

Students as Experts: Using Photo-Elicitation Facilitation Groups  
to Understand the Resiliency of Latina

Low-Income First-Generation College Students

by

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## ABSTRACT

Historically, first-generation college students (FGCS), students whose parents have not attended college nor earned a degree, are more likely to have lower college retention rates and are less likely to complete their academic programs in a timely manner. Despite this, there are many FGCS who do succeed and it is imperative to learn what fuels their success. The theoretical perspectives that framed this study included: hidden curricula, resiliency theory and community cultural wealth. Drawing from these perspectives, this qualitative research study consisted of a 10-week photo-elicitation facilitation and reflection group in which participants identified aspects of the hidden curricula encountered in the university that were challenging in their educational journeys and guided them in identifying the sources of strength (i.e. protective factors) that they channeled to overcome those challenges. The participants for this study were selected using a stratified purposeful sampling approach. The participants identified as Latina, low-income FGCS who were on good academic standing and majored in two of the largest academic units at Arizona State University's Tempe campus- the College of Liberal Arts and Sciences and the Fulton College of Engineering. This study used participants' testimonios (critical, reflexive narratives), photo-elicitation images, student journal responses, focus group dialogue and Facebook group posts to better understand the resiliency of Latina, low-income FGCS at ASU. Using grounded theory analysis, this study revealed the following,

Latina, low-income FGCS:

- Primarily define and develop their academic resiliency outside of the classroom and use social capital connections with peers and aspirational capital connections to their future to be successful inside the classroom.
- Are heavily driven to succeed in the university setting because of their family's support and because they view their presence in college as a unique opportunity that they are grateful for.
- Operationalize their academic resiliency through a combination of hard work and sacrifice, as well as an active implementation of resilience tactics.
- Are motivated to pass on their resiliency capital to other students like them and perceive their pursuit of a college education as a transformative action for themselves, their families and their communities.

## DEDICATION

This dissertation is dedicated to every young low-income, first-generation college student intent on pursuing their dreams. I celebrate you and commend you; most importantly I believe in you, because I am you. This body of work would not have been possible without the trailblazing and resilient participants in this study—Itzayanna, Serena, Flora, Diana, Sammy, Jenny, Jessica, Bella, Amalia and Anna. You inspired me with your *testimonios* and your amazing visions for your future.

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## CHAPTER 1

### LEADERSHIP CONTEXT AND PURPOSE OF THE STUDY

A ‘first-gen’ low-income student is someone who wants to be here but sees that all of the odds are against them and that they need to climb the mountain. And that makes me resilient because I know I am setting the tone for everyone else in my family and everyone else who comes after me. And also taking the initiative to do it for my children, that if I can do it, there’s no reason why you can’t.

-ASU Student, Work Observation, fall 2014

Historically, first-generation college students, students whose parents have not attended college and/or have not earned a degree (Engle, Bermeo, & O’Brien, 2006), are more likely to have lower college retention rates and were less likely to complete their academic programs in a timely manner (Pascarella, Pierson, Wolniak, & Terenzini, 2004). Additionally, research results reveal that only 26% of first-generation college students will earn a bachelor’s degree whereas their non-first generation peers earn a degree at a rate of 68% (Engle et al., 2006). This disparity is particularly disconcerting since an increasing amount of college students are from low-income families with little to no college experience (Engle & Tinto, 2008).

At Arizona State University (ASU), the largest public higher education institution in the country with an enrollment of 76,771 students, approximately 39.5% of the total undergraduate population identify as a first-generation college student (FGCS) (Office of Institutional Analysis, 2013). Additionally, ASU also has a high percentage of low-income students—approximately 41% of the undergraduate student body are recipients of the need-based federal financial aid grant program, which is known as the Pell Grant (*Pell Performance*, 2011). A large proportion of ASU’s undergraduate student body come from minority backgrounds—34% of undergraduate enrollment is comprised of

students of color (“Diversity by the Numbers: University Statistics,” 2015). This overwhelming amount of minority low-income FGCS at ASU provides evidence that the institution is committed to inclusion and access. In fact, the university’s charter starts off with this statement “ASU is a comprehensive public research university, measured not by whom we exclude, but rather by whom we include and how they succeed” (ASU Charter and Goals: 2015 and Beyond, 2015). This charter sets the tone for the institution’s dedication to its students, yet the problem is that first-generation minority college students at ASU are succeeding at lower rates than their peers who are in the majority group. These students report lower retention and graduation rates than their non-first generation peers (Office of Institutional Analysis, 2013). Table 1 displays the retention and graduation rate differences between first-generation and non-first generation students at ASU.

Table 1. Retention and Graduation Rates by First-Generation, Minority Status, Arizona State University

	First-Generation, Minority	Non First-Generation, Non-Minority
One-Year Retention Rate <sup>1</sup> (%)	78.5	86.7
Four-Year Graduation Rate <sup>2</sup> (%)	33.1	46.9
Six-Year Graduation Rate <sup>3</sup> (%)	55.4	66.7

*Source:* University Office of Institutional Analysis, Arizona State University

<sup>1</sup> Fall 2013 entering cohort

<sup>2</sup> Fall 2008 and Fall 2010 entering cohort

<sup>3</sup> Fall 2008 entering cohort

ASU's charter was officially approved in 2014 but historically the national commitment to higher education access has been in place for 50 years. The Higher Education Act (HEA) of 1965 was signed into law by President Lyndon B. Johnson as part of his Great Society domestic agenda. Under the HEA, federal funding was authorized to establish continuing education and community service programs, upgrade college and university libraries, aid historically Black colleges, provide college student aid and founded the National Teacher Corps (Davis, Green-Derry, & Jones, 2013). The college student aid portion of the HEA is of particular significance for minority low-income FGCS as this was the first time that a federally funded financial aid program was enacted for students in need. This aid came in the shape of educational opportunity grants (later renamed as the Pell Grant), federally guaranteed student loans, and work-study programs. Over time, amendments to the HEA act led to an increased diversity in college enrollment. Federal TRiO programs were created to motivate and support low-income and first-generation college students to pursue higher education ("History of the Federal TRIO Programs," 2016).

In addition, the Federal Pell grant program provided funding to millions of students. For example, in the 2015 fiscal year alone the Pell grant program provided over eight million students with aid (*Federal Pell Grant Program*, 2015). Pell grants have been particularly impactful for students of color—more than 60% of African American students and 50% of Hispanic undergraduate college students rely on Pell grants to attend school (Wine & Hunt-White, 2012). Over five decades later these HEA initiatives have led to more students attending college, but many are not finishing. It has been reported that while 54% of high-income students have a Bachelor's degree by age 25, only 10% of

low-income students have attained this degree (Towler, 2014). At a recent college opportunity summit, President Barack Obama stated:

Too many students who take the crucial step of enrolling in college don't actually finish, which means they leave with the burden of debt, without the earnings and job benefits of a degree. So we've got to change that (Towler, 2014).

Educational institutions have taken on the task of changing the college success rates of minority low-income FGCS. There is increased attention on the national agenda for minority low-income FGCS to succeed. Part of this is due to President Obama's highly ambitious education initiative—that by 2020, the United States will reclaim its former status as having the highest proportion of college graduates in the world (*Meeting the Nation's 2020 Goal: State Targets for Increasing the Number and Percentage of College Graduates with Degrees*, 2011). This goal will require raising the percentage of Americans ages 25 to 64 with a college degree from 41.2% to nearly 60% (Nichols, 2011). Currently, U.S. college graduation rates rank 19<sup>th</sup> out of 28 countries studied by the Organization for Economic Cooperation and Development, with countries such as Iceland, New Zealand and Poland taking the top rankings (OECD, 2014). In order to increase rankings and meet President Obama's goal, institutions of higher education need to cultivate innovative strategies to move students, especially those who are minority low-income FGCS, from the admission pipeline through graduation.

Benchmarks for college success are usually defined by two institutional terms—retention and graduation rates. According to the National Center for Education Statistics (NCES), retention is defined as the rate at which students persist in their educational program. The rate is calculated by measuring the number of students enrolled from the

previous fall who are again enrolled in the current fall. Graduation rates are measured by the NCES as the total number of completers (a student who receives a degree, diploma, and certificate) who achieved their graduation goal within 150% of normal time completion, or within six years (“Fast Facts: Back to School Statistics,” 2014).

As a result of increased attention to attaining these benchmarks, many higher education institution officials are attempting to identify how they can best retain students. There are a number of strategies devised as solutions to retention including offering students study support, student employment, on-campus housing, peer to peer mentoring, involvement opportunities, etc. (Astin, Berger, Bibo, & Burkum, 2012; Rowley, 2010;). These student support mechanisms have been widely studied, yet very few studies have explored how minority low-income FGCS learn to navigate hidden curricula in order to achieve a Bachelor’s degree. Therefore, my study explored if and how low-income, minority FGCS cultivate academic resilience to mitigate the effects of the hidden curricula in the classroom.

Resilience is defined as the positive capacity of people to cope with adversity (Huang & Lin, 2013; Johnson, Taasobshirazi, Kestler, & Cordova, 2014). Facing adversity could potentially block the persistence of minority low-income FGCS. As suggested previously, a pervasive yet covert type of adversity that looms over minority low-income FGCS is navigating the hidden curricula in college classrooms. The hidden curricula are defined many ways but often consists of the values, dispositions and social and behavioral expectations that brought rewards in school for students (Jackson, 1968). Hidden curricula are viewed as the unwritten rules or the non-academic functions in a classroom that may not be related to educational goals, but are still essential for

satisfactory progression, said Jackson (1968). It may consist of factors such as classroom interactions and relationships and/or unexplained faculty expectations regarding behavior in the classroom and academic performance (Vallance, 1983). The hidden curricula are seen as a socialization process that can be marginalizing for minority low-income FGCS as the classroom is an unfamiliar academic setting where they are unlikely to encounter large numbers of minority low-income FGCS peers as well as low-income formerly FGCS minority faculty (White & Lowenthal, 2011). Marginalization was summarized by Michael Apple (2001) who argued: “They see very few people like themselves there, the lived culture of the institution makes them feel like ‘the other.’ What we have then is a group of people who basically come from families that have made it” (cited in Gair & Mullins, 2001, p.32).

Because minority low-income FGCS tend to have less personal, emotional and financial support, they are less likely than their non-first generation peers to thrive and persist (Ward, Siegel, & Davenport, 2012). Yet, there are many minority low-income FGCS who are able to successfully persist and reach their aspirations of a bachelor’s degree. A multitude of research exists regarding the retention and graduation rates of minority low-income first-generation college students, and often times these research studies highlight the failures and shortcomings of the students. In fact, resilience researchers have said, “There is a converse to the phenomenon of minority students’ low academic achievement, but that has received far less attention than their academic failures” (Morales, 2000). There is a need for educational research that probes into the educational journeys of minority low-income FGCS who have been academically resilient and persisted against the hidden curricula and situates them as experts to

formulate retention innovations for their fellow peers. The purpose of this qualitative action research study is to examine and explain if academic resilience assists minority low-income FGCS to navigate the hidden curricula and succeed at ASU and to gather their recommendations so that it may be embedded as part of shaping university retention efforts.

### **Leadership Context and Researcher Positionality**

I currently serve as the Assistant Director of ASU's First-Year Success Center (FYS). FYS provides support services and retention strategies for first and second-year undergraduates university-wide. In my role, I am responsible for planning and implementing holistic support services for freshmen and sophomore students, as well as assisting with program design, assessment/evaluation, and strategic planning. More importantly, I develop curriculum, train the peer and professional staff, and collaborate with campus partners to support the retention of over 9,000 students. In every aspect of my role, I have to constantly think of how I can deliver high-quality student support services in a scalable manner. Through my work at First-Year Success, I have observed the increased numbers of minority low-income FGCS attending ASU. In my role as a higher education administrator, I feel immense stewardship towards ensuring that the retention services provided are cognizant of the large minority low-income FGCS population at ASU. Part of this is because I understand the unique needs and experiences of minority low-income FGCS because I followed a similar path.

As the first person in my family to attend a university, I recall how extremely proud and excited I was to have the opportunity to pursue a college education. Yet, I was also nervous and hesitant as to what college life was all about. I could not ask my family



members for advice, largely because I did not want them to worry, but also because I knew they had never experienced attending a university before. There were aspects of the college experience that I could not anticipate or even be prepared for—factors such as feeling intimidated by my surroundings, not understanding academic expectations, and trying to find social belonging were all unprecedented sources of pressure that I had to learn to overcome. In fact, I did not find it reassuring when faculty or staff members would say, “Let me know if you have any questions” because I was not sure what questions to ask in the first place. These recollections remind me that being a college student is challenging enough, much less being one of the thousands who is a student of color, low-income, and the first in their family to go to college, at the largest public institution in the country.

