DISSERTATION

THE WHO, WHAT, WHY, OF FIRST GENERATION LATINE UNIVERSITY STUDENT NETWORKS

Submitted by

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In partial fulfillment of the requirements

For the Degree of Doctor of Philosophy

Fort Collins, Colorado

Spring 2025

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ABSTRACT

THE WHO, WHAT, WHY OF FIRST GENERATION LATINE UNIVERSITY STUDENT NETWORKS

Prior research demonstrates First Generation (FG) students have less access to knowledge about university processes due to the lack of relationships with adults who are familiar with these processes before and during the FG student's time at the university. This study aimed to learn more about the First Generation Latine (FGL) university student experience through an analysis of their individual university support networks. A focus on the Latine student population was intentional because FGL students have lower graduation rates, are more likely to be FG students, and the United States is expected to be one-third Latine by 2050. This study sought to find out who FGL students reported in their network, what support they received from connections in their network, and why they chose to maintain a relationship with the connections in their network. Yosso's (2005) Community Cultural Wealth Model and Rendón's (1994) Validation theory guided this study's understanding of how FGL students use their knowledge and resources to leverage a network for success. Social network analysis methods were used to gather network data and semi-structured interviews supplemented the network data. Findings demonstrate FGL student networks are diverse in size, composition and structure, with a high student and staff presence. Findings also show FGL students seek a variety of support types, including navigational support, personal support, and identity support. As previous literature shows, these findings also highlight the importance of using validating practices for maintaining relationships with FGL students and supporting them on their journey of student success.

ACKNOWLEDGEMENTS

Right now, I feel like Snoop Dogg at his Hollywood star acceptance, “I want to thank me for believing in me, I want to thank me for doing all this hard work, I want to thank me for having no days off, I want to thank me for never quitting.” I really want to thank me for not quitting. Transferring from one PhD program to another because of invalidating experiences must be acknowledged. My own experiences made me question my ability and sense of belonging. It took failing into another program to learn about my experiences through the theorists I used in this study. My education program introduced me to Yosso (2005) and the abundance of skills first generation students like me carry. So yes, I want to thank me for not quitting, realizing it was not a “me problem,” and focusing on the success stories of the first generation Latine students in this study.

Of course, I would have quit if I did not have the support of my personal network. Adri, thank you for being the best hermana I could ask for. Our sister trips, your constant support when I am venting, yelling at me to go to the doctor, celebratory gifts, good luck messages. All of it. Thank you. Zach, you came into my life during the busiest times of this journey and I am forever grateful to the universe for bringing you into my life at this time. You’ve held me down through the many fickle emotions and make me feel like I can do anything. I cannot wait to have a life with you without the PhD weekends. To my fodongas, I cannot write much without grasping for air while I cry. You three mean the world to me and are my daily power source. To the homie Sean, thanks for your unwavering support and constant reminder of the chingona I am. You really are a real one. Tiara, Jimena, Lucia, Stephanie, India, Hannah, Shawna- thank you ladies

for the study/work/writing sessions. I do my best work in community, and you are the PhD community I needed. To TRIO programs, keep doing what you do. It worked for me.

Finally, a huge thank you to my committee. Dr. Birmingham, you took me under your wing when I was most discouraged and lost. Your guidance and support these last 4.5 years are unmatched. Thank you for letting me bother you weekly to make sure I was on the right track, and for creating a space that allowed me to be vulnerable as I figured out how to be my authentic academic self. You'll never know the true impact you have had on me. Good luck getting rid of me, even after we publish! Carmen, can you believe this?! I am honored to have someone on my committee who has witnessed so much of my journey. Thank you for being a badass example for Latinas everywhere. I see you Dr. Rivera. I thank you. Dr. Muñoz, another chingona, thank you for pushing me and challenging me from a place of care. You. Are. Goals! Dr. Cross, I will never forget our first conversation about graduate school during my undergrad. You opened my eyes to the possibility of a master's and then to a PhD. I am sorry I called you "crazy" for encouraging me to request funds for a longitudinal study. Your audacious encouragement (Duncan-Andrade, 2009) is something students like me need more of and I am forever thankful to you.

Thank you to the leadership who provided funds for the larger longitudinal study. Your financial support of my ideas was affirming and another reason I did not quit. Thank you to the graduate students who helped with interviews, transcriptions and project management.

I am overwhelmed by the amount of support and encouragement throughout these nine years. There is no way to write about everyone. As you will read, networks are dynamic. If you studied with me, encouraged me, asked about my progress, invited me for coffee, sent me a "you got this" message, celebrated with me, anything in these last nine years, thank you.

Finally, THANK YOU to the students who participated in the longitudinal study. Thank you for sharing a piece of your story with us. Special thanks to the FGL students who participated in this study during year three. It was a privilege to listen to and read your stories and I appreciate your vulnerability.

DEDICATION

Sin duda, este logro no existe sin los esfuerzos de mi mamá y mi papá.

Obdulia y Teodoro, gracias por inculcar la importancia de la escuela y los estudios.

Gracias por enseñarme a no rajarme.

Gracias por seguir sus sueños y siempre luchar por más allá de ustedes mismos.

Ante todo, su ejemplo y nuestras raíces son mi fuerza y orgullo.

To my sister, the OFG (original first gen).

Adriana,

YOU are the original first gen student in our family.

Thank you for paving the way as a university student and as a first gen professional.

The first gen identity does not end with a college graduation,

and you have shown us all there are no limits to what first gen can do.

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CHAPTER 1: INTRODUCTION

Introduction

Baldwin Park (BP), California is a city in Los Angeles County, my childhood home and birthplace of the In N Out burger chain. I attended elementary, junior high, and freshmen year of high school in the Baldwin Park Unified School District (BPUSD), a district with mostly Latine students. While writing a paper about neoliberalism in education for my first PhD course, I was excited to see BPUSD mentioned in Kozol's *Savage Inequalities* (1991), a book about the educational inequalities of schools in the United States. I thought, "people never talk about BP! This is so cool!" After reading the full sentence, "Baldwin Park, a low-income city near Los Angeles, was spending $595 for each student while Beverly Hills was able to spend $1,244," my excitement was floored (1991, p. 220). At the same time, a feeling of pride overcame me. I sat and wondered, "how did *I* become a first-generation college graduate?" How did my sister and cousins, who also attended BPUSD and share my identities (Mexican American, female, child of immigrants, English Language Learners) become first generation college graduates if our district was so underfunded? My sociology background filled me with theoretical and practical answers about class and racial inequalities, but those answers felt incomplete *and* were deficit based. Was it our individual persistence and grit? That answer felt too individualistic, there had to be more to it. While I cannot assertively answer for my sister and cousins, I felt there was one thing that consistently helped explain our first-generation Latina student story of higher education success- the supportive relationships surrounding us, our community, our network.

A year after these thoughts, I was introduced to social network analysis (SNA) and its focus on studying the ways relationships and networks can change a person's behavior and expose them to new opportunities, affectively changing their experience (McCarty et. al., 2019;

Carolan, 2014; Rainie & Wellman, 2012). Knowledge of SNA and my experience as a first-generation Latina student prompted me to focus my PhD research on the relationships and networks of first generation Latine students at a university. I wanted to understand more about my and other first generation Latine (FGL) student success. In doing so, I acknowledge that other first generation Latine student stories may overlap with mine, including the stories shared as part of this study, but together, these stories are not *the* first generation Latine student experience. This study only partly contributes to the FGL student experience because even though we all identify as FGL, our lived experiences are not siloed within these three identities (first generation, Latine, student). The simultaneity of all our identities, including but not limited to race, class, and gender, are a process by which "individuals come to see themselves and how others see them in organizations" (Holvino, 2010, p.262). As such, the process of simultaneity (further discussed in chapter 2) impacts everyone in a unique way, leading to distinct yet possibly overlapping experiences.

Even so, the stories shared in this FGL student study are experiences that will further our knowledge, understanding and theorizing of first generation Latine student success across multiple Latine identities. By studying the relationships and networks of FGL students, we learn more about the relationships that best support FGL students toward university networks that leverage their knowledge and experiences, effectively leading them toward graduation. As a note, the use of "my" and "I" in this paper is consistent with academia and the expectations for ownership of original research, but this study's completion is only possible with the support of my advisors, university leaders who provided funds, and the dozen graduate students that helped interview, transcribe or code.

Statement of Research Problem

Graduation Rate Disparities

For this study, a first-generation (FG) student is one with neither parent nor guardian earning a bachelor's degree. I chose this definition because it aligns with the definition used by Land Grant University (LGU)[1], where this study took place, but this is not the only FG definition (Toutkoushian et. al., 2021). At LGU, there continues to be a graduation gap between first generation and continuing generation students. During the 2008-2015 cohorts, an additional 959 FG students should have graduated to match the continuing generation four-year graduation rates (reports.*blinded*.edu). The cohort that is part of this study, fall 2016, shows an 8% four-year graduation gap, meaning 103 additional FG students should have graduated to match the continuing generation graduation rate (reports.*blinded*.edu). When adding the Latine identity to the 2016 cohort data at LGU, the gap between FGL students and continuing generation students increases to 9.2%. Between 2017 and 2020, the gaps have decreased and increased, and the newest cohort (Fall 2024) is comprised of about 23% FG students (reports.*blinded*.edu). With an increase in the FG population and inconsistent gap performance at LGU, it is important to study the FGL population at the university level.

In 2021, the national 4-year graduation rate for Latinos was 52% (edexcelencia.org). In the same year, the Pew Research Center found, 20% of FG students completed at least a bachelor's degree and 60% of CG students completed at least a bachelor's degree (pewresearch.org). Additionally, as of academic year 2015-16, 56% of undergraduates nationally were first-generation college students, of which 25% are Latine students (RTI international, 2018). In 2020, *Excelencia* in Education reported that Latine students were "more likely to be the

[1] Landgrant State University is a pseudonym.

first-generation college students than other racial/ethnic groups," reporting 51% of Latinos identifying as first generation. With Latines expected to comprise one third of the United States' population by 2050 (Garcia, 2014), over half the national student population identifying as FG, and almost half the FG population being Latine, it is critical that the educational field better understands FG Latine student university experiences. More importantly, research on FG student populations is imperative because past studies show FG status is one of the strongest or the strongest predictor of attrition rates (Chen & Carroll, 2005; Vuong et al, 2010).

Importance of Institutional Knowledge for Graduation

As the data shows, students who come from families with prior university experience (continuing generation) are more likely to attend university and graduate (DeAngelo et al., 2011). Part of this disparity stems from the lack of access FGL students have to people who hold higher degrees and knowledge about higher education (Stanton-Salazar, 2001; Espinoza, 2011). While CG students can turn to their families for support *and* university knowledge, FG students can only turn to their families for support (Yosso, 2005; Castellanos & Gloria, 2007; Gloria & Castellanos 2012). This means FG students must also work on intentionally building relationships with folks who can provide access to higher education opportunities, information, and a sense of belonging. When FG and FGL students have access to and relationships with folks who can specifically share the university knowledge and understanding they hold, like pre-collegiate program advisors/counselors, they are more likely to receive a bachelor's degree (Mahoney, 1998; Campbell, 2010; Espinoza, 2011). In addition to gaining exposure and knowledge about university processes through relationships with folks who have university experience, past research indicates university social and academic connections (Allen et. al., 2008; Rios-Aguilar & Deil-Amen, 2012) and sense of belonging (Hurtado et. al., 2015) are critical for student retention and graduation. When FGL students connect with students *and*

institutional agents (Stanton-Salazar, 2011) at the university, and they develop a sense of belonging through these interactions, their educational trajectory changes and becomes a pivotal validating moment (Espinoza, 2011) for their educational journey. At some point in our lives, we all entered a space that was unfamiliar or brand new to us and our immediate community. Perhaps, it was a space or activity we were intimidated by because we were not close to someone who already shared that experience. We likely returned or stayed because we had positive experiences in that environment and with the people in it. Similarly, for FGL students, staying at a university is more likely when they have positive experiences and relationships at the university.

Unfortunately, there is dearth of research that specifically sets out to understand the individual relationships and networks that best support FGL students during their university experience. This study analyzes the relationships (networks) of FGL students at LGU via social network analysis and qualitative interviews. In the remainder of this chapter, I lay out my study's questions and term definitions, followed by my positionality within a network context. I close this chapter with my study's assumptions and significance.

Research Questions

The three research questions of this study are guided by my personal experience as a first-generation Latina, prior research on first generation and Latine students, and theoretical frameworks aligned with the experiences of FG Latine students. To further understand the relationships that support FGL students, I sought to address the following:

1. Who is in the university support networks of FGL students?
    a. What is the structure of their university support network?

2. What kinds of support do these FGL students receive from different university connections?

3: Why do these FGL students maintain a relationship with these connections?

Important Terms and Definitions

The definitions of terms and concepts below were meant to guide this study and might not be applicable to other studies about first generation Latine students.

- *Academic Success:* An undergraduate degree is sold and marketed as a "4-year degree," which means the students in this study who graduate within four years are academically successful. Also, at LGU, the graduation gaps between FG and continuing generation students increases by the 6th year, another reason I chose to use the four-year graduation as evidence of academic success (reports.*blinded*.edu). For the purposes of this study, no emphasis is placed on grade point average, but grade point average will be used during analysis as an attribute of the participants.
- *First Generation College Student (FG):* Students with neither parent/guardian earning at least a bachelor's degree in the United States. This is the definition that aligns with LGU.
- *Institutional Agent:* Individuals who transmit important knowledge to students about the college going process. For this study, these are folks whose primary role at the university is that of an employee (Stanton-Salazar & Urso-Spina, 2003).
- *Latine:* Gender neutral term for Latino, which centers the experiences of people from Latin America and rejects the term Hispanic, which typically centers Spain and its colonialist histories (Celis-Carbajal, 2020). Also, Latine is a gender inclusive alternative to Latino or Latina and since Spanish already has a few words that end in "e" and are gender inclusive (i.e. estudiante (student)), I prefer to use the term Latine.

- *Personal network*: set of relationships of an individual FGL student. In this study, the personal network of FGL students is limited to university contacts the students feel supported by and/or receive support from.
- *Relationship:* connection between two or more people; a connection a FGL student has to another individual (alter) on campus. Connection and relationship will be used interchangeably throughout this study.
- *Predominantly White Institution (PWI):* Institution of higher education with 50% or more of the students identifying as White.
- *Simultaneity:* The process by which individuals who share one identity can experience a context differently because no individual is siloed in one identity; we experience the world through the simultaneously of our identities. For example, my experience as a FGL PhD student is different for a FGL PhD student who is male, which is different from a FGL PhD student who is a queer female, etc. (Holvino, 2010).
- *Social Network Analysis (SNA):* an analytical method that focuses on how social connections influence individual and/or group behavior and/or attitudes (Carolan, 2014).
- *SNA terminology*: covered in chapter three.

Positionality

As briefly mentioned, I was raised in a Spanish speaking household by Mexican immigrants who completed the 3rd and 5th grade in Mexico. Even though I grew up in a limited income community and qualified for free/reduced lunch, home was a house my parents financed, and a place where college was an expectation. When I moved from Los Angeles, California to Greeley, Colorado, I was one of two Latine student to in international baccalaureate (IB) courses. At that time, I thought it was because there were not a lot of Latine students and less who cared

about going to college. When I hung out with my Latine friends, we did not talk much about school because we were not in the same classes or because they "just weren't into it" or believed "school is not for me." Many of them believed I was the "the smart Latina" and a few referred to me as "Whitewashed" because I was in advanced classes and wanted to go to college. Even so, the students in IB never thought of me as "White" and they did not think of me as smart (at least it felt that way). In IB, I was not the student others wanted to work on projects with, and every time I had to go to an IB student's house to work on a project, I was reminded of the fact that we no longer had a house, and my parents did not have "white-collar" jobs. Some days I felt shame, and other days, it was a point of pride to know I was in the same classes as IB students whose parents had postsecondary experience. I made the necessary meaningful connections with a handful of IB students to stay in the program, and those friendships provided access to experiences that were not in my immediate network (e.g. discovering Benihana).

My other pride point was the other "B" program, Upward Bound (UB). This was the TRIO program that provided me with connections to other students like me; first generation students who wanted to go to college but were not sure how. UB created an environment that made university attendance a norm for FG students and consistently validated my abilities and potential. UB also connected me to an advisor who met with me bi-weekly and guided me through the college going processes. Thus, even though I did not have someone at home to help with the academic side of college, through UB, I had complete access to someone I could ask and would respond in a timely manner (aside from the school counselor who was overloaded). And, just as important, UB connected me with students in and out of my high school who had similar identities, experiences, and goals.

After high school, I went on to receive a bachelor's degree in sociology. While working on my bachelor's, I was exposed to courses that shed light on why there are less FGL students in college or on the college path. I learned about systems and institutions that intentionally and unintentionally exclude students who share my identities. The idea that my Latine friends from high school did not think "school was for them" was likely due to a lack of meaningful relationships with folks who had higher education degrees. They could not see themselves as university students not because of their individual attributes, but because the larger institutions surrounding them limited their access to a network with higher education possibilities. I wanted to further my knowledge about the micro, meso, and macro systems and processes that impact individuals and went on to receive a master's degree. Once again, the only reason I understood what a master's degree was and how I could obtain one was through a connection with a sociology faculty. Without her initial validation of my ability to complete a master's, I would not have gone to graduate school and certainly would not be obtaining a PhD. During my master's, I was the only Latine student and one of two FG students (to my knowledge). Even so, I was the only one in my cohort to finish my thesis and its defense before walking at graduation, within two years of starting the MS (a feat I did not realize was such a big deal until my PhD).

Today, I identify as a FGL hetero female who is a part-time PhD candidate with a full-time job and visual impairments. A PhD candidate who fully understands the complexities, benefits, and challenges of being a networked individual. I approach this study with similar identities to the participants of this study and recognize our shared identities do not equal same experiences. As mentioned previously, simultaneity affirms that my story, and the stories covered in this study, are not encompassing of the entire first generation Latine student experience. They are, however, first generation Latine student experiences that will further our knowledge,

understanding and theorizing of first generation Latine student success across multiple Latine identities. Throughout my study, I will weave in some of my experience, but it is not part of the methods of this study because it is not a major data source. My stories are interspersed to gain additional context and further affirm the FGL student experience.

Assumptions

The following assumptions for this study are based on prior research, theoretical frameworks, and personal experiences. First, I bring the assumption to this research that FG Latine student experiences in this study are different than those of continuing generation and/or students who do not identity as Latine. Second, I assume relationships with different people at a university matter for the retention and graduation of FG Latine students.

Significance of Study

As discussed above, first generation student graduation rates are lower than continuing generation student rates and FGL graduation rates are lower than all FG rates (reports.*blinded*.edu; RTI international, 2018). In 2018, over half the students working on their undergraduate degree were FG and a quarter of these were Latine (RTI international, 2018). With the United States expecting Latines to be one third of the population by 2050 (Garcia, 2014), it is imperative that institutions work to significantly increase graduation rates for FGL students by studying retention for FGL students from a variety of approaches and theoretical perspectives.

A personal network approach to FGL student success shifts our focus from the student attributes to the *relationships* of the student. In doing so, we address the implications for the student *and* the social context (university) being studied (Perry et al., 2018). This is an important distinction because a network approach explores the use of, and connections to specific university programs and services, instead of solely focusing on individual student attributes. As

such, this study places additional responsibility for graduation on the university and not the student.

Additionally, this study's network approach identifies the specific types of relationships FGL students have at the university and my findings provide specific insights into the relationships that most positively impact FGL students. Overall, this study is significant because these data provide universities with an understanding of how to enhance their student programming to improve the FGL experience; effectively leading efforts to increase FGL graduation rates with the voices and experiences of FGL students.

The following chapter provides a literature review and the study's theoretical frameworks, followed by chapter three, methods. Chapter four is a review of my findings and chapter five concludes this study with a discussion, limitations and recommendations.

CHAPTER TWO: LITERATURE REVIEW

Introduction

The university context reflects a history of knowledge and experiences that are needed for degree completion. When students arrive at the university with knowledge and experiences that mirror the university context, they are more likely to stay and graduate (Espinoza, 2011). With this in mind, we can assume, if students arrive knowing what to expect, who they need to connect with on campus and which relationships should be nurtured, their university knowledge and experiences will be elevated. For first generation Latine (FGL) students, graduation rates are lower, partly because of a lack of access to the relationships that provide important information and most needed information in a university setting (Carrasco, 2024; Yosso, 2005). This does not mean FGL students are lacking relationships numerically, nor that they lack the skills to create and nurture relationships (Carolan-Silva & Reyes, 2013). Instead, it highlights how their university networks often contain less institutional connections and relationships that are vital and valued for degree completion. In comparison to continuing generation students, prior research demonstrates FGL students have less knowledge about college/university processes because they have less relationships with adults who are familiar with these processes before and during their time at the university (Stanton-Salazar, 2001; Espinoza, 2011).

One of the main reasons FGL students have lower graduation rates and less university knowledgeable relationships is related to the lack of access to quality education that is linked to social economic standing (Allan, 2013). As educators, we know higher salaries and career opportunities are correlated with greater educational attainment (Ishitani, 2006; Espinoza, 2011). FGL families typically have lower rates of educational attainment, which means they live in

lower income neighborhoods. This lower rate of educational attainment is tied to the history of discrimination in the United States, specifically, its "separate and unequal educations" of Whites and people of color (Taylor, 2016). Like other people of color in the United States, Latines have a complicated and long history of discrimination. Since the 1930's, Latines have provided the United States with cheap labor in mining, railroad, agriculture and construction jobs (Garcia, 2014). As the Latine community expanded, the United States created schools for Latines that were segregated and known as "inferior public schools" (Garcia, 2014, p. 5). These schools were "inferior" because they were known as "Mexican schools" that were under-resourced because they were only for Latines, a population that was seen as "intellectually inferior and expected to leave school at an early age" (Donato, 2022). Thus, even if Latines earned enough to move to the White part of town and be closer to a White school, Latine students were denied admission. Legal segregation in U.S. schools continued until Brown V. Board of Education (1954), but the consequences of segregation continue to negatively impact students of color, including Latine students.

It is important to note that this short section on the history of segregation in education only begins to scratch the surface of the complexity of the history of Latines and education in the United States, and that is partly due to the complexity of the Latine identity. Like other racial and ethnic groups, the Latine population in the United States has a range and depth of experiences. For Latines, these experiences vary in the generations of presence in the United States, country of origin, migration status, documentation status, and language proficiency (to name a few). Even with this understanding, data on Latine college enrollment and completion is rarely (if ever) disaggregated by these varying experiences. That said, the rates of enrollment and

completion for the Latine population continues to be significantly lower than that of Whites in the U.S, leading to more Latines with lower paying jobs (RTI international, 2018).

As such, lower income jobs mean families live in lower income neighborhoods, and lower income neighborhood have underfunded schools. Since most FGL students come from lower income neighborhoods, they lack access to high quality K-12 education. In 1991, Kozol critiqued the lack of resources that existed for lower income students and the effect class has on educational experiences and higher education outcomes. Almost 30 years later, Love (2019) makes a similar claim by noting, schools in low-income areas are underfunded, which contributes to fewer resources in the school, less staff, and "ultimately, less social and economic mobility" (p. 29). With less personnel to provide college going information and academic preparation, and less resources for college preparation programs, FGL students have limited opportunities to learn about college and fewer resources at their disposal, which makes them more likely to drop out of college (Stephens et al., 2014).

Fortunately for institutions of higher education, student networks of support are not fixed. Relationships and network building are an ongoing process of "construction, negotiation, and help seeking" (Stanton-Salazar, 1997, p. 4). This means university programming can and must leverage the knowledge and skills FGL students arrive with, provide additional opportunities for gaining university knowledge, and support FGL students while they cultivate the social networks that effectively lead to graduation (Rainie & Wellman, 2012).

With the above in mind, I studied the university connections of FGL students through a relational (network) approach. A relational approach at a university takes individual and institutional characteristics into consideration, shifts our focus to the connections (relationships) of the student, and addresses the implications for the student and the social context (university)

(Perry et al., 2018). This is an important distinction because a network approach allows us to examine the *patterns* of their connections to specific people, university programs, and/or services. By analyzing the networks of FGL students, I gained knowledge of who students are connected to, what type of support they received from their connections, and why the students maintained a relationship with these connections.

In the paragraphs below, I provide a historical literature review of first generation and Latine student success, followed by a review of relational approaches to student success. Then, I review relational approaches to first generation student success, followed by relational approaches to first generation Latine student success and end the literature review section with a review of network research in education. After the literature, I move on to discuss the theoretical approaches that are best for analyzing FGL networks and the relationships within.

