethnicity

The number of dropouts in each ethnic/racial group at each community college was converted to a percentage to account for differences in school size, and Pearson product-moment correlations were run to examine the overall relationship between the Diversity Score and student drop-out rates. Significant correlations ranged from $r = .225$ to $r = .769$. Six of the correlations were statistically significant at $p \leq .01$. The correlation

between the race/ethnicity Diversity Score and Native Hawaiian/Pacific Islanders was significant at $p \leq .05$. All of the correlations were positive with the exception of the relationship between Diversity Score and percentage of White dropouts. Table 4.7 displays the results of the correlation matrix analysis.

A second correlation was run to explore the overall relationship between URM faculty and URM drop-outs. The result was a strong and positive relationship $r = .745$, $p < .01$.

Table 4.7

Overall Correlations between Race/Ethnic Diversity Score and Student Drop-out Rate

Group	r	p
URM graduates	.769	.000
White	-.762	.000
Hispanic/Latino	.372	.000
Asian	.356	.000
Native Hawaiian/Pacific Islander	.225	.013
American Indian/Alaska Native	.353	.000
Black	.416	.000

In order to explore the relationship between faculty diversity and student drop-out rates at a finer level, a third correlation matrix was constructed examining the relationships between percentages of faculty of each ethnic/racial group and student drop-out rate by ethnicity/race. The magnitude of the significant correlations ranged from $r = .253$ to $r = .912$. Results of the Pearson correlations showed statistically significant

relationships between 20 of the 36 correlations with at least $p < .05$. Table 4.8 displays the results of the correlation matrix analysis. All racial/ethnic graduation rates showed the highest strong and positive correlation with the faculty who were of their own ethnic/racial group.

Table 4.8

Correlations between Faculty and Student Drop-out Rates by Ethnicity/Race

Faculty	Hispanic /Latino	American Indian/ Alaska Native	Asian	Drop-outs Native Hawaiian/ Pacific Islander	Black/ African American	White
Hispanic/ Latino	.639**	.449**	.094	.015	-.159	-.502**
American Indian/ Alaska Native	-.016	.912**	-.028	.044	-.124	-.253**
Asian	.147	.088	.771**	.743**	.005	-.396**
Native Hawaiian/ Pacific Islander	-.059	.476**	.527**	.746**	-.108	-.277**
Black/ African American	-.032	-.079	.025	-.116	.857**	-.541**
White	-.262**	-.306**	-.343**	-.272**	-.503**	.737**

* $p < .05$. ** $p < .01$.

Gender

The number of male and female dropouts at each community college was converted to a percentage to account for differences in school size, and Pearson product-moment correlations were run to examine the overall relationship between the Gender Diversity Score and student drop-out rates. The relationship between both male and female dropouts and the Gender Diversity Score were not found to be significant. The relationship between the Gender Diversity Score and male drop-out rates was not significant with a correlation of $r = .009$, $p = .923$. The relationship between the Gender Diversity Score and female drop-out rates was not significant with a correlation of $r = .089$, $p = .334$. Table 4.9 displays all the correlations and p values for the analysis.

Table 4.9

Correlations between Gender Diversity Score and Student Drop-out Rate

Group	r	p
Male	-.061	.508
Female	.019	.835

Qualitative Research Questions

This qualitative research took a phenomenological approach to explore how these community college presidents and former students interpret their diversity experience in the community college setting. It is the objective of phenomenological inquiry to explore individual's direct or 'lived' experiences and how they made sense and meaning of these experiences (Lichtman, 2013).

Six ($n = 6$) public community college presidents, who at the time of the interview held, or had formerly held the position of a public community college president in the Texas Gulf Coast Area and fifteen ($n = 15$) former community college students who are

currently attending a four-year university were interviewed. All of the 15 students had previously attended public community colleges in the Texas Gulf Coast Area.

Semi-structured interviews with open-ended questions were utilized with study participants to generate the detailed data needed to gain an understanding of the participant's perspectives (Cresswell, 2012).

Former community college students who were, at the time of this study, attending a four-year university were purposely selected to explore their perceptions of the relationship of faculty diversity to their student experience.

This study seeks to determine whether there were commonalities between perceptions of the participants that can be used to guide the development of strategies to enhance student success. In order to understand how individuals make sense of their experiences, a methodical method was used to capture and describe how they experienced the phenomenon (in this case the relationship of faculty diversity to student success), how they saw it, judged it, remembered it, and talked about it. For this study, a phenomenological approach is the most accurate.

Research Question 7

How do community college presidents perceive the relationship, if any, between faculty diversity and student graduation, transfer, and drop-out rates?

These findings are based on the president's responses, in their own words, to a set of ten ($n = 10$) structured interview questions that addressed research question seven and sought to understand the lived experience of college presidents in a rapidly diversifying region of the United States. Research questions can be found as Appendix C. I asked them additional exploratory questions to get a deeper understanding of the phenomenon during the 45 minutes to one hour individual interviews with each president. Each interview was conducted in the president's office on their college campus.

Three of the presidents were male and three were female. The race/ethnic make-up of the interview subjects was four White presidents, one African American president, and one Hispanic president. Two interview subjects were presidents of colleges that were a part of a multi-college system. Two of the interview subjects were presidents of independent colleges in communities surrounding a large metropolitan area. One of the interview subjects was a president of a rural college which also included student residential facilities.

The questions were initially presented to the presidents in the order shown in appendix C. After the first and second interview, the first four questions relating directly to perceived perceptions of faculty diversity and its relationship to student success were moved to position six, seven, eight, and nine to elicit more thoughtful answers to these questions.

A substantial amount of data was collected from the presidents interviewed regarding their perceptions of faculty diversity and student success. I provided a copy of the research purpose, questions and research design to the participants and discussed the project with them before beginning the interview. I also shared with them a copy of the interview questions to use as a guide for the discussion. In the first interview with President 1, I also attempted to record notes on a legal pad. Shortly after the start of the first interview, I stopped recording by hand in order to focus on effective listening and questioning strategies and reduce distractions for the interview subjects. At the conclusion of the interview I gave each participant the opportunity to provide any follow-up information, ask any questions, or continue their train of thought regarding the process. I asked and received permission to turn the recorder back at the end of two president interviews (President 4 and President 5) because the post-interview comments seemed relevant and valuable to the study.

Five of the six presidents stated that the race or ethnicity of their faculty is important and makes a difference in the community college experience of their students. One president stated that other factors like individual strengths and motivation transcend race and ethnicity.

Four of the six presidents stated that the gender of their faculty makes a difference in the community college experience for their students. One president stated that he is unsure if there is a relationship between faculty gender and student success. One president stated that the experience created by the college is what matters most, regardless of gender.

Three themes surfaced as a result of the data analysis process: (a) changes in our communities drives change in our colleges, (b) inclusion is a process of accommodation, and (c) mentoring and role modeling are critical.

Theme A: Changes in our communities' drive change in our colleges

All six of the presidents recognized the accelerated pace of change in their diversifying communities. They talked about change as a catalyst for new ideas and addressed concerns about the difficulty in finding qualified URM faculty as well as conflict between diversity groups. President 1 discussed how she perceives the excitement of dynamic change in her service area.

We are a very diversifying and a very conservative community. It is interesting that we are a rapidly changing community. The growth is the development and all that is happening. We are maintaining that small hometown, hometown with a heart. Kind of family-oriented feel while also embracing the change. It is a fascinating sociological thing to watch. It's a fantastic community and I am very fortunate to be a part of it.

President 6 addressed the demands placed on a community with a growing number of URM students and the pressures of urban growth. He described the challenge to the community and the college taxing resources and expanding service areas.

We have about 16% African Americans, about 44% Hispanic and the remainder would be some Asian students and some White students. Our community, both the college and the school district in the last 3 or 4 years has really transitioned more toward more minority students that are both in the community. The way they do it in Texas, there are 50 public community colleges and the State has, similar to what public school districts are, this is your service area, this is who you serve. So they carved up the state and said this is who you serve. So we serve 17 school districts.

President 4 succinctly put the diversity reality of the state of the Texas Gulf Coast area in perspective. He states, “We are the future. We look like what the rest of the country is going to look like in 20 or 30 years.” President 4 expressed excitement about the diversification of the community. He showed a picture of himself with a diverse group of students and described the scene.

It’s fascinating to see the students that we have interact with each other and the setting is what....so I’m showing you a picture of the honor students in Paris, in the front of Notre Dame church. There are Hispanics, there’s African American, there’s a Syrian, there’s an Egyptian, there’s a Venezuelan, there’s a Serbian. Hispanic from Southeast side, Hispanic from Venezuela, some Asian students. I spent some time with these students. They got very good grades. That’s why they’re honor students but in my experience working with all students, they’re not any different in terms of their interaction.

President 4 stated his conviction that globalization and inclusion is positive for the community and the student. He noted that the, “ultimate student experience is to provide students with a microcosm of the world.” President 4 believes that students need global skills to compete in today’s marketplace and that there is an advantage to students in a changing environment.

I think the advantage of the urban area is we are the world. If you travel to Paris if you travel to NYC we look a lot alike from a community standpoint, I was at the headquarters for a global technology company in California and as I walked through their offices it reminded me of Houston and some of them wear their native clothes. I believe it’s important and helps breed collaboration and that collaboration helps the students with success in life. It’s in my opinion, a critical part of the college experience.

President 5 stated that a president must embrace the diversity that is emerging in order to be relevant. He encouraged other presidents to reach out and look for opportunities to succeed. His advice included:

Embrace it., I think there is a healthiness to a diversity of voices in our institutions. Diversity in our students, not everybody looks like me, not everybody thinks like me. If Presidents want to be surrounded by yes men they are in the wrong business. You need that diversity of voices as a President. You need to hear your students. You need to hear your faculty, staff, and communities because that is the only way you can help them to succeed. There are challenges. There are so many opportunities to help students to help colleges serve our community serve this industry, prepare the next generation, and prepare the workforce. But, you can’t do that in isolation you won’t be successful

What presidents need to do to survive in an expanding diversity environment was a subject raised by all of the presidents interviewed. President 6 has been in the field for forty years. He stated that presidents must understand the historical perspective that surrounds the urban community college. He stated that presidents should understand the different needs and priorities of their students.

They need to understand the historical perspective. For the most part, not exclusively, White students come into higher education better prepared and there is a lot of reason for that. White families have higher incomes. Mom and or Dad may have gone to college and they've had the support and maybe they haven't had to work as much when they go to college so they can focus more of their attention on taking the courses and being successful. Understanding that's not...think about going to the university. You go to the university, live in the dormitory, you don't work, you are a full-time student and you finish in four years. Well, 85% of our students here. 85% are part-time. Talk about diversity...talk about the dimension of part-time v. full-time. So, knowing who your students are and knowing what you try to do.

One president believed that knowing who your students are involves knowing where they come from, their background, culture, and experiences. As communities change, college presidents must constantly find strategies for engaging the old and new stakeholders. This is an active process, President 2 states:

So what are those cultures, those populations and where do you draw your students from? So preparing yourself for that. The other thing I would do, prepare your staff. It is just critical that they don't just give you lip service to the fact that they value people.

This sentiment is echoed by President 4 who said to new presidents, “You need to not get dissuaded. There is politics. There is favoritism. As a leader, everyone is watching. There needs to be a self-awareness of your environment. There is a situational awareness that we live in all day long.”

President 3 provided a step by step guideline to new community college presidents for successfully managing the diversity of a new president’s community college.

Number one, they have to be prepared to serve the cross sector of the population. Number two, they need to recognize the importance of connecting with their communities in an authentic way. To gain their support. Number three, to ensure that technology is up to date and available to the students to fully equip them with the skill sets that are needed to go into the workforce because irrespective of whether the students are looking at a workforce pathway or continuing education, academic track, technology is absolutely essential and the students will ultimately go to work and so they will have to be prepared. Number four, I think fundraising is going to be very important. I think that philanthropy cannot be understated merely because the funding streams are so reduced now that you have to be creative finding ways to get the revenue needed in order to continue your education programs.

These strategies provide guidance to identify what is necessary to train a global workforce employee today: diverse communication, networking, accessing current technology and additional funding to meet a wide array of needs.