This personal and professional context impacts my role as a researcher, painting me as an insider-outsider qualitative researcher that occupies the ‘space between’ (Corbin Dwyer & Buckle, 2009). In other words, I am not completely an insider because although I share similar experiences with the participants, I am also now an administrator of the institution that is professionally charged with ensuring their success and retention. These realities influence this study’s process from conception to analysis. The next section further elaborates on my professional context and its connection to this study.

In August 2014, ASU boasted record-breaking enrollment numbers with the admission of 10,635 first-year undergraduate students (Keeler, 2014). Of this number, 6,900 were targeted and served by the FYS Center (M. Herrera, personal communication, October 6, 2014). A typical ASU freshman class is very diverse—the students represent all 50 states and over 63 countries are represented (Keeler, 2014). In addition, more than

42% of enrolled Arizona residents reported that they will be the first in their family to go to a four-year college and about 39% of these freshmen come from low-income families (Keeler, 2014). The success of freshman at ASU is a top priority for the institution. Currently, ASU's first-time, full-time freshman retention rate is the highest in the state, with 84% of first-year students returning for their sophomore year (*Arizona State University 2011-2012 Annual Report*, 2012). The FYS Center is charged with increasing this retention rate by two percent in the 2015 academic year, with an ultimate goal of retaining 90% of ASU's first-year students within the next few years.

The large attention paid to ASU's freshman class is intentional. Research suggests that minority low-income FGCS who start in public, four-year institutions are three times more likely to leave after the first year compared to their non-first generation peers, 12 versus 4% respectively (Engle & Tinto, 2008). As such, higher education researcher Vincent Tinto (2008) has written, "Simply put, access without effective support is not opportunity" (p. 25). It is simply not enough that ASU just admits increasing numbers of minority low-income FGCS. ASU must also do everything it can to ensure these students are successful in their pursuit of higher education attainment and one novel thing that can be done is understanding the experiences of minority low-income FGCS who successfully navigated the hidden curricula and are academically resilient and soliciting their recommendations to improve the support provided to fellow minority low-income FGCS.

### **Pressing Problem of Practice**

Cultivating innovations that support the retention and timely graduation of minority low-income FGCS fits right along with ASU's initiatives. In 2014, ASU became

a founding member of the University Innovation Alliance (UIA), a national consortium of 11 public universities who are working in a collective to share interventions that enable low-income students, including those of first-generation backgrounds, to succeed (“ASU Joins University Innovation Alliance to boost access to college degree,” 2014). The UIA asserts that research universities can be leaders in improving the social and economic mobility of low-income students in three ways: 1) by serving a large proportion of low-income students; 2) By modeling the practices and commitment necessary to succeed for other institutions and 3) by applying intellectual and research capacity to the issues, as they do to other significant social and scientific challenges (*University Innovation Alliance Vision and Prospectus*, 2014).

One of the premier tools that ASU is sharing in this alliance is an online progress-to-degree tracking program called eAdvisor. This technology tool helps students pick their majors, tracks their progress and alerts administrators if a student is not meeting the critical requirements needed to graduate (Marcus, 2015). Since the implementation of eAdvisor, ASU has seen a 15% increase in the graduation of low-income students (“ASU Joins University Innovation Alliance to boost access to college degree,” 2014). This is a remarkable feat and one that ASU should be proud of. However, eAdvisor is just one of many strategies and innovations that can be enhanced or implemented to ensure that more minority low-income FGCS persist and graduate. One area that eAdvisor cannot track or monitor is the presence of hidden curricula in the classrooms nor can it identify the academic resilience of minority low-income FGCS at ASU. Therefore, this study has the potential to shed light on previously untold factors that can aid in the increased success of minority low-income FGCS not only at ASU but across the nation.

## **Purpose of the Action**

The purpose of my qualitative action research study was to explore if photo-elicitation facilitation and reflection groups can influence minority low-income FGCS to identify their sources of protective factors as a method of increasing their academic resiliency. Photo-elicitation is the use of photographs during an interview process (Collier & Collier, 1986). This retrospective and qualitative study was designed to understand if academic resilience helps minority low-income FGCS overcome adversity such as navigating the hidden curricula of college culture. This study sought to capture the voices and visions of upperclassmen, minority low-income FGCS at ASU through *testimonios* and photo-elicitation. A *testimonio* is a qualitative method akin to in-depth interviewing or oral histories, with the addition of it being a conscientized reflection that brings to light a wrong or an urgent call for action (Reyes & Rodríguez, 2012). Additionally, participant-produced photo-elicitation methods were used because of its ability as a method to access voice, overcome power imbalances between the researcher and the research participants and to facilitate a process of reflective dialogue around a research topic (Liebenberg, Ungar, & Theron, 2014).

Taken together, this study involved the creation of photo-elicitation facilitation groups that involved minority low-income FGCS in identifying aspects of the hidden curricula encountered in the classroom that was the most challenging in their educational journeys and guided them into identifying the sources of strength that they channeled to overcome those challenges. At the end of the process, the participants were asked to cultivate a set of recommendations that the institution may implement to help future

minority low-income FGCS reach greater success at ASU. This study was guided by the following research questions:

### **Research Questions**

1. Do minority low-income FGCS define and develop their academic resiliency in college classrooms? If so, how?
2. What are the protective factors that have emerged to help students to remain resilient in these classrooms?
3. Do students utilize these protective factors as resiliency capital to navigate the classroom environment? If so, how?
4. How do students further build upon these protective factors to increase the academic resiliency for other low-income FGCS?

## CHAPTER 2

### REVIEW OF SUPPORTING SCHOLARSHIP

To understand the importance of supporting the educational experiences of FGCS, chapter two begins with an overview of the three general categories of research surrounding first-generation college students; a majority of whom are Latina students who come from low-income backgrounds and the intersectionality that exists amongst these identities. Then, I examine theoretical frameworks and supporting scholarship that will inform this study. The following chapter will reveal how prevailing literature on FGCS mostly revolves around a “deficit perspective.” As a stance, the theoretical frameworks selected for this study move away from that deficit lens and instead provides evidence of the untapped sources of wealth and resilience Latina low-income FGCS possess despite the additional obstacles that they face. In particular, the theoretical perspectives chosen for this center around hidden curricula, resiliency, and community cultural capital (Margolis, 2001; Morales, 2008 & Yosso, 2005),

#### **FGCS Literature**

The body of literature revolving around FGCS has focused mostly on three general categories of research: 1) comparisons of college knowledge, levels of family income and support, educational expectations and academic preparation between FGCS and their continuing generation peers, 2) transition experiences of FGCS to college, 3) persistence in college and degree attainment (Pascarella et al., 2004). To set the context for what research results depict, studies focused on these three categories are addressed below.

**Academic Preparation and Expectations.** In looking at academic preparation comparisons between FGCS and their continuing generation peers, several research studies attest that those whose parents had college experience were significantly more likely to have higher levels of academic preparedness (Atherton, 2014). More often than not, academic preparation characteristics are determined by SAT scores for math and verbal subjects, as well as high school GPA (Choy, 2001). In regards to academic expectations, FGCS tend to report lower educational expectations and receive less support from their parents in college preparation than their non-first generation peers (Choy, 2001). College attendance expectations are largely different between the two groups, in fact, 91% of non-first generation students reported that they expected to attend college, whereas only 55 % of FGCS have post-secondary education expectations (Choy, 2001). Now that research results on the academic preparedness and expectations of FGCS have been presented, the section below will address what has been investigated in the literature about the transition experiences of FGCS.

**Transition Experiences.** There are studies surrounding FGCS that revolve around how psychosocial factors influence transition experiences in college. Transition experiences have an eviscerating impact, with research results that suggest low-income FGCS were nearly four times more likely to leave higher education after the first year than their continuing generation peers (Engle & Tinto, 2008). For example, a study conducted by Ramos-Sanchez and Nichols (2007) specifically focused on academic self-efficacy levels of first-generation and non-first-generation college students and explored the association between generational status, self-efficacy, and academic outcomes such as GPA and college adjustment.

Researchers found that although stronger self-efficacy did not necessarily lead to a higher GPA, it did have a powerful relationship with college adjustment. They found that students with higher self-efficacy at the beginning of the school year exhibited a better transition to college than those who reported lower self-efficacy. Finally, Ramos-Sanchez and Nichols (2007) found that continuing generation students reported higher levels of self-efficacy than their first-generation peers. The results of these studies suggest that college adjustment and the transition was more difficult for low efficacy FGCS students. Now that a discussion on college transition has been presented, the next section of this paper addresses the third category—persistence in college and degree attainment.

**Persistence in College and Degree Attainment.** Persistence is defined by the National Student Clearing House as the percentage of students who remain enrolled, regardless of the institution (*Report: Snapshot Report- Persistence- Retention*, 2014). Studies analyzing student persistence have typically analyzed the importance of variables that may include one or more of the following: 1) background characteristics, 2) pre-college achievement variables, 3) reasons for choosing a particular institution, 4) institutional characteristics, and 5) academic, social and financial college experiences (Martin Lohfink & Paulsen, 2005). These variables demonstrate the complex layers of reasons that could ensure that a student remains in college, or not. Research suggests that FGCS face significantly different challenges persisting than their continuing generation peers.

For example, studies conclude that FGCS often face unique out-of-class obstacles that can impede their academic persistence (Martinez, Sher, Krull, & Wood, 2009). The



specific obstacles that FGCS students were more frequently encountering included: job responsibilities, family responsibilities, weak English and mathematics skills, inadequate study skills and feeling depressed, stressed or upset (Stebleton & Soria, 2012). Taken together, these experiences of FGCS remarkably differ than those of their non-first generation peers. The literature provides us with an understanding as to the challenges FGCS face in the areas of academic preparation and expectations, transition experiences and their persistence and degree attainment. This background information is necessary for higher education administrators to know because of the impact it has on the institution's ability to retain a student. The next section addresses the intersectionality of Latina, low-income, FGCS.

**Intersectionality.** Intersectionality theory refers to the overlapping of social differences in the creation of unique social identities, such as the understanding that identities such as race, gender, and class exist in relation to one another (Carbado, Crenshaw, Mays, & Tomlinson, 2013). In this study, it is understood that the characteristics of FGCS exist and intersect with the participant's ethnicities (Latina) and their social class (low-income). Literature suggests that Latina college students face unique stresses that impact their college degree attainment. These include lack of money, less preparation, low practical college knowledge from family and the pressure to choose between their home culture and that of the academic setting (A. M. Gloria & Castellanos, 2012). Additionally, research results have presented that Latina students have experienced intolerant university environments which has made them feel unwelcomed and invisible (A. Gloria, Castellanos, & Orozco, 2005).

In considering social class, literature about low-income college students have identified that socio-economic status within race and ethnic group influences college enrollment, educational inequality and promotion of success (Merolla & Jackson, 2014). In other words, low-income students are least likely to attend and be successful in school explaining the educational inequality and disparities that exists within different demographic groups in the United States. Furthermore, research results suggest that FGCS with higher incomes are more likely to persist in college (Martin Lohfink & Paulsen, 2005). Overall, these findings point out that Latina, low-income FGCS experience not only their parent's lack of information and experience with college, but also encounter other social and economic realities which influence their educational opportunities. These intersecting identities are important for higher education administrators to understand as it impacts the institution's ability to help students persist at that university. The next section further elaborates on literature surrounding the college student retention.

### **Retention**

Although persistence and retention are often used as interchangeable terms, for the purposes of my proposed research, retention is defined as continued enrollment or degree completion within the same institution (National Student Clearing House, 2014). Increasingly, higher education administrators across the country are concerned about ensuring that retention rates at their respective universities are a top priority. Part of the reason for this is the increasing demand for college completion rates and transparency and accountability requests.

For example, as part of President Obama's 2020 college completion initiative, an online portal for college data was released called the College Scorecard (Obama, 2013). The College Score Card outlines costs, loan default rates and most importantly degree completion rates for each institution. Obviously, it behooves the institution to increase its retention rate. Additionally, many states are moving away from the historic funding formula of providing stated based funding to universities based on the number of full-time students enrolled at the beginning of the semester (National Conference of State Legislatures, 2014). Increasingly, states such as Arizona use a performance based funding formula that is dependent on completed student credit hours and degrees awarded (Arizona Board of Regents, 2010).