Historical Literature Review of First Generation and Latine Student Success

As previously mentioned, most first-generation students are students of color (Rodini et. al, 2018) and a large portion of those minoritized students are Latine (edexcelencia.org; RTI International, 2018). The complicated and long history of discrimination of minoritized folks faced in the United States has impacted the way institutions of higher education approach first generation and Latine students, and the research has reflected such practices. Previous literature on first generation and Latine student success has shifted from a deficit lens to asset based, and from individual responsibility to institutional responsibility. Much of the early literature on FG students focused on what FG students lacked in comparison to their continuing generation student counterparts, suggesting FG students needed to assimilate into the existing higher education culture- a culture that is embedded in Whiteness and greatly disadvantages students of color (Bensimon et. al.,2019). For example, Tinto (1975) suggested students were likely

departing from the university because individual students were not integrating themselves into the campus community. The literature on integration of students then focused on how individual students should engage with the university and seek support, placing the responsibility of graduation solely on the student. These claims oriented researchers and practitioners toward studying the populations of students with higher departure rates. This meant there was a focus on what FG and Latine students (and other minoritized students) were "lacking" for university graduation, placing minoritized students as "lacking" knowledge and social capital (Bourdieu, 1986) and needing more grit (Duckworth et. al., 2007).

As literature on individual characteristics and student success spread, a different approach was taken. Researchers began to challenge the need for "more grit" and an asset-based approach to minoritized student experiences emerged- the literature began to recognize the funds of knowledge (Velez-Ibañez & Greenberg, 1992), wealth of capital (Yosso, 2005) and asset bundles (Johnson & Bozeman, 2012) minoritized students brought with them as they arrived at institutions of higher education. This shift in the literature not only recognized the skills and knowledge minoritized students arrived with, but it also placed responsibility on the institution to both recognize the assets of minoritized students *and* identify how to leverage those assets.

Shifting some of the graduation rate responsibility to institutions of higher education allowed the literature to "meet in the middle" and bridge individual student assets with the support and resources institutions must provide. This bridge centers the emergence (or lack thereof) of the *relationships* between students and institutions, acknowledging the importance of student connections across campus *and* the role higher institutions play in creating and nourishing those relationships. To highlight this shift toward a relational approach, I review

relational approaches in education, followed by relational approaches for first generation and Latine student success in the following sections.

Relational Approaches in Education

A relational approach to student retention and success is important because prior research shows that relationships (or lack of) inform and shape life outcomes (Stanton-Salazar, 2001: Stanton-Salazar & Urso Spina, 2003; Rainie & Wellman, 2012). Duhigg (2012) provides a foundational example of how relationships shape life outcomes by discussing the Montgomery bus boycott that arose after Rosa Parks' refusal to sit in the back of a bus. Rosa Parks was not the first person to refuse to give up her seat to a White individual and sit in the back of the bus, but unlike the folks before her, Parks was well embedded in her community with strong relationships that spanned Montgomery's racial and economic lines (Duhigg, 2012). Parks' relationships with the National Association for the Advancement of Colored People (NAACP) and a wealthy White lawyer were key to her bail being posted- these were relationships with people who had knowledge about legal systems. Coupled with her prominence as a respectable community member of several networks, Park's case was the "perfect case to challenge Montgomery's bus segregation laws" in court, one that propelled the civil rights movement (Duhigg, 2012, p.221). In the end, Park's individual characteristics *and* the relationships she held provided life-changing support to her, folks in her community, and beyond.

In education, relationships keep students in college (McCabe, 2016; Felten & Lambert, 2020), act as stress buffers (Cohen & Hoberman, 1983), provide information that is not easily accessible in the home (Stanton-Salazar & Spina, 2003; Stanton-Salazar, 2011), and foster resiliency (Stanton-Salazar & Spina, 2000). Stanton-Salazar (2011) specifically discusses the power of relationships with institutional agents, "an individual who occupies one or more

hierarchical positions of relatively *high-status*, either within a society or in an institution (or an organization)" (p.1075). In higher education settings, institutional agents are staff, academic advisors, instructors, faculty, etc., who use their university position to connect with an individual (in this case a student) and transmit "highly valued *institutional support*" (Stanton-Salazar, 2011, p.1075). Connections, or relationships, with institutional agents are important to student success because these connections become another person students can turn to for university related advice, support or resource. At times, students just need a connection, or knowledge of that connection to understand the current or potential benefit of that connection (Stanton-Salazar & Urso Spina, 2003). Chambliss and Takacs' (2014) book, *How College Works*, argues that students get more out of college when they have positive relationships with two or three friends and one or two professors, showing some institutional agent connections are helpful to student success. Tinto (1975) originally wrote about student integration as a responsibility of the student and recently reflected on integration, stating, "while engagement matters, it proves to be the case that with whom the student engages may matter as much if not more" (Tinto, 2023, p. 2). This reflection highlights the importance of students having a university network with specific people, including institutional agents.

Additionally, in their book, *Relationship Rich Education*, Felten and Lambert (2020) highlight four themes they found to be essential in the success of programs and practices intended to provide relationship-rich experiences during college. These four themes are as follows: student leadership is a force multiplier; individual and small-scale initiatives can take root and spread; technology and data can facilitate relationship building; and broadening access to relationship-rich experiences means rethinking basic structures (Felten & Lambert, 2020). Peer mentoring programs, informal events with faculty and staff, hyperlinked emails, first year

interest groups, learning communities, and creative office hours are just a few of the programs and practices featured in their book. Overall, the programs that fall under these themes share a "commitment to relationship-rich experiences that challenge students to integrate the learning they are doing in the classroom with the experiences they are having on and beyond campus" (Felten & Lambert, 2020, p. 129). By providing a variety of access and communication points for campus resources, and opportunities, additional students are more likely to connect with at least one person and place on campus. In doing so, institutions proactively increase individual student engagement, which inevitably increases retention and graduation rates.

Relational Approaches to First Generation Student Success

A long-standing program that has a track record for success with FG students is TRIO. TRIO programs are federally funded programs that positively impact the academic career of its first-generation participants (Mahoney, 1998; Campbell, 2010, Espinoza, 2011). As TRIO participants, students receive academic, career, and personal support prior to and/or during college. In turn, FG TRIO students build their confidence and community cultural wealth capitals, successfully receiving a higher education degree at higher rates than FG non-TRIO participants (Mahoney, 1998; Campbell, 2010; Espinoza, 2011). A 2021 Department of Education report showed "an average degree completion rate of 55 percent, compared to 44 percent for nonparticipants" whose institution had a TRIO project. Thus, the more a student is exposed to post-secondary procedures and institutional agents, the higher the feelings of belonging within institutions of higher education, the more likely they are to connect and engage with university resources (people and programs).

Furthermore, the more FGL students participate in a, or the university environment, the stronger their *university student* identity becomes. As Wegner (2018) notes, learning in and from

our communities "changes who we are and creates personal histories of becoming" (p. 221). The more students engage with the university community (people, events, spaces, traditions, etc.), the more likely the student will feel part of the community and identify as a university student. For FGL students, this is especially important because they might be the first in their family or home community to hold this identity. Feeling like and identifying as a "university student" helps FGL students with their sense of belonging and increases their likelihood of continued participation in the university community and the communities within (student organizations, study groups, etc.) (Walton & Cohen, 2011). As their identity and sense of belonging strengthens, the student is more likely to feel comfortable with expanding and diversifying their university network, increasing the likelihood of retention and graduation.

Furthermore, at Landgrant State University, the Living and Learning[2] (L&L) programs were modeled after TRIO programs and are institutionally funded. Most students in Connections identify as first generation and/or students of color (L&L.*blinded*.edu, 2022). Two core opportunities L&L provides to assist FG students in establishing their network and sense of belonging are "establish meaningful relationships" and "connect with a diverse community" (L&L.*blinded*.edu, 2022). L&L participants live in the same residence hall and take courses with other L&L students. A L&L student mentor is also assigned to all new L&L students and this mentor connects with the student and guides the student through their journey as a L&L student on campus (L&L.*blinded*.edu, 2022). An institutional research study found, all L&L participants benefit, but "those who are first generation, low-income, of color, enter with lower indicators of prior academic preparation, or a combination of these characteristics graduate at far higher rates (as much as 44 percentage points) than peers who do not participate in L&L" (L&L.*blinded*.edu,

[2] Pseudonym for university program

2022). This highlights the positive impact the L&L relationships had on the success of students who share similar identities to FGL students. Preliminary analysis of my network research shows FG L&L participants had a higher GPA, and larger, more diverse networks (Bañuelos, 2017).

Relational Approaches to First Generation Latine Student Success

As I thought about the relationships that were critical to my personal educational journey, I stumbled upon a book that emphasizes the need for college-going and college-navigating relationships in the life of students who have identities like first generation and Latine. In her book, *Pivotal Moments*, Espinoza (2011) explains:

> An educational pivotal moment is a significant academic intervention initiated by a college-educated adult who intentionally reaches out to a student to provide the student with the guidance and support to reach an educational goal. In this exchange, students learn from educators how to efficiently and effectively navigate school processes, knowledge that ultimately enhances their academic skill set (p. 33).

Espinoza (2011) goes on to detail the importance of educators building trust with the student and moving from mentoring to advising, to advocating, and supporting low-income and minoritized students. With 140 student interviews and 90 educator interviews, Espinoza (2011) provides examples of pivotal moments from several FG students of color, and educators. She asserts, a "key outcome of an educational pivotal moment is the gradual transformation of a student's psychological disposition toward schooling," and the student's ability to see themselves in higher education settings (p. 37). I was fortunate enough to begin to think of school as "something I was good at" in third grade. My third-grade teacher Mrs. Jensen validated my ability to speak English and Spanish and nominated me for the gifted and talented program. Prior to her, I thought I was

"behind" in school because part of my day was with Spanish speakers, but her validation of this ability changed my psychological disposition toward school and my future in school. Espinoza's research is a perfect example of the significant and positive impact certain relationships can have on the success of FGL students.

Similarly, prior research shows Latine students are more likely to enroll in college if they have role models or a positive relationship with an institutional agent (Stanton-Salazar & Urso-Spina, 2003, Stanton-Salazar, 2011). Here, it is important to acknowledge that while relationships with institutional agents are beneficial, they are not always beneficial to all students. In fact, "gate-keeping" agents can appear to FGL students when the institutional agent is not intentional about meeting the need of the individual student and assumes all students have prior knowledge of higher education institutions (Stanton-Salazar, 2011). For institutional agents to have beneficial connections with FGL students, institutional agents must have some awareness of what aspects of life are significant to FGL experiences (Barajas & Pierce, 2001), the assets they carry and needs they might have (Velez-Ibañez & Greenberg, 1992; Yosso, 2005; Marrero, 2016). Without assuming all FGL students have the same experience, FGL institutional agents also validate the FGL student's presence at the university (Rendon, 1994 & 2002). When FGL students are validated by university connections, their sense of belonging is increased, increasing the likelihood of retention and graduation. Validation will be further discussed below.

Also, Carolan-Silva & Reyes (2013) show how Latine students use their navigational capital (Yosso, 2005) to draw information about college from strong, weak, vertical, and horizontal relationships around them. Meaning, Latine students turn to folks near and within their network to obtain college information; this could be another student (horizontal if same grade, vertical if older), a friend's parent (weak), a close mentor (strong and vertical) and/or a

guidance counselor (vertical). Kouyoumdjian et. al., (2017) asked first and second-generation Latine students about factors that supported their degree completion. The authors found that family was a strong motivator and support (familial capital), and relationships with faculty "that cared about their educational experience" were crucial to their success (p. 72). Gloria and Castellanos (2012) also found family support to be pivotal to FGL student's making it to and through graduation. FGL students might not be able to call on their family for academic support, but knowing they are supported by their family gave them the necessary familial capital (Yosso, 2005) to continue their university journey (Espinoza, 2011).

Overall, prior research demonstrates validating and affirming relationships from faculty, staff, mentors, and other folks in the university networks of FGL students are crucial for the retention and success of FGL students (Rendón, 2002; Castellanos & Gloria 2007; Espinoza, 2011; Cisneros, 2021).

Network Research and Education

Support network research in education is a growing area with a variety of quantitative, qualitative and/or mixed methods (Carolan, 2014). Even so, few (if any) studies investigate the support networks of individual first generation Latine students at institutions of higher education. In the paragraphs that follow, I highlight a few network studies that speak to a variety of network related aspects important for university success.

First, it is important to note that four types of support prevail in the literature. These four types of support are: emotional (related to feelings of trust and love), informational (information or advice given) appraisal (feedback provided about oneself), and instrumental (tangible resources or time provision). These support types were introduced in House's, *Work Stress and Social Support* (1981), in which he details how our support networks (social support in his terms)

can alleviate work stress. Several studies use these support types to investigate the support students receive or perceive to have access to, even though the original work was not on students.

In *Connecting in College,* McCabe, 2016 examines the friendship networks of university students with a specific focus on shape of the networks (structure) and the content (support type) provided by each student's friend. McCabe (2016) specifically examined the "types of friendship networks students form, who forms which type, what academic and social outcomes are attached to each type, and how they affect students for college" (p. 5). Thus, McCabe examined how the structure of the students' friendship networks impacted their academic experiences and performance, and the support types received. She found students fell within three major friendship network structures- tight knitters, samplers, and compartmentalizers. *Tight knitters* had one densely concentrated network in which almost all friends knew each other. Students with these networks were more likely to be Black and Latine students. *Samplers* had a network structure that showed most connections did not know each other, with students "sampling" friendships. Sampler demographics ranged by class, gender and race. Finally, *compartmentalizers* had two to four groups of friends who were well connected ("clusters") and some individual connections who were less connected to the rest of the network. Most compartmentalizers were "middle- and upper white students, especially women" and able to find academic support within either friendship cluster (p.6). McCabe's (2016) network approach points practitioners to recognize a difference in the structure of the networks amongst varying student populations. Her study also observed emotional and instrumental support received by students (two of the four prevailing support types), but it was limited to support provided by student connections. By not asking student to identify the institutional agents who provided

university support, we are left with a gap in our understanding of the networks students create at the university.

In an additional study utilizing network research, Raposa and Hurd (2021) collected network support data from a sample of 200 minoritized, first generation and/or pell university students. Their study looked at the type of support (instrumental, emotional, appraisal, informational) students received from "natural mentors" the students listed. The authors define natural mentor relationships as those that "arise organically through the process of mutual selection and are often adults from youths' neighborhoods, schools, and extended family or fictive kin networks" (p. 38). Raposa and Hurd had participants report up to five natural mentors they turned to for support during their first two years at their university. Participants who took part in Raposa and Hurd's (2021) study reported their five natural mentors once a semester for the first four semesters at the university. When reporting their natural mentors, the students were also asked "a series of questions about support received from each mentor identified," and the support constructs used were the four House (1981) proposed. The authors found most mentors students went to for support were not university staff or faculty. In fact, only 10% or less of the mentors reported were university staff or faculty, with the remaining being folks from the student's community. Raposa and Hurd also found that the most common support type received by this sample of minoritized students was appraisal, followed by emotional, informational and instrumental. Not surprising, Raposa and Hurd found that the natural mentors who were university staff and faculty provided more informational support than mentors from the student's community. This study was also mostly quantitative and could have been strengthen with qualitative interviews that may have revealed additional support types received that do not fall within the prescribed support categories. Their focus on minoritized populations informs my

study, but the aggregation of racial/ethnic, pell, and first-generation status does not allow us to specifically learn about the first generation Latine population. Also, while it is helpful to know minoritized students mostly reach outside of the university for support in the first two years, not limiting their study to who at the university provides support prevents us from learning more about the support(s) provided to minoritized students by the university.

Additionally, Gonzalez-Canché and Rios-Aguilar (2015) used quantitative measures of social network analysis to investigate how peers effect credit attainment at a community college. Although they did not use House's framework, their study is one of very few that think of network research through a critical lens and helps me think about the network orientations of students from minoritized backgrounds, while considering the additional identities students hold. Gonzalez-Canche and Rios-Aguilar looked at the effect of student credit enrollment based on the peer credit enrollment of their classmates, acknowledging that "just sitting in a class with a group of students does not necessarily translate into that group affecting our decisions to take more or fewer credits," and expecting that students from similar racial/ethnic backgrounds will create relationships in class (p.85). When sifting through their data, Gonzalez-Canche and Rios-Aguilar found that African-American and Latine male students were more likely to benefit from "interacting with similar peers (i.e., peers from the same racial/ethnic group) in terms of credits they complete, and most likely, in terms of the networks they form" (p. 88). On the other hand, African- American and Latine female credit attainment was not impacted by their peers' credit attainment, demonstrating the importance of taking multiple identities into account when studying the experiences of students. While this study provides information about the experience of community college students, where less FG research is conducted (Ives & Montoya, 2020), and adds to the insight of peer effects, the authors acknowledge the need for "in-depth qualitative

exploration" to provide a further understanding of peer influence (Gonzalez-Canché & Rios-Aguilar, 2015, p. 89). Like McCabe's (2016) research, this study's focus on peer relationships leaves us with a gap in understanding the full network of support.

Literature Summary

As we can see, FGL students are well connected on and off campus. Access programs like TRIO and L&L (federal and institutional), coupled with relationship focused programming, and asset minded understandings of FG and FGL students help address the first generation and continuing generation graduation rate gap. Institutional agents can create pivotal moments for FGL access, retention and success through culturally sensitive practices like validation. While several studies in education employ a network approach, there is a gap in the literature pertaining to the individual university support networks of FGL students. Prior literature looks at the personal networks of students, but they limit the network of the students to their friendship networks (McCabe, 2016) or limit the contacts to five (Raposa and Hurd, 2021). Since a variety of people "have the potential to engage in student-centered practices," it is important to ask students about their entire university network (Hurtado et. al., 2011, p.57). Prior quantitative network research on students (Gonzalez-Canche & Rios-Aguilar, 2015) also limits the rich stories we can obtain with qualitative interviews (Bhattacharya, 2017).

Also, the use of House's (1981) framework is helpful and limiting to the support networks of FGL students. While many types of supports FGL students need can fall into the categories of appraisal, informational, instrumental, and emotional, I decided to avoid asking students about these specific support types. Instead, I asked students what type of support they obtained and found patterns through their answers. This approach allows FGL students to tell us

about their experience instead of automatically fitting their experience into previous literature, which is further discussed in the methods chapter.

Finally, studying the *network* of FGL students allows me to observe persistent patterns and relationships between individuals (FGL students) in a system (institution of higher education), instead of simply looking at the attributes of the student (Giuffre, 2013). As Stanton-Salazar (2004) adds, "if academic success in school were mainly contingent upon individual ability and effort, then there would be no need to entertain theories that focus our attention on the complexities that underlie social relations in organizational life and in society" (p.18). By focusing on the networks FGL students have at the university, I am better able to understand which relationships and network characteristics relate to FGL graduation rates.

Theoretical Frameworks

The context we are born into is the foundation for the understanding of our surroundings and the resources and relationships we have access to. I was born into a specific context- a home in a lower income community with two loving immigrant parents who did not speak English and had a third and fifth grade education. Being born into this context gave me certain identities- American citizen, Mexican American, first-generation student, English as a Second Language student, and limited-income student. These identities and their context all come with different affordances and constraints. The knowledge and resources a person holds has been theorized as social capital (Bourdieu, 1986), Funds of knowledge (Moll et al., 1992), human capital, (Coleman, 1988), knowledge and discourse (Foucault, 1980), Community Cultural Wealth (Yosso, 2005), and communities of practice (Lave and Wenger, 1991), to name a few. These theories help us conceptualize resources, knowledge, and identity in slightly different ways. They also help us understand how individuals come to learn about their surroundings and how

individuals gain access to knowledge and practices in new contexts. As with all theoretical approaches, each of these theories has its own assumptions and limitations. For this first generation Latine student (FGL) network study, I selected Yosso's (2005) Community Cultural Wealth Model and Rendon's (1994) Validation Theory to help me best comprehend how the knowledge and resources FGL students hold can be leveraged for their academic success. I describe each theory below and its connection to this study.

Community Cultural Wealth Model

Yosso (2005) argues that students from underrepresented backgrounds are not "lacking" social capital, knowledge, or resources when they enter a higher education space. Instead, Yosso (2005) claims, institutions of higher education do not value the capital and knowledge FGL students hold as much as it values the capital and knowledge of other continuing generation students. As such, Yosso (2005) proposes the Community Cultural Wealth model (CCWM), an asset-based model that recognizes and values the knowledge and experience first-generation students bring to the higher education space. She further asserts, the knowledge and capital that matters in an education setting "refers to an accumulation of specific forms of knowledge, skills and abilities that are valued by privileged groups in society" (Yosso, 2005, p.76). This helps us understand that FGL students do not arrive to the university context with *less* capital and skills, but they often have *less of* the knowledge and capital that is most valued and recognized as helpful for university success. CCWM helps us recognize that FGL students come to a university with six forms of cultural capital (aspirational, social, navigational, linguistic, resistant and familial) that transfer the necessary motivation and skills to persist and graduate from a university (Yosso, 2005). In the paragraphs below, I demonstrate how Yosso's acknowledgement of the FGL student linguistic, navigational, familial, social, aspirational and cultural capitals easily translate to the higher education sphere and beyond.

One of the most important capitals Yosso (2005) points to is resistant capital, "knowledges and skills fostered through oppositional behavior that challenges inequality" (p. 80). As a Latina woman, I grew up listening to stories of my parents, grandparents, uncles and aunts. Stories of poverty, hardship, machismo (toxic patriarchal ideals), domestic violence, alcoholism, shame, and overall lack of resources. All these stories were always wrapped up with hope; with concluding remarks like, pero a seguir (but we move forward) or asi es, pero aqui estamos (that's how it is, but this is where we are). These stories of perseverance from my family are examples of what it means to resist, to persevere through the challenges of systemic inequality related to sexism and classism. Their stories push me to resist inequality and use my education and skills to overcome the challenges of being a first-generation student; experiences that remain with me as reminders that I can challenge the system and its expectations of me.

For Yosso, familial capital refers to the resources students have access to in their home community, typically immediate and extended family connections. While the family connections may not lead to university knowledge, many FGL student families have a deep sense of obligation to one another that serves as a motivation to complete goals for themselves and their community, what Woolley (2009) wrote of as *familismo*. Additionally, Yosso's recognition of familial capital allows researchers and practitioners to think of "non-traditional" ways families are supportive of their student's academic endeavors. That even though families are less present in school activities because of work, childcare, elderly care responsibilities etc., that does not mean FGL families are less engaged. In fact, prior research shows Latine immigrant parents are very involved, but the involvement is not recognized because it does not follow the traditional definition of involvement set by schools (Poza, Brooks, & Valdés, 2014). For example, Latine immigrant families tend to use their community networks to support their student with school;

they reach out to neighbors or friends they trust or ask folks they see in positions of power (i.e. supervisors, church staff, non-profit staff) about how they can help their student with navigating the educational system (Poza, Brooks, & Valdés, 2014). Tied to resistant and aspirational capitals is aspirational capital. For me, my aspirational capital, or what Yosso (2005) refers to as, "the ability to maintain hopes and dreams for the future, even in the face of real and perceived barriers," is rooted in my family's stories of perseverance and hope (p.77). These family bonds, skillful experiences and historical reminders fuel my desire to seek access to resources that will improve the next generation of our family.

Furthermore, Yosso's model points out the navigational and linguistic capitals FG student carry. A FGL student like me has high navigational and linguistic capital because once I knew enough English, I was translating for my parents. This was (and still is) common with bills, employment paperwork, doctor visits, veterinarian visits, and other important situations. Without knowing, talking to strangers (mostly professionals) on behalf of the family increased my confidence in my ability to "figure it out." I carried that confidence while navigating systems that were new to our family and realized that was the preparation I needed for navigating the college admissions and enrollment processes.

Finally, Yosso (2005) discusses social capital as one of the capitals belonging to her community cultural wealth model. Yosso's social capital refers to the "networks of people and community resources" (p. 79). In this study, the support network is limited to university connections that include university programs, university services, and/or institutional agents. When it comes to social capital, a variety of connections is typically recommended to ensure students have a "back-up" when one connection is unable to provide a specific type of support (Cheung et. al, 2015). Yosso's social capital is also helpful for understanding the FGL experience

because she recognizes the network of support and resources FGL students built on their way to the university; one that is typically full of family contacts who maintain and strengthen the familial and aspirational capitals that are crucial to FGL student success. Moreover, by recognizing the wealth of capitals FGL students come to the university with, Yosso's model also highlights the ways universities have under-valued and under recognized the relationships FGL students have and create during their university tenure. Yosso (2005) reminds us FGL students are not *lacking* relationships. If anything, FGL students are lacking the types of relationships that are most valued and helpful at university campuses. Research has pointed to less interaction between FG students and faculty (Espinoza, 2011; Dika, 2012) and less positive feelings of sense of belonging when interacting with faculty in comparison to their continuing generation counterparts (Kim & Sax, 2009). Research foci on faculty-student interaction places higher value on these relationships, even though FG student success varies by context (Padilla, 2008).