Sub-theme A.1: Qualified URM candidates are hard to find

Four of the president’s interviewed expressed concern at the difficulty of finding qualified URM candidates to fill faculty and staff positions at their college.

Pres.2 (Rural school in a diverse environment)

Our county is one of the most diverse in the nation. We actually tried to recruit because we know full well that we have underserved populations and getting those students into school is one of our greatest issues in our education. It is difficult getting the minority faculty participation here. They want to be in bigger cities. More amenities, more connections for them.

President. 4 (Large metropolitan college)

If you look at the diversity of our employees, our staff that does not match the community and what are we doing about that? I refuse to believe that there is no qualified African American or Hispanic English professors in the Houston area. We are just not looking hard enough.

President 6 (Independent suburban small college)

But our faculty diversity is not strong. Part of that is what I mentioned before. We are competing with other colleges all across, especially in the Houston area there are just so many and there's not enough supply of who you might want to fill the demand which you have. I think the struggle that we have is, are there enough available fully credentialed and fully experienced African Americans, women, Hispanics? That is the challenge that we face.

President 5 (Independent suburban small college)

But you would think that in this community you could hire Hispanic faculty, Hispanic staff because of this feeling that "I want somebody that looks like me. I can identify, they can be my role model". Well the challenge was first the level of education is not very high. A lot of folks never went to High School or finished High School. The ones who went on and got a degree, they were in such demand

that they don't stay they can go on most anywhere. In all likelihood someone else would pay them more than we could.

President 4 acknowledges that this lack of diversity goes beyond the faculty ranks and takes the discussion of URM representation to the administrative and strategic level. He discusses the lack of diversity with-in the role of president across the state. He notes:

When I sit at the (*State Community College Presidents*) meeting and look in the room in a state that has 50 colleges, I have not for a second said they are not highly qualified good people because they are but when you just look at it, it doesn't come anywhere near any relation to the population.

One president gives an example of a volatile issue that could derail a college that is seeking to build partnerships and collaboration with other diverse stakeholders in the community. President 2 talks about difficult issues around difference and the tension it can bring to a community. She believes that her role as president is important to help establish a safe environment for students.

There's a lot of tension there especially when you start looking at the Christian and the Islamic, Hindu and all of that...your normal 50 or 60 year old person, they may not say much but, there is some tension there and its carrying over into schools. Having events where you allow students to see different religions. I will never forget I took a class at undergraduate school, Religious Backgrounds. You went through all the religions and how they connected so much. I will never forget that experience. Because you came from where I came from. Probably the King James Version of the Bible was thought to be the original. That was it. What you have to do is provide the example as a president. You set the tone.

President 1 grades her institution on its ability to service its rapidly diversifying community. She notes that in order to address the emerging change her college has

actively sought external recognition and grants to build programs for not just URM students but all students in her college.

OK on a scale of 1-10 I'd give us about an 8. That was not the case a couple of years ago I would have given us a 6. But in the last couple of years we were awarded Hispanic serving institution status and then we competed for and were rewarded a Title V grant and through that 5 year grant we are in year two starting with three we have been able to really broaden the opportunities for diverse groups of students even though it is an HSI based grant we have been able to serve a lot of different populations of students.

Sub-theme A.2: The president as an inclusion leader

A second sub-theme emerged as data from the interviews with the presidents was deconstructed and reorganized. Five of the presidents stated that providing a racial and ethnically diverse array of faculty and staff was important to student success. Four of the five also stated that other diversity factors were more important. President 5 stated that in his opinion diversity can mean a lot of things. Race, ethnicity, and gender diversity represent only a few areas of difference that exist in our society. Economic differences, access to the internet, or one of many other issues which may impact student success. President 5 states:

There is certainly (diversity) in our community colleges today there are so many economic differences between our students. Those who, the haves and the have nots. Those who have access to computers and the internet at home and those who do not. So the economic issues that run the gambit. It could be issues of some of the traditional things we work with first generation college going in your family vs. not. It makes a difference. Then you get over into political

differences, LGBTQ differences. There is a wide range of diversity that we can talk about.

Presidents 3 and 4 believed that other factors are more important than race and diversity. President 4 expresses his opinion that there are other alliances that provide more meaning to the student development activities. President 4 believes that common interests, experiences, and activities help students develop a sense of belonging. He stated:

The way I view it, when I visit a classroom or a group of students, I see diversity in that group but the groups themselves, to the extent that I know about them, they are grouped by their....their affinity is not race or ethnicity. It is the honor student club or the manufacturing student club or the computer science, robotics club and within those different groups there occurs a diversity of population

President 3 suggested that a student's personal strength and motivation are the most important factor in driving student success. She expressed her opinion that a focus on developing faculty race and ethnicity can distract educators from addressing what students really need. President 3 described the importance of focusing on a student's individual strength.

I am a believer in strengths and so in looking at the strengths of an individual, to be sure that those individuals are going to be the best fit to work with underprepared students. It also has a lot to do with the passion of a person and the motivation of a person who wants to work with underprepared students. So I think to look at the race and ethnicity is a limiting factor. When you start looking at a person, who is going to have the passion, the drive, the determination to ensure that students succeed.

To illustrate her point regarding developing a focus on a student's strengths President 3 told a story about how a counselor can go beyond race and ethnicity and focus on student interests and strengths to create a motivation to succeed.

Now, what I want you to do is to tell me how you would handle this student who comes to you sagging, tattoos and he comes in, doesn't really have quit the direction yet. You as an advisor are saying how I can help you. The student's saying I'm not doing too well but my parents insisted that I am here in school. What do you think you want to do? I'm going to give you this test for career placement. But what do you think you want to do? Well, I'm really thinking I want to be a police officer. Now, this is the disconnect because the person is looking at the student, all these tattoos. Sagging but wants to be a police officer. So now how do you work with this student who has this desire, perhaps has even taken the test or skillsets and shows the other student.

President 3, provided a suggestion on how to move forward with this student by looking closely at their strengths and interests order to find a connection with something that motivates them.

Well you connect the person with the individuals who can help to guide them. You can be candid with the student. You are going to encourage them and you are going to look at this person. This person might be strong in influencing. Might have a domain that says I can influence anybody. I have great communication skills. So maybe instead of being the officer on the street, maybe this student can be a hostage negotiator or some other field within that. And they say ok this is great, it shows me much more clearly how I can work with diverse students without being trapped with the perception of what I see.

President 4 continued this line of thought regarding looking beyond race and ethnicity to supporting student success using a more holistic approach. President 4 provided guidance to new presidents regarding looking beyond race and ethnicity across the array of student struggles and providing a strategy that addresses individual needs. President 4 states:

Often there's more going on than what you see on the surface. Particularly when you are championing diversity. We live in a strange time and we need to be true to our values. We are not elected and my student body is the student body I have, not what someone else might want me to have and I've got to get them the best the most resources I can with what I have. Being able to navigate those things. You shouldn't follow the trap of equality as I mentioned earlier, not every Hispanic has my experience. I don't have theirs. It's the equity, its making sure that all of the students have the ability to succeed facing the challenges that they face and not making sure everyone gets \$5. There might be one student who doesn't need the \$5 that particular day but another student that needs \$20. But there is a limit to that but the equity is important when I look at it at a work environment.

Theme B: Inclusion is the process of accommodation

A third theme that emerged from the president interviews was a recognition that the student's educational, and sometimes basic needs must be identified, addressed, and barriers to access and learning removed. All six of the college presidents interviewed talked about the steps that their colleges have been taking to address the expanding needs of their rapidly diversifying student body and communities.

President 1 had strong feelings about a president's role in being an advocate for the student. She supported aggressive action as an educational leader to create a

productive environment for their learning experiences. She stated that she has learned this from her experiences with her own child who has a disability. President 1 presents a personal and passionate definition of advocacy that she suggests other educational leaders adopt.

Advocacy is championing. Advocacy is learning the issues and understanding the issues and knowing what the issues are and articulating that and helping others learn and understand and it's a positive, it's a learning process, it's a growth process and so being willing to tell her story and tell our story. That's a champion and so helping others advocate in a way that's not belittling or angry or cutting somebody down or so negative is what we see so much of today. I think it is part of my role as a president. I have to be part of that messaging.

Two sub-themes emerged from the review of data obtained in the president interviews: (B.1) building supports for students and (B.2) breaking down barriers.

Sub-Theme B.1: Building supports

President 5 stated that building student supports is a responsibility for all faculty and staff in the organizations. President 5 suggested that a student support begin by building connections between students and faculty members.

It's very very important that students connect in the classroom with their faculty. We also believe that it is also important that students connect outside of the classroom. There is a lot of research that strongly suggests that when those connections are made even if it's just one person connecting with that student, that their chances of success their opportunities of success, the feeling of belonging which goes up increases their opportunities for success. So our goal really is to create opportunities for those connections to occur.

President 6 talked about the importance of school organizations and student clubs as an important part of his college's efforts to support student success. He advocates for looking beyond the classroom experience and building supports in student clubs and organizations. He also noted the importance of faculty involvement in club activities.

So that's an important part. So obviously, our math lab is supporting the students. We have a number of clubs and organizations that deal with a wide variety of diversity. To be supportive of the students, it's good to be supportive of them academically, but it's not always the academics being the reason a student doesn't finish. All these reasons in their life tend to impose on them and cause them to stop out or drop out or whatever. And so, we do that. We have a quality enhancement plan which is a part of our accreditation. Its focused on working with students to try to get them out of their developmental sequence and into the college community and again that's on all students so it's not just focused on our student diversity population.

President 3 also talked about the importance of creating diverse student organizations and clubs, particularly as a way for students and staff from different cultures and backgrounds to interact.

I chaired a diversity and inclusion committee at my college, and then eventually after two years selected a chair that was able to continue that work. So diversity there was a given and it worked extraordinarily well. There was also a request from some of the students to have a LGBTQ which we of course honored and that also added value to the work at the college so that those students who were LGBTQ were also able to enjoy the college experience and to interact with each other and we created that space for them.

Two presidents described institutional systems that have been put into place in their colleges to identify students in need and target support to address specific needs. President 5 discussed how his college has developed an alert system which allows faculty and staff to identify students at risk for poor classroom performance or dropping out. The alert system is used to target resources to where the need is greatest.

You talk about student success. One of the things that we are doing and have been doing it. We've started early alert systems. Somebody fails a class, somebody misses a test, they got a counselor who takes them down the, but we have gone to the next level. We have gone beyond just where we were. We want to be checking in with students on a regular basis. We want to be checking in with them monthly.

President 5 continues and highlights the importance of personalizing the school experience by creating a support relationship with faculty and staff.

Making sure...as simple as faculty members knowing every student's name. Hey John ...that simple. Greeting them by name, that's a big deal. But those individual check ins. You have a sense of who they are. . What is the student missing? Don't give them the whole nine yards. What are they missing and let's get them down the road.

President 6 also identifies how his college targets student needs and responds to them.

If you (student) come in and say you want to get a certificate or degree, if you did not get your certificate or degree, than it's not a success and what is it that stopped you from doing it. Is it because your car broke down and you didn't have money to take the bus then what can we do. Our foundation provides some quick short term assistant for those kind of things. That crosses gender. That crosses

ethnicity. But don't just walk in and think all is fine just keep things going where they are going. No. Know if you are making an impact on each student.

Identifying and removing instructional and non-instructional barriers to student success was a topic addressed by 5 of the presidents interviewed. President 5 tells a story that is familiar about breaking down a barrier at a baseball game. This story was also told by President 1 and President 2. President 5 states:

Like a lot of colleges, we are focused on student success. It's a matter of breaking down the barriers. When I talk about breaking down barriers one of the best analogies that I can think of is you have 50 yard line seats at the ballgame and for some strange reason somebody decides to come along and build right in front of you a six foot wall. Your six foot six you can look over the wall. The person next to you is five foot nothing so they need a stool to help look over the wall. The person on the other side is 4 foot nothing and they need a higher stool to look over the wall. That's accommodation, alright? Breaking down the barriers is removing the wall. OK? So that there is no wall, there is no barrier.

President 5 brought into his discussion of removing barriers the need to have financial support and other support systems for students to ensure access to instructional programs.

Whether it is a gender or ethnicity type issues we try to take those barriers down so we can move that forward. If it is scholarship issues where students have need we have a fairly robust scholarship program at this college where we guarantee the tuition and fees of every student who graduates High School in our service area.