With increased attention being focused on retaining college students, does retention theory inform the success of FGCS? Early on, it did not. One of the most commonly cited theories of retention in higher education is touted by renowned researcher Vince Tinto (1990). Tinto wrote:

Students are more likely to stay in school that involve them as valued members of the institution. The frequency and quality of contact with faculty, staff and other students have repeatedly been shown to be independent predictors of persistence (p.5).

Tinto's earlier work did not specifically address FGCS or minority low-income college students and several studies since have looked into how Tinto's retention theories may provide a good baseline for most students but that it does not adequately address the complexities of FGCS populations. A central theme of Tinto's retention theory is the idea of integrating students into the social and academic life of the university (Vince Tinto,

1988). Yet, some studies posit that this integration aspect does not address the challenges that traditionally underrepresented college students face when attempting to integrate. One such study looked into the experiences low-income FGCS have when interacting with faculty. (Longwell-Grice & Longwell-Grice, 2007) writes:

The working-class, first-gen students in this study perceived and articulated a significant distance from faculty from the beginning of their college experience. This distance included fear and risk. It called into question their identities and cultural norms. (p.416).

The study above elaborated that minority low-income FGCS experience a lack of security in their identities as potentially successful college students. Adding this to the perception that faculty did not care about them made the students interpret that they would be better off being undetected and unseen by their professors (Longwell-Grice & Longwell-Grice, 2007). Since the 1990's, Tinto has taken a more active approach in providing retention support for minority low-income FGCS. In a report for the Pell Institute for the Study of Opportunity in Higher Education, (Engle & Tinto, 2008) Tinto asserts that in order for degree attainment rates to increase in the United States, major effort has to be made to support minority low-income FGCS. Some of the recommendations made include: 1) improving academic preparation for college, 2) providing additional financial aid, 3) increasing transfer rates to four-year colleges, 4) easing transition to college through early intervention programs, advising, tutoring and peer mentoring, 5) encouraging engagement on campus and lastly, 6) promoting reentry for young and working adults (Engle & Tinto, 2008). The next section of this literature

review presents how Yosso's (2005) community cultural wealth model presents an anti-deficit lens in understanding and viewing the experiences of minority low-income FGCS.

### **Community Cultural Wealth**

One of the foundational strengths of Yosso's community cultural wealth is that it criticizes the assumption that underrepresented students arrive at an institution burdened with deficits. Using the foundations of critical race theory, Yosso (2005) conceptualizes community cultural wealth as an alternative concept. According to Yosso, "Cultural wealth is an array of knowledge, skills, abilities and contacts possessed and utilized by communities of color to survive and resist macro and micro forms of oppressions" (2005, p.77). Yosso outlined six forms of capital that comprise community cultural wealth (Yosso, 2005, p.78).

They are listed as follows:

- 1) Aspirational- refers to the ability to be hopeful and dream of the future, even when facing real and perceived challenges.
- 2) Linguistic- intellectual and social skills attained being bi-lingual.
- 3) Familial- connectedness to community and family.
- 4) Social- networks of people and community resources.
- 5) Navigational- the ability to maneuver social institutions that may historically oppress marginalized groups.
- 6) Resistant capital- knowledge and skills cultivated that challenges inequality.

Explain how these capitals relate with your research questions and the population in your study.

Yosso (2005) counters persisting theories that have misinterpreted Pierre Bourdieu's social capital theory into deficit misunderstandings. In fact, Bourdieu's work focused on the complex relationship between culture and power and how educational systems are a primary institutional setting for the production, transmission and accumulation of various forms of cultural capital (Swartz, 1997). In answering the misinterpretation by other researchers of Bourdieu's cultural capital theory, Yosso asserts that using the White middle class interpretation of what the norm is fails to acknowledge the wealth of capital students of color bring to the institution. In addition, community cultural wealth is heralded for its commitment to "Conduct research, teach and develop schools that serve a larger purpose of struggling toward social and racial justice (2005, p. 82)."

Increasingly, researchers are using community cultural wealth to champion the educational aspirations of underrepresented students. In Luna and Martinez' (2013) study, the researchers used qualitative inquiry to examine the educational experiences of Latino students in high schools and universities. The researchers conducted focus groups and used a purposive sample of academically successful Latino students. The participants frequently discussed the use of culturally or ethnically based knowledge, skills and abilities needed to excel academically and to survive perceived racial micro aggressions at their institutions (Luna & Martinez, 2013).

Another important facet of the findings was that it challenges previously mentioned research about FGCS students not receiving sources of capital from their non-college experienced parents. Luna and Martinez' (2013) study revealed that Latino parents largely shape their children's academic aspirations,

Although most parents could not contribute to the cost of college or help their children navigate the college application process they could provide support in other ways, such as words of inspiration and encouragement (p. 12).

Another study involving community cultural wealth focused on the experiences of undocumented Chicana college students. In this study, Yosso's forms of capital emerged as pathways that could move the students beyond their current circumstances (Huber, 2005). For example, the students were transformed by their parents' stories of migration and would connect their aspirations to their sense of family history. Additionally, Huber (2005) discovered that students often drew from the different sources of capital simultaneously, since these forms of capital intersected in many facets of their lives and were particularly impactful in allowing them to navigate a top-tier research university.

The ability of community cultural wealth to articulate the often unheralded strengths of marginalized students is a more than worthwhile topic to explore. It has been suggested that operating within a strengths-based framework leads to greater well-being inside and outside of the classroom (Ray & Kafka, 2014). Additionally, the tenets of critical race theory lend itself to understanding intersectionality and interdisciplinary perspectives within its framework. As Yosso (2006) mentions:

CRT in education works between and beyond disciplinary boundaries, drawing on multiple methods to listen to and learn from those knowledges otherwise silenced by popular discourse and academic research (p.8).

In summary, community cultural wealth is dedicated to exposing the strengths and sources of capital that low-income minority FGCS possess. The ability of underrepresented students to use sources of community cultural wealth to overcome

obstacles that they face in the university experience is an example of their ability to be resilient. To further understand how resilience is related to the educational experiences of low-income, minority FGCS, the next section of this literature review delves into resilience theory.

### **Resilience Theory**

Resilience research is “focused on individuals who experience severe hardship yet manage to achieve healthy development and academic success” (Campa, 2013). This study posits that resilience provides explanations as to why some minority low-income FGCS succeed even when faced with challenging circumstances. As a framework, this study defines resilience theory as a multi-dimensional concept which focuses on the assets and sources of cultural wealth that one possesses and allows them to bounce back or defeat the odds. Assets may include internal factors such as personal characteristics of social competence, sense of autonomy, sense of purpose and good problem solving skills (Benard, 2004). It may also include external factors such as access to positive peer relationships and an adult who shows interest and caring (Hartley, 2010).

**History of Resiliency Theory.** The history of resiliency theory emerged in the 1950’s in the fields of psychology, medicine, and public health. Then, researchers such as Hinkle (1974) and Anthony and Cohler (1987) featured early work that identified certain types of people as ‘invulnerable.’ Hinkle (1974) identified ‘true subgroups of invulnerables’ as “people who display a high degree of competence in spite of stressful environments and experiences” (Brown, D’Emidio-Caston, & Benard, 2001, p.11). While early research identified what resilience looked like in certain individuals, the landmark research that has paved the way for resiliency theory in education began on the island of



Kauai in 1955. There, researcher Emmy Werner spearheaded the first longitudinal study on resilience.

In this study, all children born on the island that year were followed over a span of 40 years (Brendtro, 2012). The children on this island faced very adverse conditions such as chronic poverty, parents who had not graduated from high school, and volatile family environments. Werner (1993) and her research team discovered that regardless of these challenging conditions, 70% of young people who were studied, were able to thrive. Their successes were attributed to three factors: 1) connectedness the participants felt with their community, 2) connectedness to their family and other adults, and 3) certain individual characteristics, such as not passively reacting to negative circumstances, but instead seeking out people and opportunities that led to a positive turnaround in their lives (Werner, 1995). Werner's research was the first of its kind to identify the predictive buffering elements known as "protective factors" that allowed vulnerable, at-risk children to overcome adverse situations (Werner, 1993). Now that background on the history of resilience theory has been presented, the next section of this paper identifies a subset of resiliency theory—academic resiliency.

**Academic Resiliency.** To further elaborate on resiliency theory as a framework, this study focused on the academic resiliency of students at the post-secondary level. Definitions of academic resiliency include, "the heightened likelihood of success in school and in other life accomplishments, despite environmental adversities, brought about by early traits, conditions, and experiences" (M. Wang, Haertel, & Walberg, 1994, p.46). Most academic resiliency studies have focused on the K-12 educational experience, but increasingly research on collegiate academic resiliency has risen to the

forefront. Academic resilience research is focused on the educational achievement of students despite the presence of risk factors, such as socio-economic status, parental background or minority status (Morales & Trotman, 2004). Risk factors are defined as any issue that stands in the way of a student's achievement; in this case, being poor and a member of a racial minority group makes for a risk factor in the collegiate environment (Morales & Trotman, 2004).

Along with risk factors, there are three other aspects of resilience theory that are often mentioned in the literature: vulnerability areas, protective factors and compensatory strategies (Morales, 2008). According to Kitano and Lewis (2005), vulnerability factors is an individual aspect that can later become problematic( i.e., poverty level, minority status, parent background). Protective factors are the strengths the individual possesses that can mitigate risk factors, and compensatory strategies are the methods that individuals cultivate to overcome vulnerabilities. A distinguishing point to make is that in academic resilience research, resiliency is viewed as a process. It is not a fixed attribute of a certain individual, but instead can be seen as a series of adaptations and responses.

As a stance, my proposed research study links academic resilience to the community cultural wealth framework mentioned in the prior section of this chapter. The six forms of capital mentioned earlier (aspirational, linguistic, familial, social, navigational and resistant) can be viewed as protective factors of academic resiliency. The challenge is that predominant deficit thinking and deficit policies do not activate these protective factors to their maximum potential. Instead, minority low-income FGCS receive mixed messages about the bounty of strengths they naturally possess. To harness these protective factors, Morales (2000) suggested that one pivotal recognition is the

student's own awareness of the relationship between their risk and protective factors, and their continuous and consistent refinement and implementation of protective factors as a method for achieving resilience. In other words, students can cultivate and enhance their resiliency by being aware and reflective. Furthermore, Morales (2000, p. 61) writes about the five-step resilience cycle, which he found to be evident through the resilient students' lives. The five steps are:

1. The student realistically and effectively identifies/recognizes her or his major risk factors.
2. The student is able to manifest and seek out protective factors that have the potential to offset or mitigate the potentially negative effects of the perceived risk factors.
3. The protective factors work in concert to propel the student toward high academic achievement.
4. The student is able to recognize the value of the protective factors and continues to refine and implement them.
5. The consistent and continuous refinement and implementation of protective factors, along with the evolving vision of the student's desired destination, sustain the student's academic achievement as new academic challenges present themselves.

Morales (2000) adds that central to the five-step resiliency cycle is the student's vision of where they wanted to be as a result of their education, "This vision assisted them in their academic journeys and helped provide the students with the impetus and drive to engage in each step of the cycle" (Morales & Trotman, 2004, p. 147).

In summary, community cultural wealth and resiliency theory are asset based perspectives in viewing the educational experiences of minority low-income FGCS. While the literature recognizes a slew of psychological and social barriers which impede the institution's ability to retain minority low-income FGCS my study was narrowed down to focus on a socially constructed barrier that exists for minority low-income FGCS—the hidden curricula. The next section provides information that defines this barrier further.

### **Hidden curricula**

Defining the hidden curricula entails dissecting two heavy loaded words; the connotation behind hidden suggests it is being kept from others and curriculum suggests that learning is supposed to occur. Taken together, keeping others from learning is an outright injustice, but unlike visible forms of barriers the hidden curricula are not easily detected or are sometimes 'hidden in plain sight' (Margolis, Soldatenko, Acker, & Gair, 2001) yet it impacts many minority low-income FGCS. The hidden curricula represent all of the unwritten rules that are a part of the daily structure or routine in educational institutions and can take place in a lecture hall, a faculty member's office hours or even used as a method for evaluating a student's performance (Sambell & Dowell, 1998).

It may represent the physical environment of a campus, perceptions of an individual's appearance, higher education rankings, and statuses of different disciplines (Margolis, 2001). Additionally, it is elusive in nature and can lead to consequences for minority low-income FGCS such as lowered grades, increased stress and academic marginalization (Snyder, 1971). All of these are threats to a student's ability to academically persist which then influences retention and graduation rates. As Smith

(2013, p.25) stated, “The concept of the hidden curricula reminds us that mastering the domain of the hidden curricula is an important component for achieving academic success because it indirectly influences student’s abilities and performance in the formal curriculum.”