Overall, Yosso's community cultural wealth model highlights the support network, wealth of knowledge, and skills FGL students bring to the university level. Yosso's framework allows us to see how each portion of a network provides different supports and capital that are crucial to FGL student persistence and academic success. The recognition of these capitals (knowledge, resources, and experiences) as FGL assets directs our attention to FGL networks as abundant and diverse, not limiting or absent. With this framework, I acknowledge that FGL students arrive at the university with the capital, skills and motivation needed to succeed at the university. As such, I focused my attention on the relationships students created at the university and the support received, instead of focusing on what is not found in their experience or what they did not have in their network of support.

Validation Theory

Beyond using Yosso (2005) to recognize the networks and assets FGL students come to the university with, it is important to think about *why* FGL students build and maintain certain campus connections throughout their time at the university. By understanding why students keep certain relationships, we are clued into retention efforts and can use these efforts to effectively leverage the many capitals of FGL students, those Yosso (2005) directed us to. A theory that helps us understand more about the relationships FGL students hold is Rendón's (1994) validation theory. Validation theory explains that one of the reasons culturally diverse students maintain a relationship with a campus connection deals with the connection's ability to positively affirm the student's identity as a student inside and/or outside the classroom, effectively leading to a sense of belonging (Rendon). Sense of belonging is "a psychological measure of integration in the college community and attachment to an institution" that impacts student retention and "can vary by race/ethnicity and class" (Hurtado, et. al., 2015, p. 62).

For Rendón (1994), there are six elements to validation theory, the first being, "validation is an enabling, confirming and supportive process initiated by in- and out-of-class agents that fosters academic and interpersonal development" (p.44). Within this first element, Rendón is highlighting the importance of initiative for institutions. Specifically, the university needs to own that it is the responsibility of their university programs, services and institutional agents to initiate contact with FGL students. The initial contact does not need to come to FGL students for deficit-based reasons such as they are less-confident or unable to figure it out on their own which would be an example of ignoring the navigational capital FGL students bring to campus (Yosso, 2005). Instead, universities need to initiate contact because reaching out to someone is an impetus to students feeling they are where they belong.

A feeling of belonging shows the university is validating the student's presence at the university, which leads to the second element of Rendon's theory- "when validation is present, students feel capable of learning; they experience a feeling of self-worth and feel that they, and everything that they bring to the college experience, are accepted and recognized as valuable" (p.44). Meaning, students are more likely to perform better in and out of class when the knowledge and skills they come to the university with are acknowledged and affirmed. For example, each time I started a new PhD course, I felt the need to meet with the faculty to mention that I was a full-time employee and part-time PhD student. I was not looking for faculty to go easy on me. I was looking for validation. I felt like I was in over my head because I had been out of school for a few years, would not be taking courses in the recommended order of the program, and would have to study alone because other students did not study on the weekends. I felt most supported by the faculty who acknowledged that being a full-time employee and part-time PhD student *is* challenging and that my PhD journey would be *different*, not necessarily more or less challenging than full-time PhD students. These faculty made me feel good about attending their office hours and recognizing that my work experience would bring a different perspective. The faculty who said, "well other PhD students basically work full time too" did not make me feel validated. Something as simple as acknowledging my journey helped me feel I was on the right path and had the "go ahead" to continue.

The third element Rendon calls to our attention is that "like involvement, validation is a prerequisite to student development" (p.44). This means students are more likely to get involved with events, student organizations, or other university opportunities if they feel validated. As mentioned above, when faculty validated my identity as a full-time employee, I was more comfortable emailing that professor to set up a time to meet if I could not make their office

hours. Their validation also made me feel supported in class. I felt as though they "had my back" during discussions and was more likely to add to discussion or ask a question.

The fourth element refers to the occurrence of validation. Rendon (1994) helps us understand that validation occurs inside and outside the class and can come from a variety of people. In class, validation comes from other students, professors, lab or course assistants, instructors, etc. Outside of class, all individuals who are part of the student's network can be validating (significant others, family members, university institutional agents, friends, roommates, etc.). All these folks at the university can provide some form of validation through in class our out of class activities that "promote academic excellence and personal growth" (Rendon, 2002). For this reason, it is important to present validation theory and its practices to "key institutional agents and units that result in successful navigation of the college environment" (Hurtado, et. al., 2011).

The fifth element of Rendon's framework suggests validation is a developmental process. Meaning, validation can increase with more validation and more validation improves the student's experience. Universities and their agents should validate as needed, not think of validation as a checklist item to complete with each student. For this to occur, it is important to involve a variety of folks and units at the university. This can be done by encouraging faculty to assign in or out of class group projects, ensuring curriculum relate to a variety of student experiences, requiring advisors/staff to checking in with students versus waiting for student to reach out, etc. These examples provide an opportunity for the student to create a connection and/or feel validated throughout their time at the university, not just during orientation.

Finally, the sixth and last element of validation theory is its timeline. As Rendon (1994) states, validation is "most effective when offered early on in the student's college experience"

(p.44). Validation needs to occur in the first year and preferably during the first weeks of class. Prior literature shows the first four weeks at the university are critical to the student's experience and retention, with validation being essential to those first four weeks (Valdez & Ozbek, 2024). If institutions manage to validate a student early on, the sense of belonging feelings will begin to develop sooner, which leads to the student feeling part of the community and "cared about as a person, not just a student" (Rendón & Muñoz, 2011). As such, the university is more likely to retain the student and support them through graduation.

In sum, the elements of validation theory inform what validation is and does for student development, who can provide validation, and when the process of validation should begin. This framework highlights how validation is a process, and a sense of belonging is an outcome of that process. Specifically, that when FG students feel a sense of belonging, they perform better because they feel valued and feel they are part of the community (Stanton-Salazar, 2001; Rendón & Muñoz, 2011; Coronella, 2018). And, that while validation can come from family members, non-kin connections at the university enlarge a student's university network, which help with creating diverse university networks that provide additional opportunities for success (Coleman, 1988). The more FGL students feel validated by their university network, the more likely they are to participate in the university environment, and the stronger their *university student* identity becomes. As Wenger (2018) notes, learning in and from our communities "changes who we are and creates personal histories of becoming" (p. 221). The more students engage with the university community (people, events, spaces, traditions, etc.), the more likely the student will feel part of the community and identify as a university student. For FGL students, this is especially important because they might be the first in their family or home community to hold this identity. Feeling like and identifying as a "university student" helps FGL students with their

sense of belonging and increases their likelihood of continued participation in the university community and the communities within (student organizations, study groups, etc.) (Walton & Cohen, 2011). Thus, validation theory helps us better understand *the process* that leads to students feeling a sense of belonging. As Hurtado et. al. (2015), explain, "validation is a process that involves recognition and value engendered by faculty and staff in curricula and extracurricular contexts. Sense of belonging is a feeling of attachment and lace within the overall campus community" (p. 74).

Finally, for this study, it is important to discuss the Ecological Validation Model of Student Success (Kitchen et. al. 2021). This model draws on Rendon's (1994) validation model and Bronfenbrenner's (1994) ecology model and provides a "how to" set up a university for validation. Bronfenbrenner's model calls our attention to the person, process, context and time. In this case, what the institution is validating (a person's experience, identity, attributes), how the institution is validating (the process), where the validation is occurring at the university (context) and when that validation occurs (time) (Kitchen, et. al. 2021; Hallett et. al., 2022). In the Ecological Validation model, Kitchen et. al (2021) argue that institutions must focus on *how* students are supported, not solely *what* support is provided. They also call for a holistic validation model, one in which institutions "create initiatives, structures, and expectations that embed validating experiences across contexts such as classes, financial aid, counseling, housing, registrar, and advising" (Hallett et. al., 2022, p. 2). A holistic approach of this sort puts the responsibility on all departments, programs and services, not solely on areas that are "most" student-facing. When all areas of the university act with validation in mind, students will experience validation through multiple touch points and across a variety of campus locations, reducing the possibility of students wanting to avoid certain people or places on campus.

Overall, validation framework helps practitioners and researchers think about student needs and support types more holistically, which helps me think beyond the four popular support types. As a reminder, the prevailing four types of social support are emotional (related to feelings of trust and love), informational (information or advice given) appraisal (feedback provided about one's self), and instrumental (tangible resources or time provision) (House, 1981). While inclusive of many types of supports, this framework was created within a work context, missing critical pieces of support for university students. Validation theory contributed to the methodological approach I took; I asked students about the support they received, instead of having them list the support they received as one of House's (1981) four support types. Taking a deductive approach to understanding the support FGL students received increased the possibility of finding support types not listed in previous models.

Theory and Simultaneity

Simultaneity asserts identities are not siloed. Specifically, that first generation and Latine are not the only identities the students of this study hold, and that their experience as a FGL student differs from each other, in varying spaces within the university, and in non-university spaces. Each student, and each FGL student in this case, has their own experience at the university and while some experiences overlap, the process of identifying as a student is dependent on the multiple identities students simultaneously hold *in addition* to their FGL identities (e.g. FGL female, FGL male, FGL queer male, etc.) (Holvino, 2010).

Also, simultaneity leads us to a focus on context, which is important for this study because it considers the relationships that exist within the university context and how these relationships produce and reproduce university relations of hierarchy and power (Anthias, 2013). By directing our attention to the relationships that implicate the simultaneity of student identities, we deepen our understanding of the relationships at play within the frameworks of Community

Cultural Wealth Model (Yosso, 2005) and Validation Theory (Rendon, 1994). As mentioned in my positionality section, the stories of the FGL students in this study should not be interpreted as *the* first generation Latine student experience. They are, however, first generation Latine student experiences that will further our knowledge, understanding and theorizing of FGL student success across multiple Latine identities.

Theoretical Frameworks Summary

Yosso's (2005) community cultural wealth model guides my understanding of the different resources, knowledge and support each student has access to through their connections on campus (the people they report in their network) and the capitals they arrived at the university with. Rendon's Validation Theory (1994) helps us understand how we can validate the knowledge and skills students hold through the relationships they have on campus. Together, these theoretical frameworks acknowledge that the networked experiences of each student are specific to their intersectional identities, the contexts they were in before the university, and the context they find themselves in during their third year at the university. As Marrero (2016) states, "when students feel a sense of trust and care in their environment and believe the adults around them feel a sense of responsibility for their well-being, including trying to help and understand them, they will become motivated to rise to the academic pursuits before them" (p. 182).

Conclusion

As we can see, connections (relationships) shape an individual's outcomes. The relationships FGL university students have access to depends on the context they are raised in and the access to university resources and knowledge that context has. In a university setting, the relationships a student has throughout their educational journey can create and strengthen the ties the student has to a university, leading to a sense of social belonging and ultimately, graduation.

As discussed above, FGL student graduation rates are significantly lower, and it is the university's responsibility to investigate retention and graduation for FGL students from a variety of approaches and theoretical perspectives. The relational (networked) approach of this study contributes to our knowledge of the networks of FGL students and enriches the current understanding of student success. With a network approach, the university will be able to leverage the specific connections that are most helpful to FGL retention, successfully leading efforts to increase FG graduation rates.

CHAPTER 3: METHODS

Introduction

This study aimed to learn more about the support networks of first generation Latine (FGL) students at a 4-year, predominantly white institution (PWI), through an exploration and analysis of the student's personal support network. As a reminder, the research questions for this study were:

1. Who is in the support network of FGL students?
    a. What is the network structure of these FGL networks?
2. What kinds of support do these students receive from the connections in their network?
3. Why did FGL students maintain a connection with those listed in their network?

To assist with answering these questions, I relied on my theoretical frameworks, Community Cultural Wealth Model (Yosso, 2005) and Validation Theory (Rendón, 1994) to bridge my methodological and analytical procedures. I especially relied on these frameworks during data analysis to consider the support FGL students arrived to the university with, which support types they received, and if the reasons for maintaining a connection aligned with previous theories. I also relied on a method scholars use to better understand the importance of networks- Social Network Analysis (SNA). In the remainder of this chapter, I briefly review my methodological stance, discuss what SNA is, and how SNA was used to address the research questions above. I make the case that SNA is the best approach to address my research goals because it is inherently a mixed method that aligns with and allows for a seamless integration of multiple quantitative or qualitative methods (Schiffer & Hauck, 2010). More specifically, I show why SNA was best for analyzing the relationships that surround FGL students as they navigate the university system and reach degree completion. Next, I include details about my study's data sources, data

collection, participants, methods procedures, and analysis. I conclude with methodological limitations of the study.

Methodological Stance

My approach to this study is interpretivist/constructivist, one that aims to understand and reconstruct our understanding of FGL student experiences via their network of support. A constructivist/interpretivist approach believes reality is relative, "socially and experientially based" (Guba & Lincoln, 1994). Specific to this study, I believe student realities (experiences) are impacted by their interaction with others and construct experiences based on their interpretation of those interactions. My approach to data collection and analysis acknowledges my own positionality in the interpretation of the interviewees' responses. I believe my experience as a FGL student "enriches the inquiry and interpretive strength of the study" by allowing me to engage in dialogue with the data (Lynham et al., 2006, pp.174-175). In dialoguing with the data, I acknowledge my experiences impact the interpretation of the data, and, my acknowledgement and awareness of simultaneity ensures I construct a reality that is "more informed and sophisticated" than previous studies (Guba & Lincoln, 1994).

Methods Overview

This study is qualitative, a method that allows researchers to create knowledge through the collection of experiences via methodological techniques like interviews, observations, and focus groups (Miles and Huberman, 1984; Yin, 2015). This study centers the experiences of FGL students at a university and used semi-structured interviews and social network analysis methods to obtain data that helps us understand the support networks surrounding FGL students. Qualitative methods were appropriate for this study since I was most interested in understanding the networks and experiences of FGL students from their own perspective (Denzin et. al., 2017).

For analysis, I used thematic analysis (Clarke & Braun, 2017) guided by both a deductive and inductive approach to data analysis. The inductive approach allowed answers to the research questions to "emerge" during analysis of the network maps and qualitative interviews. This approach allows for participant voice to be foregrounded in the analysis of what is important about their networks and experiences at the university (Braun & Clarke, 2017). At the same time, I analyzed data deductively by relying on Rendón's (1994) Validation Theory and Yosso's (2005) Community Cultural Wealth Model to guide my understanding of these data and create a bridge to existing literature. Deductive coding in this way allows for the consideration of theoretical understandings to be included the analysis process. In the sections below, I provide background and reason for my use of social network analysis.

Research Design

Introduction to Social Network Analysis

Social network analysis (SNA) is both a theory and method. As a theory, SNA helps us think about the ways social connections influence individual and group behavior and/or attitudes (Carolan, 2014). More importantly, SNA helps us better understand and document how the network surrounding a person can limit or add to the opportunities a person encounters (Borgatti et al., 2018). SNA leads us to think about the relationships that surround us as individuals and groups, directing our attention to the smaller structures (networks) that exist around us and potentially support us as we navigate institutions (friendship networks, buyer/seller networks, professional network, university network etc.) In doing so, we can think of SNA as a structural perspective theory, one that emphasizes the importance of our connections in specific surroundings, not just individual attributes. This does not mean our individual attributes do not impact the connections we have in our networks; it means SNA uses personal attributes as an

additional piece of the analysis while also considering the attributes of relationships (strength of a relationship, longevity, type of relationship, etc.) and access to/lack of access to relationships.

As a method, SNA provides us with the data collection tools that best gather information about a set of relationships (a network), and the measures or models associated with the collection of network data. Overall, SNA emphasizes four premises: (1) individuals and their actions are interdependent; (2) relationships between individuals are opportunities for the transmission of resources and knowledge; (3) the pattern of relationships an individual has- or the network structure- is an environment that can facilitate or limit individual action; and (4) social network models conceptualize structure as enduring patterns of relations among actors (Wasserman & Faust, 1994).

Some of the earliest acknowledged ideas of SNA are linked to Auguste Comte's structural perspective, the "laws of interconnection," which argues that all parts of a society are connected to each other- individuals become families "families become tribes, and tribes become nations" (Freeman, 2004, p.14). With this, Comte further argued that the family was a "social limit" (Freeman, 2004). I interpret this to mean that our core identities and experiences are partial to our family's social standing; an idea that is important to a first-generation Latine student study. As previously mentioned, the context we are born into is the foundation for our understanding of our surroundings and the resources and relationships we have access to. As we think about FGL students, it is important to remember their "social limit" to university understandings is not an individual limitation, but a limited resource they had less access and exposure to due, in part, to parent/guardian educational attainment. Building on the ideas of interconnection, Moreno (1934) introduced sociometry and traced the connection between relationships and psychological well-being in one of the earlier SNA works that incorporated graphics. Today, SNA is used in

sociology, psychology, anthropology, political science, statistics, history, education, and a variety of other disciplines.

Furthermore, by collecting network information, SNA allows researchers to observe the resources that were accessed versus potentially accessed, and further observe patterns that give rise to/support structures that impact individual experiences. This is vital because social structures arise from patterns in the networks and this patterning has consequences for individuals within and outside the network (McCarty et al., 2019; Wasserman & Faust, 2004). In other words, there are groups of first-generation students and groups of continuing generation students. These groups arose from a pattern of certain parent/guardian groups attending or not attending college. A student's status as a first generation or continuing generation student is dependent on their family's experience. Here, we see how Comte's idea of "family limit" and interconnections exists, and how the study of FGL student networks can inform the ways in which new patterns can arise.

Basic Social Network Analysis terminology

The definitions below are meant to support the reader's understanding of the proposed study and its plan for analysis. Definitions provided are grounded in McCarty et al. (2019) book:

- *Actor/Ego*: the individuals being studied (FGL students)
- *Alters*: The ego's network members (Individuals/groups reported by the FGL student. For this study, we will use "connection" when referring to someone named in the FGL network)
- *Ties*: the connection between the actors/ego and their alters (the relationship between the student and who they reported in their network)
- *Social network*: set of relationships within a bounded group or community
- *Personal/ego network*: set of relationships of an individual ego (the relationships the individual FGL student reports having during their third year at LGU)

- *Composition*: characteristics or attributes of actors/alters within a network (number of people in network, roles of the folks in the student's network)
- *Structure*: the arrangement and connections within the network (is everyone connected, is one person more connected than others, is someone not connected to others, etc.)

Social Network Analysis Research Approaches

Social network analysis can be done on the group level (whole/complete) or the individual (ego/personal) level. Whole network analysis "examines sets of interrelated objects or actors that are regarded for analytical purposes as bounded social collectives" (Marsden, 2005, p.8). Whole networks can be one-mode, which include one set of actors, or they can be two-mode, which include two sets of actors or a set of actors and an event (Wasserman & Faust, 1994). For example, studying the relationships within a first-generation Latine student group would be a one-mode network. Studying the relationships within a first-generation Latine student group *and* attendance to a campus activity would be two-mode. The network analyzed in whole network research are the connections reported by all the members of that group. Previous research on whole networks have studied school friendship segregation (Moody, 2001), the spread of obesity (Christakis & Fowler, 2007), and the Salem Witch trials (Boyer & Nissenbaum, 1974), to name a few.

Egocentric/personal network analysis focuses on an individual actor and the connections that actor has in a specific location/context (Marsden, 2005). In egocentric analysis, the network analyzed is the network reported by the individual actor. Prior personal network analysis research includes studies on access to abortion (Lee, 1969), individual student friendship networks in college (McCabe, 2016), immigrant networks (Vacca et al., 2018) and homeless women's networks (Tucker et al., 2009).

Both whole and personal network approaches can be used to research first generation student retention at institutions of higher education. As with most research, choosing one method over another depends on your questions and the goals of your research (Yin, 2015; Turner et al, 2017). Since this research seeks to explore the individual networks of FGL students at a particular university, I used measures and analysis associated with egocentric/personal network analysis (ENA). From this point forward, the words personal and ego are used interchangeably, unless noted otherwise. With egocentric (ego) analysis, I can "explore the social environment and isolate its effect on people, using the variation from one person to another to explain the variation in what we think the social environment predicts or effects" (McCarty et al., 2019, p. 2). Thus, an egocentric approach allowed me to compare ENA measures (e.g. network size, density) while considering a few individual attributes. Qualitative interviews helped me further understand how personal attributes (FG and Latine) are related to the resources and knowledge the student holds, how access to that knowledge and resources impacts the formation of FGL student networks, and how this information can be used to inform university practices to better support FGL students on campus.

All in all, including social network analysis for data collection and analysis increases the study's credibility (Yin, 2015). With SNA data, we complement the semi-structured interview data and obtain a more holistic understanding of the student's support network (visually and qualitatively). SNA allows us to obtain the structure of the student's network, which provides information about the patterns of relationships that exist at the university for FGL students, and if those patterns create/re-create certain outcomes.

Longitudinal Study

The data sources and procedures described below come from a larger longitudinal comparative network study at Land Grant University. During the fall of 2016, I proposed a four-year comparative study to collect network data from first generation and continuing generation students at LGU. A total of $37,000 was awarded to me from five Vice Presidents and their respective divisions. With these funds, I was able to hire and train graduate students to help me conduct a total of 207 interviews over the four years. These funds also allowed me to hire a project manager each year to assist with scheduling the interviews between each interviewer (including myself) and the student participants. Fortunately, we were also able to provide incentives for student participants and hired graduate students for transcription and data organization. This dissertation focuses specifically on a subset of first generation Latine participants who were part of the larger longitudinal study.

Participant Information

The participants in this study were part of the larger, comparative and longitudinal study at LGU. The next few paragraphs detail the larger study's procedure for participant recruitment. I close this section by discussing inclusion criteria for my FGL study.

During the spring semester of 2017, the internal data office at LGU provided a random sample of first year, continuing generation student emails and a random sample of first year, first-generation student emails to receive the recruitment email. The sample of first-generation students was one-third Living and Learning (L&L) participants, one-third Connections program participants, and one-third first-generation students who were not part of institutional programs during their first year.

Once I had these lists, these students received an email with the subject, "Recruiting 1st-Year Students for Research." The email stated that we wanted to interview them about their personal and academic networks during the spring semester and the following three spring semesters. I also included information about a $50 incentive, with $20 for the first year, and $10 every year after. As responses came in, I noticed most of the participants were females. To increase male participation, I created and posted flyers around campus about the study and recruited through the flyer and email reminders.

During the spring of 2017, we interviewed 77 students, with 34 identifying as continuing generation (CG) students and 43 as FG students. With the intention to study FG networks, our demographics were not proportionally representative of LGU's 2017 cohort demographics. The larger study had a higher FG student representation than CG students, and more students of color (mostly Latine) than White students. The gender representation was like the 2017 cohort and there was at least one student from every college at the university (during this time, male and female were the only options for gender). These 77 FG and CG students were invited back to be part of the interviews during spring 2018, 2019 and 2020.

For my dissertation, I chose to focus my investigation on FGL students because as previously mentioned, Latine students make up 25% of the FG population (naspa.org). I thought it was important to zoom into Latine students to better understand these participants' experiences and potential avenues to support them considering their growing numbers on campuses across the United States. The inclusion criteria are as follows: a participant must be a first generation Latine student and a participant of the larger comparative longitudinal study at LGU during year three (Spring 2019). I established these criteria for my study because at LGU, students are encouraged to declare a major by the end of their second year. I believe knowing who is in the

networks of students during the end of year three (with at least one full year of having a major) is helpful for understanding if graduation occurs in year four. In my experience, year one of the university is more about finding your community, year two is for establishing the community in your major, year three is strengthening the overall community and community in your major, and year four is maintaining and finishing strong. Additionally, the fourth year of this study was in 2020, during the COVID lockdown, when everyone's networks drastically shifted.

Under these criteria, a total of 19 FGL students participated in spring 2019. This means my study is based on these 19 student's net-maps and semi-structured interviews. The 19 interviews ranged from 18 minutes to 2 hours and 30 minutes. Also, according to LGU's internal data records, of these 19 students, 13 were pell eligible, 11 identified as female and 8 as male (only male and female genders were available at time of data collection). Seven females were pell eligible and 6 males were pell eligible. *Figure 1* shows participant information.