President 2 suggested that there are many barriers to access and that an effective response must be multi-faceted and individualized to each particular student. She states:

There are barriers to access, we are doing a lot of different things for a lot of different groups and unfortunately there is no one silver bullet. It's a systematic approach but it's also an individual approach. We meet students where they are at and help them to succeed.

External barriers to student access to community college was a topic addressed by President 4. He discussed how his organization is working with other agencies and services to provide for the basic needs of many students who attend his college.

Right now there is a lot of information about housing insecurity and food insecurity and that has repercussions over into computer access, internet access. How successfully students can be in the classroom if they are experiencing those kinds of things? We signed an agreement with the Food Bank where they are going to bring the food truck out to campus two or three times a month for our students to get direct access to food.

President 6 discussed barriers to students as they move beyond the community college experience. President 6 suggested that a community college should not only look at barriers to access but also must consider barriers to students who want to continue to move on to a four-year college to complete a baccalaureate degree.

Our struggle is, and this is not just for minority students but for all students. When you get a two-year technical degree, you are intending to go into the workforce. So, I think we do that very well. Where we are not doing as when you come here to get an associate of arts or an associate of science degree that's the first two years of a baccalaureate degree. If a student does not move forward to obtain a four-year degree, neither college is really successful.

One president discussed how difficult it could be to remove internal barriers to students and URM faculty that come from a lack of diversity within curriculum and

subject discipline committees. She notes that the eventual consequence of not including a diverse set of voices in course pedagogy limits the benefits that can come from inclusion. President 1 discussed limitations she believes are experienced at her college coming from being part of a multi-college system

Every college has representatives from the faculty, two or three, who serve on the curriculum team and they all come together so there's twelve or fifteen people who represent the entire English faculty (or other discipline) on that team. Then they make the decision about assessments in institutional effectiveness, outcomes to measure that cycle and sixty hour degree programs are an issue from the state. All those kind of curriculum decisions. So who those 12 to 15 people are on the curriculum team, if there is not diversity on that team that voice is not going to be diverse. So how to ensure that that team is diverse is a challenge. The challenge with that is sometimes those teams never...the people that are on them are the same people for ever and ever and ever again. So, it is a challenge, not just a diversity of gender, ethnicity, race or orientation, but just a diversity in thought and how English (or other disciplines) should be taught. So that's a real challenge and I'm not sure we do it real well.

Theme C: Mentoring and role modeling are critical

The concepts of mentoring and role modeling as a student success strategy emerged as a strong theme for all the presidents interviewed. Four of the presidents discussed their belief that students need mentors and roles models of their on race, ethnicity, and gender who they can identify with as a catalyst for building motivation.

President 5

We have got to have a faculty that looks like the community it serves. We have got to have role models and mentors that believe. This is a critical issue and you

are right this is an absolutely critical issue. One of things that I think we have both from practice and from research is that students need mentors and that those mentors need to be individuals that they can connect with and who look like them. That simple. OK? If I don't have any Hispanic males on my faculty and I have a group of Hispanic males, where is the role model? The same is true with White females, Asian, just go right down the list. They need role models not only in our faculty but in our staff, in our student services area on our Board of Regents.

President 2

I think it's very important because they need to see themselves. So many of these different groups don't have any mentors. They don't have that experience to look up to. Having your faculty come from a variety, getting more variety of ethnic diversity in your faculty is really important I think. And then getting groups within that because there are still...you can work really hard on it but it's still difficult. It's just critical for them to see that.

President 5

We have a young man who is a Hispanic Male who teaches in our remedial math area. He says "Hey guys I was where you were one time and I did it, you can do it. We have others who have come through the trenches and been there and...I was talking to a young man last night. A young man who wants to be a chef and we were talking about where he is at in his career and the culinary program he is in the where he wants to go. I was telling him about some of the role models and folks to emulate and he was going "I didn't know that". He's just kinda like "there are other people like me".

President 4, a Hispanic male, told a story about an experience that he had with a Hispanic female student at a graduation commencement ceremony.

When I was mingling with the students before walking out there was a group of students that caught my eye and I went over to talk to them. When I was talking to them this young lady she started crying and certainly these are tears of joy. We are talking about graduation, we are talking about excitement of life, what are the next steps, what have you got planned and in talking with her she shared that she was crying because of me, because of me...it was an Hispanic student. I told her you just met me. What would cause you to cry because I'm here talking to you? Her reflection was there was an Hispanic leader in this college and we never thought that would happen.

President 4 was visibly moved when he told this compelling story. He reflected on his own experiences growing up in a community where his national origin was the majority population. He talked about the difference of perceptions in his college service areas.

I would have never seen guessed that type of reaction from a student. I came from an environment that was predominantly Hispanic to one that is very much a blend. But I experienced work throughout the whole country and other parts of the world. I did not carry that around in my mind as something that I needed to deeply think about. There are some casual observations, but the deep thought about what does this mean? To our communities in the Gulf Coast, it is something that students observe. They are paying attention.

President 2, a white female, states that students also need gender role models who look like them.

The Asian culture is highly motivated but their self-esteem in their women is not there so just the experience of me being with them and talking with them and then giving them mentors to work with them. So that's the experience I had. I know

in the faculty students have said they can identify better with an experience with somebody that looks like them.

President 5 also acknowledged the role of gender in providing support to female students.

I know lots of success stories for different individuals. I can tell you that when females struggle they do tend to reach out and they reach out to a female they respect who is a faculty member or counselor and it may be as simple as I broke up with my boyfriend or maybe more traumatic you know I flunked the test or some life crisis. You know, someone to talk to. We have seen that time and time again. The counseling staff deals with that all the time.

Two presidents were less convinced that role models should be based on race, ethnicity, or gender and suggested that there were other characteristics more important like the faculty-student experience or fostering motivation.

President 3

I guess it has a lot to do with the learning style of students as well. Some cannot get beyond what they see, then others are not affected by that at all. I still go back to the strengths that the person brings to the table. Yes it would be nice if the female student is able to connect with the role model. But that role model may not necessarily be able to connect in the essential ways other than the fact that it's a female

President 1

I get that a female student might be more comfortable with a female instructor just as a Muslim student might be more comfortable with a Muslim instructor. But I think in all of it that faculty member has incredible influence in a classroom. Especially for the student who doesn't believe they belong there.

President 4 expanded the discussion about mentors and role-models and suggested that there is a place for a variety of types and roles that mentors, and role-models can take. He presented himself as an example of how one person can expand his or her experiences by engaging in the differences around them.

The inclusion champions for me are the out of the office friends I have. Who I respect. On the way home I will call one of them to talk. "How's your day?" They are not all in Houston and not all of them have worked for me. One of my best friends growing up in South Texas was an African America. We played football together. We played in a little rock band together. We probably spent equal times at each other's houses. It's about people. What did I learn from that relationship? I learned that all of us want to succeed. All of us want to be happy. All of us want great things for our children.

President 5 reflected on the concept of mentoring and role modeling from the perspective of being a long-time administrator. He talked about the history of community colleges and how by nature they have been built on the premise of individualized education and support. He notes that these concepts are not a new thing.

When I begin my career in community colleges I am not sure those were common words. I've been in 40 years that's not something we talked about. Even back then we talked about what our community colleges were to be. We were to be the college of the people. That is us. When you understand that that really is inclusion. We did not use those words 40 years ago but we talked about every student that walked in that door was going to get our help and that we were going to help them succeed in whatever they did.

Investigator Reflection.

The responses of the president's after the interview recording was turned off seem to be significant to this research. Four of the presidents expressed concern that their interview was not productive or that it did not result in a good interview. This investigator disagrees with their assessment regarding the quality of the interview. But upon reflection, this investigator must acknowledge that my professional work outside of this role as a research investigator may have had an influence or impacted the interview subject's behavior and/or perceptions. During the introductions I introduced myself as a college administrator who regularly works with issues of diversity, conflict resolution, and equity. I have previously met three of the presidents through community projects and work activities. During the course of this qualitative research, I have worked with an external reviewer who was knowledgeable about diversity, equity, and protected class bias issues to minimize the possibility of undue influence or bias.

Research Question 8

How do community college students perceive the relationship, if any, between faculty diversity and student graduation, transfer, and drop-out rates.

These findings are based on student responses, in their own words, to a set of 5 structured interview questions. I asked them additional exploratory questions to get a deeper understanding of the phenomenon during the 15-20 minute interviews. Interviews were conducted with former community college students who were attending one Gulf Coast university. The interviews were conducted in a university classroom which had been reserved for that purpose. The student participants had been recruited by word of mouth or from seeing flyers posted around the campus asking for participation. All students who participated were provided with a \$10 Starbucks coffee gift card for their

participation. Students were interviewed in groups of one, two, or three. Appendix D provides race, ethnicity, and gender data for students interviewed.

After careful analysis of the participant responses to the interview questions, three general themes emerged: (a) Individual connections are important, (b) female teachers matter to female students.

Theme A: Individual connections are important

The first of five questions provided to each student (Attachment B) asked, “Did the race or ethnicity of your professors make a difference in your community college experience?” Nine students responded that the race or ethnicity of their professors did not make a difference. Five students indicated that it did make a difference. One student could not decide between the two choices.

Later in the interview Student 3, who could not answer whether race or ethnicity has had an effect on her community college experience, gave a description of a classroom experience that suggests that she had developed a connection with an African American female instructor that made a positive impact on her student experience. She notes that her instructor understood her struggle. The student also appreciated that the instructor maintained high expectations for the student’s work.

My main teacher, who I could more closely relate to as a mentor, was an African American woman. She understood me as a minority. She spoke to minorities going to college. It was good to know someone who could understand or relate to our struggle. Hey, you guys need to go to college. There is nobody who is going to accept the fact that Hey, I’m colored you know? Come help me or give me a handout. I felt that she was harder on us or harder on me because of the fact that I was colored in a good way. I felt like that was good. Like a challenge with hand holding but on the other hand was a fist.

Three other students initially stated that the race or ethnicity of their teachers did not impact their college experience. Then, they responded to the next question by providing an example where the race and ethnicity of a faculty member had either positive or negative effect on their college experience.

Student 4 initially did not see her community college experience affected by the race and ethnicity of her teachers. Initially she answered no to the question, but after reflection she provided an example of just such an experience.

I would say overall it did not but there was one specific professor. She was my English professor but she came from Mexico. She was native Spanish speaker but it was in a good way because I have a speech impediment and so for her to be able to come over here and learn the language and say “Oh I can teach you how to do English” and so she was very impactful.

Student 6 also did not initially see how her college experience may have been affected by the race and ethnicity of her teachers and then provided an example of just that situation.

I don’t think it did but I can’t say that it didn’t because most of the teachers I had were female and they were usually not white. They were usually either Hispanic or Black. Maybe it made me relate to them more. I did have one teacher I talked with. She was a History teacher and she was Native American. The reason that I talked to her was because I was thinking about taking Native American History here and because I’m Native American. So I became close to her because of that and it was one of the reasons I could talk to her.

Student 13, a Hispanic male readily answered yes to question 1 stating succinctly, “Yes, I could relate to the professors who were my race if that makes any sense.” This sentiment was voiced by four other students when they answered yes to the first question

presented in the interview. Each noted that they had a greater comfort level with faculty members who were the same race and ethnicity as they were. Student 7 states:

If the professor was a minority I felt a commonality with them and I felt that I could accomplish anything because they are at this level and so...at the time I was really wanting to work in the education field so seeing them was motivation for myself.

Student 7 discusses her connection with her professor who looked like her and motivated her to expand her opportunities for education.

For me it was when I was taking my intro education courses and my professor, she was Hispanic, just like me and we were able to share experiences, like how she has experienced things within the education field and kind of prepared me for what I can expect as a matter of speaking a second language we have talked about that a lot because I didn't originally speak Spanish when I started college. As far as motivating me to learn Spanish as knowing a second language is really beneficial. She motivated me to expand on my own education.

Student 6 expressed an appreciation of having experiences and interactions with instructors and others from different cultures.