The history of the hidden curricula is traced back to Philip Jackson’s 1968 book *Life in Classrooms* which unearthed a deep debate among educators and theorists over what schools do and do not do overtly or tacitly at the classroom level (Giroux, 1983). Places of education are not just where students learn arithmetic; it is also a place that is an agency of socialization, and a place that plays a role in the social, moral and economic reproduction of society. Students receive messages about what behaviors are reinforced (being polite, trying hard) and also about who is inherently in charge (the teacher) — Jackson (1968) also states that learning how to make it in school involves students having to falsify their behavior. Jackson adds that the constant impact of the hidden curricula requires a solution, and if addressing it fails then one surefire strategy to overcome it is a student completely checking out and not caring about whether they succeed or fail in the classroom—which Jackson refers to as psychological withdrawal.

After a review of the literature and the theoretical perspectives of hidden curricula, resilience theory and community cultural wealth, the research questions for this study were designed to understand the experience of minority, low-income FGCS at ASU and informed the research design of the study.

## CHAPTER 3

### RESEARCH DESIGN

The purpose of this qualitative research study was to explore if photo-elicitation facilitation and reflection groups influenced minority low-income FGCS to identify their sources of protective factors as a method of increasing their academic resiliency. This retrospective and qualitative study was designed to understand if academic resilience helps minority low-income FGCS overcome adversity such as navigating faculty aspects of the hidden curricula in college classrooms. It sought to capture the voices and visions of minority low-income FGCS at ASU through qualitative research which involved *testimonios* and photo-elicitation. These methods were intentionally chosen for this study because of their combined parallel philosophies that center around reflection and dialogue (Espino, Vega, Rendón, Ranero, & Muñiz, 2012; Lapenta, 2011).

#### **Methods Approach**

**Qualitative Approach.** This research project was intentionally qualitative in nature because qualitative inquiries are most appropriate for when a problem or issue needs to be resolved and when silenced voices need to be heard (Creswell, 2013). This certainly applies to Latina, low-income, FGCS as they are sometimes “invisible” in higher education research (A. M. Gloria & Castellanos, 2012), even though their college enrollment rates have increased (Sy & Romero, 2008). In this particular study, although Latina, low-income, FGCS represent the highest proportion of minority students at ASU,

they still experience lower retention rates than their non-minority peers (Office of Institutional Analysis, 2015).

Additionally, the ability of qualitative research to be inductive, emergent and shaped by the researcher's experience in collecting and analyzing the data complements this design. As such, this study used the qualitative, transformative and critical scholarship and methodology of *testimonios*. Reyes and Rodriguez (2012) defined *testimonios* as the "construction of a discourse of solidarity" (p. 526). Furthermore, a *testimonio* is meant to be heard and meant to produce awareness. While *testimonios* are often of an oral representation, in this study I also used an alternate form of data that captures the images of a student's particular *testimonio* to capture their protective factors or their multiple stages of phases of the factors by also engaging the participants in a photo-elicitation project. With *testimonios* and photo-elicitation, students were able to inform the study on what unheralded strengths they possess that fueled their resiliency and helped them become academically successful.

**Visual Research Methods.** Photo-elicitation was first introduced to the visual research methods world by John Collier, Jr (1957) as a concept called 'photo interviewing.' As an approach, photo-elicitation was one of the very first non-directive, open-ended interview methods which presented collaboration between the participant and the researcher (Lapenta, 2011). Its aim is to grant the participant greater "space for personal interpretations and responses" (Lapenta, 2011, p.201). There are multiple variations of photo-elicitation; some involve approaches where the pictures may be taken or selected by the researcher, while others may be taken or selected by the participant. The latter has been referred to in the literature as 'reflexive photography' or 'auto-driven

photo-elicitation ’ (Clark, 1999; Harper, 1987). In this study, the latter is the approach I selected and is referred to as participant driven photo-elicitation.

Photo-elicitation images provide a medium to communicate dimensions of participants’ lives, can ease rapport between researcher and interviewee and allows participants to illustrate multiple meanings that otherwise might have gone undiscussed in traditional interview approaches (Clark-Ibáñez, 2004; Liebenberg et al., 2014). For the purpose of this study, and as a central part of the procedure that I will discuss later, students were asked to use photo-elicitation to capture images related to the hidden curricula in their college experiences and also to capture images related to the sources of strength that fuel their academic resiliency.

### **Setting**

Arizona State University’s (ASU) Tempe campus served as the setting for this research study. ASU is the largest public university in the nation by enrollment (NCES, 2013). It is recognized as one of the most diverse public universities in the U.S. and has accomplished this through intentional institutional design. It bolsters a strong commitment to student success, access and excellence (“ASU Charter and Goals: 2015 and Beyond,” 2015). For example, ASU’s President Michael Crow states, “We reject the notion that excellence and access cannot be integrated within a single institution, and we have sought to redefine the notion of egalitarian admissions standards by offering access to as many students who are qualified to attend” (2011, p. 40). As a result of this accessible admissions process, ASU has had an increase of minority student enrollment by 100% and an increase in low-income student enrollment by 87% since 2002 (Crow, 2011).



The university is particularly interested in the success of Latino students and recognizes that the economic future of the state of Arizona relies on the educational progress of Latino students (Terrill, 2015). In a recent address at a Latino education foundation event, President Crow said,

We are also committed in our charter to taking responsibility for the broader community, for the community where we live and work. Both of these aims require that we address the Latino student-achievement gap. Arizona cannot fulfill its greatest potential if it fails to educate the fastest-growing populace in the state. ASU's Tempe campus in particular was chosen as the setting because it hosts the most heterogeneous blend of academic majors and disciplines and also has the largest population (by number) of Latina low-income FGCS than any of ASU's other campuses (Office of Institutional Analysis, 2015). In particular, the College of Liberal Arts and Sciences and the Ira A. Fulton College of Engineering were the two academic colleges that the participants were selected from. The College of Liberal Arts and Sciences is ASU's largest and most diverse college, offering majors and academic programs in the humanities, the social sciences and the natural sciences ("College of Liberal Arts and Sciences," 2016). The Ira A. Fulton College of Engineering is home to six schools of engineering disciplines and fields; it is the largest engineering school in the U.S. in terms of enrollment ("Ira A. Fulton Schools of Engineering Fact Book," 2016).

### **Participants and Sampling**

Participants in this study were chosen based on ethnicity, income, class standing and academic progression for the purpose of studying Latina low-income FGCS and across various identities. Specifically, I used a stratified purposeful sampling approach.

Stratified purposeful sampling lends credibility to a research study because it can serve as an area of comparison that is representative of the population of interest (Patton, 2001). Stratified random sampling was intentionally not selected as a sampling approach for this research study because random sampling for qualitative research is “not the most effective way of developing an understanding of complex issues relating to human behavior” (Marshall, 1996, p. 523). Using stratified purposeful sampling, the first strata involved identifying students who are Latina, low-income FGCS. There are several justifications for this sampling approach, first Latina/o students are the largest ethnic minority population at ASU—in 2013, Latina/o students represented 18.1% (13,892 students) of total enrollment. In contrast, total minority enrollment in 2013 was 33.5% (25,732 students) (Office of Institutional Analysis, 2015). Selecting Latina participants for this study allowed for a larger sampling and recruitment pool due to the sheer size of the Latina/o population at ASU. Secondly, Latina/o students experience stark differences in staying and eventually graduating from ASU when compared to non-minority students at ASU, with a 6% retention rate difference and a 10.4% 6-year graduation rate difference (Office of Institutional Analysis, 2015). Lastly, research suggests that although Latinas enroll and graduate from 4-year institutions at a higher rate when compared to their male Latino peers, they encounter unique educational barriers that impede their educational pursuits that are even more heightened when they are the first in their families to go to college and come from low income backgrounds (Engle & Tinto, 2008). Some of these unique barriers include balancing family responsibilities, lack of finances, limited family knowledge of college and practical support from families (Gloria & Castellanos, 2012; Sy & Romero).

The second strata was based on academic discipline. The participants' majors belonged to either of the largest colleges on the ASU's Tempe campus, the College of Liberal Arts and Sciences or The Fulton College of Engineering. These academic colleges were specifically chosen because they have among the highest proportion of Latina/o college students on the Tempe campus. For example, in the fall of 2013 the College of Liberal Arts and Sciences had the highest Latina/o enrollment numbers with 3,675 students enrolled (Office of Institutional Analysis, 2013). The Fulton College of Engineering had the third highest Latina/o enrollment numbers with 1,330 students enrolled (Office of Institutional Analysis, 2013).

The third strata involved academic progress. To be eligible for the study, participants must have attained at least 30 academic credits, with good academic standing, and were making timely progress towards graduation—these three characteristics of resiliency made them the appropriate participants for this study (Morales, 2008). These sampling methods were used to identify the students based on their fit with the criteria and the strata mentioned above. This sampling approach allowed me to select individuals because they can purposefully inform an understanding of the research problem and central phenomenon of the study (Creswell, 2013).

**Participant Recruitment and Research Procedure.** I recruited the participants via email starting the second week of classes for the fall 2015 term and recruitment took place for two weeks. The recruitment list of eligible participants from the College of Liberal Arts and Sciences yielded 166 students. On the other hand, the Fulton College of Engineering had a smaller eligibility list of just 43 students. I received responses from students fairly quickly for the College of Liberal Arts and Sciences and was able to fill

those five slots immediately. For the Fulton College of Engineering, I had to reach out to engineering focused student organizations to get the word out to eligible participants. Once I filled my ten participant slots, I scheduled the one-on-one interviews with the participants. Consent forms, participant expectations and an explanation of the study were provided to each participant prior to the study's start. Participants were given pseudonyms to ensure confidentiality and all consent forms and unique identifiers were locked and stored for safekeeping. As an introduction to the participants, brief vignettes are provided below. For more information about the student's bio sketches, please see Appendix C.

**Bella.** Bella is a 22-year old Women and Gender Studies senior. Bella comes from a family of seven. She immigrated to the US from Mexico and did not earn her citizenship until she was a sophomore in high school. She is graduating with her Bachelors in May and is considering pursuing a graduate degree.

**Serena.** Serena is a 21-year old Sociology major. She attended a local Tempe high school and decided to attend ASU because it was affordable and close to her family. She is active in student organizations on campus and she aspires to become a social worker in the future.

**Amalia.** Amalia is a 21-year old psychology junior. Her parents moved to the US from Mexico before her first birthday to seek better opportunities for their family. She calls herself a "dream catcher" and wants to ensure that others like her are not prevented from accessing a quality college education.

**Flora.** Flora is a 24-year old microbiology junior. She immigrated to the US from Mexico when she was four years old. Prior to coming to ASU she enlisted in the military

as a way for her to gain US citizenship. She is active in the Army reserves and aspires to be a dentist in the future.

**Diana.** Diana is a 20-year old junior majoring in Justice studies. She became an independent student at 14 years old after her father was deported to Mexico. Diana is in the Army ROTC and aspires to be an ROTC teacher in the future.

**Anna.** Anna is a 19-year old student majoring in Industrial Engineering. She immigrated to the US from Mexico when she was two years old. Anna comes from a tight knit family with siblings who have already graduated from ASU.

**Jessica.** Jessica is a 21-year old junior majoring in Mechanical Engineering. Prior to coming to ASU, Jessica was a community college student. Despite graduating in the top of her class, she did not attend a university right away because of cost.

**Sammy.** Sammy is a 22-year old Industrial Engineering major. She immigrated to the US from Mexico when she was four years old. Sammy is active in several women's STEM student organization programs at ASU. She wants to be an Engineer because it validates her love for math and science.

**Jenny.** Jenny is a 20-year old Engineering junior. She was born in Mexico and is the first in her entire extended family to attend college. Jenny was active in the Robotics club in high school and this encouraged her to pursue Engineering as a major in college.

**Itzayanna.** Itzayanna is a 21-year old junior majoring in Biomedical engineering. She immigrated to the US when she was in the fourth grade. At ASU, Itzayanna volunteers regularly with STEM outreach programs hoping to introduce more young people to pursue engineering.

The table below provides a complete list of demographic information about each participant.