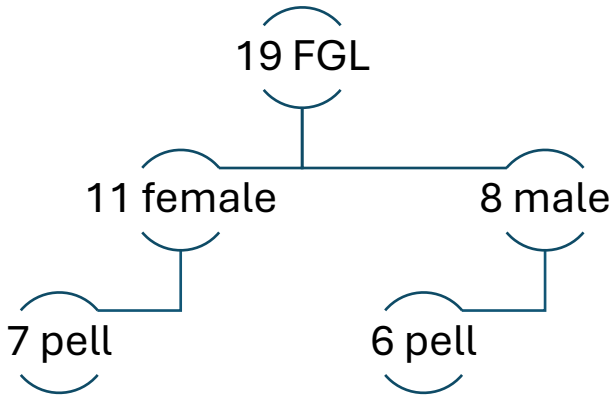

Figure 1: Participant information

Data Sources

Table 1 below provides a summary of the data sources used to answer the proposed research questions. It also provides detail on how the theoretical frameworks assist in

addressing the specific research questions. Following the table, I define and describe each data source:

Table 1: Data Sources

Research Question	Data Source	Theoretical Framework
Who is in the networks of first generation Latine students? What is the structure of the student's network?	Student Attributes Network Maps Digitized network Semi - structured interviews ENA measures	Community cultural wealth model (Yosso, 2005) helps me think of the different capitals each student has access to through their connections on campus (the people they report in their network).
What kinds of support do these students receive from different types of people?	Semi-structured interviews	Community cultural wealth model (Yosso, 2005) helps me think about the different support types and capitals students bring to the university and the additional varying supports and capitals they need on a university campus. Validation Theory (Rendón, 1994) Allowed me to consider what university contacts (if any) took initiative to create a connection with students, one of Validation theory's elements.
Why did FGL students maintain a connection with those listed in their network?	Digitized Network Semi-structured interviews	Community cultural wealth model (Yosso, 2005) assisted me in considering the different support types students receive from each contact and if the student feels closer to a contact because a specific capital was leveraged and/or provided. Validation Theory (Rendón, 1994) aided in the understanding of which behavior and/or practices were perceived more positively and helpful by the FGL students in this study.

Student attributes

A student's attributes are identity markers that will allow us to further understand the experiences of the 19 FGL students in this study. The LGU data office provided me with the

following information about each student: FG status, gender, ethnicity, pell status, involvement in institutional program, GPA, and degree major. This information was used to address question one and to better understand the varying experiences of FGL students.

Network Maps

Network maps, or net-maps, were used to collect information about who is in the student's network. A net-map is a visual survey tool that allows us to collect information about a student's network (Schiffer & Hauck, 2010). These net-maps tells us who students turned to for support during their third year at the university and provide a visual of who they felt "closer" to. If they felt "closer" to this person, the student placed this person in a circle closer to the "me" in the net-map. An example of the net-map provided is below (*figure 2*).

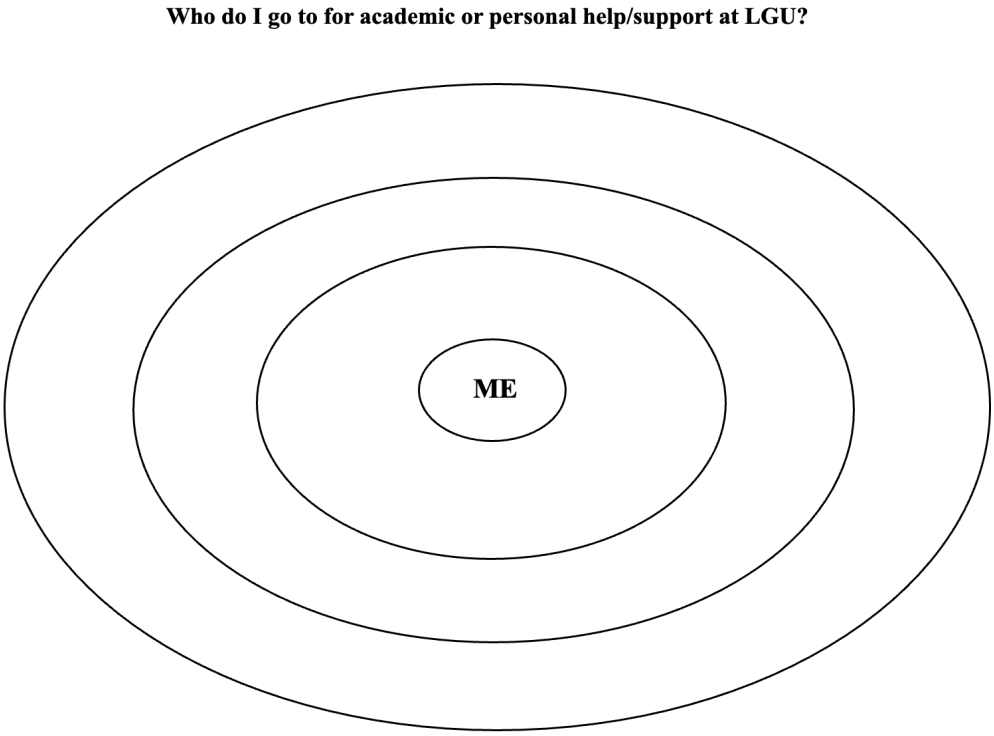

Figure 2: Network map example

The student was not given a definition of "close" and was told "close is defined by you." When completing the net-map, students were also asked to draw connections within the people

in their network, showing how many people in their network knew each other. For example, I might observe there are more students than staff and faculty in the network. Thus, the net-map is a data source that provides me with an initial understanding of the composition and structure of the student's network, critical to answering question one. As a reminder, none of the questions for *this* study concern relationship strength (closeness in net-map), but these were the net-maps used as part of the larger longitudinal study.

Digitized Network Visual

This data source provides a digitized visual of the student's net-map, which is a detailed and neater representation of the student's network. I used the software program Visone to create a visual network that is arranged for easier analysis of the structure. With the software, it was easier to code the roles of the connections in the student's network (staff, faculty, student, etc.), create lines between the people who are connected within their network, and enlarge the node of the alter that provides more types of support. This version of the net-map is also necessary for maintaining confidentiality of the students. In the original net-map, students wrote names of people on campus, making it possible for someone to identify the student through their network. With the digital version, we use numbers to identify the student and their number with an underscore to identify the student's alters. If the FGL student's identification number is 260, their alters will be 26001, 26002, 26003, etc. *Figure 3* below shows a digitized network example of one of our FGL students. The different colors show different roles on campus (blue is student, yellow is staff, pink is professor). As we can see, everyone in this student's network is connected to someone else, which has benefits and challenges to the student experience, especially when it comes to the amount of diverse information the student can receive (Granovetter, 1973; Coleman, 1998; Burt, 2002; McCabe, 2016).

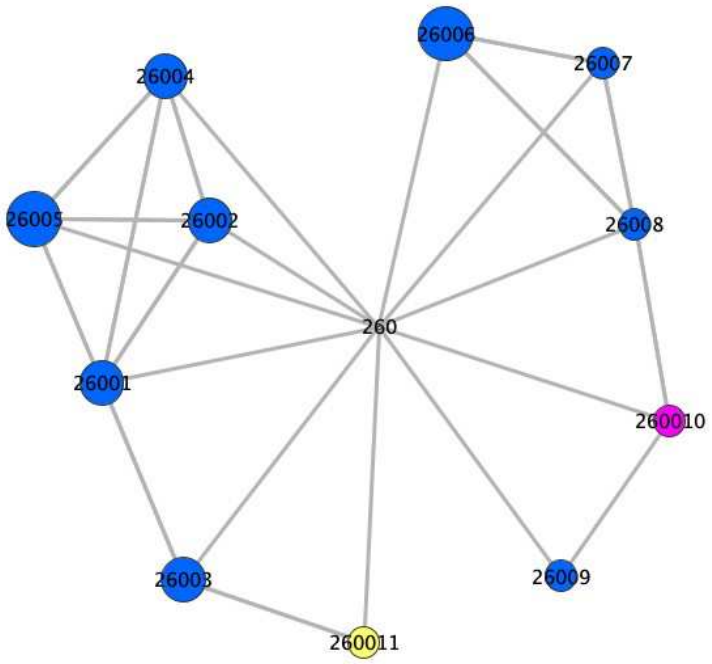

Figure 3: Digitized network example

Semi-structured Interviews

The semi-structured interviews took place as soon as the student completed filling out their net-map. Including the time used to write in their net-map, the interviews lasted between 18 and 151 minutes. The semi-structured interview asked students specific questions about their net-map and provided an opportunity for students to add context to the connections they included in their initial map. Data from the interviews provides the following information about each alter the student placed in their net-map: inception of relationship, length of relationship, type of support received from the alter, why and when the student goes to the alter. This data source is vital for understanding the breadth and depth of the student's personal network. Specifically, during analysis for the second and third research question.

Data Collection Procedures

As a method, SNA is distinct because it enriches qualitative or quantitative data collection through its use of network visuals and mathematical and/or computational models

(Freeman, 2004). When using SNA, the researcher/s must use a network survey tool to gather data about the participant (individual or group) network (relationships/connections, etc). For this study, we used a Network Map (net-map). As a reminder, a network-map (net-map) is a visualization-based network data collection method that allows the participant to map out alters and ties in their network (Schiffer & Hauck, 2010). Students were given a net-map with three concentric circles and a "me" in the middle. The top of the page also had a question for them to answer as they completed their net-map- "who do you go to for personal or academic support at LGU?" When asked to map out their network, students were told to write down the first name and relationship of who they listed (e.g. Maria- friend, Zach-advisor). Students were also told to limit the who they placed in their network to folks at the university. This was done because the focus of this study is on the support they receive on campus. Finally, they were asked to consider how "close" they felt to the people they put in their network. If the student placed someone in the inner most circle that is closer to the "me," it means the student felt closer to that person or group at that time. Close was defined by the student. Allowing the student to draw out their network was beneficial because it helped the student structure their own thoughts while "serving as a tool to prioritize their extensive but implicit network knowledge" (Schiffer & Hauck, 2010, p. 240). I limited the people they reported in their net-map to the university setting to narrow in my attention on the support system the student created during their time at the university. Additionally, a net-map of their network provides a visual that serves as the first step in understanding the student's network composition and structure. I also chose a net-map over a different network survey because it is preferred by most participants and provides a standardized visual, which is ideal for comparing networks (Hollstein et al., 2020).

A visual representation of the participant's network is also accompanied by a semi-structured qualitative interview. After completing their net-map, students were asked a series of questions from our semi-structured interview guide (Appendix A). Semi-structured interviews complement the network data and enrich the varying stories of these students. Semi-structured interviews also allowed me and other interviewers to ask open ended questions that directed the conversation to our research questions, while providing space for a clearer story of the student's experience. These interviews allow for access to participant experiences in ways that reveal important contextual details about their university relationships and networks. With the addition of the interview, I was able to better identify the network composition and structure because we asked for information about the alters. If I only had the network survey, the context of our network visual would be limited. On the flip side, if we only had the interview, a visual understanding of the structure and composition of the network would not exist. Thus, the interviews and network surveys complement each other's data while opening our analysis to additional and relevant pieces of information.

Validity and Reliability

A study is said to have validity if the measures used to answer the study's question/s are known as appropriate measures for answering said questions (Yin, 2015). This study's validity is addressed by using multiple data sources that have been used in peer reviewed journals for similar network studies. By using data sources and methods that were previously used in similar studies, I am also addressing reliability issues, ensuring the data sources I use are replicable. With multiple data sources (personal attributes, net-map visual, software network visual, semi-structured interview, SNA measures), we reach triangulation and increase the validity of our findings (Turner et al., 2017). With SNA and triangulation, we have a more holistic

understanding of each student's experience at LGU and can propose an ideal network for success.

Analysis Procedures

Below, I outline the procedures I followed to analyze these data. As a reminder, I utilized thematic analysis to make sense of the 19 FGL networks and interviews included in this study. The included following the 6 stages of thematic analysis which include: 1) Familiarizing yourself with the data; 2) Generating initial codes; 3) Generating initial themes; 4) Reviewing themes; 5) Defining and naming themes; and 6) writing up the results (Braun & Clarke, 2006). In generating codes and themes, I employed both inductive and deductive analysis that allowed to foreground participant voice as well as consider understandings from theoretical framing and existing literature. I also utilized SNA techniques to organize and then analyze participant netmaps.

Social Network Analysis

To best understand participant netmaps, I employed an SNA approach called Ego Network Analysis (ENA). I used ENA to analyze the connections reported by these 19 FGL students. Specifically, to figure out who was in the networks of the students and what their network structure looked like (question one), I turned to the completed net-maps and data tables created by a graduate student I hired to help with typing the net-map information into a data table. For each net-map, a number was assigned to each connection the student wrote down. Next to that number were two columns- one that listed the relationship the student identified in the net-map and another with a 1, 3 or 5 to know which ring the connection was within (1 for outer most ring in net-map, 3 for middle, 5 for closest ring to the "me"). A column was added to track the placement of the connection in the net-map in case I wanted to look at the strength of the relationship and for accuracy. If net-maps had the same first name listed, I could avoid confusion

by ensuring the placement of the connection and the relationship they had to that person. Once I reviewed the net-maps and checked the data tables for accuracy, I blinded the information by removing all names to ensure student anonymity. *Figure 4* shows an example of this process with false data.

Student (ego)	Connection (alter)	Connection assignment	Relationship	Tie Strength (net-map location)
290	Jesus	290_1	friend	1
290	Maria	290_2	Advisor	3
290	Jose	290_3	Professor	5

Student (ego)	Connection assignment	Relationship	Tie Strength (net-map location)
290	290_1	friend	1
290	290_2	Advisor	3
290	290_3	Professor	5

Figure 4: Example of netmap coding process with false data

To understand the structure of the networks, I created another table for each student network that listed who in their network was connected to who. For example, from *figure 4* above, I tracked who 290_1 was connected to in the network, who 290_2 was connected to and

so on. With this data organized as seen on the left of *figure 5* (below), we can see that student 290 had 3 connections (290_1, 290_2, 290_3) and there is a connection between 290_1 and 290_2 and 290_2 and 290_3. However, there is no connection between 290_1 and 290_3. While this is easy to read for a small network, it is not easy to read as the networks grow. Setting up the network data in a table of this sort was also necessary for the software use. Once in the Visone software, I was able to create a visual network, as shown on the right within *Figure 5*.

ID	Connection
290	290_1
290	290_2
290	290_3
290_1	290_2
290_2	290_3

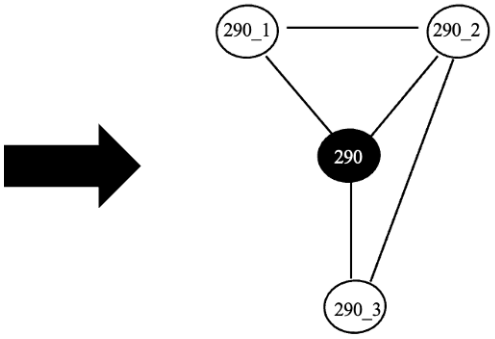

Figure 5: Visual network example

Interviews

After collecting the net-map data tables, I moved onto the interview transcriptions and qualitative analysis. I was fortunate to have enough grant funds to hire one to three graduate students each year for transcriptions of all 207 interviews. The transcriptions for year three were all completed by one graduate student. I provided a template for transcription to the graduate student, including how to save the file. Once I was ready to analyze the qualitative interviews, I loaded all 19 transcription files into MAXQDA, a software designed for qualitative and mixed methods analysis. This allowed the interview transcripts to be in one place in order to familiarize

myself with these data. Once in MAXQDA, I started the qualitative data analysis process of initial codes, initial themes, and then defining and describing these themes via thematic analysis (Braun & Clarke, 2006). Thematic analysis (TA) is a "method used for identifying and analyzing patterns in qualitative data" (Clarke & Braun, 2013). I used TA because it is useful across a variety of theoretical frameworks and research questions and allows for data or theory driven analyses (Clarke & Braun, 2013).

During the first interview read, I employed inductive coding. I coded each connection's relationship to the student (relevant to question 1), the support they received from each connection (relevant to question 2), their reason to stay connected to that connection (relevant to question 3) and other information that stood out to me or came up frequently (Bhattacharya, 2017). During the second read, I made sure I reviewed my initial codes, made any revisions to the coding scheme, and coded anything that was missed during the first read. For the third read, I moved toward a deductive process, organized the codes into categories and themes as they related to each question. I took notes throughout these processes to ensure consistency and reflect on how analysis was related to my theoretical frameworks, literature review and/or contradictions of my study's background and goals (Glesne, 2015; Bhattacharya, 2017). For example, as I coded and found patterns, I turned to Yosso's (2005) navigational capital to define "navigational support" as one of the supports these 19 FGL students were referring to. When it came to narrowing in on themes for question three (why students stay connected), I referred to the elements of validation theory and examples provided in validation literature to relate the themes to previous findings. As I went through this process, I also discussed issues and/or reflections with my advisor. The themes I chose were the most appropriate for "re-presenting" the experiences of the FGL students in my study (Bhattacharya, 2017).

After analyzing the interviews, I went back to the net-map data tables to add a column for each type of support categorized. I added a "1" in the column if the support type was received by the student from that connection and a "0" if it was not. I added a column at the end to add all the "1's" that were present and replaced the relationship column with "connection type" to use the categories of connections (student, staff, professor, etc.) I created and assigned a number to each connection type (e.g. student = 1, staff = 2, professor = 3). These connection types were the categories of connections I extracted from my interview analysis and net-map analyses. *Figure 6* below shows an example with false data.

Student (ego)	Connection assignment	Connection type	Support 1	Support 2	Support 3	Support 4	Support 5
290	290_1	Student	1	1	0	1	0
290	290_2	Staff	0	1	1	1	0
290	290_3	Professor	0	1	1	0	0

Student (ego)	Connection assignment	Connection type	Support 1	Support 2	Support 3	Support 4	Support Sum
290	290_1	1	1	1	0	1	3
290	290_2	2	0	1	1	1	3
290	290_3	3	0	1	1	0	2

Student (ego)	Connection assignment	Connection type	Support Sum
290	290_1	1	3
290	290_2	2	3
290	290_3	3	2

Figure 6: Connection type coding process example with false data

Putting the data into this format was necessary to create the digital network visuals. Once the data was coded like the bottom table in *figure 6*, I put the information into Visone. In Visone, I assigned certain colors to connection types and enlarged the connections that had a larger sum of support. With this, I was able to create the network visuals. I printed the digital networks in color and began analysis on composition and structure. I laid out all the images to find network size, composition and structural patterns. First, I observed all network visuals, then I grouped the visuals by the attributes of students (pell eligibility, female, male, institutional program participation, mix of a few attributes, etc.). I took notes as I analyzed the visuals and reflected on these by discussing with my advisor and a colleague who consults on SNA every day. I also made connections to the literature on FGL students, SNA literature, and theoretical frameworks.

Once I analyzed all these data from codes to themes in relation to my stated research questions, I prepared outlines of the major findings for each research question. After discussing the outlines with my advisor, I moved to writing up the results which are found in chapter 4.

Methodological Limitations

With every study, there are several methodological limitations. Some of this study's limitations are found in the data collection process and data analysis process. For one, the data collection of the larger comparative study was limited to one cohort (fall 2017), and it was limited to students who were engaged enough to read and respond to that first-year recruitment study email. Also, the 19 FGL students from this study likely participated in the interviews from year one and two, which means their third-year net-map and semi-structured interview responses may be limited because of interviewee burden. By their third spring, the student may have realized the fewer alters they place on their net-map, the shorter the interview will be (McCarthy et al., 2019). With over five questions for each connection listed, the student may have decided

to leave a few connections out. There is also the possibility of forgetting about certain people during the interview. Even though the interview guide provided student participants the opportunity to add connections to their net-map as the interview went on, it is common for folks to forget about someone, depending on the day they are having. Our FGL student participants also may have been less comfortable with certain interviewers and their identities (Glesne, 2015). I was able to build rapport with some of the students I shared identities with, and discussed this with the graduate students I trained, but I understand I cannot control that for all the interviews conducted (Glesne, 2015).

In data analysis, I recognize that my positionality and shared identities with the students of this study has an impact on my interpretation of the data (Bhattacharya, 2017). To not over-represent the stories that are most like my experience(s), I reflected often and went to back to my notes/thoughts every time that I needed to further analysis and asked questions like "why did I noticed this?" or "Is this what I think today?" (Glesne, 2015). I also shared analysis notes and reflections with my advisor and hoped such questions ensured my findings were most appropriate for sharing the experiences of all 19 FGL students.

Summary

This study used qualitative methods and thematic analysis for its data collection and analysis. In this chapter, I provided an overview of the qualitative methods I used for this study and introduced SNA methods. I also reviewed why I chose SNA and other qualitative methods for data collection. Finally, I reviewed my analysis procedures for the different data that was collected and concluded with methodological limitations. In the next chapter. I review the findings from my data analysis.

CHAPTER 4: FINDINGS

Introduction

As a reminder, this study sought to find out who FGL students turned to for university support during their third year at the university and what the makeup of their university support network was. Question two focused on the kind of support these FGL students obtained from the connections mentioned in their support network, and question three focused on why these FGL students maintained a relationship with said connection. The next few paragraphs review each question and its main findings after analysis.

Question One: Who is in the Networks of FGL Students?

Research question one asks, what is the *composition* and structure of First Generation Latine student networks? Essentially, composition is concerned with who is in the network and structure helps us understand what the network configuration looks like. The first step of understanding the composition and structure of the participant networks was to examine who or what the students included in their netmap. Analysis revealed a total of 280 points of contact amongst the nineteen networks. There was a range in network size from three to 70, with an average of 14.7 connections. Without the largest network of seventy, the average size of the 19 networks was 11.6 connections and the range is three to 33. When organized by group size, the networks naturally fell into a distribution that divided them into small, medium and large network sizes. There were four small networks that contained three to eight connections, 10 medium networks with nine to13 connections and four large networks with 16 or more connections (*figure 7*). These network sizes reveal the diversity across participants in this study

in terms of the number of university related connections they built into their third year on campus.

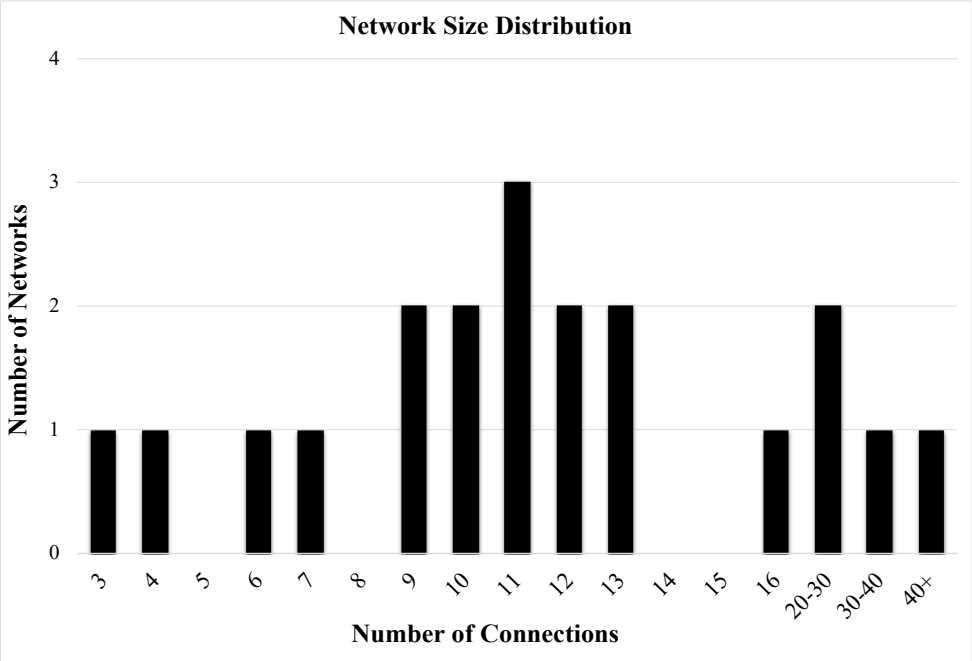

Figure 7: Network size distribution

Composition Categories

Of the 280 connections reported, I coded seven broad categories of connections in the networks of the nineteen FGL students who were part of this study. In order of overall presence, the seven categories of connections in these students' support networks are *student*, *staff*, *professor*, *academic advisor*, *university space/program*, *student organization*, and *graduate student*. Seventeen of the nineteen networks had at least three of these categories present in their network, and eight had four or more of these categories present in their network.

Student. The most frequently mentioned category was *students*. This category comprised of other undergraduate students on campus who took on roles such as friend, classmate, co-worker, significant other, sorority sister, fraternity brother, and other members of a student organization they are part of. Of the 280 total connections across all 19 networks, 153 or 54% of

connections were students and all nineteen participants reported at least one student connection in their network. Eleven (58%) of the nineteen student networks were comprised of at least 50% students.

Staff. The second most frequently reported category in these networks was *staff.* A total of 69 connections (24% of total connections) were coded as staff. Connections who were coded as staff in these networks were those who work on campus for institutional programs and offices like Living and Learning (L&L), Connections, federal TRIO programs, cultural centers, financial aid, admissions, and the Health Center. Student organization advisors, the university President and a few Vice Presidents were also named in this category. Fifteen of the 19 (79%) students reported at least one staff in their network and nine (47%) reported more than one staff in their network.

Professor. The third category is *professor*, with 28 reported connections (10% of total contacts). I did not code this category as "faculty" because we did not verify the status of LGU employees mentioned in networks. Since we are focused on the relationship between the student and connection reported, any person the student reported as a professor falls in this category. Professors in this category might be faculty, instructors, or staff who teach seminars for programs like Living & Learning and Honors. It is important to name this distinction because different roles have access to different resources and opportunities, just as different relationships provide different support (Agneessens et. al., 2006). Eleven (58%) of the nineteen networks reported at least one professor in their network and six (32%) reported two or more professors.