I had a public speaking professor who was Hispanic and female and she was really cool. I know she speaks Spanish and English and sometimes it's really cool to see her kind of teach with her culture. Like she would sometimes speak a little Spanglish because that is what she is used to speaking at home and its cool to see someone in their element and someone else expressing their own culture even if I personally don't relate to it. It's always nice to see other people's cultures and how they express that.

Student 14 agreed and noted that the diversity of his college teachers fostered a greater level of comfort for him at college. He states that, “I think because I was in the education program that was really diverse so I didn’t feel too stuck with professors and saw them differently because we all had the same goals and it felt like more comfortable. Everyone had the same interests.”

Not all diversity experiences with faculty from different races and ethnicities are positive. The following three students reported having problems understanding some instructors because the instructors had poor English language skills.

Student 10

Significantly the communication. It affected a little bit in the communication. Some professors, they were trying to bring their own teaching methods that they taught in their countries into here. Which for some of us, I’m speaking not just for me but for a lot of people. I did a lot of study groups so we had the same issue and it was kind of difficult to understand them.

Student 9:

For the most part no. Sometimes you’re dealing with the accent you’re not familiar. I had a professor from somewhere in Northern Africa who had an accent I wasn’t familiar with so it took me a few weeks to get used to it but beyond that not really.

Student 1

The only difference that I had was if they were a foreign speaker and English was their second language. Depending on how long they had been in the country or how long they had practiced English there were communicational boundaries that of course was not their fault and so that was the only issue and other than that race did not play as an issue for me. One of my biology teachers at my community

college. I had a hard time...I was failing the classes. I was paying attention more to trying to understand what they were saying. I had to work double on that.

That's just me personally, now other people in the class I can't speak for them so some people passed it. I personally I didn't.

Student 1 continued to tell his story about transferring to a university and retaking the same course that he had failed in the community college setting.

So, when I came here, low and behold one of my professors here is not a native English speaker. But is able to articulate a lot of words that the other people were not able to and I'm actually passing the class that I was originally failing somewhere else. So that's the only issue I have.

Theme B: Female teachers matter to female students

Nine students, three male and six females, stated that the gender of their instructors made a difference in their community college experience. Three students, two male and one female did not believe that faculty gender had an impact on their experience and three students, two males and one female, stated that they did not know the answer the question. Data from 100% ($n = 8$) female students interviewed suggests that females perceive that there is a significant impact of faculty gender on their student community college experience. They state:

Student 6:

Yeah, and so I'm white and so I notice diversity, but I don't necessarily relate to that kind of thing. But I'm in biology and I had a biology professor who is female. Obviously and I saw myself in her. We went to the same college beforehand. I went to a state school before I went to the community college. She is in Biology and she specialized in birds and I was really interested in birds. I was a biology major and ended up really relating to her and made me more sure

that I was in the right field. That sort of thing. It really enriched my education to see myself in her and so we had a nice camaraderie and I ended up working for her for a while.

Student 6 continues to discuss her experiences with women teachers as well as her positive experience in a diverse environment.

Yes, in a positive way. I had a ...I went to community college and I believe I had mostly female professors, looking back. So, it was nice to have that sort of camaraderie. Strong women teaching me and just seeing the faculty around it's a very diverse campus. There's male teachers and teachers of all ethnicities and all that so I think it was a positive experience.

Student 7

Well, at times throughout my schedule I will see how many female professors do I have, how many male professors. because I notice with myself it's difficult for me to ask for help from a male professor because I feel kind of intimidated by them. But with a female professor I feel comfortable with them.

Student 8

I can say I did favor paying attention to female professors more than male. . . So I genuinely usually enjoy Algebra and Math but found myself in College not paying attention to my math teachers who were male, more than my Math teachers who were female.

Student 11

We are used to men being our teachers. I usually don't get women and so when I get a male teacher it doesn't really bother me. It doesn't really make a difference. When I do get a female teacher it is a little bit different because she explains things a little more and I am less hesitant to ask her things. For me, going up to a

male teacher I will be more hesitant. With her I will feel more forward to ask her something about the class.

Student 13

I'm really intimidated by men sometimes so having men professors it was unusual for me because they have such bold personalities most of the time especially in literature so it felt hesitant to visit them office hours for help. So I would usually select women professors. There was one math teacher I had. I never liked math and I mainly had women math teachers but this one was different because he was a male. It felt more comfortable with him because it did not feel like he was just pushing you aside. He was really more into math than the other professors I had so it felt like he could help me more.

Student 15

I only had three male professors at my former community college. They all seemed to be really into their work. They were all History professors. They were just so focused on their subject. They couldn't relate, they were less nurturing.

One male student stated that he also sometimes found women teachers more welcoming and easier to talk to. He noted that some of the male teachers he had taken a class with were not as welcoming.

Student 3:

Having a women was sometimes more easy and more welcoming to talk to. My past encounters with male teachers have been very standoffish not because they did anything but I thought that they had a demeanor of you can't come talk to me If you don't learn it when I tell that's your own problem. I just always felt like that.

Outliers

Two additional topics emerged in the student interviews that seemed relevant to student success but go beyond the scope of this research. Student 1 ended his interview with a story from his high school experience about the guidance that he received from his counselors. He stated that because he was a minority (Hispanic) he was counseled not to take an Accelerated Program class.

I had an interesting experience in High School. I was a minority in High School. When I went into High School as a freshman since I was a minority during that time period, I don't know why but those counselors or the counselor that I saw I asked the question, what is AP Class? The response to me was, you don't need to worry about those, those classes mean more homework. Well I don't want that so I never went into AP classes not knowing what they were. So going all through High School, where some students that I never got to meet because they were in these AP classes all the way through. But when I finally got to community college, I remember people from this college or that college when all I remember (from high school) is the army recruiters or military recruiters.

Student 1 noted the importance of his community college experience for providing the motivation for him to continue to work to obtain his college degree and eventually a good career. He states for him that community college was his only affordable choice. He is proud of his accomplishment so far as a first generation college student and he credits his community college for giving him the skills to choose classes, to know when and how to go talk to counselors, and for encouraging him to go to a "bigger university."

Two students also gave advice about how to find professors who students can identify with and who can provide the best instruction to them. Student 8 tells new

community colleges students that, “I would say find a professor that’s like you that makes you see yourself in their position. Try to get someone that you can relate to so that you can meet their expectations and also your own.” Student 9 suggests that students use available resources and research and select instructors that they feel would be best for them. Students often give the best advice to other students.

Do your research on what professors you are going to take. Rate my professor is a pretty good resource. Find a friend who is already in community college especially to bug them if it’s at the one you’re going to. Take advantage of what opportunities the school offers to both develop and do well while you are there.

Conclusion

This mixed methods research sought to explore the relationships between diversity and student graduation, transfer and dropout rate in public community colleges. For this study race, ethnic and gender diversity were investigated. This research also explored the perceptions of community college presidents and former students regarding their perceptions of the relationships, if any, between faculty diversity and student success.

There was a significant difference found between the graduation and drop-out rates of non-URM and URM students with URM students graduating at a significantly lower rate than non-URM students. URM students also transfer and drop-out at a significantly lower rate than non-URM students.

There was a significant difference found between the graduation and drop-out rates of male and female students with males graduating at a significantly lower rate than females, and males dropping out at a significantly higher rate than females. There was no significant difference found in the transfer rates of male and female students.

The findings suggest that there was a significant medium to strong positive relationship between graduation ($r = .787, p < .01$) and transfer rates ($r = .738, p < .01$) for URM students of all race/ethnic categories when there are increases in faculty diversity. There was a similar positive relationship ($r = .745, p < .01$) between increases in drop-out rates for URM students and increases in faculty diversity.

A qualitative study was conducted to determine how community college presidents and former community college students perceived the relationship, if any, between faculty race and ethnic diversity and student graduation, transfer, and drop-out rates. The majority of both the community college president group and the community college former student group perceive that faculty race, ethnic, and gender diversity made a difference in their community college experience. Several themes emerged during the analysis of the qualitative data collected. For the community college presidents the themes that emerged are: (a) changes in our communities drive change in our colleges, (b) inclusion is the process of accommodation, (c) mentoring and role modeling are critical. Themes that emerged from the student discussions include: (a) individual connections are important, (b) female faculty matter more to female students.

Chapter Five will address the significance of these findings, limitations of the study, and implications for research and practice.

CHAPTER V: SIGNIFICANCE OF THE STUDY, LIMITATIONS AND IMPLICATIONS

Introduction

In his book, *Building a House for Diversity*, Roosevelt Thomas Jr. (1999) begins with a classic tale about an elephant and a giraffe attempting to live in the same house. This same illustration, magnified by many more species of animals, is not unlike the diverse environments that are emerging in many community colleges across the country. This research was intended to provide thoughtful guidance to community college leaders, researchers, and advocates regarding how to best prepare for addressing the many needs of today's diverse array of students. It did so by first exploring a unique measurement tool that assessed the relationship between faculty diversity and student success. Specifically, this mixed methods research explored the relationships between faculty race, ethnic, and gender diversity and how these immutable characteristics impact student graduation, transfer, and dropout rates in public community colleges. Identifying a way to measure faculty diversity and student success was only part of the subject that needed to be addressed. This research also explored the perceptions of community college presidents and former students regarding the relationships between faculty diversity and student success.

Summary of Study

Stout, Archie, Cross and Carman (2018) developed a new metric for studying faculty diversity. They found that the overall graduation rates for underrepresented minority students of all races were positively affected by an increased diversity in their professors and instructors. This study replicated and expanded upon the previous research by calculating an institutional Diversity Score using the same statistical analysis put forth by Stout et al. (2018). This research expanded on the previous research by

exploring the relationship between faculty race and ethnicity and student transfer and drop-out rates. Additionally, a second Diversity Score for gender was developed for each college. Gender Diversity Scores were then correlated with student graduation, transfer, and drop-out rates to quantify the relationships between faculty gender diversity and student success. For this study the Diversity Score was applied across the range of U.S. public community colleges in order to establish a baseline measurement and explore a new quantitative metric for evaluating faculty diversity.

The qualitative phase of the study identified the perceptions of college presidents and students regarding the relationship of faculty race, ethnic, and gender diversity with student graduation, transfer and dropout rates. This qualitative research was conducted to help make meaning of the quantitative results found.

Significance of Study

Research Question 1

Is there a difference between graduation, transfer, and drop-out rates of URM students and non-URM students in public community college?

- A. Is there a difference between the graduation rates of URM students and non-URM students?*
- B. Is there a difference between the transfer rates of URM students and non-URM students?*
- C. Is there a difference between the drop-outs rates of URM students and non-URM students?*

This study found that non-URM students used for this sample ($n = 55,443$) graduate at a significantly higher percentage rate than URM students ($n = 36,250$). The mean for total non-URM graduates ($M = 123.97$, $SD = 110.58$) was significantly greater than the mean for total URM graduates ($M = 52.08$, $SD = 82.34$) with a large effect size

($d = .69$). This finding was expected and supports the findings of previous research which highlights the significant gaps between URM and non-URM graduation rates (Espinosa, Turk, Taylor, & Chessman, 2019; Aud, et al., 2011; McFarland, et al., 2017; NCES, 2017; Stout, Archie, Cross, & Carman, 2018).

This study also found that non-URM students used for this sample transfer to another institution of higher education at a significantly higher percentage than URM students. The results show the mean for total non-URM transfers ($M = 87$, $SD = 84.88$) was significantly greater than the mean for total URM transfers ($M = 54.47$, $SD = 63.11$) with a medium effect size ($d = .47$). This finding was expected. IPEDs defines transfer as moving from one postsecondary institution to another. This would indicate that students are still progressing through their educational goals. There was little research found that addresses the relationship between student transfer and faculty race, ethnic, and gender variance. More study on this relationship is warranted to assess whether transfer is really a true measure of student success.

This study also found that non-URM students used for this sample drop-out at a significantly higher percentage than URM students. The results that the mean for total non-URM drop-outs ($M = 182.86$, $SD = 168.51$) was significantly greater than the mean for total URM drop-outs ($M = 110.07$, $SD = 178.62$) with a medium effect size ($d = .41$).