*Table 2. Participant Demographics.*

Identifier (Pseudonym)	Ethnicity/Race	Pell Grant & FGCS	Class Standing (30+Credits)	College	Major	Age
Bella	Latina	Yes	Senior	College of Liberal Arts and Sciences	Women and Gender Studies	22
Serena	Latina and Caucasian	Yes	Senior	College of Liberal Arts and Sciences	Sociology	21
Amalia	Latina	Yes	Junior	College of Liberal Arts and Sciences	Psychology	21
Flora	Latina	Yes	Sophomore	College of Liberal Arts and Sciences	Microbiology	24
Diana	Latina	Yes	Junior	College of Liberal Arts and Sciences	Justice Studies	20
Anna	Latina	Yes	Sophomore	Fulton College of Engineering	Industrial Engineering	19
Jessica	Latina	Yes	Junior	Fulton College of Engineering	Mechanical Engineering	21
Sammy	Latina	Yes	Senior	Fulton College of Engineering	Industrial Engineering	22
Jenny	Latina	Yes	Junior	Fulton College of Engineering	Robotics	20
Itzayanna	Latina	Yes	Junior	Fulton College of Engineering	Biomedical engineering	21

**Role of Researcher.** My role as a researcher in this study was to create, investigate, facilitate, participate and be an observer in this project. Participant observation is a qualitative data collection method that entails being embedded in the context of the study, building rapport with participants, and spending enough time interacting to get needed data (Guest, Namey, & Mitchell, 2013, p.77). The nature of participant observation means that the data collected is inherently unique to the observer, therefore, personally, I had to be cognizant of my role as a steward of public higher education and the power differential that existed between me and the participants. On the other hand, I also identify as a minority low-income FGCS and this has motivated me to dedicate the span of my professional career to ensure that students who are similar to me have the opportunity to reach their full potential. Throughout this study, I spent copious amounts of time reflecting on similar challenges and successes that I experienced as I navigated ASU as a first-time freshman. I vividly recall the excitement I had to pursue a university education, but I also felt a tremendous sense of pressure to figure out so much on my own.

Now that I am a practitioner, I draw from my own professional experiences as a seasoned retention and student support services administrator. I resonate with the racial and social class stature of the students, and I was also a student at the time the research was conducted, but I am also an administrator. I was aware that these intersections may lead to “an added sense of self-discovery and social advocacy” for me as a researcher (Herr & Anderson, 2015, p. 57). I ensured that I was transparent with my participants about my experiences and my multiple roles as researcher.

## **Action Plan**

This study focused on addressing the following research questions:

- 1) Do minority low-income FGCS define and develop their academic resiliency in college classrooms? If so, how?
- 2) What are the protective factors that have emerged to help students to remain resilient in these classrooms?
- 3) Do students utilize these protective factors as resiliency capital to navigate the classroom environment? If so, how?
- 4) How do students further build upon these protective factors to increase the academic resiliency for other low-income FGCS?

Participants were asked to take part in a ten-week study in which they were trained on the concepts of photo-elicitation, asked to take pictures, responded to journal prompts, participated in photo-elicitation processing focus groups and then worked together to compile recommendations for faculty, administrators and other minority low-income FGCS. This study took place over the fall 2015 semester during a ten-week time span (August 2015-November 2015). It consisted of a photo-elicitation facilitation and reflection group in which Latina, low-income FGCS identified aspects of the hidden curricula encountered in the university that were challenging in their educational journeys and guided them to identifying the sources of strength (i.e. protective factors) that they channeled to overcome those challenges. At the end of the process, the participants were asked to cultivate a set of recommendations that the institution should implement to help future minority low-income FGCS reach greater success at ASU.



**Timeline and Curricular Sequence.** The table below represents the timeline of the study (Table 3). As the researcher and facilitator, I developed the protocols for each phase of data collection. This includes protocols for photo-elicitation facilitation and reflection groups, interview and group protocols, journal prompts and photo-elicitation training. I also oversaw the photo-elicitation facilitation groups, stored the data, analyzed the data and helped the students cultivate a set of recommendations that could be disseminated to the ASU community. As the researcher, I kept a research journal to capture my impression of themes, experiences and reactions to the entire study’s process. This method of self-reflection can be helpful in documenting and creating transparency in the research process by providing a “research trail” of any aspects of my experience as a researcher that may impact the study and the analysis of the data collected (Ortlipp, 2008).

Table 3. *Study Timeline and Sequence*

<b>Period</b>	<b>Focus of the Time Period</b>	<b>Average Time</b>
Weeks 1-2	Initial <i>Testimonios</i> gathered from each participant	43 minutes per participant
Week 3	Session 1: Group Introductions, Purpose of Study, Photo-elicitation 101	2 h total
Week 4	Participants gather photos, journal about the photos and the prompts.	30 minutes-1 hour
Week 5	Session 2: Processing of photos, focus group	2 h total
Week 6	Participants gather photos, journal about the photos and the prompts.	30 minutes-1 hour
Week 7	Session 3: Processing of photos and the prompts, focus group.	2 h total
Week 8	Participants gather photos, journal about the photos and the prompts.	30 minutes-1 hour
Week 9	Session 4: Processing of photos and the prompts, focus group.	2 h 30 minutes
Total Participant Time Commitment:		11 hours- 12.75 hours

During the ten-week cycle, I first met with each participant individually to gather their *testimonios*. Then, the participants voted on a mutual time that worked for all ten individuals to participate in the photo-elicitation facilitation sessions. The sessions took place in a conference room on the Tempe campus during a series of Wednesday evenings from September to November. Knowing that participant engagement would be crucial to this study, participants were offered a cash stipend for their time (up to 75 dollars). Additionally, dinner was provided for each group session. In total, I facilitated ten one-on-one interviews and four group sessions with the participants. The participants had a 100% engagement and attendance rate for all of the study's components. Table 4, which is presented below, lists each focus per session. In the sessions I provided information to the participants that informed their understanding of the study's process and trained them on concepts of photo-elicitation. In the first session, the focus centered on orientation, group building and photo-elicitation training. Then, the subsequent sessions focused on processing, reflecting and analyzing the prompts with each other. Lastly, the fourth session focused on culminating the experiences of the participants into a set of recommendations for students and faculty.

Table 4. *Photo-elicitation Group Facilitation Process Description*

Session	Description
Session 1	<ul style="list-style-type: none"> <li>• Orientation</li> <li>• Introduction to Photo-elicitation</li> <li>• Overview of Photo-elicitation prompts and journal prompts for Session 2</li> </ul>
Session 2	<ul style="list-style-type: none"> <li>• Process, reflect, analyze, contextualize and categorize hidden curricula photos</li> <li>• Overview of Photo-elicitation prompts and journal prompts for Session 3</li> </ul>
Session 3	<ul style="list-style-type: none"> <li>• Process, reflect, analyze, contextualize and categorize resiliency and community cultural wealth photos</li> <li>• Overview of Photo-elicitation prompts and journal prompts for Session 4</li> </ul>
Session 4	<ul style="list-style-type: none"> <li>• Process, reflect, analyze, contextualize and categorize expert ability photos</li> <li>• Compile expert student recommendations</li> </ul>

**Data Collection Resources**

To ensure that I addressed the research questions in this study, I used a suite of qualitative data collection tools which will be discussed in greater detail below. They were 1:1 *testimonios*, photo-elicitation images, student journal responses, Facebook comments and transcripts of audio recorded focus group discussions. Data collection commenced on August 31, 2015. The final group session took place on November 4, 2015.

**Testimonios.** The *testimonios* were collected in the first two weeks of this study. Individual interviews were held with ten participants. The interviews were about 45 minutes in duration. During these interviews, students were asked about their experiences as Latina low-income FGCS at ASU and what sources of strength they relied on when times became tough. I asked participants open ended questions such as “Looking back on your freshman year, what did you not know about college that you feel like would have been important to know?” Another sample question is “Can you tell me about a college memory related to a classroom or a lecture hall that stands out for you? What happened?”

and “When it gets tough for you, what do you do? How do you deal with it?” For the full set of interview questions, Appendix B features the protocols for the *testimonios* of this study. Participant *testimonios* were recorded on a laptop with the recording software Audacity and also with an iPad through an app called Super note. The interviews took place in a private office or conference room on the Tempe campus. I sent each individual interview recording to an external transcription company. Once I received the transcripts, I reviewed each recorded interview and compared it with the transcript to ensure accuracy of the data. The *testimonios* amounted to over seven hours of audio data and 60,446 words.

**Photo-elicitation materials and Facebook group dialogue.** The first group session took place on September 23, 2015. During this session, I trained participants on the concepts of photo-elicitation, its history, and shared with them examples of how photo-elicitation projects have been used around the world and in different studies. Then, I explained to the participants the parameters and procedures to abide by when taking pictures for the study. This included avoiding taking identifiable pictures of other subjects, considering the privacy and personal safety of other subjects and also ensuring that the pictures do not violate the student code of conduct. Then, I shared with the participants the expectations for taking part in the study. (See Appendix B for the Photo-elicitation protocols).

First, participants were given a prompt and then asked to take 3-5 photos per photo-elicitation facilitation session group. Each participant was offered the opportunity to borrow a digital camera from the researcher, but all participants opted to use their mobile phones. Then, instructions were given related to the storage of the photos. To

facilitate group dialogue and also have an area to catalogue and store images, I created a private Facebook group page just for the participants and myself. For each group session, I created an album for the students to store the photos related to the prompts for the corresponding session. In between sessions, participants were encouraged to view and comment on each other's images. The participants were not provided prompts. They responded freely to each other's pictures. Then, at each in-person session I asked the participants to identify several images to share with the rest of the group and these images were displayed via projector. The images were discussed with the rest of the participants through a facilitation process that I oversaw. By the final session, the participants gathered 107 images and had a 3,894 word count for captions.

**Student Journals.** Participants were asked to respond to journal prompts based on the set of 3-5 images they took in response to the theme of that session. Instructions regarding the student journal prompts were discussed at each session and were uploaded in the participant's google drive folder as a reminder. Examples of the journal prompts are "It took me a while to figure this out, but..." or, "Not everyone knows this but..." or "In my experience I see..." The participants responded to the journal prompts electronically through a password protected google drive folder shared between me and the participant. Journaling allows participants the opportunity to interpret, reflect, document, and recall their experiences in a photo-elicitation process. It will also provide another opportunity to capture the student's voices while simultaneously allowing for another layer of complex analysis (Delgado, 2015). At the end of the session, 27 journals were collected amounting to a 7,100 word count.

**Focus group.** During the photo-elicitation facilitation group sessions I asked pointed questions to help gather the group's contextualization and interpretation of each other's images. Some of the group questions included: "What are some of the commonalities or differences that you see in the pictures shared at today's session?" or "What influence do you think those commonalities/differences have on a minority low-income first generation college student's ability to succeed or not succeed here at ASU?" or "What do you think ASU could do better regarding the themes you mentioned today?" These questions are modeled after a participatory action research approach in image-based interviewing called photovoice (Wang, 1999), in which participants are asked to take photographs that capture their daily routines, common events or community life (Lapenta, 2011). In Wang's approach to elicit participant reflections, there are group processing questions which form the acronym SHOWeD:

S- What do you See here?

H- What is really Happening here?

O- How does this related to Our lives?

We- Why does this situation, concern or strength exist?

D- What can we DO about it? (Wang, 1999 p. 188).

The discussion group was audio recorded with a laptop using the Audacity app and also with an iPad. I sent each session recording to an external transcription company. Once I received the transcripts, I reviewed each recorded session to ensure accuracy of the data. The focus group discussions amounted to 5.5 hours of audio data and 46,454 words.

## **Data Analysis**

The data analysis procedures I followed stem from a grounded theory approach. Grounded theory is a methodology that guides researchers in developing theory out of data, thus making the theory “grounded” in the data (Creswell, 2013). This data analysis approach was selected because of its ability to cultivate new development of a theory or a mode that can be used to shape retention initiatives that have been vetted and constructed by the participants. This approach was used for analyzing the audio and digital data as listed in the previous section. In the section below, I describe the steps I followed.

In Charmaz’ (2014, p.46) approach to grounded theory, coding is the pivotal link between collecting data and developing an emergent theory to interpret the data. I used coding to define what is happening in the data and to understand what it meant.

According to Charmaz (2014, p.46), there are at least two main phases in grounded theory coding: 1) an initial phase involving naming each word, line or segment of data followed by 2) a focused selective phase that uses the most significant or frequent initial codes to sort, synthesize, integrate and organize large amounts of data. I used constant comparative methods (Glaser & Strauss, 1967) to make sequential comparisons for every unit of data, every participant, and every session.