Academic advisor. The fourth category was *academic advisor* with 14 reported contacts (5% of total connections). Academic advisors were not included in the staff category because like the professor category, academic advisor status was not verified, and some departments assign

faculty to advise students. Academic advisors and staff also have very different roles and caseloads on campus. For these reasons, a different category was necessary. Ten out of the nineteen FGL students reported an academic advisor in their network. When thinking about staff, professors, and academic advisors, it is important to remember that this research focused on the relationship the student has, and their perception of the current or potential support they can receive from this connection. A focus on the relationship allows us to learn about the meaning the student places on the connection, which broadens our understanding of why students continue to go to that person/program/office. If the focus was on the role or title of the connection, the assumption would be that faculty, staff, and academic advisor support is limited to their university's roles and responsibilities.

University space/program. After academic advisor, *university space/program* was the most common with seven connections identified (2.5% of total connections). This category represents university spaces like the financial aid office, tutoring spaces, programs on campus (i.e. peer mentoring program) and the university health center. Students named these programs or spaces as supportive in some way, without mentioning a specific person from the office or program. If they mentioned a specific person, they were categorized as a staff, student, professor or academic advisor. University space/program was present in six (32%) of the 19 networks.

Student organization. The sixth most present category was *student organizations* with seven connections identified (2.5% of total connections). Student organizations include Greek letter organizations (multicultural and traditional), degree program related organizations (e.g. business club), and an activity organization (*e.g*. outdoors club). Like the university space/program category, this was coded as a student organization because the student did not

name a specific person, or they added the organization in addition to specific members. Four of the 19 (21%) students reported a student organization in their network.

Graduate student. The least present category that was coded with its own category was *graduate student*. There were three graduate students reported amongst the 280 connections (1% of the total connections) and all three were part of three different networks. Two of the three were reported as graduate assistants and the other was a friend of a friend they could reach out to about their graduate school experience at LGU. *Figure 8* shows the breakdown of categories of connections present in these networks.

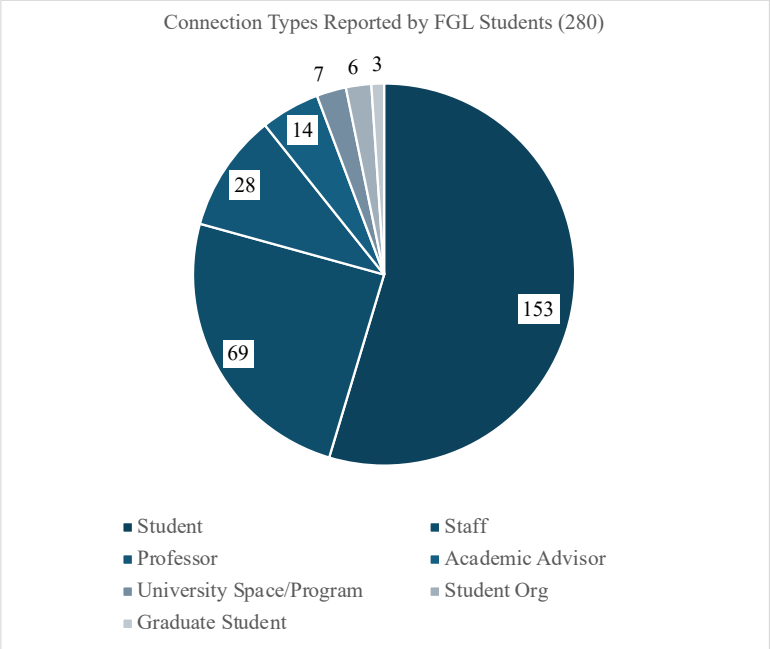

Figure 8: Connection types reported by FGL student participants

Overall, these composition findings illustrate that by their third year at LGU, FGL students have established networks of support that are relatively small, with a range of connection types. With seven different categories of connections present amongst these networks, FGL students turn to a wide range of connections and resources on campus. As mentioned, most students in this sample (17 out of 19) had at least three of seven connections

present in their network and almost half (eight out of 19) had at least four of the seven connections. Students were present in all 19 networks, and staff were in 15 of the 19 networks, indicating the important roles students and staff play in supporting these 19 FGL students. Of the 19, only one participant does not name at least one institutional agent in their network, and that is the one participant who did not graduate. These findings provide additional evidence of the importance of institutional agents for the higher education success of FGL students. *Figure 9* below shows the composition of all 19 networks.

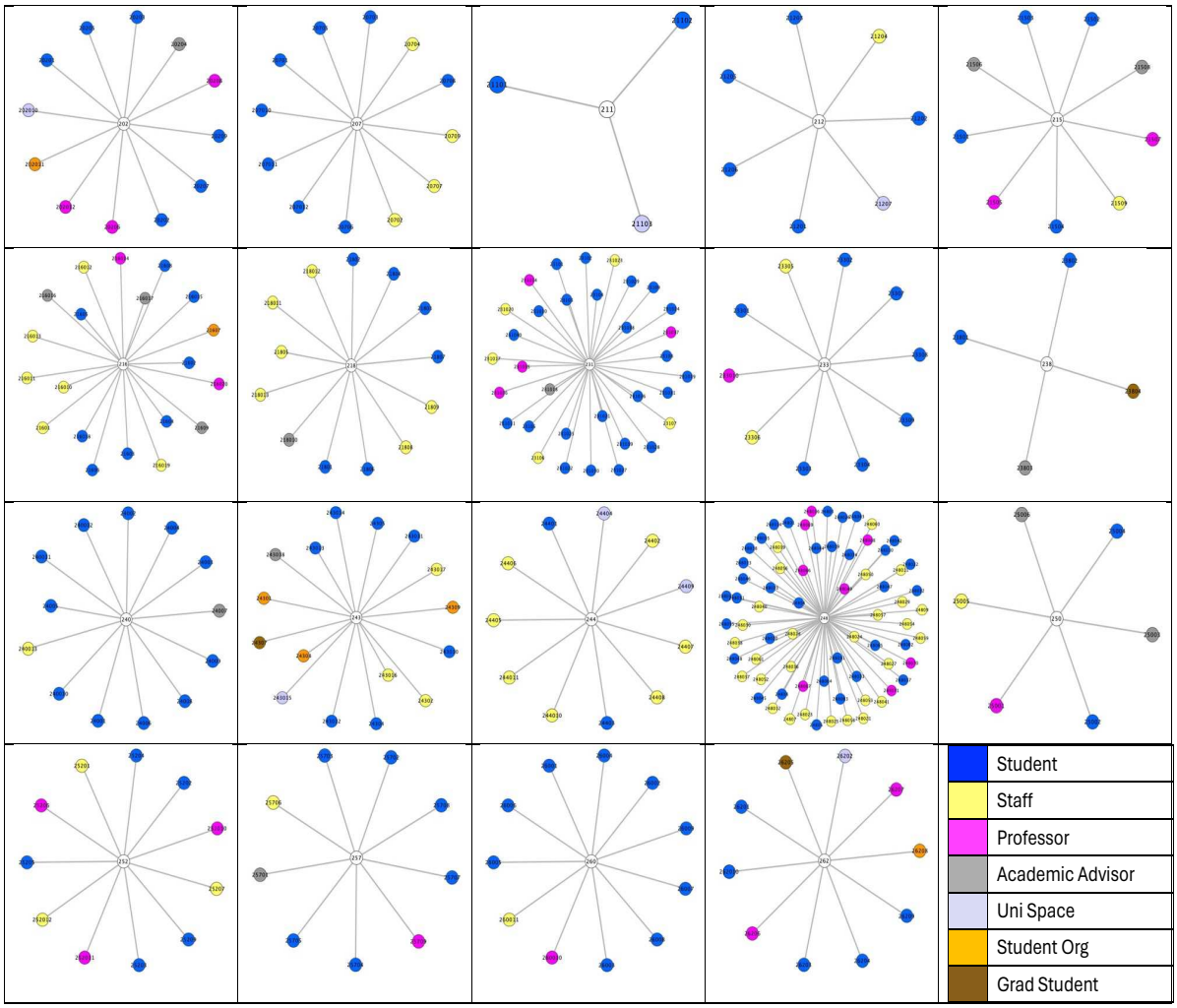

Figure 9: Composition of all 19 networks

Figure 9 above has a key on the bottom right to show which types of connections were present in each network. The key is also in order of the frequency of connections, as discussed in detail in the section above. As shown, a blue circle (student connection) is present in all the networks. Yellow circles (staff connections) are present in 15 of the networks, with pink (professor) connections being in 11 and so forth. The smallest network, middle top row, belongs to the student who did not graduate.

Examining Composition by Subgroup

In addition to finding seven broad categories of connections in their networks, I reviewed the composition of certain groups of students within the sample (*e.g.* males, females, pell eligible, graduated within four years, did not graduate within four years, institutional program membership) and I found that each group of networks vary in size and in the diversity of connections present in their networks. I chose to look at institutional program membership to explore the impact institutional programs have on FGL student networks. Also, I chose "within four-year graduation" as a measure of success because a bachelor's degree continues to be marketed as a four year degree, and if that continues, universities need to work to graduate *all* students within four years. Additionally, I narrowed in on these attributes (gender, pell, within four-year graduation) to explore differences within the FGL sample because like everyone else, students hold a variety of identities, and the simultaneity of our identities impacts social processes, like the creation of our support networks (Holvino, 2010). Therefore, sifting through the network composition of groups within the sample helps us better understand nuances that may exist, while lessening generalizations about FGL student support networks.

Gender. As a reminder, all 19 of these participants identified as male or female. These were the only genders recognized at LGU during the study's data collection. I first reviewed the

composition of female networks (n =11) and found they all had small to medium networks, with a range of three to 13 connections. Seven had at least one staff, five of the eleven had at least one professor, and three had at least one academic advisor. Seven of the 11 also had a network comprised of 50% or more students. The one participant in the study who did not graduate was a female and the only one of the 11 who did not have at least one institutional agent in their network. Five of the 11 had at least two *different* institutional agents in their network and eight have at least two institutional agents. *Figure 10* below shows the composition of FGL female networks.

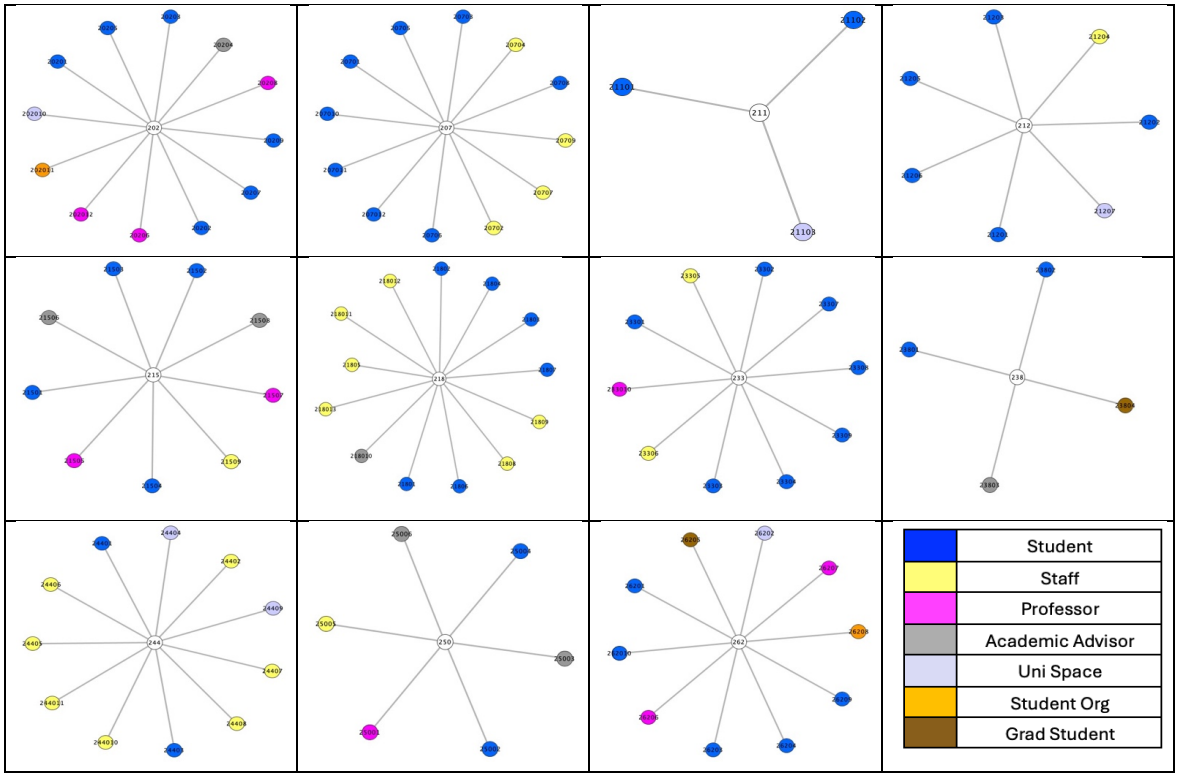

Figure 10: Composition of FGL female networks

On the other hand, males (n = 8) had medium to large networks, with a range of nine to 70. All males had at least one staff in their network, six had a least one professor, and five had an

academic advisor. They also all had at least two *different* institutional agents and half of them (four) had a network comprised of 50% or more students. *Figure 11* shows FGL male networks' composition.

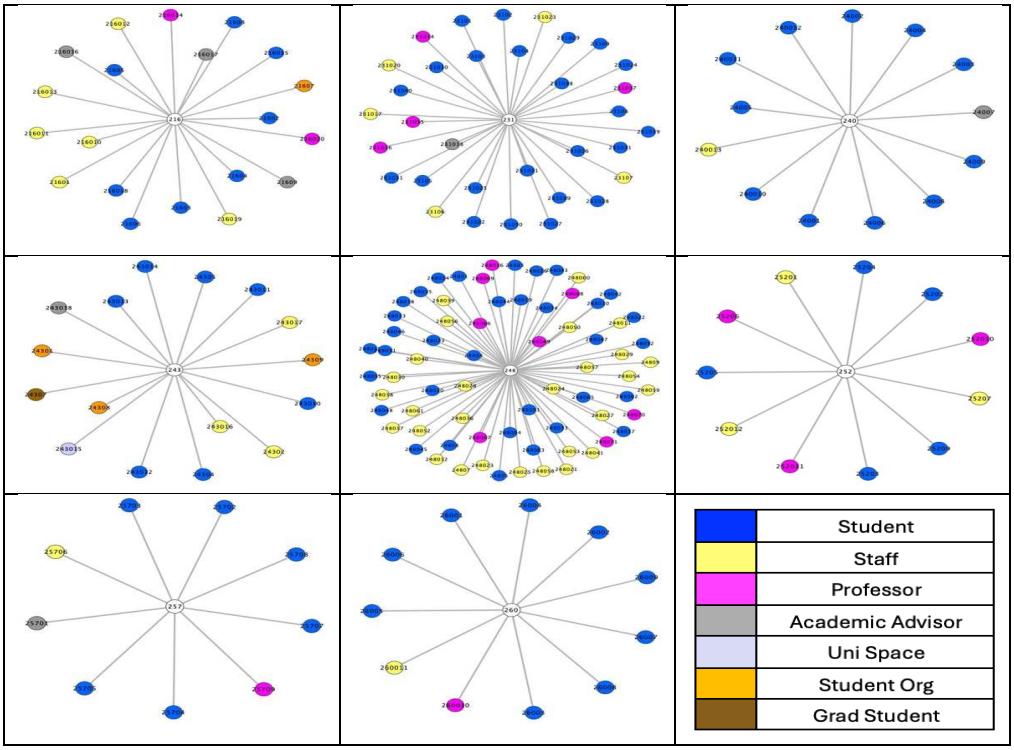

Figure 11: Composition of FGL male networks

We can see that the composition of FGL male participants and FGL female students is quite different. Male networks are larger and males are more likely to seek support from more than one institutional agent.

Pell eligibility. Next, I looked at the networks of FGL students who were also Pell eligible (*n*= 13). As a reminder, undergraduate students at universities in the United States qualify for Pell financial assistance if they "display exceptional financial need and have not earned a bachelor's, graduate, or professional degree" (studentaid.gov). The criteria for "exceptional financial need" are determined by the United States' Department of Education each

year and student eligibility is based on the student's Free Application for Federal Student Aid information (studentaid.gov). The student who did not graduate was also a pell student. This student and one other pell student network did not contain at least one institutional agent. Eleven of the 13 pell students had at least one staff, seven had at least one professor, and six had at least one academic advisor. Nine of these students had networks comprised of 50% or more students. However, eight of these nine also had at least two different institutional agents, which implies students tried to "balance" out the support they can receive from their network. An example of a network with over 50% student connections and at least 2 different institutional agents is visible in *figure 12* below (fourth column, third row right). Nine of the 13 had at least two *different* institutional agents and 11 of 13 had more than one institutional agent.

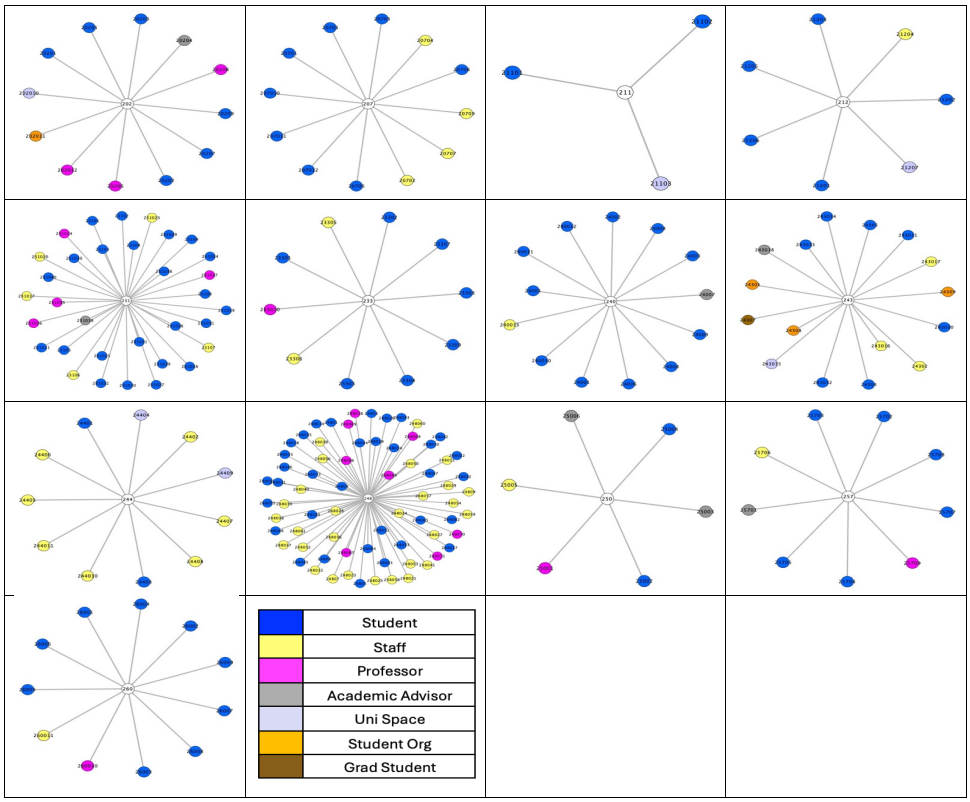

Figure 12: Composition of FGL pell-eligible student networks

Four-year graduation rate. Furthermore, I reviewed the networks of the students who graduated within four years (*n*= 13). As previously stated, I chose the length of four years for this analysis because a bachelor's degree is promoted as a four-year degree. If institutions want to continue promoting this as a four-year degree, institutions need to provide all students with the necessary support to finish within the prescribed timeline. Of the 13 students who graduated in four years, 11 were part of an institutional program. From these 11 students, 10 had a staff in their network. The Connections and L&L program were intended to support students in the creation of their network of support, and these data reveal that even in year three, students are seeking support from a variety of connections on campus, fulfilling a variety of needs. Below is *figure 13* with the composition of FGL student networks who graduated within four years.

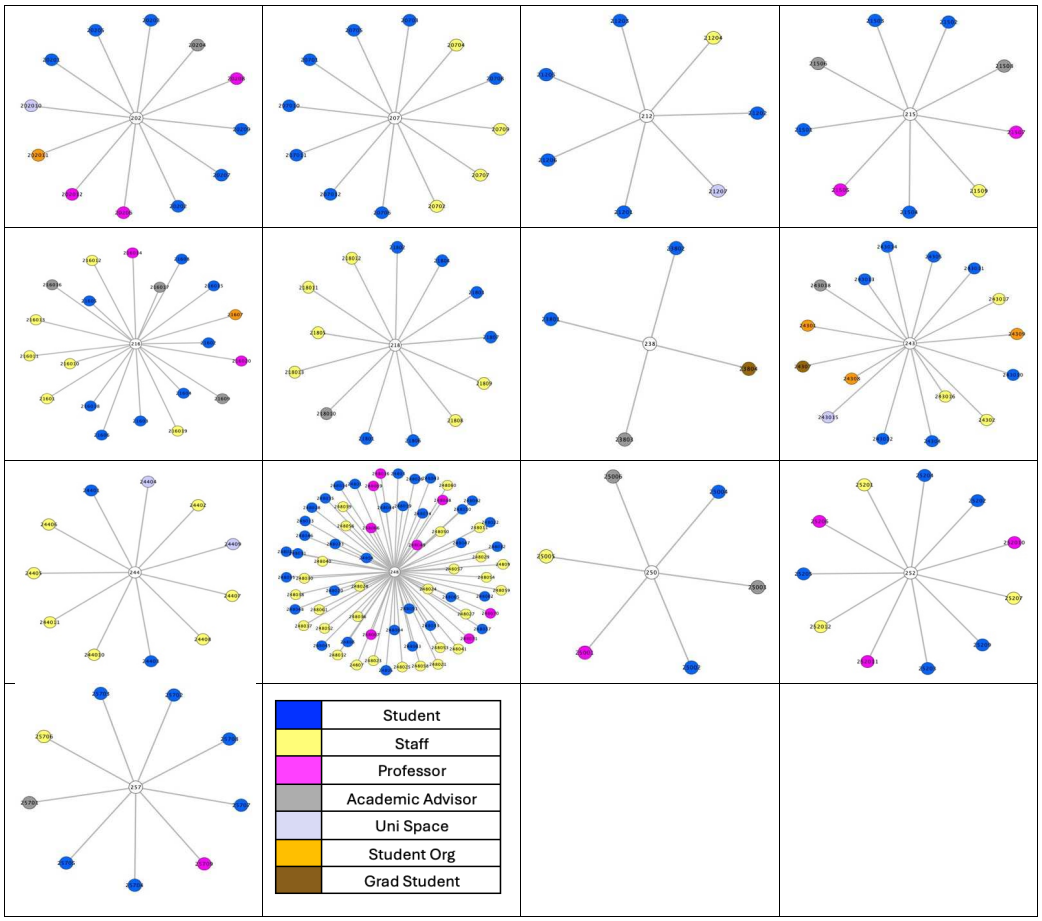

Figure 13: Composition of FGL students who graduated within 4 years

As we can see, of the 13 within four-year graduates, all had at least one institutional agent. Eleven had a staff in their network, eight had an academic advisor and six listed *both* a staff and academic advisor. Seven had a professor and five had more than one professor. Only one student in this category does not have three or more types of connections. For the most part, these networks were medium sized with a range of four to 70, or four to 20 without the largest network. Less than half (six) had a network comprised of 50% or more students. Thus, the group of participants who graduated within four years had the largest percentage of participants with at least three types of contacts, making it the most diverse group of networks.

Graduation after four years. After looking at the composition of the students who graduated within 4 years, I examined the composition and attributes of the six students who did not graduate in 4 years (*figure 14* below).