Finding that non-URM graduates drop-out at a higher percentage rate than URM students was not expected and may indicate the presence of a statistical moderator, such as location or population, that may be buffering or decreasing the effect of the independent variable on the outcome. A moderator is a variable that specifies conditions under which a given predictor is related to an outcome, in this case faculty race and ethnic variance. Moderation implies an interaction effect where the introduction of a moderating variable changes the direction or magnitude of the relationship between two

variables (Elite Research LLC, 2013-2014; Baron & Kenny, 1986). Hierarchical multiple regression is used to assess the effects of a moderating variable. To test moderation a researcher would look at the interaction effect between the independent variable and the moderator and whether the effect is significant in predicting the dependent variable, in this case drop-out rates. This effect warrants additional investigation which is beyond the scope of this research.

The major purpose for addressing research question one in this study was to identify if the student sample used in this study was representative of the student population being investigated. Research has informed us that URM are less likely to complete their college program than non-URM students (Espinosa, Turk, Taylor, & Chessman, 2019; McFarland, et al., 2017; Calahan, Perna, Yamahita, Ruiz, & Kranklin, 2016). Since the same difference was found that URM students in this sample graduated at a significantly lower rate than non-URM students it is now possible to more confidently explore the remaining quantitative research questions. The discovery of a statistical modifier that may impact the outcome of the dependent variables, in this case graduation, transfer, and drop-out rates, is cause for concern and is a limitation that must be considered when addressing the remaining quantitative research questions for this study.

There was a significant difference found between the graduation and drop-out rates of non-URM and URM students with URM students graduating at a significantly lower rate than non-URM students. URM students also transfer and drop-out at a significantly lower rate than non-URM students.

Research Question 2

Is there a difference between the graduation, transfer, and graduation rates of male and female students in public community colleges?

- A. Is there a difference in the graduation rates of male and female students?*
- B. Is there a difference in the transfer rates of male and female students?*
- C. Is there a difference in the drop-out rates of male and female students?*

This study found that female students used for this sample ($n = 49,028$) graduated at a significantly higher percentage rate than male students ($n = 49,175$). The results indicated that the mean for total women graduates ($M = 101.16$, $SD = 100.11$) was significantly greater than the mean for total male graduates ($M = 87.38$, $SD = 80.62$) with a small to medium effect size ($d = .33$). This finding was expected and supports the findings of previous research which highlights the significant gaps between male and female graduation rates (McFarland, et al., 2017; Calahan, Perna, Yamahita, Ruiz, & Kranklin, 2016).

There was no significance found between the percentage of female students who transfer to another higher educational institution and the percentage of male students who transfer. The results show that the mean for total female transfers ($M = 78.37$, $SD = 71.88$) was not significantly greater than the mean for total male transfers ($M = 75.55$, $SD = 74.52$). This finding was expected. Male and female students are more equally represented in the sample being studied than URM and non-URM students. There was little research that addresses transfer rates in higher education. More study of this relationship to assess whether transfer is really a true measure of student success is warranted.

This study also found that male students used for this sample drop-out at a significantly higher percentage than female students. The results show that the mean for total male dropouts ($M = 191.93$, $SD = 201.76$) was significantly greater than the mean for total female drop-outs ($M = 166.74$, $SD = 163.59$) with a small to medium effect size ($d = .33$).

This finding was expected and supports previous research showing that females drop out at a lower percentage rate than males (Calahan, Perna, Yamahita, Ruiz, & Kranklin, 2016; Kirsch, Brann, Yamamoto, & Sum, 2007).

There was a significant difference found between the graduation and drop-out rates of male and female students with males graduating at a significantly lower rate than females and males dropping out at a significantly higher rate than females. There was no significant difference found in the transfer rates of male and female students.

Research Question 3

To what degree is there diversity variation among community college faculty?

This study answered research question three by measuring the race, ethnic, and gender (male/female) variation among community college faculty in the institutions sampled ($n = 120$).

The Diversity Score represents the distribution of faculty by ethnicity within each community college in the sample. Colleges that had a more equal distribution of faculty across the six racial/ethnic groups measured earned a higher Diversity Score. The higher the Diversity Score, the more diverse the faculty was. Lower numbers indicate less diversity at the institution. An institution that had equal distribution across the six racial/ethnic groups would earn a racial/ethnic diversity score of 100, whereas an institution comprised solely of faculty of a single race or ethnic group would earn the lowest score of 55.

The range of the racial/ethnic Diversity Scores in this sample was 59 to 89, with a mean of 66 ($SD = 5.44$) across all institutions. This finding is in line with previous research.

Stout et al. (2018) identified a mean Diversity Score of 64 with a range from 55 and 80 ($n = 64$) in their earlier study of two and four year post-secondary institutions. In

their original study Stout et al. (2018) reported being surprised by the lack of faculty diversity they found in many institutions of higher education across the country. Three of the colleges in their study reported having no faculty of color. They reported that many colleges, particularly from smaller rural locales, reported having only one or two URM faculty on staff.

Similar findings emerged in this study which narrows the population surveyed to public community colleges. Community colleges sampled reported having from 5-579 faculty members with a mean number of 123 ($SD = 107.4$). The mean number of non-URM faculty was 101.39 ($SD = 84.23$) and 20.13 ($SD = 20.13$) for URM faculty. Six community colleges (5%) in this sample reported having no URM faculty on their staff while another 20 (15%) reported having only one URM full time faculty member. Thirty-two community colleges (26.7%) reported that they have no Hispanic/Latino faculty, while only one (.8%) reported having no Hispanic/Latino students. The lack of Hispanic/Latino male faculty is alarming with 53 (44.2%) of the colleges reported having none. Also alarming is that community colleges (50%) reported having only one or no Black faculty members in their ranks. No community college reported having more than six American Indian/Alaska Native faculty and 94 (78.3%) report having none.

In their original research, Stout et al. (2018) used 2010 U.S. Census data to calculate a hypothetical diversity score for the United States. Using federal race/ethnic categories Stout et al. calculated a Diversity Score of 75 for a hypothetical institution whose racial/ethnic makeup mirrored the 2010 U.S. population. Eight institutions (6.7%) in this sample would score equal to or higher than the Diversity Score developed for the U.S. population. The gap of nine points between the U.S. mean score of 75 and the faculty mean score of 66 in this research is only slightly lower than the 11 point gap which was reported by the earlier study (Stout, Archie, Cross, & Carman, 2018).

This research also created a gender Diversity Score for each institution. This score reflected the difference found between the number of male and female faculty at each college.

The range of the gender Diversity Scores in this sample was 58 to 100, with a mean of 87.48 ($SD = 8.59$) across all institutions. The mean gender diversity score was 21 points higher than the race and ethnicity diversity score. Women represented 56% ($n = 8299$) of the faculty population sampled. One very small college (.8%) reported having one female faculty member and four males. Four colleges (3.3%) reported equal representation between male and female faculty members receiving a Diversity Score of 100. This result was not surprising and may be explained by a more equal balance of male to female faculty in this sample.

This study replicated Stout et al. (2018) by exploring the relationship of faculty diversity to student graduation rates. This study went beyond Stout et al. by using the same diversity score to explore the relationships between faculty diversity and URM and non-URM student transfer and dropout rates. Additionally, a second diversity score for gender was developed for each college. Institutional gender diversity scores were then correlated with student graduation, transfer, and drop-out data to quantify the relationships between faculty gender diversity and student success.

Research Question 4

Is there a relationship between faculty diversity and student graduation rates in public community college?

- A. Is there a relationship between faculty race and ethnic diversity and student graduation rates?*
- B. Is there a relationship between faculty gender diversity and student graduation rates?*

Race/Ethnicity

As expected, a strong positive relationship was found between graduation rates of Hispanic/Latino, Asian, American Indian/Alaska Native, and Black students and faculty of the same race or ethnicity. Correlations ranged from $r = .144$ to $r = .783$. See table 4.1 for all correlations. Six of the correlations were statistically significant at $p \leq .01$.

A strong negative relationship ($r = -.715$) was found between increases in faculty race and ethnic diversity and white student graduation rates. This result was expected and is consistent with results found by Stout et al. (2018). This result suggested that contact with high percentages of non-URM faculty may have a negative influence on graduation rates of URM students while contact with high percentages of URM faculty may have a negative effect on graduation rates of non-URM students. Because this data is presented in percentages it shows proportional changes both in faculty and students. As a community college becomes more diverse, data that is reported in percentages will show proportional changes as both faculty and students diversify. Increases in any one URM faculty group percentage will result in a decrease in the percentage of all other faculty groups within the institution.

The relationship between the Diversity Score and Native Hawaiian and Pacific Islander graduates was found not significant with a correlation of $r = .144$ and a p score of .116. This finding was unexpected and may have been due to a small sample size for this group.

A second correlation was run to explore the overall relationship between URM faculty and URM graduates. The result was a strong and positive and statistically significant relationship $r = .787$. This finding suggests that the more diverse the faculty body, the better the graduation rates for all URM students. This result was

consistent with the Stout et al. (2018) study and supports the use of the Diversity Score to evaluate the level of faculty diversity that exists in a college.

Unexpectedly, Native Hawaiian/Pacific Islanders showed the highest correlation with Asian faculty. This may have been due to a small sample size or it may have been due to similarities in racial/ethnic cultures that have been in close proximity for centuries. There is little research available to understand this phenomenon at this time and additional investigation is warranted.

Student graduation rates were most strongly related to the percentage of faculty at their institution of the same race/ethnicity. In most cases, the presence of an overall high percentage of URM faculty was significantly related to higher URM student graduation rates, even if the URM student was not the same race/ethnicity as the URM faculty member. When there is a low percentage of URM faculty, all race/ethnic student groups had declining graduation rates declined except for non-URM students. Stout posited that a lack of connection between faculty and students could take many forms such as a lack of a role model or coach, an isolation from the instructor, and even attitudes that may form in a non-diverse environment. This study supports earlier research suggests that a lack of faculty diversity can be a barrier to the academic progress that can sustain an URM student to graduation (Stout, Archie, Cross, & Carman, 2018; Hurtado & Guillermo-Wann, 2013).

Gender

The relationship between both male and female graduates and the gender Diversity Score were not found to be significant. Research regarding differences in the success of men and women in community colleges is insufficient to address this finding. While it is clear that race and ethnic differences can influence student success, especially for URM students, what is not clear is the relationship between gender and student

success. This study explored the issue of female student success more in the qualitative component of this research and drew conclusions about how connections made by female students with women faculty become an important part of the student's support system.

Research Question 5

Is there a relationship between faculty diversity and student transfer rates in public community college?

- 1. Is there a relationship between faculty race and ethnic diversity and student transfer rates?*
- 2. Is there a relationship between faculty gender diversity and student transfer rates?*

Race/Ethnicity

This study found that there is a significant relationship between faculty race and ethnic diversity and student transfer rates with non-URM students transferring at a higher rate than URM students. This finding was not unexpected and provided insight into the transitory nature of students moving from one educational program to another and pointed to differences in access to programs.

The results of the Pearson correlations showed statistically significant relationships between 21 of the 36 correlations with at least $p < .05$. The magnitude of the significant correlations ranged from $r = .244$ to $r = .909$. Five ethnic/racial group transfer rates showed the highest strong and positive correlation with the faculty who were of their own ethnic/racial group. Interestingly the Native Hawaiian/ Pacific Islander group showed the same relation with Asian faculty as with Native Hawaiian/ Pacific Islander faculty $r = .686$, $p < .01$.

Gender

The relationships between both male and female transfer students and the faculty gender Diversity Score were not found to be significant. This finding was not expected and is consistent with the research findings in research question 4.

Research Question 6

Is there a relationship between faculty diversity and student drop-out rates?

1. *Is there a relationship between faculty race and ethnicity and student drop-out rates?*
2. *Is there a relationship between faculty gender diversity and student drop-out rates?*

Race/Ethnicity

A significant relationship was found between faculty race and ethnicity and student dropout rates. This is not surprising given the findings presented in research questions 4 and 5. Once again, non-URM students showed a negative correlation indicating that the more diverse a faculty population becomes in a college, the lower the frequency of White dropouts. This result is unexpected and confusing and does not support a hypothesis that a greater representation of URMs in faculty will support less drop-outs among URM students. This finding again suggests that the Diversity Score may not be as accurate a measure of potential success as put forward by Stout et al. (2018).