I analyzed the data as I received them and also conducted a comprehensive analysis of all data once the study ended. I created digital folders in my password protected google drive to store the analyzed data per participant, per session and per data collection source. At the culmination of the study I had audio data (12.5 hours) and digital data in the form of images (107 pictures), captions (3,894 word count) and journals (27 journals: 7,100 word count). Each data source was uploaded to the Hyper

Research qualitative software. I used this software to navigate per data source and per participant. Additionally, I used the Hyper Research qualitative software application to create, store and analyze codes.

In the initial phase of coding, I focused on sticking to the action of the phrase or the sentence. This approach helps curb tendencies to make conceptual leaps and also preserves the perspective of the participant (Charmaz, 2014). I followed the grounded theory approach of incident by incident coding for the data sources, in which I coded the main components of the data source as the participants answered the questions which described their educational journeys or as they responded to prompts. Charmaz (2014) describes incident by incident coding as a close cousin to line by line coding. Through initial coding, 183 open codes were identified. I used the constant comparative method to classify, compare, group and refine these open codes into larger themes (Fossey, Harvey, Mcdermott, & Davidson, 2002). I read through all the codes to see what parallels existed within the data sources and amongst the participants. Then, I also looked for any differences amongst the data sources and the participants.

In the focused, selective phase of coding I grouped the open codes into larger conceptual categories and also determined which codes would need to be renamed or collapsed. Categories that resembled a protective factor or a source of community cultural wealth were categorized distinctively. Using Hyper Research, I analyzed categories by frequency and also by data source, which allowed me to pinpoint if data saturation occurred and with what data source or with which participants. This also allowed me to see what elements of the data needed to be revisited or reanalyzed, using the categories that emerged in the selective coding phase. I took notes of my progress and



used constant comparative methods consistently throughout the navigation of all data sources and participants. Below, I recount the analysis strategies I followed.

***Testimonios.*** My analysis of the participant *testimonios* began with a read through of each transcript. Prior to uploading the transcripts to Hyper Research, I used Microsoft Word to compare the transcribed document with the audio recordings of the *testimonios*. I used the highlight and underline feature to distinguish any statements or words that emerged through participant voices. Then, I uploaded those documents to Hyper Research and began open coding. Then, as the group sessions started, I went back to the *testimonios* and compared them to the journals, the focus groups, the images and the Facebook discussions.

***Photo-elicitation Materials and Facebook Dialogue.*** My analysis of the photo-elicitation materials started with immersion with the data. I did this by copying each picture from the private Facebook group and saving it in a Power Point file after each of the three photo-elicitation sessions. I completed this process for all 107 photo-elicitation materials. I grouped the pictures by participant, per session so that I could compare across cases and across sessions. I used the notes section in Power Point to write down initial impressions of the images, otherwise known as ‘memoing’ (Konecki, 2011). Then, I compared these images to the rest of the data sources. Blending photo-elicitation with grounded theory allows for taking the concepts of photo-elicitation a step beyond just informing decision makers about their experiences, but it also allows for the opportunity for participants to name specific strategies or recommendations related to their unique social contexts (Lopez, 2005). The specific strategies and recommendations were

captured via audio recording and were also reviewed, analyzed and coded in Hyper Research, starting with open coding, moving to selective coding, then pulling out themes.

***Student Journals.*** Initial reading and analysis of student journals occurred after the completion of each photo-elicitation facilitation session. I downloaded all of the journals from the password protected google drive folder and uploaded them to Hyper Research. Open coding took place as each journal was received, and selective coding took place at the conclusion of the study when all data sources had been received and analyzed.

***Focus Group.*** Analysis of the three focus groups started with reading through the transcripts and comparing them with the audio recording. Then, each focus group was uploaded to Hyper Research, coded, categorized and compared amongst the other data sources. The next section of this paper goes into greater detail about how I supported the validity and trustworthiness of this qualitative research study.

### **Validation and Trustworthiness**

To ensure that this qualitative research study helped to facilitate greater understanding of the experiences of Latina low-income FGCS at ASU, I used validation and trustworthiness strategies. It is recommended that a qualitative researcher utilizes at least two validation strategies (Creswell, 2014). The strategies that I found to be the most appropriate for this study were member checking and triangulation. Member checking is defined as a quality control process by which the researcher seeks to improve the accuracy, credibility and validity of what has been recorded or what has been interpreted of the findings (Harper & Cole, 2012). This process fit well with this study because it was important to me that the participants deemed the transcriptions and the findings to be

authentic. Member checking took place during the interviews by asking questions such as ‘Am I understanding this correctly? Or ‘Did I capture what you said right? I also continued the member checking process after the *testimonios* have been transcribed through follow up communication sent to the participants via email. Member checking also took place in the photo-elicitation facilitation groups and was a consistent part of the agenda as the participants confirmed and clarified their images and responses to the images with each other.

Triangulation is defined as the use of multiple data sources in an investigation to produce understanding (Creswell, 2013). In this instance, visual, verbal and reflexive data sources helped to ascertain consistency in the study. The initial *testimonios* set the stage and was designed to answer the first two research questions. The photos, the focus group transcripts and the student journal responses were helpful in addressing all four of the research questions. It was important to me to analyze at what point these data sources converged as I discovered that it led to a powerful set of insights. Another method of triangulation that I implemented is looking at the data sources at different points in time, (i.e. pre-facilitation sessions) at the *testimonio* stage, during the photo-elicitation facilitation group process and at the final session (Patton, 1999). The main takeaway with triangulation is not solely for consistency, in fact there may be times that the data is inconsistent, but the point is to be able to identify what and why there are differences (Patton, 1999 p. 1195).

Lastly, to help secure this study’s trustworthiness I looked closely at my role as the researcher. Since the researcher is seen as an instrument in qualitative inquiry (Patton, 1999), my training, my personal experiences, my perspectives, my relationship to the

participants and my relationship to the institution are all factors that were mentioned to my participants and in my write-up of the findings. It could be said that I am both advantaged and disadvantaged by my embeddedness in the university as an administrator and also in my own experience as a low-income, minority FGCS. It's advantageous for building rapport, being able to ask pointed, clarifying questions and also for having empathy for the experiences of my participants. Yet, I am aware that these perspectives can also serve as blind spots because I am personally and professionally invested in helping students succeed at the institution where I am both an alumnae and an employee. As Patton (1999, p.1198) states, "The principle is to report any personal and professional information that may have affected data collection, analysis, and interpretation either negatively or positively in the minds of users of the findings." I was transparent with the participants prior to data collection and during the study. I also used the practice of reflexivity by keeping an electronic research journal that can serve as repository of any changes to the data collection or data analysis processes that I encountered along the way.

## CHAPTER 4

### FINDINGS

The goal of this study was to explore if photo-elicitation facilitation and reflection groups influenced minority low-income FGCS to identify their sources of protective factors as a method of increasing their academic resiliency. The qualitative data sources gathered to explore the answers to this research study included audio data (*testimonios* and focus groups) and digital data (photo-elicitation materials, student journal responses, Facebook captions and group dialogue). In this chapter, I present findings from analysis of each research question, providing supporting evidence through participant quotes, journal entries and photo-elicitation images. The following research questions were examined:

1. Do minority low-income FGCS define and develop their academic resiliency in college classrooms? If so, how?
2. What are the protective factors that have emerged to help students to remain resilient in these classrooms?
3. Do students utilize these protective factors as resiliency capital to navigate the classroom environment? If so, how?
4. How do students further build upon these protective factors to increase the academic resiliency for other low-income FGCS?

#### **Research Question #1 Findings**

To examine Research Question #1, *do minority low-income FGCS define and develop their academic resiliency in college classrooms? If so, how?* All components of the study were analyzed using grounded theory (Charmaz & Mitchell, 2001). The themes

that emerged from the data revealed a lot about the various sources where academic resiliency is defined and developed, yet the college classroom was not the exclusive source. In this study, academic resiliency is defined as the educational achievement of low-income, Latina FGCS in the midst of institutional and systemic risk factors. They perceive the cyclical effects of poverty and its visible representation of preventing access to opportunities, coming from underperforming and underfunded high schools, immigration policy barriers, unsupportive faculty, lack of diversity in classrooms and being immersed in sexist classrooms as some of the institutional and systemic threats to their educational success. In response to these perceived risk factors, the Latina low-income FGCS participants cultivated protective factors—the strengths an individual possesses that can mitigate risk factors. In this study, data analysis revealed that protective factors which cultivate academic resiliency often represented sources of community cultural wealth (Yosso, 2005) that existed beyond the walls of a university classroom.

Results for the first research question indicate that the students' perceptions of the development of their academic resiliency were enhanced by their ability to maneuver and find connections to a peer network (social capital) who could identify with the challenges of being a low-income FGCS and by being connected to a major or career path in which they felt personally and professionally aligned. I called these two categories **social capital connections** and **aspirational capital connections**. Then, a discussion about **faculty and classroom environments** is presented. Therefore, this study asserts that minority low-income FGCS define and develop their academic resiliency inside and outside of the college classroom through formal and informal networks.

**Social Capital Connections.** Students perceive the facilitation of social capital connections through informal and formal peer networks as closely related to their academic resiliency. All participants in this study named an aspect of a peer network as a major source of support in bridging the gaps of college-related knowledge their parents were unable to pass down to them and in offering a sense of community and a second family at ASU. These peer networks offered navigational capital strategies (Yosso, 2000) by sharing and modeling how they maneuvered the institution and informational capital, or the knowledge that can be “processed, stored, and transmitted into a set of actions that support and empower students toward academic and social success” (Cooper & Liou, 2007, p.44) .

The participants attributed their educational achievements to peers who provided valuable navigational skills and college information that aided with their university transition. Whether it was a member of a student organization reaching out (formal network- institutionally supported form of social support), or a high school friend offering advice (informal network- non institutional form of social support), it is evident that the power of peer networks offers more than just a bridge for social belonging. It is also often a place where personal and professional development can occur, career aspirations can be introduced and emotional support can be garnered. For example, the quotes below illustrate the capacity of formal networks to offer these types of support. Diana (Justice Studies, junior) said,

It (her Latina sorority) ended up being a lot more fun than I expected. I’ve grown in the way that I’ve become more social. In high school, I couldn’t really keep a

conversation; I was really quiet. Now, I just became more open; I've developed more communication skills (*Testimonio*, September, 11, 2015).

Similarly, Itzayanna (Biomedical Engineering, junior) said,

Being involved in SHPE (Society of Hispanic Professional Engineers) provides a lot of support. They are definitely people I can relate to. Many of them are in a similar situation as me where they are first-generation. It's like a support system and there's opportunities there I might not be able to get if I wasn't in an organization (*Testimonio*, August, 31, 2015).

The participants above attributed a refinement in their personal and professional growth to formal networks (i.e. established student engagement opportunities at the university), such as a Latina sorority or a Hispanic professional association. Access to these formal networks emulates the college capital that continuing generation students are privy to as knowledge related to college is passed down from one generation to the next (Stanton-Salazar, 1997). Whereas continuing generation students often gain access to knowledge related to college capital from their family members, in this study, the participants received college capital knowledge from their peers, or knowledge of how to negotiate hidden curricula. It is important to note that although the participants' parents did not have prior college experience, they placed a high value on college education and offered support and cultural knowledge that also helped the students navigate the institution—these are discussed in the findings for the second research question in this study.

Findings for this research question suggest that the participants gained compensatory social capital benefits from other FGCS they met through formal network



connections. Other formal network connections that came up in the study included cohort-based scholarship support programs for low-income college students, on-campus student employment opportunities, high school outreach programs, mentoring programs and service-oriented organizations. These types of formal network connections were referenced frequently throughout the study, resulting in over 57 referenced codes. This suggests that the participants' social capital connections with institutionally supported networks was a highly utilized protective factor.

Furthermore, students have indicated that outside of these formal networks that are facilitated by the university, they also have informal networks (i.e. not an established student organization) which further contributes to the development of their academic resiliency. These informal social capital connections provided a wide range of support—from offering academic skills tips to encouraging that the participants remained enrolled at ASU. For example, Itzayanna (Biomedical Engineering, junior) said,

I received advice from my friends. Since I was a year behind, my friends from high school who graduated with the group that I was supposed to graduate with, they came to college. They gave me little tips. They said, 'You know it always helps if you sit in the front because if you sit in the back you're not gonna pay attention, and you're going to be distracted by other people' (*Testimonio*, August 31, 2015).