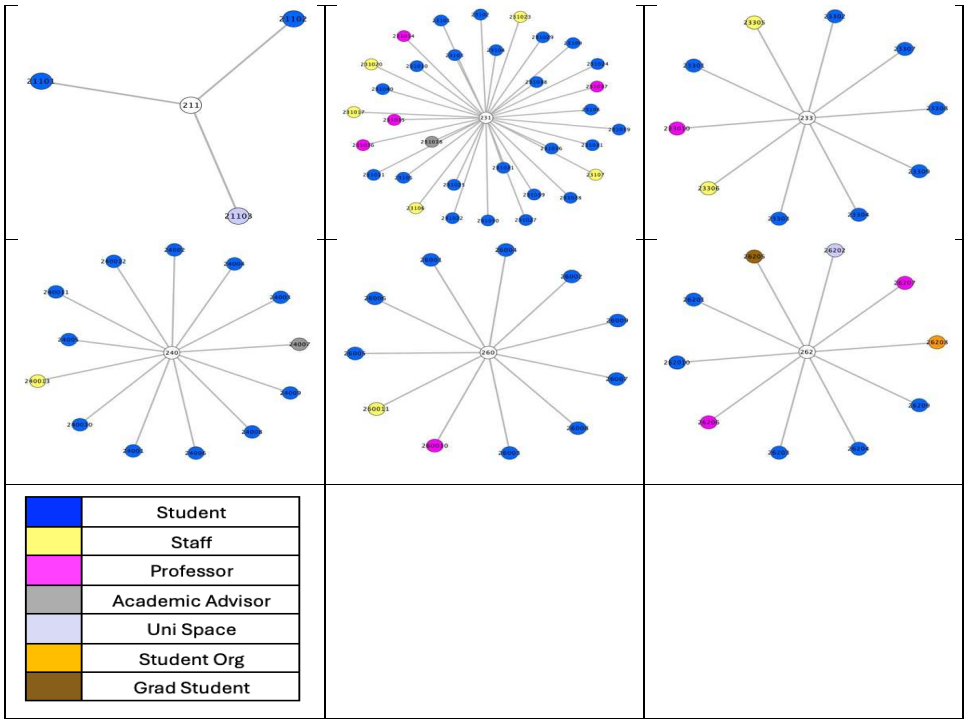

Figure 14: Composition of FGL students who graduated within 4.5-6 years

Of these six, all were in an institutional program and only one did not graduate. Of the remaining five that graduated, three graduated in 4.5 years and the other two graduated in five or five and a half years. The size of these networks varied from small to large, with most being within the medium sized range. Four of these six had two different types of institutional agents in their networks. The one finding that was startling was that all six of these students had 50% or more of their network made up of students. However, similar to the group who graduated within four years, the five who did graduate after the four-year timeline all had at least three types of connections on campus. Obviously, we can assume that every university student's network is comprised of mostly students, even the thirteen in this sample who graduated within four years. However, my findings suggest that when a student's main support network (what I assume they reported in this study) is mostly comprised of students, they tend to graduate a semester or two behind the peers who reported having a more diverse network. Meaning, if we can support students with building their main support network to have at least three different types of contacts, we might increase their chances of graduating within the four years or only one to two semesters after the fourth year.

Overall, these findings show FGL students seek support from a variety of people and programs/offices at the university. Students who graduated within four years were more likely to have three or more types of connections, and males were more likely to have at least two institutional agents. The students who graduated in 4.5-6 years also had more than 50% of their network comprised of students, but they had at least 3 types of contacts in their network. Students who are FGL and pell eligible are more likely to have a support network comprised of mostly students, but they compensate by having at least two institutional agents.

While the findings on FGL student networks and their composition are significant, it is important to also look at the structure of the student networks. The structure of a network is concerned with the configuration of the network, its architectural aspect if you will (Perry et. al., 2018). Information about the structure provides insight into the patterns of relationships, allowing us to learn about the flow of information and resources that might be part of FGL student networks. The next section reviews the second part of question one- what is the structure of these FGL networks?

Network Structures

The findings above provide information about the relationships students have in their networks, also known as the *composition* of the network. In this section, I will review the findings related to *structure*, what the network looks like once all connections amongst the student's connections are made. It is important to note that these are the network structures according to the student's knowledge. Each student drew a line between the connections they knew to be connected to each other on campus. This was not verified by the research team, so it is possible that their networks are more or less connected. *Figure 15* shows examples of common structure features found in the networks of FGL students.

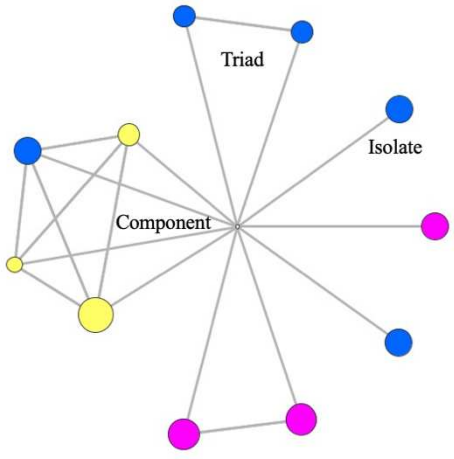

Figure 15: Common network structure features

Isolates, Triads and Components

First, my analysis revealed few isolates. As shown in *figure 15* above, isolates are connections in the student's network that are not connected to others in the network. Isolates are important to a network because they are likely to have a higher number of connections that are different from the rest of the student's network, providing access to diverse information (Granovetter, 1973). In this case, a professor who is an isolate will have different experiences and information to provide the student, versus a student or staff who is linked to the rest of the network. On the other hand, it takes a lot of effort and time to maintain isolates in your network (McCarty et. al., 2019), a likely reason for the small number of isolates in these networks.

Second, I noticed all networks had at least one noticeable triad or component. A triad is a connection between three people in the network and a component has four or more people densely connected to each other, in which all the connections in the component are *reachable* (McCarty et. al., 2019). These triads and components are important for the flow of information and to better identify which portion of the network provides which type of support. Specifically, triads help with understanding the transitivity of information and/or resource sharing, collaboration, etc. For example, if person A collaborates with person B and person B collaborates with person C, then person A collaborates with person C (Carolan, 2014). Also, in a connection between A and B, the addition of "another" or C, alleviates the need for A to always be with B, allowing A to be transitive, increasing the opportunity for A to return to B and C with new information and or a new connection (e.g. D). Each isolate, triad and/or component represents a different set of social obligations a student navigates (e.g. a component of connections between staff and students might represent obligations associated with a student organization or program, a triad with friends from high school at LGU versus a triad with friends the student met at LGU).

Prior to the structural analysis I completed, I expected to see institutional agents (staff, professors, academic advisors) as isolates because people tend to have components and connections of people who are similar. Isolates are usually separate from the group because they have a distinct role in the person's network, providing certain information they do not receive from others. In this case, I assumed there would be more isolates as institutional agents because institutional agents have different roles from students, providing different information and resources than students. These data surprised me by contradicting that expectation. Instead of seeing institutional agents as isolates, I found that most institutional agents were embedded into these FGL networks. By embedded, I mean they are part of a triad or component in the participant networks. Among the students who graduated within four years (n = 13), only three networks have a staff or professor as an isolate, but two of those three networks have more than one institutional agent, and the other institutional agents *are* embedded with the rest of the network. In other words, among the networks of students who graduated within four years, only one student does not have at least one institutional agent who is embedded in the network. Of the 280 connections reported, only 26 were isolates and eight of those 26 were from the large network of 70. Across the 19 networks, 12 had isolates. The only contact category that was not an isolate in any of the networks was university space/program.

As mentioned, most students who were in an institutional program have a staff in their network, and most of those staff are embedded in the network. We can assume the institutional programs are creating a strong culture of support, where staff and students are coming together through intentional programming (e.g. being in seminar with program cohort, follow through LGU advising, networking events, etc.). Intentional programming creates spaces of trust between the students and institutional agents, ensuring students feel comfortable with the institutional

agents and students they meet in those programs. By building trust with folks in the program, students are more likely to feel comfortable with these folks *and* the institutional agents/senior students/programs/spaces they are introduced to/referred to through the folks in this program. *Figure 16* below shows the structure (and composition) of all 19 FGL networks:

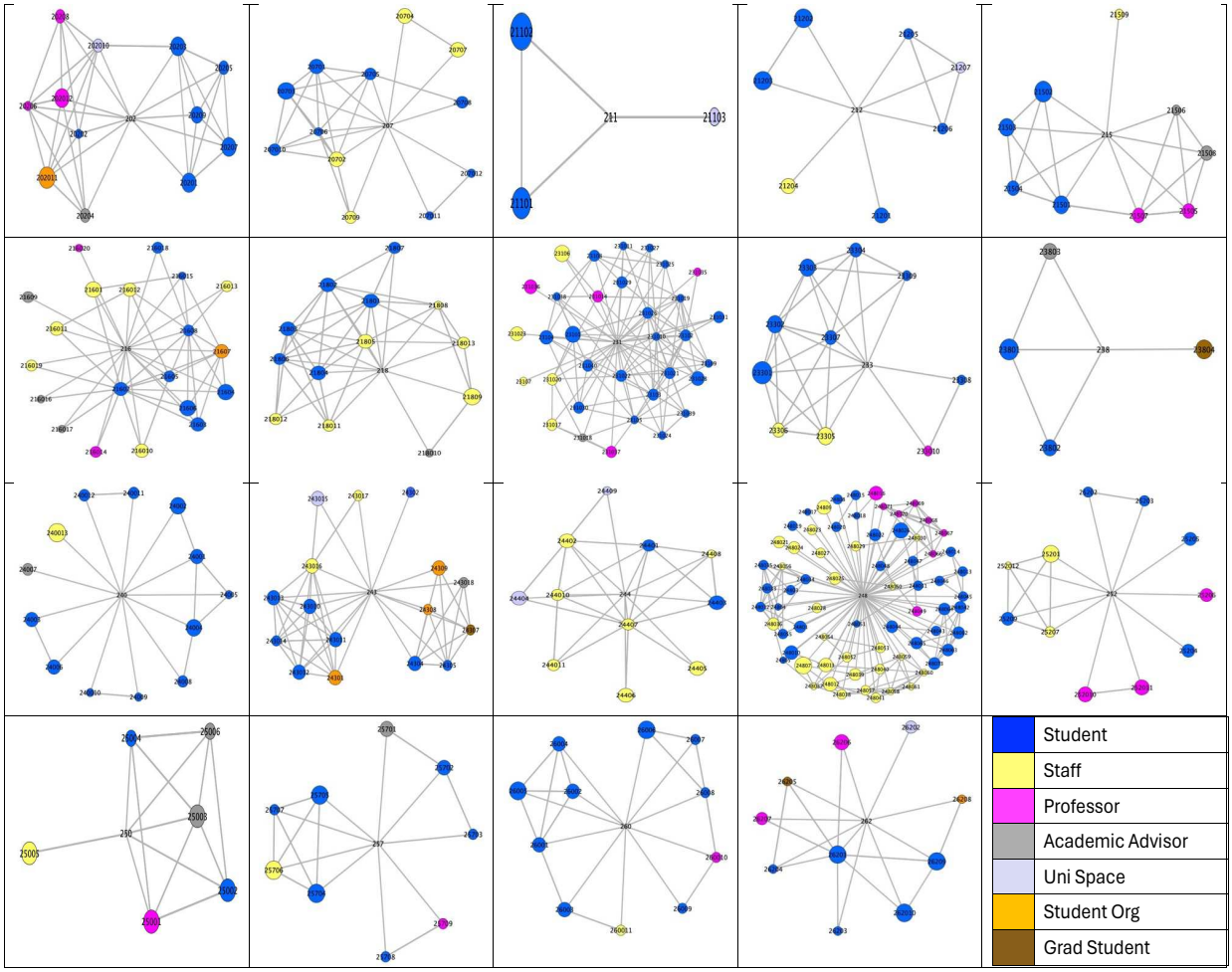

Figure 16: Structure and composition of all 19 FGL networks

Overall Structural Patterns

When it came to the overall structure of the student networks, I found a few patterns through the analysis of these data. One, over half the networks (n=14) have at least one or more distinct components and/or triads. Meaning, instead of having a network with one giant

component where every connection is connected to the other connections, these networks show a few components. Some single connections link one component or triad to another, but for the most part, they are separated from other components in the network. Networks that resemble this structure are below, in *figure 17*.

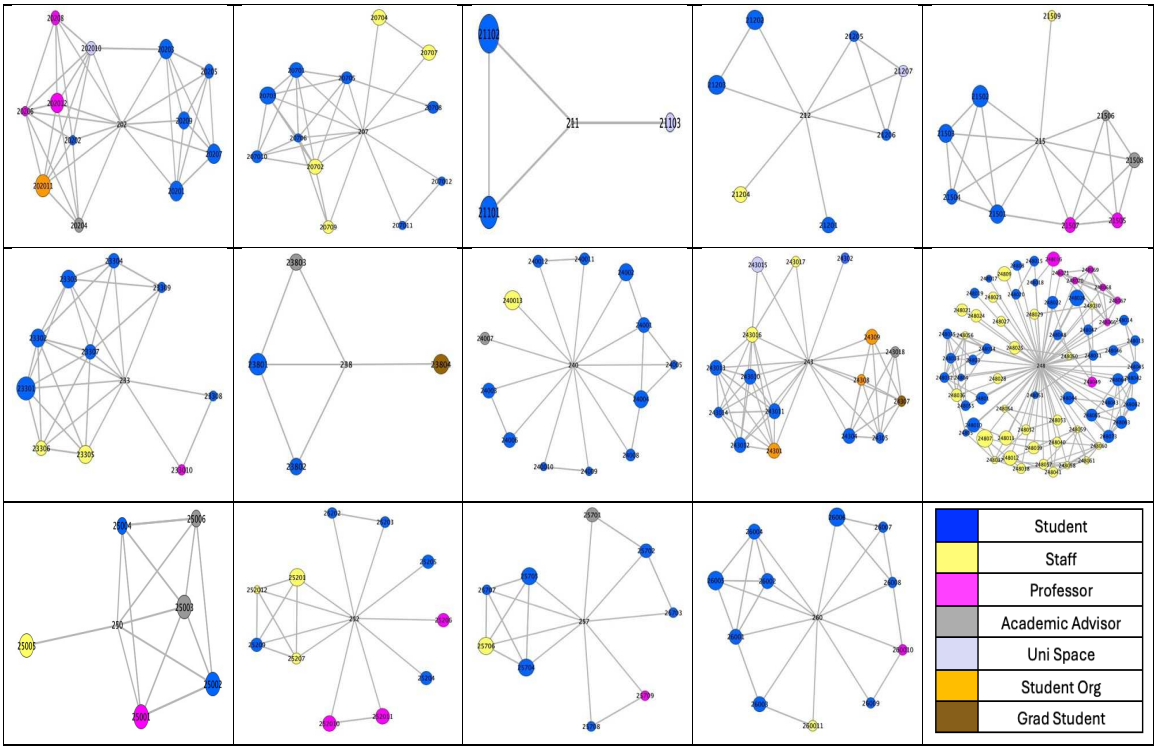

Figure 17: Network structures with components

As *figure 17* above shows, students have various components, which implies students compartmentalize their connections on campus. Their network naturally forms components, which helps us make inferences about who they go to for which type of support. For example, participant 202 (first row, first column in *figure 17*) has a component on the left that connects professors, academic advisor, university space, a student and student org. The component on the right is comprised of only students and only one student is connected to the university space. Here, we can infer this student is connected to a student organization that is part of her major

(hence the academic advisor and professor connections) and that the university space is also related to her major. In fact, the university space is a career center type office in this student's major, the student organization is an honors society, and the professors and student part of the left cluster are all part of her major. This student clearly separates her academic life from her social/friend group and is well connected in her major.

Additionally, a network like that of participant 243 (column four, row two in *figure 17*) shows a component on the bottom left in which students, a staff, and student organization are connected. Here, the yellow circle is the staff who advises the fraternity the student is in and the blue connections are students in the fraternity. The component on the right of this network connects two student organizations, an academic advisor, students, and a graduate student. This allows us to see the student's "degree major component," which is separate from the folks in his fraternity. In this case, the student organizations are not part of the department he is in, but they are related to his major, the students and graduate student are in his major. Again, we see a student who is well connected to his major, with a separate part of his network providing non-academic support.

The remaining five networks (*figure 18* below) did not have *clear* components. In comparison to the group of structures above, components are more loosely connected in these networks, making them harder to find. We can also spot a few triads in these five networks, but again, they are not as obvious as the triads in the structures above.

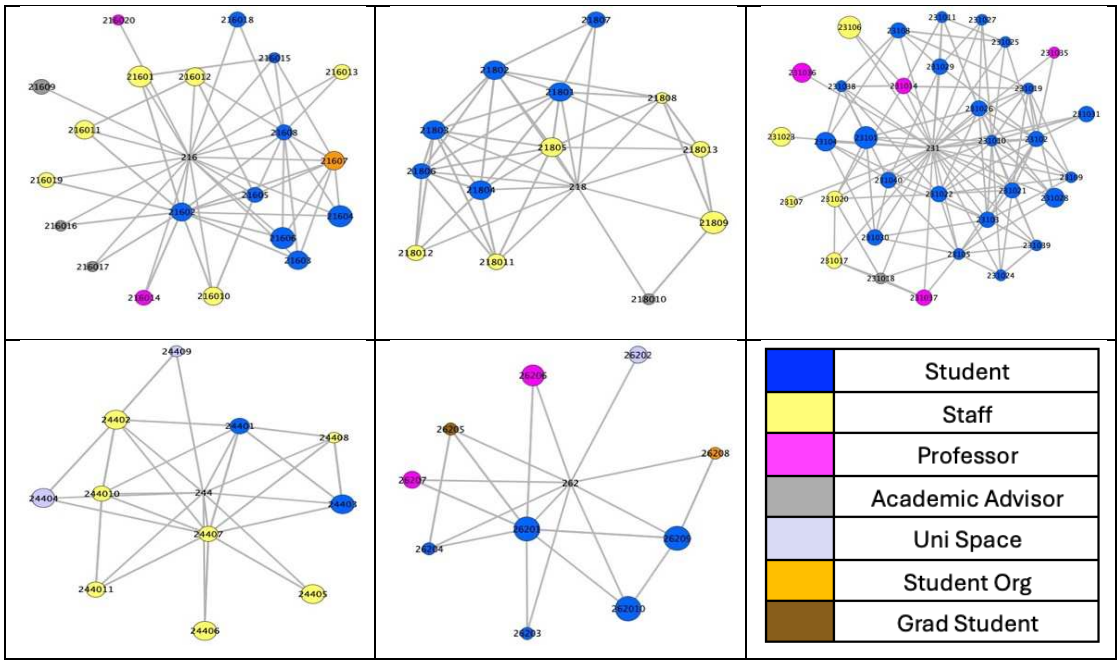

Figure 18: Networks with less clearly defined components

Findings in this category are important because it shows we do not have a "set" structure for academic success or institutional program participation. The loose connections among these participant networks might be a result of these five participants all having at least three different types of connections on campus (student, staff, professor, student org, etc.). The diversity of connections present in these networks makes the compartmentalization less *visually* clear, but I can still see the various aspects of the university these participants navigate through.

In summary, majority of the participant networks in this sample have few isolates and at least one distinct triad or component. The networks without a visually clear component or triad have at least three different connection types. The varying configurations in their networks tell us they seek support from a variety of connections and keep certain connections separate from one another; as if each connection, triad or component supports a different area of maneuvering for FGL students navigating the university system. These findings reveal both structural patterns can lead to academic success. Unfortunately, the literature on individual student network structures

and academic success is very limited. McCabe's (2016) book is one of the few studies related to the individual networks of undergraduate students and the type of network structure the student has. However, McCabe's participants were only asked to report their friendship (student) networks on campus. As we can see in this study's structural visuals, institutional agents and programs/spaces impact the structure of the network. In the next section, I provide additional findings around navigational support and how this study adds to the literature on the significance of navigational support for FGL student success.

Question Two: Support Types Received from Connections

In addition to examining the composition and structure of student networks, I set out to investigate the types of support students receive from the different connections in their network. This is vital because it provides insight into which categories of connections provide certain and pivotal support to FGL students. Information of this sort would allow us to "program" certain opportunities into the FGL university experience, ensuring their network connections provide the support that is most necessary for FGL student success. To answer question two, I turned to the semi-structured interview transcription portions where students answered, "When do you go to this person for support?" and "What kind of help/support do you go to them for?" While the questions seem repetitive, I chose to add the second question as an "in case it has not been answered." Some students answered it with the "when" and some needed the "what." Overall, I found students received seven broad categories of support from their contacts. In order of frequency, the seven categories are defined and explained below:

Navigational support. Navigational is a term based on the work of Yosso (2005). She describes first generation students as holders of navigational capital and defines that as "the skills of maneuvering through social institutions" (pg. 80). In this study, the network contacts that

provide navigational support provide information that is instrumental to the student's experience with moving toward and through graduation. This includes but is not limited to advising support, resources when encountering academic struggles, which office or program handles x, recommendations on which course to take or with which faculty, and opportunities for engagement and/or involvement (e.g. recommend joining a student organization or attending a university event).

When it came to navigational support, I found that institutional agents are critical for providing information and opportunities students are unaware of, or opportunities that can connect students to more (people or opportunities). For example, student participant, Lupe, said this about a staff connection: “she helped with finding internship offers, finding up the activities here on campus that could help me.” Another participant, Hector, shared that a staff connection helped him obtain one of a handful of students spots on a committee in which he “gets to talk to the [university president] and talk about my ideas for making school better.” Hector further added the following about this staff connection: “she got me a position at [the] conference in DC, she's done so much for me, I - I can't even imagine what my LGU experience would have been without her.” More importantly, the staff connection who led Hector to be part of that committee provided Hector with another reason to reach out to a professor. When referring to his connection with a professor, Hector said, “I came to her a few times for certain ideas I had for [the] committee, specifically starting a um, a First Amendment workshop when students come in to orientation. Since she's a constitutional law professor I showed her ideas that I had and she suggested people I could talk to about moving the idea further.”

The two quotes by Hector here show that he connected with a professor because he is part of a committee a staff member connected him to. A conversation with that professor then

directed him to connecting with other folks. These quotes exemplify how certain connections on campus enrich the student's university experience and lead to additional or potentially additional supportive connections.

Furthermore, navigational support also includes support to get through logistical, academic and experiential degree requirements. For example, Arturo, reached out to a senior student who is in the honors program about "how to get through the program." He specifically states, I go to him to ask "which classes to take together and he's just really knowledgeable and just like, he keeps me updated on what's next as far as the program goes. So he's just someone that's helped me navigate [the] program." Similar to Arturo, Chris has a staff connection with the fraternity advisor that he does not "talk as much" with but is someone he feels he can contact. Chris adds:

> She is a great resource. I can hit her up, text her, and like hey, do you know any internships? Or can you read over my resume? How do you feel about this? Have you heard of that? is always nice to have and she's just like another person and that person knows at least 50 other people and if those 50 people know somebody who has your answer, then you're set.

Additionally, Adriana reaches out to her academic advisor for what she refers to as "strictly academic" support:

> When I have any problems, academically, I know that I can go to her. Yeah, she's helped me a lot to get to stay on track for graduation. She's offered resources. Like, this summer I'm actually going to community college to finish some classes that I need to and she helped me know about that and that it's an option...And the whole credit transfer and all that. So hers is strictly academic, but its very helpful. Its stuff that I need.

As we can see, Adriana, Chris and Arturo reach out to folks they perceive to know more than them about certain university processes or opportunities and understand the importance of maintaining that connection, even if it is not someone they interact with often.

Additionally, students like Victor reach out to their staff connection for support with making other connections on campus, "just a few weeks ago I asked her how she would go about reaching out to a professor, the format." Here, we see these participants know there is a "right" way to reach out to certain people on campus and they are using their connections on campus to help them with appropriately navigating these expectations.

Overall, navigational support was the most frequented support in the networks of these FGL students. This finding highlights the need to provide FGL students with multiple contacts on campus that direct them to the multifaceted aspects of university experiences and requirements (student organizations, committees, internships, summer classes, "how to" reach out to a professor, etc.). This finding also supports the previous literature on the high navigational capital FGL students hold. As evidenced by their third-year network, FGL students intentionally sought the support of connections who would elevate their navigational skills.

Personal support. This type of support comes from someone the student is comfortable sharing personal (not academic) pieces of their life with. This is not necessarily a person they go to when they need to vent (although they might), but it is a person they can share non-university related pieces of their life with. For example, Alicia let a professor know she was having car issues and could not get to class to take the quiz and the professor allowed her to take the quiz at another time. She did not vent to the professor about the issue, but felt comfortable enough to share why she could not make it to class. The professor's understanding was something "that helped me," said Alicia.

Several participants named students as providers of personal support related to relationship advice, family issues, daily stressors, etc. As Hector explains, “I definitely go to her for more personal support just because we both have similar lives in terms of family structure and what family expects of us, if that makes sense.” Mario also reaches out to one of his student connections for personal support because he feels comfortable with them. He adds, “he gives good advice. Um, about anything. When I have questions or he'll - he'll know what to say to make me feel better, whether it be school, girls, whatever, he's a pretty wise dude.”

Other times, students reach out to staff for personal support that leads to navigational support. Below we see when Teodoro reached out to a staff member after feeling overwhelmed and unsure about steps after graduation:

> I remember going to her office once and telling her, junior year is really kicking me. I feel so close to coming to an end and I don't know what I wanna do. And she told me about her personal, life as well and she told me about how she went to grad school after and looked at um, Public Administration and at the time I was like, I don't know what that is. And she told me a little more about it and at that time in my life, I was also like who do I want to be? And then there's [she] over here telling me that there's a master's of public administration and I think [she] was the one who kinda opened a new door for me in terms of understanding what I wanna do and how to influence others and how to continue that higher ed piece.