Significant correlations ranged from $r = .225$ to $r = .769$. Six of the correlations were statistically significant at $p \leq .01$. The correlation between the race/ethnicity Diversity Score and Native Hawaiian/Pacific Islanders was significant at $p \leq .05$. All of the correlations were positive with the exception of the relationship between Diversity Score and percentage of White drop-outs.

A second correlation was run to explore the overall relationship between URM faculty and URM drop-outs. The result was a strong and positive relationship $r = .745$, $p < .01$.

In order to explore the relationship between faculty diversity and student drop-out rates at a finer level, a third correlation matrix was constructed to examine the relationships between percentages of faculty of each race/ethnic group and student drop-out rate by race/ethnicity. The magnitude of the significant correlations ranged from $r = .253$ to $r = .912$. Results of the Pearson correlations showed statistically significant relationships between 20 of the 36 correlations with at least $p < .05$. Table 4.8 displays the results of the correlation matrix analysis. All race/ethnic graduation rates showed the highest strong and positive correlation with the faculty who were of their own race/ethnic group.

Gender

The relationship between both male and female drop-outs and the gender Diversity Score were not found to be significant. This is again an unexpected result and is consistent with the results found in both research questions four and five.

Qualitative Research Questions

The quantitative component of this study explored the relationship of faculty diversity to student success, specifically race, ethnicity, and gender. Qualitative research can be used to help make meaning of the data found and to put the results into context. .

Utilizing elements phenomenological research six ($n = 6$) public community college presidents who had formerly, or at the time of the interview, held the position of a public community college president in the Texas Gulf Coast area were interviewed. Also interviewed were 15 former community college students who were attending a four-year

university. All 15 of the students interviewed formerly attended public community colleges in the Texas Gulf Coast area.

Community college presidents were intentionally selected for this research due to their broad reach in defining the scope and priorities of their assigned colleges. As the college Chief Executive Officer (CEO) the president has oversight and is responsible for all community college functions and activities (St. Charles Community College, 2018; American Association of Community Colleges, 2018; Spangler, 2008).

Former community college students attending a four-year university at the time of this study were purposely selected to explore their perceptions of the relationship of faculty diversity to their student experience.

Research Question 7

How do community college presidents perceive the relationship, if any, between faculty diversity and student graduation, transfer, and drop-out rates?

Community college presidents believe that there is a relationship between faculty race and ethnicity and student success. This is important because community college presidents drive the strategy needed to move their colleges forward into the next decade.

Three of the presidents were male and three were female. Four of the presidents were White. One president was Black/African American, and one was Hispanic/Latino. Two interview subjects were presidents of colleges that were a part of a multi-college system. Two were presidents of independent colleges in communities surrounding a large metropolitan area. One of the interview subjects was a president of a rural college which also included student residential facilities.

Five of the six presidents interviewed stated that the race or ethnicity of their faculty is important and makes a difference in the community college experience of their

students. One president stated that other factors like individual strengths and motivation are more important and transcend race and ethnicity.

Four of the six presidents stated that the gender of their faculty makes a difference in the community college experience of their students. One president stated that he is unsure if there is a relationship between faculty gender and student success. One president stated that the experience created by the college is what matters most, regardless of race, ethnicity, or gender.

There is generally a consensus that faculty race and ethnic diversity makes a difference in the success of students but individual interpretations regarding how that occurs may be very different. These presidents filter information through their own experiences and personal biases. This becomes apparent when we listen to the individual voices. They struggle to make meaning of their environment and take action to change it in support of the success of their students (Diangelo, 2018).

Community college presidents are accountable to many different voices in their internal and external communities (American Association of Community Colleges, 2018; Roueche, Richardson, Neal, & Roueche, 2008). Their reputations and careers may hinge on a single decision made in the heat of crisis. As one president states, “We must be aware that everyone is watching.” Presidents make decisions in the context of their environment, institutional priorities, and hopefully for the benefit of their students. Sometimes these constituencies demand conflicting actions. The interviews provided thoughtful reflection and ideas from six very different individuals about how to create an environment that will support all students.

Three major themes were extracted from the textural and structural descriptions of the participant responses: (a) changes in our communities drive change in our colleges,

(b) inclusion is a process of accommodation, and (c) mentoring and role modeling is critical.

Theme A: Changes in our communities drive the need for change in our colleges

All six of the presidents recognized the accelerated pace of change in their diversifying communities. They discussed issues related to community change and development. Two of the presidents talked about diversity change in a positive context. They talked about change as a catalyst for new ideas. President 4 believed change brings both opportunities and problems. He suggested that community colleges must prepare students for the global workforce. He stated that, “The ultimate student experience is to provide students with a microcosm of the world.” Presidents talked about the need for their colleges to do more strategic planning and reach out to develop more partners who can assist in providing needed supports to students. President 5 describes diversity change in his service area through the lens of race and ethnicity. He states, “Our community, both the college and the school district in the last 3 or 4 years has really transitioned more toward more minority students.”

Two sub-themes were isolated from a further analysis of the responses: (a.1.) qualified URM candidates are hard to find, and (a.2.) the president as an inclusive leader.

Sub-theme A.1: Qualified URM faculty candidates are hard to find

Difficulty in hiring racial and ethnically diverse faculty frequently came up in the interviews with the presidents. This theme is not surprising. Research has informed us for decades about the struggle many colleges have had in providing an adequate representation of faculty based on race and ethnicity (Williams & Wade-Golden, 2008; Bowen & Bok, 1998; McFarland, et al., 2017). Research has also informed us of the value of minority representation in the college environment and its benefits to students by creating a more welcoming environment in which to study and learn (Egalite & Kisida,

2016; Museus, 2014). The following four college presidents were very aware of this concern.

President 2 (Rural college): It is difficult getting minority faculty participation here. They want to be in bigger cities. More amenities, more connections for them.

President 4 (Large metropolitan college): I refuse to believe that there are no qualified African American or Hispanic English professors in the Houston area. We are just not looking hard enough.

President 5 (Independent suburban college): They (Hispanic Faculty) are in such demand that they don't stay. They can go on most anywhere. In all likelihood someone else would pay them more.

President 6 (Suburban small college): Our faculty diversity is not strong

There was little advice from the presidents regarding how to successfully find these resources. Presidents talked about having diverse hiring committees and following Federal and State laws to ensure compliance. Presidents discussed the need for diverse hiring pools but shared little information regarding how to seek to broaden these applicant pools and how to advertise, search for and develop URM faculty development opportunities.

Sub-theme A.2: The president as an inclusion leader

As strategic leaders, presidents must model inclusive behavior and foster advanced engagement with community supports and services (Association of American Colleges and Universities, 2015). The presidents interviewed struggled to define their role as an inclusion leader. President 5 stated that presidents, "need to understand the historical perspective" referring to the demographic change in his student body. President 6 stated that a president must, "embrace the diversity in order to be relevant."

President 3 provided a step by step process for successfully managing the diversity of the community college:

1. Prepare to serve the cross sector of the population
2. Recognize the importance of connecting with the community in an authentic way
3. Ensure that technology is up to date
4. Fundraising is very important, philanthropy cannot be understated

The presidents interviewed were representative of community college leadership in a rapidly changing environment. They must both look at the broad strategic level and tease out problems between individuals and small groups. At times the presidents appeared uncomfortable as they sought to define diversity in the context of their colleges and students. This finding was expected. Diversity change occurs at all levels. Each person experiences change adapting to change has proven to sometimes be difficult for the individual as well as the institution (Thomas Jr., 1999; Levin, Haberler, Walker, & Jackson-Boothby, 2014; Hernandez-Gravelle, O'Neil, & Batten, 2012)

Theme B: Inclusion is a process of accommodation

An important finding of this research is the strong opinion of college presidents that colleges must actively seek out supports to enable students to get in the door and succeed when attending community colleges. This finding was expected (actually hoped for) and is supported by research (Chen, 2017; Hurtado & Guillermo-Wann, 2013; Tinto V. , 2006). President 1 talked about her role as president and advocate. She stated, “Advocacy is championing.” She goes on to state, “I think it is my role as a president. To sub-themes were extracted from the analysis of the data: (b.1) building supports, and (b.2) removing barriers.

Sub-theme B.1: Building supports

President 5 stated that building student supports is a responsibility for all faculty and staff in the organization. He stated, “It is very important for students to connect in the classroom with their faculty. We also believe that it is important that students connect out of the classroom.” The presidents interviewed talked about school clubs and organizations, tutoring, and Early Alert systems that identify struggling students and reach out to help them. President 6 agrees that supports outside of the classroom are critical. He notes:

It is good to be supportive of them (students) academically, but it’s not always the academics being the reason a student doesn’t finish. All these reasons in their life tend to impose on them and cause them to stop out or drop-out or whatever.

Sub-theme B.2: Removing barriers

Identifying and removing instructional and non-instructional barriers to students was a topic addressed by five of the six presidents interviewed. They noted a variety of barriers that as president they must address: Homelessness, disabilities, mental illness, home issues, inter-college barriers to moving to a four-year college, curriculum barriers and the most often mentioned, financial barriers.

This finding was expected and is supported by research (Espinosa, Turk, Taylor, & Chessman, 2019; Glass & Minnotte, 2010; St. Rose & Hill, 2013). Almost two thirds of community college students enroll part time and hold jobs to help pay for living and educational expenses. Financial aid formulas are designed for traditional-aged students and federal guidelines base aid packages on current wages (based on income reported to the I.R.S.). Students who work while also attending school have their current wages count against their following year’s financial aid award. Recent research by the American Council of Education has also identified that these practices in conjunction

with rising college debt have impacted race and ethnically diverse students the hardest (Espinosa, Turk, Taylor, & Chessman, 2019).

President 4 notes his concern:

Right now there is a lot of information about housing insecurity and food insecurity and that has repercussions over into computer access, internet access. How successful can students be in the classroom if they are experiencing those kinds of things?

Theme C: Mentoring and role modeling are critical

The most significant finding to emerge from the president interviews was their belief that students need mentors and role models of their own race, ethnicity, and/or gender. Having faculty members as mentors and role models is seen as the most important reason to have a diverse faculty. This finding is supported by research (Museus, 2014; Tovar, 2014; Crisp, 2010; Dee, 2005).

The following comments from presidents illustrates this finding:

1. "They need to see themselves."
2. "Students need mentors. Mentors need to be individuals that they can connect with and who look like them."
3. "Students have said they can identify better with an experience with somebody who looks like them."
4. "When females struggle they do tend to reach out and they reach out to a female."
5. "A Hispanic male who teaches in our remedial math area. He says, "Hey guys I was where you were one time and I can do it, you can do it!"

Research Question 8

How do community college students perceive the relationship, if any, between faculty diversity and student graduation, transfer, and drop-out rates?

Interviews were conducted with 15 former community college students who were attending one Gulf Coast university. These findings are based on student responses, in their own words, to a set of 5 structured interview questions.

The first of five questions provided to each student (Attachment B) asks, “Did the race or ethnicity of your professors make a difference in your community college experience?” Nine students responded that the race or ethnicity of their professors did not make a difference. Five students indicated that it did make a difference. One student could not decide between the two choices.

Nine students, three male and six females, stated that the gender of their instructors made a difference in their community college experience. Three students, two male and one female did not believe that faculty gender had an impact on their experience and three students, two males and one female, stated that they did not know the answer the question. Significantly, 100% ($n = 8$) of the female students interviewed provided examples from their own community college experience suggesting that there was a significant impact of faculty gender on their student community college experience.

After careful analysis of the participant responses to the interview questions, two themes were extracted from the contextual data: (a) Individual connections are important, and (b) Female teachers matter to female students.

Theme A: Individual connections are important

Student 3, could not answer whether race or ethnicity influenced her community college experience. However, she gave a description of her interaction with a classroom

instructor that suggested that she had developed a connection with an African American female instructor who made a positive impact on her student experience. She stated, “My main teacher, who I could more closely relate to as a mentor, was an African American woman. She understood me as a minority.” Student 3 shared why she was so motivated by her teacher. “I felt that she was harder on us or harder on me because of the fact that I was colored in a good way. I felt like that was good. Like a challenge with handholding, but on the other hand was a fist.” Student 3 appreciated the connection, and she was motivated by the rigor of the task.

Three other students initially stated that the race or ethnicity of their teachers did not impact their college experience. Then they responded to the next question by providing an example of how the race and ethnicity of a faculty member had either a positive or negative effect on their college experience.