The quote above demonstrates that minority, low-income FGCS receive tangible navigational and informational capital tips to be successful in the classroom from their peers. They draw from peers in formal and informal networks outside of the classroom to help them to attain success inside the classroom. These tips help to instill strategies that

fuel academic resiliency and therefore act as protective factors. This is further demonstrated in the image below. In one of the photo-elicitation facilitation sessions, participants were asked to capture images related to what keeps them going when times get tough academically. In Figure 1 below, Serena (Sociology, senior) names her best friend as her support for those difficult moments when she sometimes felt like leaving the university because of academic challenges, such as balancing rigorous classroom material with the demands of having to work to provide for herself financially. The image portrays a band playing at a social gathering at Serena's friend's house, and she elaborates on how this fuels her academic resiliency in the caption below.

*Figure 1. Photo-elicitation - Social Capital Connection.*



Serena (Sociology, senior) said,

This photo represents my friends. In this case, I went to a show hosted at my best friend's house because her roommate is in a band. When I feel like quitting because school has me down, I can always go to my friends, especially my best friend, for support. She makes me feel at home whenever I'm with her. (Student Facebook caption, October 17, 2015).

Results revealed that the power of these social capital connections (formal or informal) were compounded when students felt that they could relate to those peers. They used phrases such as “felt comfortable,” “makes me feel at home” and “they’ve been there before” or they identified their peers as also being low-income, minority FGCS to convey that relatable peers helped them to define and develop their academic resiliency. Due to these connections and their ability to relate to their peers, it has allowed for students to facilitate their social capital and to foster their resiliency. As Isabel (Women and Gender Studies, senior) said:

I think when you see somebody like you doing something that you want to do, it makes it reachable. Whereas, it seems like abstract when you have a certain dream, but when you see somebody like you in that situation, it's like "I can do this too." (Focus Group. September 23, 2015).

This quote suggests that students in this study perceived the presence of successful, minority low-income FGCS at ASU as a marker that success can be possible for them as well. It sends a message that the university can foster a space that has allowed other minority, low-income FGCS to navigate the institution despite the presence of perceived risk factors. Their ability to see success modeled from students who have similar experiences as them helped to define and develop their academic resiliency and also allowed the participants to have high hopes for success beyond the classroom, and into their future aspirations. This theme is further discussed below and is named aspirational capital connections.

**Aspirational Capital Connections.** Participants in this study expressed a strong connection to their future aspirations and attributed that to increased academic

achievement, or the development of their academic resiliency, despite the presence of perceived risk factors such as coming from low-income schools, or not being fully informed of the academic opportunities available to them. The data analyzed were coded in Hyper Research with the sub codes “career alignment,” “student-development” and “career development.” These codes were referenced 59 times throughout the study signifying that aspirational capital connections were pivotal for the participants to define and develop their academic resiliency. In participant *testimonios*, the students were asked to share information about their classroom experiences. They often revealed moments of discovery when they saw their personal values align with the academic curriculum they were receiving in their classrooms. In the passage below, Amalia (Psychology, junior) talks about her experience when she discovered how leaving her original major of Political Science and switching to Psychology allowed her the opportunity to understand herself and others better. Amalia said,

Now that I've switched to Psychology, I'm really enjoying my classes where we talk about personality, where we talk about growth, relationships. Why people act a certain way. Just because it helps me understand the person. It helps me sympathize with them or figure out ways that I can be able help them. It also helps me learn about myself and what I can do to be successful. Classes like that where they challenge me to think critically and think about others. And, realize some of the mistakes that I'm making and be able to change the way of thinking, those are really great for me (*Testimonio*. September 9, 2015).

Amalia adapted the knowledge she learned from class into her own self-development, and she named this as one of her favorite academic experiences thus far. This suggests

that students in this study used the ability to maneuver academic majors—i.e. their navigational capital, to further their aspirational capital connections. Furthermore, participants also found aspirational capital connections that could make use of their experiences coming from low-income communities. In the passage below, Jenny (Robotics, junior) describes how she could see herself being an asset to the engineering community because of her abilities to spread out scarce resources as a result of coming from a low-income school.

Jenny (Robotics, junior) said:

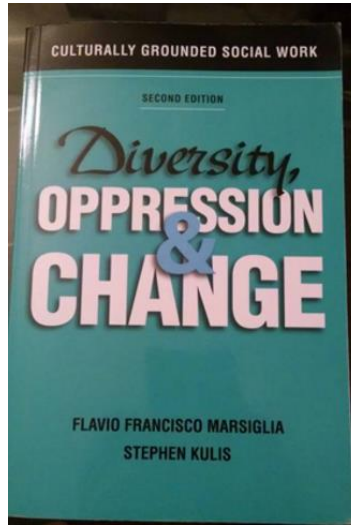
I just liked the idea of being able to create stuff that would be useful to people. We would always think about being kind of sustainable. We didn't have a lot of resources. We kind of had to be sustainable. That made me think about if ... We were a school that doesn't get much funding, we kind of have to pitch in and buy the materials and stuff. If I could take this mentality of you can do anything you want even if you don't have a ton of resources, you can still make something completely useful. I wanted to bring that mentality into the engineering profession (*Testimonio*. August 31, 2015).

Jenny's statement is an example of how participants in this study used aspirational capital connections to position themselves as professionals for their future careers. Instead of seeing participants who come from a low-income school as a deficit, Jenny is demonstrating that these experiences can actually be an asset for her future career.

Additionally, students stated that their aspirational capital connections could also be propelled to improve the conditions of other students, and were motivated to embed themselves even further in their academics to help. In one of the photo-elicitation

facilitation sessions, participants shared how they could see themselves changing the experiences of other minority, low-income FGCS at ASU. In the photo-elicitation example below Serena (Sociology, senior), who aspires to be a social worker in the future, shares an image of a book she is reading in her social work class.

*Figure 2. Photo-elicitation - Aspirational Capital Connection.*



She captioned the photo as:

Right now, my studies in social work is going to make me a great resource for future low-income, first-gen Latina students. I will be knowledgeable in how to work with this population, how to help them find their inner strength, and how to guide them through the bumps in the road (Student Facebook caption. November 14, 2015).

This photo-elicitation image and caption suggests that participants, through aspirational capital connections, possess the ability to transform not only their educational journeys, but also the lives of other students. This signifies that students see aspirational capital connections as a pathway for rewriting their histories and overcoming risk factors. It also

signifies their optimistic perspective of their mobility in the educational institution. Once students maneuvered their way through the institution by employing navigational and aspirational capital, they saw the institution as fertile ground for continuing to sharpen their academic resiliency and further advance their education.

For example, students were excited about their futures. For example, Bella (Women and Gender Studies, senior) stated, “There’s always opportunity. I don’t want to just stay in one area. I can get a doctorate” (*Testimonio*, August 31, 2015). This simple statement suggests that minority, low-income FGCS are academically resilient by declaring that they can see themselves sustaining their academic resiliency with longevity in academia by pursuing the pinnacle of higher education. This leads to the final theme that emerged for the first research question—the influence of faculty and classroom environment in the development of academic resiliency for minority, low-income FGCS.

**Faculty influence and classroom environment.** Participants perceived the influence of faculty and classroom environment as less of a factor in the development of their academic resiliency. As stated earlier, the results from this study suggests that academic resiliency is not exclusively developed or defined in college classrooms. In fact, these codes combined were referenced just 22 times throughout the entire study, which pales in comparison with other codes mentioned in this chapter which were almost double this amount. Regardless, this is an important area to elaborate upon because the literature suggests that faculty interactions and the classroom environment plays a pivotal role in the retention of low-income, minority FGCS (Schreiner, Noel, Anderson, & Cantwell, 2011). When asked to reflect about classroom experiences in the participants’ *testimonios*, they provided mixed responses when discussing their experiences with

faculty. Some participants shared that they valued their interactions with faculty members. They named experiences with professors who offered encouragement, assistance with assignments, and also connected them with opportunities such as on-campus employment.

Sammy (Industrial Engineering, senior) said:

Professor X, she was amazing. I would go to her office hours a lot. I'm actually going to be a grader for her, too, like a quiz master. She helped me a lot to keep moving forward. If I was stuck on something she would motivate me to go to labs. She would be there open for questions. She was awesome (*Testimonio*, September 3, 2015).

In Sammy's example above, she demonstrates that there was ease around navigating her experience with her professor. She provided an example of how navigating relationships with faculty members can lead to an accumulation of social capital in the way of opportunities and other types of support (Stanton-Salazar, 1997). This was a piece of wisdom that participants learned to become aware of; in fact, participants shared how they wish they would have established relationships with faculty members sooner. In one of the photo-elicitation facilitation sessions, participants were asked to share pieces of information that they knew now as upperclassmen, that they wish they would have known as freshmen students. One of the images shared by Serena (Sociology, senior) displays a faculty member's office hours' sign.



Figure 3. *Photo-elicitation - Faculty influence.*



Serena captioned the photo as, “Something I wish I could tell my freshman self: GO! Developing relationships with your professors is more valuable than you know!” (Student Facebook caption. September 27, 2015).

To elaborate further, participants discussed the concept of navigating relationships with their faculty and the influence this had on their academic resiliency in one of the focus groups. They shared that although as freshman students they heard about this piece of advice, there were certain factors that prevented them from actually putting it into practice right away. They named reasons such as intimidation, not wanting to be a nuisance and feeling prideful. It was clear that asking for help from faculty was something that students had to learn to become accustomed to. Jessica (Mechanical engineering, junior) said:

You don’t want to go, ‘Oh I really need help’ and you just don’t want to go to them. To them (professors) it may seem like the easiest thing, and you don’t want

to ask them that and then come off a different way. I think in the beginning, that's how it was for me. I didn't want to put my pride aside and ask for help, so I would just try to figure it out, but then I ended up just doing it (Focus group. October 7, 2015).

Some participants expressed difficulty in navigating their relationships with certain faculty because of the faculty members' differing approaches to responding to questions. Nevertheless, these approaches influenced the resource seeking behaviors of the participants with other institutional support areas on campus, such as tutoring services. For example, Anna (Industrial engineering, sophomore), said "This year, my calc professor, he's like 'Don't come to me if you have a dumb question. You have to go through the tutoring center or someone else first. So yeah, I just don't want to be annoying'" (Focus group. October 7, 2015). Similarly, Bella (Women and Gender Studies, senior) said this about a different professor:

I never tried to ask him (professor) dumb questions. I always tried to figure out the problem first, but if I seriously didn't I would leave that question for him to help me or guide me. Then I realized that he was pretty kind, and that he really cared (*Testimonio*, August 31, 2015).

These types of instances suggest that faculty members have differing approaches on how willing or approachable they were to help students define and develop their academic resiliency, and it also showcases that faculty members are often not held accountable to serve or mentor students well (Margolis & Romero, 2001). Some do it better than others, such as the examples listed above that included faculty members serving as encouragers and connects students to different helpful resources. Others have been less approachable

yet steered participants to figure out a solution or to be resource-seekers, which can also be defining moments for developing academic resiliency. It also suggests that even if conditions are not ideal, students can still learn and still be academically resilient, as stated by Peter Mc Laren and Henry Giroux (1994, 26), “Mental development can take place under both favorable and unfavorable conditions... people develop cognitively often during attempts to resist—to overcome disadvantageous circumstances.” Just as navigating relationships with faculty is a factor in the development of academic resiliency for minority, low-income FGCS so too is the influence of the classroom environment.

Participants spoke about the classroom primarily in three ways: First, the shock they felt when they first started attending college classes due to the significance of diversity in the classroom. Second, they discussed often having to find compensatory strategies to succeed academically because they felt unprepared and that they came from less academically rigorous high schools. Third, the classroom exposed them to peers who served as comparison points for achievement. Below are examples of how this was represented in the data.

***Significance of Diversity in the Classroom.*** Participants in this study perceived the significance of diversity in the classroom as playing a factor in their academic resiliency. To illustrate, participants shared in their *testimonios* that a majority of them came from high schools in Arizona with a predominantly Hispanic population. They shared that when they first arrived at ASU, they initially felt intimidated by the demographic presence in the classroom environment. For many of them, it was the first time that they were not surrounded by students who looked like them. In the *testimonios*, participants were asked to share information about how they experienced the classroom

when they first arrived at the university. Sammy (Industrial engineering, senior) described her experience her first semester in the classroom this way,

It was overwhelming. My first semester I remember being surprised at all the Caucasians in my class. I felt different because my hair is dark, big, poufy and curly. There was a lot of like straight blonde hair or red heads or whatever. I remember at first I felt inferior. It was kind of hard because I felt really different (*Testimonio*, September 3, 2015).