Evelin also shared going to a staff member when she felt overwhelmed and needed guidance on next steps- “I had a lot of stuff going on, like family issues, so I literally went to her like, I'm doing this and I might have to take an academic leave, how do I go about this, so she helped me talk and reach out to find out what could happen and yeah.”

As we can see, students' personal support needs vary from seeking understanding of personal issues impacting academics and sharing relationship and/or family issues. Even though students provided a large amount of personal support for these participants, The last two quotes show students received *both* navigational and personal support from staff and they were coded as such, showing students are willing seek out staff to ask for university related guidance *while being* vulnerable. This level of comfortability provides further understanding of why these specific connections are part of their network three years into their time at LGU. As the second most frequented type of support sought out, it is clear personal support is critical for FGL student success.

Social support. The third support most frequently reported support by these FGL students was social support. This type of support is provided by someone the student enjoys spending time with, or in the words of Teodoro, a person who is there for "the social aspect of college and having a social life." For example, Ventura receives "social support" from a student and adds, "he's a different major than me so I don't really ask him for academic support. It's us being a part of the same friend group." Then, we have Emilio referring to a student connection, "he and I would go out on like lunch dates, I guess, hang out and eat together. I love hanging out with him." Similar to Ventura and Emilio, Maria and Lupe refer to certain student connections as strictly social. Maria says this student connection is someone they go to "for more recreational things so - if we're gonna go bowling or go hammocking." Lupe adds, "just like any new movie coming out, any new up, even just like things here at school. Um, or events here that are not technically related to classes."

As evidenced in the examples above, social support is limited to the social aspect of college and is mostly provided by students in their network. This shows the FGL students in this

sample have no problem differentiating between the folks in their network who are there for mostly or only social support. This data indicates FGL students have a clear understanding of who in their network provides which type of support, facilitating their ability to maneuver their network as needed.

Academic support. Academic support was the fourth most frequented support that is related to the student's academic life but is not limited to it. Studying with classmates, taking classes with students, attending tutoring, working on class projects, visiting professors during office hours, reviewing a lab report with a grad student, or talking through a class assignment with staff are all examples of academic support that were brought forth as examples in the interviews.

Alicia provides a great example of academic support from her connection to a student in her major. She believes their connection is strong because "literally every single day, we're taking classes. We're taking animal anatomy right now and we literally just spent like hours in the library, her and I, so we practically live together." For Alicia this connection is important because they are frequently around each other in a major (animal sciences) where the two feel like the "outcast" because other students are "ranchers or farmers from generations" and they both grew up in the city. Thus, even though an academic connection might be directly related to the student's academics, they are not limited to academic support. Similar to Alicia, Janet receives academic support from a student in her network because she keeps her accountable. As Janet states, "I feel like she helps -holds me accountable for my class and doing better in it and I feel like without her I would not be doing as good."

Beyond receiving academic support from individuals on campus, student organizations support students with academics by "pushing" them while they also push other members of the

organization. For Victor, the fraternity is a “big support system academically” because members often tell him, “hey get your homework done, go study” and they “host study hours twice a week” in the university library that are required. Another academic resource that is important to note is a university space in which Lula received tutoring support. She said:

> Um, because once I had my second exam I did really well, that's like the best I've done in that class, so I actually see it benefitting me academically in this course, and then also how they're [student tutors] fun to hang around with cause yeah, they help you with the material but they also understand, there's other things that - let me think - they're able to know that we're students also and so they kinda joke around and sometimes they bring donuts to be like, we're gonna be here for five hours, to kinda make it worth it.”

As evidenced above, the FGL students in this sample obtain academic support from a variety of connections on campus. They seek tutoring, professor office hours, student organization study hours and library time with other students to ensure they are academically accountable and successful. Sometimes, the participants differentiated between their friends and classmates, with classmates being connections they strictly seek out for academic support. In this set of data, it is clear FGL students seek support from a variety of people and programs on campus and do well when studying with others.

Wellbeing support. The wellbeing support category is comprised of support related to the student’s physical, mental, spiritual, and/or emotional being. This support category includes someone the student will go to the gym with, a person who asks the student about housing and eating, someone that helps when they are sick, support from a mental health provider, free birth control from the university Health Center, someone they do bible study with, and/or someone they go to “just to vent.” A connection that provides wellbeing support does not provide full

physical, mental, spiritual and emotional support, but they provide support in at least one of these wellbeing areas.

For example, Teodoro referred to a staff connection as a “tia” (aunt) because that staff is “always there to help.” When Teodoro is sick, the staff has cough drops for them and whenever he “needs to rant” the staff is there. “Anything I need, she's going to provide”, says Teodoro. Similarly, Emilio feels comfortable with his university therapist, referring to her as an older sister:

> When I catch up with her, she's on the clock, and she just knows a lot about me. A lot. And I appreciate that about her because I don’t know how I would be with any other therapist that we have here. I’m just very fortunate I got her. Because she's someone who comes from a background to understand those types of issues that I go through. She can empathize with me, even though its not her job to, its more her job to help me rationalize things and make sense of stuff, she's just like, it’s turned into almost like my older sister.

What Emilio and Teodoro share about these staff are just two examples of a familial level of comfort some FGL participants feel with certain university connections. This level of comfort increases the student’s willingness to seek support when they are not feeling well mentally or emotionally, increasing their chances of staying at the university.

Other times, Ventura goes to his student connection when he needs emotional support. He states, “I usually go for him for emotional support. Uh I think he's really understanding and like, calm. He's a really calm person so he's clearheaded, so when I'm having trouble and I just want a second opinion, he's really good at that.” Similarly, Evelin needs her friend to calm her down, “if I'm having a rough day and that whole situation with [my] major she's like, calm down, you need

to breath. And like, you can't make a rational decision right now because you will probably regret it later. She calms me down."

Finally, some FGL participants received physical wellbeing support from their peers. Hector has a friend he likes to rock climb with to get his mind of school and when Victor was stressed, he shared the following about a connection with a student, "I had two exams in one week and I was really stressed out about studying for them and I told [him] about it and [he] was like, let's go to the gym, kinda stress relief. And while I was there, just kinda enjoying eachother's companies."

Overall, wellbeing support encompasses a wide variety of needs (spiritual, physical, emotional, and mental). FGL participants understand that their whole being needs support in addition to their academic and professional needs. These needs are met from a variety of people and resources on campus, demonstrating their use of university resources.

Out of/post LGU support. The sixth most frequented support students reported is what I refer to as "out of/post LGU." This category of support provides these FGL students connections to people and opportunities that support the student during their time at LGU and/or potentially after graduation. Examples include connections to internships outside of LGU, recommending conference attendance, access to an alumni network from their student org, serving as a reference, etc.

For example, Carmen reported connecting with her professor because she is a Certified Public Accountant and is someone she can go to regarding graduate programs. She added, "I went to her the other day to ask about an Ethics course we have to take for the CPA and I just went to her office and asked about an internship and other stuff like that, so, I went to her office for that." By the same token, Hector reached out to a professor because he wants to be a lawyer.

He said, “so I would bug her way too much at her office hours. I just thought it was interesting, it was the first time I talked pretty closely with a lawyer so I wanted to know everything.” Similarly, Victor reached out to a graduate student because, “he's a Masters business student” that he can go to if he has “a question about what it would be like to go into the Master's program.”

As we can see, Carmen, Hector, and Victor reach out to their campus connections for guidance on future endeavors, like taking the CPA exam, learning about their future career, and possibly applying to graduate school. Once again, we see how first-generation students are putting their navigational skills to use. Here, FGL participants demonstrate how they turn to their university connections to ensure success post degree attainment.

JEDI support. The least frequented reported support but certainly not least important is JEDI. Support in this category is related to justice, equity, diversity, and inclusion (JEDI). Participants reported bonding with a student over a shared identity, venting to a connection about their experience as a student of color at a predominantly White institution, and/or learning more about JEDI related issues with this connection. Alicia receives JEDI support from another student who shares the first-generation identity and understands the struggles of family not fully understanding the expectations and workload of seeking a higher education. She states, “we really connected with um, with just similar experiences that we go through being a um, first generation student that leaves their home, and their parents not really understanding, like, oh, ‘you study so you're good.’ Just, understanding, like, college is not...you just go to class, no. Its tough.”

Like Alicia, Arturo connects with a student who also shares his Mexican-American identity on campus and is able to talk to him about what it is like to be Mexican-American at a

predominantly White institution. As Arturo shared, “I go to him for um, friendship and maybe because we have a shared identity, it just makes...me feel like I have a um, I don't know how to describe. We have the same identity, so we relate a lot and we have a lot of the same ideas as far as like, how being a minority group on campus affects us so we discuss those things "

Several staff were also named by these participants as connections they go to for JEDI support. In one instance, Teodoro went to one of his staff connections to discuss how he did not feel comfortable in the center for LGBTQ+ students because he was not a White gay man. When the university hired a Latina to direct that center, he said he went to her and said, “I don't come here because its predominately white, I don't feel comfortable.” Teodoro proceeds to discuss how his relationship with this staff blossomed because he was able to talk to this staff openly about being an openly gay Latino student. In another example, Evelin shared that she goes to one of her staff connections to discuss situations related to JEDI. She states, “I literally go to him for everything… telling him about situations I had in classes where I experienced racism or sexism and so I go to him and he helps me look over those situations and he helps me talk it out with me.”

In summary, the FGL participants in this study demonstrate a need for JEDI support because they recognize that their first-generation and/or Latine identities impact their higher education journey. They seek connections with folks who share their identity(ies) and/or folks they can talk to about JEDI issues they experienced. Even though it was the least frequently reported support from these participants, it was reported at least once from 12 different participants in this study.

Overall, the FGL students in this study reported receiving seven broad categories of support from their seven different types of connections. In order of frequency, those categories of

support were navigational, personal, social, academic, wellbeing, out of/post LGU, and JEDI. Navigational support was the highest support received and was indirectly present in other categories of support. For example, sometimes students went to a connection for personal support and the personal issue they were receiving support for was impacting their time at LGU, they received navigational support. Additionally, with most support, participants expressed a clear understanding of which connection provided which type of support (e.g. "strictly for this" or "I only go to them for that"). All in all, these FGL participants obtained holistic support from their university connections. In the next section, I address which connections provide which support most often.

Support by composition category

After finding seven types of connections in and eight types of support in these FGL networks, I set out to find which type of support was provided by which type of connection. To do so, I created a table that listed each network connection and each support type. I went through every connection and used the semi-structured interview transcripts to code a "1" under the type of support if it was provided and a "0" if it was not. An example of this table is below in *table 2*. Such findings informed which types of connections students need in their university network to receive a variety of supports, leading to a more holistic support of each student.

Table 2: Example of coding types of support by type of connection

connection	**acad**	**wellbe**	**navi**	**jedi**	**soc**	**out/pos**	**pers**
student_1	1	1	0	1	1	0	1
student_2	1	0	0	0	1	0	0
staff_1	0	1	1	1	0	0	1
staff_2	0	0	1	0	0	1	1
professor_1	1	0	1	0	0	1	1
Univ space/program	1	0	0	0	0	0	0

First, I found that only staff and students covered all the categories of support. This means I found an example of each support type for at least one staff and one student, not that all staff and students provided all supports. Students were highest in social support, followed by personal, academic, wellbeing, navigational, JEDI, out of/post LGU. Staff's highest category of support was navigational, followed by personal, out of/post LGU, wellbeing, JEDI, academic and social. These findings shed light on the amount of staff connections that go beyond navigational support, demonstrating staff on campus are meeting the needs of these FGL students on a personal level. This shows that staff on campus are establishing deep rapport with these students. So much so, that by their third year at the university, FGL students have them in their network as people they *want* to connect with, not just people they are *required* to connect with.

Furthermore, as mentioned in question one, professors were the third most present type of connection in these networks and they provided five of the seven support types. The most frequented support type for professors was academic, followed by navigational, out of/post LGU, personal and JEDI support. This shows folks in a professor role are also going above and beyond when connecting with FGL students. When it came to academic advisors, I found they provided four of the support types. In order of frequency, academic advisors provided navigational, out of/post LGU, wellbeing, and personal support.

Table 3: Frequency of support types by connection type

Student	**Staff**	**Professor**	**Academic Advisor**	**Space/ Program**	**Student Org**	**Grad Student**
social	navigational	academic	navigational	wellbeing	academic	academic
personal	personal	navigational	out of/post LGU	out of/post LGU	out of/post LGU	JEDI
academic	out of/post LGU	out of/post LGU	wellbeing	navigational	social	out of/post LGU
wellbeing	wellbeing	personal	personal	personal	JEDI	navigational
navigational	JEDI	JEDI		academic	navigational	
JEDI	academic					
out of/post LGU	social					

Table 3 shows all seven types of connections, and the categories of support provided by them in order of frequency (top to bottom). An empty cell means that support type was not reported for that type of connection.

As we can see, personal support is most frequently provided by students and staff. Professors, academic advisors and university spaces/programs also provide personal support, but not at the same rate as students and staff. These findings also suggest staff is going above and beyond to ensure FGL students receive the personal support they need to be successful at the university. In turn, universities need to recognize the level of care and detail staff put into supporting FGL students via compensation or additional hires.

Also, the findings in *table 3* also highlight the importance of navigational support for these FGL participants. This was not only the most support FGL students received from their support network, but a support received from *every* type of connection in their networks. The only other type of support that was received by all the connection types was out of/post LGU. Our data suggests FGL students seek out the information that is necessary for them to graduate *and* information to be successful once they obtain a university degree- both types of information they might have less access to at home. As Yosso (2005) reminds us, FGL students have plenty of navigational skills, and at the university level, this data demonstrates a high level of it.

All in all, the data on the types of support received from their networks points to the FGL participants in this study receiving holistic support from a network that has students and at least two different institutional agents. With students and two different institutional agents, FGL students receive most, if not all, of the seven types of supports reported by the participants in this study- navigational, personal, academic, social, wellbeing, out of/post LGU, JEDI. This finding is consistent with prior network research, which shows “more” relationships does not always

mean better (Perry et. al., 2018). Thus, while more than three different types of campus connections are welcome, they may not be *necessary* for university success.

Question Three: Why Students Maintain These Relationships

Up to now, I have gone over data that tells us who is in the networks of these FGL student networks and what types of support they get from those connections. The third question is focused on *why* students go to those specific connections for support. To find out why students go to these connections, I referred to the interview portions that answered, "What about this person made you want to stay connected with them?" and "Why did you put them in that location of the netmap?" For this study, I am not concerned with who the student feels "closer" to, but as with question one, asking a different question provided a range of depth and breadth in the answers of students. Overall, I was able to code the student answers into three main reasons they go to these connections for support- certain behaviors/practices, characteristics of the connection, and benefit. Below are the descriptions of these reasons and evidence of each.

Behaviors/practices. Behaviors/practices was the most common reason students continue to go to their network connection. By behaviors/practices, I am referring to the actions and/or practices the students reported being displayed by their connection. In several instances, the participants shared something their connection did to make them feel cared for. In one instance, Evelin stated the following about a staff connection:

I think just because that care she gave us. Like, as a first generation student, and then my parents like, they would go to her and she would explain to them like, and always like in their language and stuff, so its just like, without her help and support and guidance, I wouldn't have made it to college and so now, seeing that she's been with me through all my years in college and literally now I'm graduating and going to grad school, she's still there for me.

In another example, Victor says he “definitely” stays connected with a staff because of “her motherly aspect.” As noted in a transcript:

> *Victor*: And she's very, you know, um, very outgoing, very um, just comforting, I guess
>
> *Interviewer:* Uh huh and can you talk about how she comforts you?
>
> *Victor*: Yeah I don't know how to describe it. She, sometimes at work she'll be like, have you eaten today, those kinds of things. Just a very motherly thing.

Evidently, for Evelin and Victor, it is important for behaviors and practices to feel as if they are coming from a place of care. This demonstrates that when students feel cared for, they are likely to stay connected to the university and actively maintain the connections they have on campus.

Furthermore, when it comes to professors, Hector and Alicia provide examples of staying in touch with professors who challenge them *and* show care. In Hector’s instance referring to a professor:

> She was very receptive and helpful about suggestions and very questioning about what I thought in a challenging way, which I thought was really fun. So yeah, I don't know, she spurred me to think in a more critical manner...I've never met someone that so kindly puts down your ideas in a way that’s like, wow that makes so much sense, I can't believe I didn't think about that. [laughter].

Similarly, Alicia says she stays in contact with her professor because she is “very approachable.” For Alicia, it meant a lot that, “from day one she was memorizing everyone’s name” and would call on students (by their name) to answer questions. She added:

> Because one of the things that she would do in study groups is, she would do pop quizzes and she would know your name. So she would be like - [Name] - tell me this. So

that just got you sweatin', so you were always paying attention so that helped me a lot to be more effective in my academics and just, just her studying techniques helped me a lot.

As noted above, both Alicia and Hector appreciated their professors because they were challenged by them and felt cared for. These participants show that students do not want to "slip by" in class, but they do want to be challenged in a way that does not put them down. When professors teach with accountability and care, FGL students are likely to maintain connections and perform well in class.

The examples above imply that the FGL students of this study continue to seek support from their connections because the actions and/or practices shown by their connections make them feel supported and/or taken care of. They feel encouraged, comforted, challenged and seen. When folks on campus check in on how they are doing, know their name, or push them, they feel supported by that person and that makes them feel comfortable enough to continue seeking support. The examples above are from connections that are institutional agents, but students and university programs also displayed behaviors that challenged and comforted these participants.

Characteristics. The participants in this study also referred to characteristics of the person as a reason for maintaining their connection. At times, the characteristic had to do with homophily. In social network analysis, homophily refers to the tendency to connect with people you share similarities with- sharing similar identities, enjoying the same hobbies, same personality traits, etc., (Perry et. al., 2018). In this study, homophily, or similarity as a reason to stay connected to someone showed up with personality and background.

For example, Sofia talked about a student she connects with who, like her, has "more aggressive personality traits" because they are both from areas in the east coast that are very different from where LGU is located. She adds, "jokes doing go well here and you kinda just - he

just is kinda on our level with that stuff, so it's a lot easier to just be who I am and not be worried about being judged or being seen as aggressive." Like Sofia, Lula had a friend, a student who she met at LGU and maintains a relationship with because of several similarities. Lula states:

Well we have a lot in common and its funny because we both lived in [city] and went to similar high schools, really close. So we grew up in the same area and we kinda know that environment, but ironically met here. And we have common interests like, outside of like, we like to swim a lot and just like, someone to hang out with.

Mario and Teodoro also discussed similarities as a reason for maintaining a relationship, but theirs were related to identity. Mario continued to connect with a student because "[he] was the only other Mexican or Hispanic" in the fraternity he was in. Mario added, we "bonded over that, being different." By the same token, Teodoro shared that his connection with a student who shared his gay identity was in his words, "something that binds us together." It is evident from these examples and literature on homophily that these FGL participants tend to maintain relationships with folks they have similar backgrounds, identities or personalities to.

Other times, characteristics were referred to as a reason for maintaining this connection because the participant appreciated the characteristic(s) of that person. Maria, for example, appreciates her academic advisor's "raw" personality. Maria adds, "she is very... raw with like, how she presents herself, so whether it's with her emotions and like her opinion on things. So I think she has a lot to offer as far as like advice and um, support." For Emilio, a student who is "different" and "openminded" is something he appreciates. Emilio recognizes he mostly associates with other Latine students and states, "[he] is white and it's just, something different about having a friend who is white that I can - that I can connect with solo. Like him. Especially since he's very openminded as a person, which I like." Finally for Noemi, it is her secondary

academic advisor's optimism that keeps their connection going. During the interview, Noemi shared that her primary academic advisor would say, "well IF you get done." The "if" was not something Noemi took lightly. When she met with another advisor in the department, she met someone who would say, "once you get done." Noemi added:

> It's never like, IF you get this done, it's like ONCE you get it done… She's like, if it takes you five years, what's the problem? And I was like, You're right! Like others would have been like, I don't know if you can get it done in four years. And she's like, if it takes you five, six, seven years, it's okay. I feel like that's why I wanna keep connected, because she's always very optimistic.

As we can see, one of the reasons these FGL participants stay connected to folks in their network relates to characteristics that connection holds. At times, participants said they maintained a relationship with this person because they had a characteristic(s) they appreciated about them. Other times, they maintained the connection because they shared similar characteristic(s) with that connection. Most the of examples in this area are from institutional agents and students, which are connections they receive more personal support from. As one might think, it takes getting to know someone at a personal level to understand their characteristics, so it is not surprising that most of these examples are from these connection types.

Benefit. The third reason these FGL students maintained a relationship with their connection deals with benefit. In this category, the student sees a present or future benefit to maintaining a relationship with this person while they are at the university. In terms of students seeing the present benefit, Ventura makes it clear that having students to connect with in class are "good to have" during finals week because it is easier to "get a study group going" if "you need

help.” For Hector, a connection with staff is good to maintain because the staff on campus is well connected and you want to be sure you have someone you might need. He states, “she is a very well-connected lady, she knows everybody, so it’s a good resource to have.” For Noemi, staying connected with the graduate student in her chemistry lab was beneficial because it was empowering. She said:

> I feel like just very cliche, but like how she is woman in chemistry... So I like having her be like, you're a girl, you're in this department and you're working hard. And once you graduate, start applying for this… And that's why I wanna keep her connected because she is a woman in the science field and there's not a lot and like, if she did it, I can do it too.

When participants see a future benefit to maintaining the connection for future benefit, participants like Alicia referred to their connection’s own network, and they were usually professors. Here, Alicia is referring to a professor: “Um, he also has a lot of connections. So he has been like literally in a lot of states so he has a lot of connections and he's always always informing us of any type of like, research opportunities, internships, volunteer, so I definitely think they'll be beneficial later on. Teodoro also refers to his connection with multiple professors as important for the future, stating, “just in terms of seeking out advice or potentially recommendation letters... um their status as professors.” Finally, like Teodoro and Alicia, Emilio stays connected with a professor because he feels he can talk with him about future opportunities related to jobs in his field.

As seen, the participants in this study use their navigational skills to identify who in their network is beneficial for their time at the university and post- university life. They keep connected with folks who provide them with hope (e.g. seeing a girl in chemistry means if she can do it, I can do it to) and folks who will help them get to graduation (e.g. studying for finals

with students). On the other hand, students also maintain relationships with folks who are well connected and can support them after graduation (e.g. potential recommendation letters, connections to future jobs). Without a doubt, these FGL participants are intentional about their university connections and understand which connections on campus will provide the most diverse set of opportunities, increasing the benefits of their university journey.

Conclusion

All in all, I answered three essential questions with the data I gathered- what connections exist in the networks of the 19 FGL participants, what support do they obtain from these connections and why they maintain these connections. I found the participants named a total of 280 connections and amongst them were seven broad categories of connections. In order of overall presence, the seven categories of connections in these support networks were student, staff, professor, academic advisor, university space/program, student organization, and graduate student. Other than knowing who was in the network, I was able to identify the structure of the network through connecting everyone the student connected in their network survey. My findings reveal that different structural patterns can lead to academic success.

Then, I found that the seven categories of connections provided seven broad categories of support. Again, in order of frequency, those categories were: navigational, personal, social, academic, wellbeing, out of/post LGU, and JEDI. The categories of students and staff provided support in each of these seven categories and several data showed personal support was heavily provided by institutional agents and students.

Finally, the main reasons these participants chose to maintain relationships with these contacts deals with benefits/practices, characteristics, benefit. At times, certain behaviors/practices that came from a place of care from their connection were the reason a

participant stayed connected to them. Other times, participants maintained their relationships because they shared characteristics with their connection, or their connection had a characteristic they appreciated. Lastly, participants identified a benefit while they were on their educational journey or saw a future benefit to maintaining that connection.

The data from this study show these participants successfully navigate through the university by holding a variety of connections across campus and obtaining a variety of supports from them. These participants are great at asking for the specific support they need and have a clear understanding of which connection can provide that support. These FGL students continue to gracefully navigate their academic journey by being aware of the benefits each connection holds and the future benefit of that connection.

CHAPTER 5: DISCUSSION

This study intended to learn from the individual university support networks of 19 first generation Latine students (FGL). In particular, I wanted to better understand the makeup of their networks and the types of supports connections their university networks provided. In order to better understand this, I utilized Yosso's (2005) Community Cultural Wealth Model and Rendón's (1994) Validation theory to help me analyze participant data of my three research questions:

1. Who is in the university support networks of FGL students?
    a. What is the structure of their university support network?
2. What kinds of support do these FGL students receive from different university connections?

3: Why do these FGL students maintain a relationship with these connections?