Student 4 related a story about an instructor who provided meaningful support to her. This story illustrated how a student can benefit from the complexity of diversity in a relationship. She began her story dismissing the impact of diversity on her school experience. She then presented a reflection on race (Hispanic, Black, Native American) and her positive experience with a Native American teacher.

I don't think it (race or ethnicity) made an impact. I can't say that it didn't because most of the teachers I had were female and they were usually not white. They were Hispanic or Black. Maybe it made me relate to them more. I did have one teacher I talked with. She was a history teacher and she was a Native American. The reason I talked to her is because I was thinking about taking Native American history and because I'm Native American so I became close to her and that was one of the reasons I could talk to her.

Not all diversity experiences with faculty from different races and ethnicities are seen as positive. Three students reported having problems understanding instructors who had poor English language skills. Language barriers can arise when diverse cultures come together on a college campus. One student told his story about transferring to the university and retaking the same course that he had failed in a community college setting. He stated, “When I came here lo and behold one of my professors is not a native English speaker but he is able to articulate a lot of words that other people were not able to and I’m actually passing the class I was originally failing somewhere else.”

Theme B: Female teachers matter to female students

Some female students talked about seeing themselves in their female teachers and finding acceptance. Comments like, “I saw myself in her.”, “I was a biology major and ended up really relating to her.” and “It was nice to have that sort of camaraderie.” are reflections of identity and hope. Some students suggested that women are perceived as more nurturing, accessible, and caring. This perception is seen in comments like: “I found myself in college not paying attention to my math teachers who were male more than my math teachers who were female.”, “When I do get a female teacher it is a little bit different, because she explains things a little more” and “I’m less hesitant to ask her things.” Other comments seem to reflect a deeper reaction based on fear or rejection such as: “It’s difficult for me to ask help from a male professor because I feel kind of intimidated by them.”, “Male teachers have been very standoffish, they had a demeanor of you can’t come to me.”, and “I’m really intimidated by men.”

These female students have found safety, acceptance, and motivation from their female teachers.

Limitations

There are many limitations to this study to be considered. One limitation is the broad scope of the research purpose and questions presented. The first component of this mixed methods research involved looking at the statistical relationships between immutable characteristics like race and gender and student success measures which include graduation, transfer, and drop-out. The second component of the study explored broader concepts of diversity and student success from the varied perceptions of students and college presidents. There is nothing more abstract than diversity work. Diversity, inclusion, and student success are broad subjects that can be interpreted through many lenses (Chen, 2017; Thomas R. , 1992; Hubbard, 2004).

Quantitative

Quantitative research limitations to this study include:

1. Differences in state laws, enrollment, and classifications of student success may limit the ability to generalize from a sample across the United States community college spectrum.
2. Restricting the definition of diversity to race, ethnicity, and gender excludes such factors as gender identity, social, or economic status. If these factors had been included in this study different results might be generated.
3. IPEDS only collects data on two gender categories, male and female. Restricting classification to two distinct groups does not allow for the investigation of academic success with other gender variance and classifications.
4. Data was collected from IPEDS from a single reporting year preventing the examination of cumulative data to address changes in community colleges over time.

5. Not using IPEDS classifications such as Non-resident Alien, Two or More Races, and Unidentified in this study limits the generalizability of its findings to these groups.
6. As noted by Stout et al. (2018) in their previous research, data that is reported in percentages will show proportional changes for both faculty and students diversity. Increases in any single URM faculty group percentage will result in a decrease in the percentage of all other faculty groups if there is no change in the numbers of faculty in other race/ethnic or gender groups.
7. Some of the correlations that this research did not find statistically significant may have been significant if a larger sample size had been available.
8. This is a correlational study. The primary limitation of correlational research is that it limits the ability to validly discuss causes and effects. This research can only validly discuss the statistical significance, strength, and direction of the relationships between faculty diversity and student graduation rates.

Qualitative

Qualitative limitations to this research include:

1. Narrowing the qualitative sample to 6 presidents with 10 years of experience and representing community colleges from the Texas Gulf Coast may impact the generalizability of the research to all community college administrators.
2. Not including perspectives drawn from college presidents who have not had 10 years of administrative experience may limit data that can arise from new insights and experiences.
3. Subjects selected for interviews may not be representative of all community college administrative personnel or students regarding the perceived

relationship between faculty diversity and student graduation. Honesty in interview participants may also be a factor limiting this study.

4. Using former community college students who are attending a four-year university may have excluded the voices of students who did not move on to a four-year college.

Implications for Future Research

In this research many, certainly not all, complexities of diversity change in the community college have emerged through the exploration of archival data and by listening to the reflections of community college presidents and students. There are many areas of future research that can be drawn from this study. Five are considered here.

First, it is recommended that this study be duplicated in all sectors of education to include K-12 programs, and other types of postsecondary programs. The Diversity Score has proven to be a valuable tool measuring faculty diversity and its effect on student success in the college setting. Further study of the Diversity Score on other populations such as low socioeconomic status students and paired diversity categories like African American men, Hispanic women, and other combinations may provide a deeper analytical understanding of the effects of faculty diversity on community college students.

Second, additional study is recommended into the possible presence of an unidentified moderating variable which may limit accuracy of the Diversity Score as a rating tool. To test moderation, an investigator could use hierarchical multiple regression to look at the interaction effect between the independent variable which in the case of this research was faculty diversity, and whether or not the effects are significant in predicting the dependent variable which in this study was student success (Elite Research LLC, 2013-2014).

Third, continued study into the perceived differences between the teaching styles of male and female teachers is recommended. Student reports regarding perceived differences in the teaching styles of male and female faculty members raise questions regarding the benefits of a nurturing or welcoming environment for student learning.

Fourth, additional study is recommended to explore the effects of faculty with poor English language skills on student success in the classroom. Student reports regarding barriers to their learning because they could not understand their instructor present difficulties to colleges who strive to be diverse yet must provide accessible instruction.

Finally, additional research into the complex question of, “How much diversity is enough diversity?” is recommended. Researchers and practitioners have suggested that in order for faculty diversity to be achieved there must be a proportional degree of ethnic variance equal to, or greater than, the student body (Stout, Archie, Cross, & Carman, 2018; Ladson-Billings & Tate, 1995; Franklin, 2012; State University of New York, 2019). Given the data regarding faculty representation in public community colleges reviewed in this research, there is a long way to go. For too many public community colleges it appears that any URM faculty representation may be helpful.

Implications for Practice

Research suggests that a racially and ethnically diverse student body can benefit from exposure to a racially and ethnically diverse faculty (Hurtado, Alvarado, Guillermo-Wann, Cuellar, & Arellano, 2012; Museus, 2014; Egalite & Kisida, 2016; Quaye, Griffin, & Museus, 2015). Stout et al. (2018) highlighted the positive impact of faculty diversity on minority and majority population graduation rates and showed an increased persistence in students at institutions with higher numbers of faculty who were of a similar race and ethnic background as their own. A sense of belonging appears to be an

element of the learning environment that is necessary to support student success for URM students (Museus, 2014; Tinto V. , 1993; Verschelden & Verschelden, 2017). These findings are supported by the quantitative findings of this research and confirmed by college presidents and former community college students who were interviewed in the qualitative research.

Currently in public community colleges there is not enough emphasis placed on identifying and recruiting faculty with regard to how their race and ethnic diversity variance can impact student success. However, research suggests that faculty racial and ethnic variance has an impact on student retention and subsequently graduation rates (Bowen & Bok, 1998; Cervantes, Mai, Morin, Otoo, & Williams, 2017; Hurtado & Guillermo-Wann, 2013). Societal shifts that occurred during the twentieth century have shaped the current makeup of American communities (Johansson, 2006). McLain and Perry (2017) report that social and governmental actions such as the Servicemen's Readjustment Act (G.I. Bill), the Civil Rights Movement, the Women's, and the proliferation of open access universities have opened the doors to non-traditional populations. Community college student populations reflect more accurately the diverse makeup of communities that they serve. Classrooms, laboratories, and instructional environments are windows to the future of our global world and a reflection of the diversity emerging in our communities (Chen, 2017). These same classrooms are also hotbeds of social testing and change (Mertes, 2018; Calahan, Perna, Yamahita, Ruiz, & Kranklin, 2016; Museus, 2014).

The presidents interviewed in this research recognized that addressing the diverse needs of public community college students has created an educational paradigm shift. There is a growing concern regarding how to level the playing field for students to succeed in community college, particularly URM students. The one size fits all attitude

for teaching and learning does not fit the needs of today's students. The most effective community colleges do not simply put voice to the goal of diversity and inclusion; they use their diversity to drive organizational decisions to increase the cultural competence of their college community (Insight Into Diversity, 2017; Chen, 2017; Cohen, Brawer, & Kisker, 2014; Spangler, 2008).

There are public community colleges making an intentional effort to recruit, hire, and retain qualified URM faculty members. Fortunately, best practices are emerging to guide them. Each year *Diverse Works in Higher Education* magazine publishes a list of the most promising places to work in community colleges (*Diverse Works in Higher Education*, 2019). The publication evaluates community college nominees on their ability to increase faculty and staff diversity, foster a sense faculty and staff belonging, and on their ability to equip college student educators for their work with students. Over the course of time best practices have emerged. Promising community colleges recognize faculty and staff for their good work and leadership. Promising community colleges strive to meet the needs of their community. Promising community colleges invest in the development of faculty and staff. Eighteen community colleges were included in the 2018 Most Promising Place to Work in Community Colleges list (*Diverse Works in Higher Education*, 2019) and joined the ranks of community colleges taking action to diversify their faculty.

A substantial body of research suggests that while all students can encounter an unwelcoming campus environment in college, students of color more frequently report encountering hostile racial climates than White students (Cervantes, Mai, Morin, Otoo, & Williams, 2017; McClain & Perry, 2017; Museus, 2014). Museus (2014) proposed a theoretical perspective that was designed to provide a foundation for evaluating best practices for URM student success that recognized the uniqueness of community college

students. The Culturally Engaging Campus Environment (CECE) Model takes a deeper dive into the multi-layered complexities of a creating campus climate in higher education where the student population is diverse, transient, and often underprepared. The CECE model addresses the reality that URM students face substantial racial and ethnic disparities in college persistence and graduation. The CECE model can be a useful tool for community college educational leaders to better understand the ways in which their college environments might be influencing the experiences and outcomes of their diverse student body.

The findings of this study support Museus' (2014) framework. Taking intentional strategic action to (a) create a diverse faculty body, (b) establish a culturally inclusive climate, and (c) remove barriers by building internal and external supports can improve community college student outcomes.

Create a diverse faculty body

Community colleges are far behind many of their four-year counterparts in taking action to establish a more diverse faculty body. In 2018, 161 colleges and universities were awarded the prestigious Higher Education Excellence in Diversity (HEED) award sponsored by Insight into Diversity magazine. Only five of those awardees were community colleges (Insight into Diversity, 2018).

The following strategies have been effectively used by many four-year universities and a few forward thinking community colleges to recruit and retain faculty of diverse ethnicities, races, and genders. The following list provides a few, of the many, intentional steps that a community college can take to focus its recruitment activities to attract URM faculty candidates:

- Establish a faculty diversity recruitment plan,
- Put in place a dedicated faculty diversity recruitment specialist,

- Advertise in diversity related publications and job boards,
- Establish mentor programs for diverse junior faculty,
- Create affinity or employee resource groups for employees.

The evaluation process used by Insight into Diversity is a good tool for higher education leaders to assess their current practices and identify others that may be more effective (Insight Into Diversity, 2017). The first of nine CECE indicators put forth by Museus (2014) is Cultural Familiarity. He posits that when college students have opportunities to connect with faculty, staff, and peers with whom they share common backgrounds they have a greater likelihood of success. These contacts can occur through face-to-face contact and interactions during curricular and co-curricular activities (Museus, 2014).

Establish a culturally inclusive climate

Campus climate can be a major factor affecting student achievement including outcomes such as retention and graduation rates (Hurtado, Alvarado, Guillermo-Wann, Cuellar, & Arellano, 2012; Hurtado, Milem, Clayton-Pederson, & Allen, 1999). The Multi-contextual Model for Diverse Learning Environments (MMDLE) provides guidance for addressing the relationship between a community college's compositional diversity and student graduation rates. The MMDLE links campus climate for diversity to educational practices and learning outcomes and is a tool that can guide practitioners who are engaging institutions in change. MMDLE suggests higher education leaders establish a plan to address:

- *Institutional historical legacy of inclusion or exclusion:* The environment experienced by both the institution and the student. During their interviews, three presidents (Presidents 2, 5, & 6) noted that a president must seek to

understand the experience and history of the college and the student in planning for student success.

- *Compositional diversity*: This component evaluates representation in all institutional areas to include students, faculty, staff, and community constituencies.
- *Psychological climate*: College leaders should assess psychological climate for URM faculty and students should be acknowledged through the assessment of interactions between individuals and the degree to which discriminatory and harassing acts (assault, bullying, and exclusion from activities) and microaggressions (racial slurs, unintended bias expressions, insensitivity) impact perception and behavior.
- *Behavioral climate*: The threshold of a behavioral climate is initially established by an institution's policy and practice. Requiring all incoming (first-time and transfer) students to enroll and successfully complete a course teaching them about appropriate intercultural communications, college standards and expectations, and how to bring their concerns and complaints forward to the appropriate authority helps to establish a standard for how members of the college community treat each other. Requiring all faculty, staff, and administrators to do the same is critical. The behavioral climate regulates individual actions and defines normative rules for how a community will act.

Removing barriers

Critical Race Theory (CRT) suggests that the values and beliefs held by the majority population are accepted as the social standard and that any change from their perspective will elicit an open and publicly targeted reaction (Taylor, 1998). Archie

(2015) goes so far as to suggest that as postsecondary institutions are becoming more racially diverse, ignoring the critical nature of race in education can cause “more damage and harm than assistance to minority groups” (p. 21).

Addressing race, ethnicity, and gender bias issues on campus presents difficult and often volatile problems that requires an intentional effort and a plan. In 2015 the former State University of New York (SUNY) college system Chancellor, Dr. Nancy L. Zimpher endorsed a plan to do just that (State University of New York, 2019). The SUNY Strategic Diversity Plan established goals to advance issues of Diversity and Inclusion throughout the 64 campus system. As its first goal SUNY established the following resource development objectives:

- Increase public and private resources necessary to sustain new initiatives to augment the numbers of underrepresented faculty, staff, students and administrators at SUNY and to shape the academic and support services infrastructure necessary to ensure student success.
- Promote diversity within SUNY’s human resources.
- Support campuses with successful diversity programs to further develop and expand these programs.
- Create synergy between academic excellence and diversity through a variety of targeted programs.

SUNY takes their strategic Diversity Plan seriously and in April 2019 announced their goal to close the gaps between the diversity of SUNY students and their professors by hiring a total of 1000 professors from minority groups SUNY-wide by 2030 (WROC News 8 Rochester-First, 2019). The SUNY plan provides a model for other colleges.

Removing barriers and building supports for the many needs of community college students requires complex evaluation, planning, and engagement. Drawing from

MMDLE and CECE theory this researcher proposes that a new Diversity and Inclusion Engagement Model be considered as a framework for removing barriers, building supports and developing a strategy for addressing race, ethnicity and gender needs on a community college campus. The engagement model proposed addresses the need for a baseline of campus safety. It builds on the foundation of creating safe spaces to provide targeted programs for special populations; engagement with community services, regulatory authority, and partner educational systems. Finally, this model proposes the development of a Diversity and Dispute Resolution Center of Excellence (DDR-COE). The DDR-COE has the potential for providing a wide array of cultural competency awareness experiences, training, and education addressing a wide array of topics such as Global Citizenship, Cultural Dispute Resolution, Culturally Relevant (Sensitive) Pedagogy, and Community Cultural Engagement to support student, faculty, and community success.

Conclusion

Using 2017 archival IPEDS data from 120 public community colleges this mixed-methods study replicated the previous research of Stout, Archie, Cross and Carman (2018) by calculating an institutional Diversity Score as a common measure of diversity and ranking the community colleges by their overall faculty level of race/ethnic, and gender variance. This research expanded upon Stout et al. by using the Diversity Score to explore URM and non-URM student transfer and dropout rates. Findings suggest that positive interactions with URM faculty can provide URM students with a role model that increases their sense of welcomeness, acceptance, and motivation to succeed. When students are exposed to a diverse faculty, they feel more comfortable and have better outcomes. As cultural demographics shift community college leaders will continue to see

increases in their diverse student populations. Increasing faculty diversity can be an important step for improving an environment for student success.

This researcher proposes that community college leaders and communities develop strategies that support creating a diverse faculty body, develop programs to establish a culturally inclusive climate and strive to remove barriers to URM student success. Finally, this researcher proposes the consideration of a new Diversity and Inclusion Services Engagement Model to guide their strategic planning to support student engagement and success.

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APPENDIX A:
INFORMED CONSENT TO PARTICIPATE IN RESEARCH

You are being asked to participate in the research project described below. Your participation in this study is entirely voluntary and you may refuse to participate, or you may decide to stop your participation at any time. Should you refuse to participate in the study or should you withdraw your and stop participation in the study, your decision will involve no penalty or loss of benefits to which you may be otherwise entitled. You are being asked to read the information below carefully, and ask questions about anything you don't understand before deciding whether or not to participate.

Title: The Relationship between Faculty Diversity and Graduation Rates in Public Community Colleges

Principal Investigator: James David Cross, M.Ed.

Faculty Sponsor: Michele Khan, Ph.D.

PURPOSE OF THE STUDY

The purpose of this research is to explore the relationship between faculty diversity and student graduation, transfer, and drop-out rates in public community colleges and seek to understand student and college president perceptions regarding the relationship, if any.

PROCEDURES

The procedures for this study include the following. In the first quantitative phase of the study, Faculty and student race and ethnicity data will be collected from IPEDS (Integrated Postsecondary Education Data System) to assess whether faculty race and ethnicity relate to student graduation, transfer and drop-out rates in the community college setting. In the second quantitative phase of the study, faculty and student gender data will be collected from IPEDS to assess whether faculty gender relates to student graduation, transfer, and drop-out rates in the community college setting. The third phase qualitative research will be conducted as a follow-up in order to help explain the quantitative results. This follow-up will explore perceptions regarding the relationships, if any, between faculty diversity and student graduation rates by interviewing 1) five college presidents and 2) fifteen students. Both students and college presidents are drawn from community colleges in the Texas Gulf Coast area. This exploration will use the same questions posed in the same manner to each president and the same questions posed in the same manner to each student focus group although the questions may vary between the president and student groups to maintain relevance with the population being investigated.

EXPECTED DURATION

The total anticipated time commitment will be approximately 45 minutes to one hour for college presidents and from 30-45 minutes for student participants.

RISKS OF PARTICIPATION

There are no anticipated risks associated with participation in this project.

BENEFITS TO THE SUBJECT

There is no direct benefit received from your participation in this study, but your participation will help the investigator(s) better understand how faculty diversity impacts community college student success.

CONFIDENTIALITY OF RECORDS

Every effort will be made to maintain the confidentiality of your study records. The data collected from the study will be used for educational and publication purposes, however, you will not be identified by name. For federal audit purposes, the participant's documentation for this research project will be maintained and safeguarded by the Principal Investigator for a minimum of three years after completion of the study. After that time, the participant's documentation may be destroyed.

FINANCIAL COMPENSATION

There is no financial compensation to be offered for participation in the study.

INVESTIGATOR'S RIGHT TO WITHDRAW PARTICIPANT

The investigator has the right to withdraw you from this study at any time.

CONTACT INFORMATION FOR QUESTIONS OR PROBLEMS

The investigator has offered to answer all your questions. If you have additional questions during the course of this study about the research or any related problem, you may contact the Student Researcher, James David Cross, at phone number 713.301.1815 or by email at dcross042@gmail.com. The Faculty Sponsor Michele Kahn, Ph.D., may be contacted at phone number 281-282-3549 or by email at KahnMM@UHCL.edu.

SIGNATURES:

Your signature below acknowledges your voluntary participation in this research project. Such participation does not release the investigator(s), institution(s), sponsor(s) or granting agency(ies) from their professional and ethical responsibility to you. By signing the form, you are not waiving any of your legal rights.

The purpose of this study, procedures to be followed, and explanation of risks or benefits have been explained to you. You have been allowed to ask questions and your questions have been answered to your satisfaction. You have been told who to contact if you have additional questions. You have read this consent form and voluntarily agree to participate as a subject in this study. You are free to withdraw your consent at any time by contacting the Principal Investigator or Student Researcher/Faculty Sponsor. You will be given a copy of the consent form you have signed.

Subject's printed name: _____

Signature of Subject: _____

Date: _____

Using language that is understandable and appropriate, I have discussed this project and the items listed above with the subject.

Printed name and title _____

Signature of Person Obtaining Consent: _____

Date: _____

THE UNIVERSITY OF HOUSTON-CLEAR LAKE (UHCL) COMMITTEE FOR PROTECTION OF HUMAN SUBJECTS HAS

REVIEWED AND APPROVED THIS PROJECT. ANY QUESTIONS REGARDING YOUR RIGHTS AS A RESEARCH

SUBJECT MAY BE ADDRESSED TO THE UHCL COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS (281-283-3015). ALL RESEARCH PROJECTS THAT ARE CARRIED OUT BY INVESTIGATORS AT UHCL ARE GOVERNED BY REQUIREMENTS OF THE UNIVERSITY AND THE FEDERAL GOVERNMENT. (FEDERALWIDE ASSURANCE # FWA00004068)

APPENDIX B:
STUDENT INTERVIEW QUESTIONNAIRE

Pseudo Name: _____

Date of Interview: _____

1. Did the race or ethnicity of your professors make a difference in your community college experience?
2. Give an example of how and when.
3. Did the gender (sex) of your professors make a difference in your community college experience?
4. Give an example of how and when.
5. What advice would you give to new students to help them prepare for the challenges and opportunities of attending a community college?

APPENDIX C:
PRESIDENT INTERVIEW QUESTIONNAIRE

Pseudo Name: _____

Date of Interview: _____

1. To what extent, if any, does the race or ethnicity of your faculty makes a difference in the community college experience of your students? If so, how?
2. If possible, please give a specific example.
3. To what extent, if any, do you believe the gender (sex) of your faculty makes a difference in the community college experience of your students? If so, how?
4. If possible, please give a specific example.
5. To what extent does your College accommodate the experiences of diverse groups?
6. Where do such actions or activities take place?
7. How does your college facilitate opportunities for students to interact with and learn from students from different groups?
8. How do you ensure that there is a diverse pool of voices included in curriculum, program and budget planning?
9. What advice would you give to new presidents/chancellors to help them prepare for the challenges and opportunities of a rapidly diversifying community?
10. Who is/are your inclusion champions?

APPENDIX D:

STUDENT DEMOGRAPHIC DATA

Race/ethnicity and demographic data for students and question 1-4 answers

<u>Student</u>	<u>Race/Ethnicity</u>	<u>Gender</u>	<u>Q1</u>	<u>Q2</u>	<u>Q3</u>	<u>Q4</u>
1	Hispanic/Latino	Male	No	Yes	No	No
2	Hispanic/Latino	Male	No	No	No Answer	No
3	Black	Male	No Answer	Yes	Yes	Yes
4	Hispanic/Latino	Male	No	Yes	No Answer	No
5	White	Female	No	Yes	No	Yes
6	White	Female	Yes	Yes	Yes	Yes
7	Hispanic/Latino	Female	Yes	Yes	Yes	Yes
8	Native American	Female	Yes	Yes	Yes	Yes
9	White	Male	No	Yes	No	No
10	Hispanic/Latino	Male	Yes	Yes	No Answer	No
11	Hispanic/Latino	Female	No	No	Yes	Yes
12	White	Female	No	No	Yes	Yes
13	Hispanic/Latino	Female	Yes	Yes	Yes	Yes
14	Asian	Male	No	No	Yes	Yes
15	Hispanic/Latino	Female	No	Yes	Yes	Yes
Yes			5	11	9	10
No			9	4	3	5
No Answer			1		3	

APPENDIX E:

DIVERSITY, INCLUSION, AND ENGAGEMENT MODEL