In this chapter, I first summarize the major findings of this study and place these findings within the existing literature. This aspect of the discussion reveals how these findings support the existing literature and areas this dissertation contributes to this knowledge base. Finally, I conclude this chapter with study limitations and recommendations for moving forward with the knowledge we have gained from these FGL students, while acknowledging that the stories of these participants are not representative of *all* FGL students and experiences.

Overview of Findings

Who is in the Networks?

As a reminder, question one asked, "Who is in the university support networks of FGL students?" and had a sub question of, "What is the structure of their university support network?" This question was primarily concerned with understanding who FGL students reported in their support network and what the structure of their network looked like when placed into visual

network software. This was a vital first step in this research to better understand who these participants identify as being part of their support network. Broadly, across the 19 networks, I found the following regarding question one*: the networks of these 19 first generation students are diverse in size, composition and structure of connections.*

More specifically, through the analysis of these networks, I found the 19 FGL networks varied in size from three to 70 connections with an average of 14.7 connections. Without the largest network of 70, the average size of the 19 networks was 11.6 connections and the range is three to 33. When organized by size, the networks naturally fell into a distribution that divided them into small, medium and large network sizes. There were four small networks that contained three to eight connections, 10 medium networks with nine to 13 connections and four large networks with 16 or more connections. These data reveal the size of the networks of these 19 FGL students were diverse in size, highlighting the idea that networks are built by students in connection to their needs and opportunities. In other words, there is no ideal network size or structure that is one fits all for FGL student success because an ideal network is dependent on the needs of the networker (Love et. al., 2023).

Additionally, the networks were diverse in terms of connection types present in their network (composition). Amongst the 280 connections reported in the 19 networks, I found seven broad categories of connection types with students and staff being the most present among the 19 FGL networks. In order of presence, the seven categories were: student, staff, professor, academic advisor, university space/program, student organization, and graduate student. Fifty-four percent of the 280 connections were students, and over a third (39%) of the types of connections were institutional agents (staff, professor, academic advisor). Finding a large portion of institutional agents in these networks is encouraging because prior literature speaks to the

importance of institutional agent support for first generation and/or Latine student success (Stanton-Salazar, 2011; Bensimon et. al., 2019, Muñoz et. al., 2023). As Stanton-Salazar (2011) specifically points out, "participating in distinct, nonfamilial sociocultural worlds, in preparation for adulthood, requires active engagement with various agents within each of these worlds" (p. 1069). Here, Stanton-Salazar is referring to the significance of university students, in this case FGL students, having network connections that support their university journey- a journey that is distinct from most members in FGL families and requires interactions with institutional agents like staff, professors and academic advisors who can provide university guidance, access and knowledge not easily obtained from kin.

Aside from these findings supporting the literature, my findings add vital details about the institutional agents who support FGL students. Since I separated staff, professor and academic advisors as distinct categories when looking at the composition of the 19 networks, I found the majority of the institutional agents reported by these FGL students were reported as staff (24% of the 39%). Where prior research speaks to institutional agents as supportive or notes the importance of faculty (Barnett, 2006; Anaya & Cole, 2001) support for retention, few studies differentiate between staff and faculty (Richardson, 2019). This is important because it demonstrates how much time and effort staff spend with FGL students, time and effort that supports university retention rates and can go unnoticed if we do not probe about the relationship between the student and support received. Even though my study did not verify the roles the institutional agents held at LGU, this finding speaks to the role the student perceived the connection to hold based on the relationship they have with them and the support received from them.

I also found that students who graduated within four years had three or more category types present in their network (at least one institutional agent) *and* less than 50% of their network was comprised of students. In other words, students who graduated within four years had a diverse makeup in their networks that extended beyond peers and included different types of institutional agents. With almost 40% of the connections reported among the 19 networks being institutional agents and at least one institutional agent present in the networks of academically successful students, my study supports social support literature that highlights the need for diverse relationships in networks to support a variety of needs and wants (Granovetter, 1973; Feeney & Collins, 2015; Cheung et. al., 2015)

When it came to the structure of the networks, we learned most of these FGL networks have at least one triad or component with few or no isolates. As reviewed in the findings chapter, isolates are connections in the student's network that are not connected to others in the network. Network isolates are important because they are likely to have a higher number of connections that are different from the rest of the student's network, providing access to diverse information (Granovetter, 1973). A triad is a connection between three people in the network and a component has four or more people densely connected to each other, in which all the connections in the component are *reachable* (McCarty et. al., 2019). Although we did not find a "set" network structure for university success, the data suggest networks with separate, grouped connections like triads and components are essential for ensuring FGL students receive a variety of support types. Thus, it is important for students to have smaller networks within their entire support network because each component and/or triad represent "separate settings, environments, or contexts" in the student's life (McCarty et. al., 2019, p.168). These multiple components allow FGL students to separate academics from involvement, and involvement from socializing, etc.

While some connections overlap with the separate parts of the university experience, the data show FGL students prefer to separate some portions of their networked experiences, consistent with previous literature on FGL ability to navigate in and out of certain spaces (Yosso, 2005).

Overall, I found there is no network structure or composition that is "one size fits all" for FGL student success. The data show more than one institutional agent in the network and at least three different types of connections are helpful, but I do not have a set recommendation for which types of connections are "better" for student success because these data reveal there are multiple types of networks that can support student success. In terms of structure, the data show most FGL students in this study have multiple components within their network (networks within the network), showing their ability to compartmentalize and navigate through the multiple experiences of being a university student.

What Support do Students Receive from these Networks?

The second question of the study, "What support do students obtain from their network connections?", aimed to find the types of support these FGL students received from each connection listed in their netmap. *Overall, this study's data found the 19 first generation students in this study received seven types of support from their connections. In order of frequency, the supports received from these FGL network connections are: navigational, personal, social, academic, wellbeing, post-graduation and JEDI*. Definitions and examples for these support types are detailed in chapter four. Of these seven supports, navigational and personal support were most present, and navigational support was received from all seven categories of connections. I borrowed the term navigational from Yosso (2005) to refer to the student's "skills of maneuvering through social institutions" (pg. 80). The abundance of navigational support these FGL students seek supports Yosso's claims of the high navigational capital first generation students carry, and, that their knowledge of how important navigational capital is based on their

experiences outside of the university. The context of the university and their experiences there have caused them to understand and identify the need to seek support that is directed at navigating the university, and they are successful in doing so because they have prior experience with navigating unfamiliar systems.

Also, finding seven types of support categories shows we need to expand the support types literature. In the literature review in chapter 2, I mentioned emotional, informational, appraisal, and instrumental support types as the prevalent support types discussed in previous literature (House, 1981, Raposa & Hurd, 2021). While some of my categories align with these four types, and other fields speak to esteem and tangible support (Cutrona & Suhr, 1994), my finding of JEDI support adds a type of support that is significant for FGL student university experiences. In this data, JEDI support comes from connections who are aware of JEDI issues, theories, literature, language, etc., a connection in the network who can support the student with making sense of their experience as a FGL student in a predominantly white institution. While this finding adds to the literature on the importance of multicultural advising (Marrero, 2016), highlighting the specialized support FGL students want/need and are provided by select number of connection adds to the social support literature and can directly impact FGL student experience at universities.

Additionally, finding seven types of supports from a variety of connections on campus contributes to the ecological validation model of student success (Kitchen et. al, 2021). Through their five-year study on first generation and low-income students, most of who are racially minoritized, Kitchen et. al. (2021) highlight the need to provide a diverse set of support types from a variety of campus connections, specifically to students like FGL. Kitchen et. al. propose a comprehensive network of support that validates students (validation theory) at multiple stages

and locations of the university (ecology). As Kitchen et. al. state, an ecological (university-wide) focus on validation, shifts the university "toward a systemic approach that places the onus on educators to coordinate across support contexts and communicate across those contexts to facilitate meaningful, informed, and validating interactions with students" (p.639). My data support this model, demonstrating FGL students seek support from a variety of locations and people on campus, ensuring their needs are met in the most holistic way possible. Since majority of the students in this study were part of an institutional program, this data also suggest LGU's institutional programs are effectively working with folks across campus to provide comprehensive student support.

During my analysis of the types of support provided, I also looked at which categories of supports were provided by which connection types. This analysis revealed that staff and students were the only types of connections that showed up in all seven categories of support. Within the student category, I found classmates, student organization members, friends, sorority sisters, fraternity brothers, family members, senior students, and significant others. Students were in every network and in a high proportion, which means universities must continue funding student programming *and* spaces that provide students an opportunity to interact with and build relationships with other students. As such, I recommend future research on the impact of student support with a focus on the different roles of students and the support provided by the different student roles.

This finding also tells us staff, or folks students perceive to be in a staff role, are providing more support than other types of institutional agents on campus – and potentially more types of support than they are given credit for. With these findings, it is important for researchers and practitioners to clearly disaggregate the roles of staff and faculty in their own research in

order to better understand where the support is coming from. In addition, researchers and University administration need to recognize the pivotal role staff members assume in the support of FGL students. Also, this data demonstrate staff who are part of LGU's institutional programs are pivotal for FGL success. So much so, universities need to evaluate their institutional programs/units through network analysis to better understand who is providing the out of class validation and sense of belonging that is critical to FGL student support (Rendón, 1994).

Why Are These Connections Important to Students?

Finally, question three of this study set out to learn why these FGL students maintained a relationship with the connection they named in their support network. *Overall, I found three main reasons these FGL students maintained a relationship with these connections. The three reasons are behaviors/practices, characteristics, and benefits*. The most reported reason for a student to continue a relationship with a campus connection are the behaviors/practices of that connection. By behaviors/practices, I am referring to the actions and/or practices the student reported being displayed by their connection. In several instances, the participants shared something their connection did to make them feel cared for. Examples of this included someone knowing their name, being challenged in a way that does not belittle them and being asked about their overall wellbeing. This finding and the examples attached to it support the literature on validation (Rendón, 1994; Hurtado et. al., 2011; Ekal et. al., 2011) and ethics of care (Noddings, 1984; Noddings, 2013). When students are validated as learners, knowers *and* humans, they are more likely to feel like members of campus and more likely to stay through graduation (Rendón, 1994; Barnett, 2011). Just as staff, faculty, administration, and other university folks are humans first, we need to remember students are humans who need to feel connected, care for, and acknowledged. This is especially true for students who are often marginalized in/by institutions based on one or more identities they bring to that space that traditionally has not been valued and

legitimized. Being a student is just one piece of their life, one identity they are maneuvering. University personnel should practice ethical caring (Noddings, 1984) in their connection with a student, a relationship that recognizes the personnel is the "one-caring" and the student is "the cared for" (p.4). That both the one- caring and cared-for have a duty to the relationship, and the student seeking support is their fulfillment in this relationship. As the one-caring, personnel must recognize that in addition to being students, students may also be parents/caregivers/older siblings/role models/partners/patients/ etc. Acknowledging academic student success (e.g. high-test score, dean's list, etc.) is an important practice by the university and its personnel, but personally acknowledging that they are more than students and caring for them as holistically as possible is necessary.

To be clear, serving students through an ethic of care or constantly validating them is not "hand holding" or "babying" them. It means treating them with respect, regardless of their identities and/or prior knowledge of/with university processes. It means acting in compassionate ways that recognize some students are more impressionable; understanding that invalidating experiences can turn off some students faster than others, not because they are "more fragile" or "more sensitive," but because it is easier to feel like you do not belong at the university when your home community experiences are dissimilar to university experiences. When the closest people around you have not had this experience or similar experiences, it is easier for students to feel "I do not belong here" and act on that feeling. At some point, we have all entered spaces we wanted to be in and perhaps felt intimidated or confused by (e.g. new gym, new class, new job, new fancy spa unlike anything you have seen, etc.). Most likely, we chose to stay because of our personal perseverance *and* gradual comfortability through validating experiences and community building (e.g. new friend, supportive colleague, welcoming environment/service, etc.). In the

same ways, FGL, and all students for that matter, should be validated and cared for as holistically as possible. Offering FGL students reassurances of their belonging, highlighting their assets, humanizing the university experience by relating to them on a personal level, and showing interest in their life beyond their academic life are all validating experiences (Kitchen et. al., 2024). It is not "extra" work, it is human-centered work that *supports all students, including FGL students*.

The second most frequented reason for maintaining a relationship in their network was based on characteristics. At times, they were characteristics students shared with the connection, (e.g. similar sense of humor, grew up in same area, shared identity) or characteristics they admired in their connection (e.g. they are hardworking, they are positive). This finding supports the literature on homophily; the tendency for people to have more connections with folks who are similar to us or share similar aspirations (McPherson et. al., 2001). When students have folks in their network that they can relate to or look to as role models, their sense of belonging increases, which is important for student retention (Stanton-Salazar, 2003).

The third reason students stayed connected with folks in their network deals with benefit- the student sees a benefit to staying in touch with this person or I, the researcher, saw a benefit for the FGL student to maintain that relationship. FGL students reported staying connected to folks because they would eventually seek a recommendation from them or because the connection had a large network. If the student maintained a relationship with someone because it was a requirement of a program or university (e.g. academic advisor withholding a registration code), taking action to maintain the relationship (e.g. scheduling a meeting) was listed as a benefit because it was beneficial toward graduation. This data shows these FGL students have a clear understanding of who they need to stay in contact with for university success (e.g.

registration access) and post-university success (e.g. connections for future job). Such findings also provide a clearer understanding of *how* FGL students use their navigational capital (Yosso, 2005) to maneuver though the system of higher education. While prior studies point to the importance of navigational capital for FGL students, my study points to how the students put it into practice, highlighting one of the many assets FGL students hold.

Limitations

As with all research, there were a few limitations to this study. One of the limitations of this study is context. Most studies on first generation students are from 4-year institutions, which LGU is, even though most FG students are enrolled at community colleges (Ives & Castillo-Montoya, 2020). Even so, the experiences highlighted in this study are relevant to FGL students attending community colleges. Since there are a larger number of FGL students in community colleges, more research should be conducted at 2-year institutions or institutions with a higher number of Latine students, like Hispanic Serving Institutions.

Another important limitation to this study concerns the diversity within the first generation and Latine communities. The first-generation definition of this study is aligned with the definition of LGU, but as prior literature shows, "neither parent or guardian having a bachelor's degree" has a variety of experiences and graduation rates within that. As Toutkoushian et. al. (2021) show, FG students with parent(s)/guardian(s) who have "some college" experience or "an associate's degree," have an advantage over FG students with parent(s)/guardian(s) who have "no college" or "no high school." Also, the National Association of Student Personnel Administrators (NASPA) shows 56% of college going students are FG when the definition is "students whose parents have not received a bachelor's degree," versus only 24% of college going students identifying as FG when the definition is "students whose parents have no

postsecondary experience." To help the most vulnerable populations of FG, researchers need to hone in on the definition more and further study the experiences of students who fall within the 24%. It is vital to better understand the experiences of those 24% because within the FG population, this is the demographic with the lowest bachelor's degree attainment. Future research needs to delve into understanding if this is an issue of network supports, personal aspirations (e.g. if my parents did not graduate high school and I did, I already surpassed the previous generation), or other explanations for the lower rates of attainment.

Also, within our sample, it is possible staff were overrepresented because majority of these 19 students were part of an institutional program. Even so, this study shows these FGL students wanted to maintain a connection with their institutional program staff. We also do not have information about the FGL student's pre-college experiences. As a reminder, many of our students participated in LGU's connections program, an institutional program for students who participated in a pre-collegiate program, but the services and time commitment of each pre-collegiate program vary, which can influence the engagement of these students.

Finally, as previously mentioned, networks are not permanent. These findings are only one data point, a snapshot of these FGL university support networks. Networks at a university have the potential to vary drastically semester to semester because each semester means new courses, schedules, and responsibilities. For that reason alone, longitudinal studies with multiple data points are important.

Recommendations

The findings from this study suggest FGL students are receiving a variety of support types from a diverse network of connections because they need/want a variety of supports. Since the majority of students in this study were in an institutional program, we can assume

participation in these institutional programs helps FGL students receive holistic support and/or build connections in their network. Institutions of higher education should further assess program/unit effectiveness via social network analyses to further understand who/what is positively engaging with students from these programs. More studies like these can confirm or add to the list of support types found for FGL students in this study, effectively directing practitioners to the support used/needed by FGL students. Assessment should also include a clear first-generation definition or evaluate with a variety of definitions since students whose parents/guardians have "some college experience" have higher graduation rates than students whose parents have "no college experience" (Toutkoushian, 2021).

Also, this study's finding of JEDI as an important category of support for FGL students means universities must continue to invest in and study the effectiveness of their JEDI training for staff and faculty, including onboarding practices. Both Hurtado et. al. (2011) and Barnett (2011) found validating campus experiences have an impact across identities (gender, age, race), but their impact differs by identity. For institutions to promote and create the most holistic validating environment for FGL students, findings of this sort must be shared with all student facing personnel. As Hurtado et. al., (2011) suggest, universities should show this type of data to a variety of student facing employees at the university and train accordingly. The more FGL students experience validation from multiple points on campus, the higher their sense of belonging will be (Kitchen et. al., 2021). Training all student facing employees to engage in validating experiences with students helps ensure first generation Latine students are better supported to graduation, without excluding another demographic of students toward graduation. Future research should also focus more on the diversity of identities amongst the FGL

population, intentionally recruiting students from neurodivergent backgrounds, non-binary genders, transfer students, adult learners, and/or students with DACA status.

Last, next to student representation in the support networks of these FGL students was the presence of staff. Staff were 24% of all the connections reported and although I have noted most of these students were part of an institutional program, most of the students maintained a relationship with a staff member because they felt validated by staff and/or had a reason to maintain that relationship. The role of faculty in the success of FGL students has been established and written about (Anaya & Cole, 2001; Cole, 2008; Dika, 2012), but we need to further study *how* institutions can increase the *quality* of the relationship between students and faculty via social network analysis and qualitative methods.

Also, further analysis on the vital roles that staff who are part of institutional programs, critical offices like financial aid, TRIO programs, learning communities, etc., assume in supporting FGL students is necessary. As my data shows, staff provide a different set of support than that of faculty. This is because staff have a varying set of skills and expertise than that of faculty. Neither is better or more important, they are different and both university roles are vital for the student's overall success. A faculty student ratio is often presented as a selling point for universities, and while that faculty to student ratio is important, a sole focus on faculty and students continues to portray the university experience as an academic endeavor in the traditional sense, ignoring the social (human) aspects of being a student. When a university can *also* speak to its staff to student ratio, the university can promote its emphasis of support beyond academics. Doing so recognizes the vital role of staff at the university and acknowledges "student" as only *one* of the student's identities, *one* of their responsibilities during their time as a university student.

Furthermore, the data from this study tells us universities need to pay attention to their staff to student ratio to ensure two things: one, that staff is not overworked and two, that students receive the support they deserve. When staff is not overworked (student load is manageable), they can provide personalized support to all students and better work with faculty and academic advisors to ensure efficiency in support provided to each student. When staff can provide this personalized support, students receive the support and validation they deserve, not just the support needed to register for a class or meet a requirement. These findings show staff is providing support beyond what is expected and that cannot be ignored by universities. Staff skills must be leveraged where staff can provide "faculty like" support (e.g. supporting undergraduates through research mentoring programs with staff who have graduate degrees), validated through appreciation, recognition and compensation, and invested in with professional development opportunities, compensation, or other means (McClure, 2024). Universities must assess what a "manageable" load is for staff and academic advisors, hire according to those needs, and acknowledge the work staff do to retain and graduate FGL students (future donors). In doing so, a staff to student ratio conveys holistic university student support, highlighting student development as a parallel process with inter and intrapersonal human development (communication skills, teamwork, volunteer work, hourly employee, leadership positions, etc.).

Conclusion

To summarize, this study aimed to learn more about the experiences of FGL university students through an analysis of their personal university support networks. A focus on the FGL population was intentional due to the lower rates in graduation (RTI international; naspa.org.) and expected Latine population growth (Garcia, 2014). For question one, I sought to find out who these FGL students were connecting with and found their networks were comprised

of seven types of connections- students, staff, professors, academic advisors, university space/program, student organization, and graduate students. I disaggregated the roles of staff, professor and academic advisor to better understand which institutional agents are providing support to FGL students and found majority of the institutional agents reported were staff, a finding that adds to the literature. When analyzing the structures of the FGL student networks, I found most networks had several smaller networks (components) and few isolates. Even though I did not find an *ideal* network structure or composition for FGL student success, I found at least three different connections in the majority of the FGL networks and in all the FGL students who graduated within four years. This finding supported the previous literature on the importance of having diverse connections in order to receive diverse support types. Additional research should continue to disaggregate institutional agents to further understand who is in the networks of FGL students.

Question two was concerned with the types of support students received from these seven types of connections. In order of frequency, the seven support types found were navigational, personal, social, academic, wellbeing, post-graduation and JEDI. Students and staff were found to provide support in all these categories. Finding staff in most of the FGL networks and as a connection that provides all seven categories of support is one of the primary findings of this study. I also found JEDI as a separate category of support that has not been part of the social support types found in the literature. Further research should focus on what support types are provided by which institutional agents and JEDI support should be included as a support type.

Finally, question three focused on why students chose to maintain relationships with the connections reported in their network. Their reasons fell into three main categories: behaviors/practices, characteristics, and benefits. The most frequented reason for maintaining a

relationship with a connection dealt with behaviors/practices exhibited by the connection toward the student. Typically, these practices/behaviors came from an ethic of care, resembling caring practices previously noted in the literature (Noddings, 1994).

Overall, findings from this study recommend universities continue to intentionally provide university experiences and opportunities that lead FGL students to creating diverse networks that include at least two institutional agents (institutional program staff, academic advisors, faculty). Findings also recommend universities focus on the significant role staff play in supporting and graduating FGL students, including their role in providing JEDI support. Prior research understands the significant role faculty have in achieving student success goals and universities recognize that role by focusing on a faculty to student ratio. This study suggests a staff to student ratio must also be prioritized to convey and practice the importance of holistic student support, not solely academic. By orienting more institutional agents toward holistic support, all students, including FGL students, will experience validation in a variety of university settings, effectively increasing their sense of belonging *throughout* the university, leading to graduation and increased FGL student success.

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APPENDIX A

INTERVIEW GUIDE SP 2019

Interview Questions, Net-Map Explanation, and Net-Map

Interviewer review cover letter and consent form. Once participant understands the study and agrees/signs consent form, interviewer proceed to read recording notice.

Recording notice:

As we reviewed in the consent form, I would like to ask for verbal permission to record your interview. As a reminder, your information will remain confidential and your recording or other interview information will not be traced back to you. This will be tracked with numerical organization, not personal information. We want to record your interview to ensure we quote you correctly and to have the opportunity to refer back to our interviews for a deeper understanding of the knowledge you provide. That being said, do I have your permission to turn on the recorder and start recording?

Proceed after yes or no.

Ok thank you. Our first question…

1. We understand your environment, personal energy, feelings, and other daily aspects can affect individual moods. In your opinion, would you say you mostly act or identify more like an introvert or extrovert? (interviewer circle one)

Introvert Extrovert

2. What does it mean to be connected at LGU to you?

3. Now we are going to proceed with the interview by asking you to complete another Network Map, also known as a Net-Map. As a reminder, a Net-map is an interview-based tool that helps researchers visually understand who people are connected to and in what ways they are connected to them. If you look at this sheet, there is a question at the top and a "me" in the middle. When I am done giving you instructions, I want you to please answer the question at the top (who do I go to for help/support at LGU?) by writing down names of people you go to for help at LGU. Only list people that are currently at LGU. Please also write their relationship to you (i.e. Maria, friend). Consider your location on this net-map and where you place the names of the people you go to. For example, I would consider someone close to the "me" as closer to me than someone on the most outer circle. Please fill this out to the best of your ability and as much as you want. Let me know when you have completed your net-map so we can proceed with the interview (hand student black or blue pen).

4. Net-map completion

5. Now I am going to ask you the same questions for every person you mapped.

a. Who is _____ (fill in by asking a name on their net-map)

c. Where and when did you meet them?

d. Why did you put them in that location of the Net-Map?

e. When do you go to this person?

f. How often do you go to this person? (if not answered in question e)

g. What kind of help/support do you go to them for? (if not already answered previously)

h. What about this person made you want to stay connected with them?

Repeat Question #5 for **all** names on their net-map.

6. Is there someone you go to for help that you wanted to map here but could not because they are outside of LGU? If yes, who? Proceed to sub-questions. If nobody, proceed to question #7.

a. If yes- What type of help do you go to them for?

7. Is there anyone else you thought of that you want to add now to the net-map?

8. What was your thought process behind putting some people closer to the "me" and putting others farther from the "me?"

9. Now, using the **RED** pen, please draw lines (without arrows) from one person to another in your netmap if they know each other. No need to draw lines from the "me" to each person, just connect people who know each other.

10. Those are all the questions I have for you. Thank you for answering them and for continuing to be a part of this study. Do you have any final questions for me?

Give student their $20 gift card and have them sign that they received the card.

Thank you again for your time. We will contact you again next year!