Sammy's comments about feeling visibly physically different was similar to other students in this study. The perception of being one of few minority students in the classroom represented several meanings for Sammy and the participants in this study. They felt less than their classroom peers because they had instances where they did not see others like them in the classroom. This symbolizes how the body can be a manifestation of the hidden curriculum and is "a crucial socializing force that symbolizes gendered and racialized social meanings" (Gair & Mullins, 2001, p.31). In other words, lack of diversity in the classroom can manifest into a risk factor. Therefore, when students did see other diverse students in the classroom, they stated that they often felt a sense of relief which suggests that for these students, proximity to diversity emerged as a protective factor. For example, Itzayanna (Biomedical Engineering, junior) said,

For my leadership class, I noticed that it had a lot of ethnicities, pretty much all of them. It felt really awesome because I'm like, 'Whoa, I'm not the only nonwhite person here.' I really enjoyed that class and it made me feel a little bit more sure of myself and confident. (*Testimonio*, August 31, 2015).

In the next photo, Itzayanna referenced diversity on campus (not necessarily the classroom) as a prime place for exposing her to new opportunities to learn from others, which in turn helped to define and develop her academic resiliency. In the image below, Itzayanna captured an image of ASU's skyline. She provided a caption to this image, saying "ASU's diverse campus is giving me the opportunity to learn about other cultures, ideas and personalities without the need to travel the world; it's all right down the street" (Student Facebook caption. October 1, 2015).

*Figure 4. Photo-elicitation - Significance of diversity.*



The examples above demonstrate the significance of diversity in a student's educational journey. A perceived lack of diversity serves as a risk factor when students do not see people like them in the classrooms. Yet when there is proximity to diversity, such as in the classrooms and in the surrounding campus environment, it can serve as a protective factor that helps Latina, low-income FGCS define and develop their academic resiliency.

***Less-rigorous high school education.*** Participants discussed that they had points in their academic journeys at ASU where they felt that the high school education they

received was not up to par with their classmates or with faculty expectations. Sammy (Industrial Engineering, senior) described her high school's academic offerings as inconsistent with what she needed for college requirements. She said, "The curriculum was always changing. One year they had physics available and one year they didn't. One year they had 'calc' available and then they didn't" (*Testimonio*, September 3, 2015). Participants shared that the classroom environment quickly showed that they had to be resourceful in finding ways to catch up with the rigorous coursework. They did this by using compensatory strategies such as seeking tutoring and outside of classroom help, using YouTube videos and Khan Academy to self-teach, and also putting in extra hours of studying time for concepts that they stated seemed to come so naturally to the rest of their peers. As Anna (Industrial Engineering, sophomore) said:

I would not ask for my life to be different because I feel like having to go through this experience without my parents knowing how to help me is making me a more resourceful person because I have to find different ways of getting help and succeeding on my own (Student journal entry, October 3, 2015).

As Anna stated above, participants in this study largely described themselves as being highly resourceful. They were able to realistically and effectively identify a risk factor (in these cases, not receiving the same quality education as their peers) and they were able to seek out protective factors to mitigate potentially negative consequences of those risk factors. These steps represent important elements of Morales' (2000) resilience cycle, which suggests that participants in this study might be typified as students who would not be academically resilient because of their high schools' subpar curriculum, but in fact

these students' resourcefulness is demonstrated by their abilities to seek out a myriad of protective factors.

*Peers as comparison points.* Participants demonstrated other ways that they effectively identified perceived risk factors and acted on them, as a way of defining and developing their academic resiliency. One of those ways is by comparing themselves to their peers to gauge their ability to perform in the classroom. For example, participants perceived that their peers had an academic edge over them because it appeared that their classmates had parents who went to college and because they physically appeared to be privileged due to race or class. Nevertheless, participants used these comparison points as a motivational tool. Anna (Industrial Engineering, sophomore) wrote:

Seeing my other classmates fuels me because they bring out the competitive part of me that makes me want to do better than them, so when I see that they're understanding a concept that I'm not, it makes me want to try 10 times harder (Student Journal, October 20, 2015).

In the photo below, another participant, Jessica (Mechanical engineering, junior) mirrored this sentiment by capturing this image of a classroom lecture hall where an instructor is going over a mathematics equation as classmates looked on. She captioned the image, "My classmates keep me going because I feel like if they can do it, so can I" (Student Facebook caption. October 19, 2015).

Figure 5. Photo-elicitation - Peers as comparison points.



Anna and Jessica's examples represent the ways in which participants gauge their academic performance in comparison to their peers and use these comparison points as benchmarks to check and cultivate their academic resiliency. Their competitive streak to do as well or even better than their peers represents another form of how academic resiliency can be defined and developed.

***Gender dynamics in the classroom.*** A final element of the classroom environment's influence on the development of academic resiliency that emerged in the data will be discussed in this section. While the results above were discussed across the participants regardless of academic discipline, there is one distinct experience that emerged from the data that only engineering students expressed—gender dynamics in the classroom. The engineering students all brought up that they felt that they stood out in the classroom because of the male dominated environment. The participants felt that their gender identity was externally conceived as a weakness. One participant, Sammy



(Industrial Engineering, senior) described what it was like for her when she had to partner up with male classmates for assignments:

So sometimes the professors say, ‘Okay work with the person next to you’ so you know, you exchange numbers. Sometimes it’s happened where they take it the wrong way and you have to set it straight. You have to be kind of mean like, ‘I’m just here for school.’ Sometimes you have to set the limit. A lot of people think, ‘Oh, it’s the only girl in engineering class. Attack!’ (*Testimonio*, September 3, 2015).

In this situation, the participant said that she had to learn to assert her boundaries with male classmates so that she could preserve her credibility and turn away unwanted suitors because for her, the top priority was her studies. Harassment and sexist attitudes in STEM classrooms are a valid risk factor, and is something that other Latinas in STEM fields have widely experienced (Cantú, 2012). This concept is called social identity threat, or the fear of being devalued or discriminated against because of one’s social group (Major & O’Brien, 2005). This risk factor has been shown to lead to underperformance on tests and disengagement from academics (O’Brien et al., 2015).

Awareness of this risk factor was mentioned by all the Engineering participants, and they discussed that they felt they had to work hard to not only keep up with the academic rigor of the classes, but also to ensure that their presence as women in the STEM field was not questioned. One participant, Jenny, (Robotics, junior) said, “Sometimes you have to prove yourself more than a guy does. I think that makes you a stronger candidate. Because you work harder than the rest. That’s one of the challenges” (*Testimonio*, September 9, 2015). All of the Engineering participants said that over time,

they accepted the lessons that being one of the few girls in their STEM classes taught them because they knew that gender dynamics in the Engineering profession was a reality that they had to be prepared for. The participants also discussed that they came to recognize that sometimes being a female can actually provide an access point advantage in the engineering field. One participant, Jessica (Industrial Engineering, junior) said:

Not that we get better treatment or anything, but companies get more to their name when you have females on their team. It's definitely rewarding because it's such a field filled with guys. When they have girls, it's kind of a plus and it just opens more doors (*Testimonio*, September 8, 2015).

Despite the clear presence of risk factors that the engineering participants in this study experienced in the classroom due to perceptions of their gender identity as a weakness, the participants effectively identified this risk factor and navigated it effectively by looping in work ethic to ensure their credibility as a mitigating protective factor. This suggests that students define and develop their academic resiliency even under the guise of extremely challenging conditions, such as perceived sexism in classrooms and in their future workplace.

**Research Question #1 Summary of Findings.** Through data analysis, the first research question in this study revealed that yes, participants do define and develop their academic resiliency in college classrooms, but not primarily and certainly not exclusively. The participants in this research study largely attributed social capital connections first (formal and informal), aspirational capital connections and then faculty interactions and the classroom environment for defining and developing their academic resiliency. This suggests that participants in this research study are actively employing

Morales' (2000) resiliency cycle of identifying risk factors, seeking out protective factors and using those protective factors to continuously refine and implement additional strategies that propel their academic success. It also suggests that participants in this study were more likely to use peers who had similar experiences of being low-income, FGCS and minority as their guides for navigating and negotiating the hidden curriculum. Additionally, participants picked up from cues from faculty members and in the classroom that a part of the hidden curriculum meant adapting values and behavioral expectations of being resourceful and solving problems on their own. In the participants' quest to be resilient against this hidden curriculum, they did not initially seek help from formal institutional agents such as their professors, instead they went outside of the classroom to identity-relevant peers and other non-faculty resources. The next section of this paper goes into greater details about the most prominent protective factors that emerged in the findings.

### **Research Question # 2 Findings**

There are a lot of parallels that emerged in the data that addressed the first two research questions of this study. In the previous section, we learned that the college classroom is not the primary or exclusive authority where Latina, low-income FGCS define and develop their academic resiliency. Instead, we learned that the primary sources attributed for the defining and development of their academic resiliency originated from social capital connections (peers) and aspirational capital connections (their future plans). The second research question in this study asks, *what are the protective factors that have emerged to help students to remain resilient in these classrooms?* Research question #2 expands on this understanding by revealing data that further names additional protective

factors. Using the constant comparative method (Glaser & Strauss, 1967) and data triangulation, the data results suggest that in a college classroom **familial capital** (Tara J. Yosso, 2005) and **gratitude for college opportunity** emanate as protective factors for Latina, low-income FGCS.

**Familial capital.** Yosso (2005) describes familial capital as forms of knowledge “nurtured among *familia* (kin) that carry a sense of community history, memory and cultural intuition” (p.79). In this study, familial capital was referenced over 69 times across all data sources and amongst all participants. As such, a common source of strength that participants often discussed was their reliance on their family support system, and how this served as motivation in their pursuit of a bachelor’s degree at ASU. Connection to family served as both a catalyst for wanting to pursue college education and also operated as a protective factor while in college. Most of the participants witnessed the financial and quality of life consequences their families experienced as a result of not being educated and being low-income. Additionally, most of the participants were faced with the expectation that college was not an option, but was a must. This is consistent with other research about Latino family dynamics that suggest that although they did not have prior college going experience, they still had high education expectations for their children (Peralta, Caspary, & Boothe, 2013).

Their families demonstrated support as the students navigated college by offering emotional guidance and encouragement, even if they were not necessarily college educated themselves. To elaborate on familial capital a bit further, I will provide examples that emerged from the data that demonstrate this source of strength as a protective factor. As a preview, in the review of results for research question #3,

information will be presented which discusses how students operationalized these protective factors to extend their academic resiliency in the classrooms. In the meantime, here are some more examples of familial capital as a protective factor. Families provide their students with consistent encouragement. For example,

Jessica (Mechanical engineering, junior) said,

They (parents) see how stressed I get sometimes and they always remind me to take a break. 'You're going to get it.' 'Go do this.' They just kind of try to help me not stress out as much even though they know I do. They always give me little reminders of how I can do it and how I can get through it (*Testimonio*. September 8, 2015).

Parents also provided these doses of encouragement through semi-daily reinforcements such as phone call conversations and text messages. Here, two different participants shared screen shots of text message conversations with their family members. These conversations capture the sense of pride, admiration and investment their parents have regarding their student's educational pursuits.

Figure 6 and 7. Photo-elicitation - Familial capital I.



While the examples above demonstrate daily acts of familial capital, another type of familial capital that emerged in the data was more rooted and permanent; grounded in culture, faith, pride and the participant's recollections of their own family's *testimonios*. In the photo below, Anna (Industrial engineering, sophomore) captured an image of a blanket with the Lady of Guadalupe religious icon emblazoned across the front. She captioned it as, "This is a blanket I have on my bed. It reminds me of my family and reminds me that I'm never alone for when I'm feeling helpless" (Student Facebook caption. October 20, 2015).

Figure 8. Photo-elicitation - Familial Capital 2.



Anna elaborated on this photo a bit further in the focus group. She stated that her mother gave her this blanket when she first moved into the residence halls her freshman year and it serves as a visual reminder of her family. She stated that her emotional well-being as a college student was closely tied to her family's support and encouragement. The participants in the other focus group resoundingly agreed. This is supported by research on the influence of familial factors on resiliency because of the overarching influence families have into all aspects of an individual's life (Morales & Trotman, 2004). The penetrating influence of familial support as a protective factor also manifested through the participant's recollections of their families' experiences—which sometimes represented struggle and pain, and hope and optimism. For example, Diana (Justice Studies, junior) shared in the photo below, an image of a hummingbird on a birthday card. She used this image to represent one of her sources of strength, when times get tough as a college student.

Figure 9. Photo-elicitation - Familial Capital 3.



Diana captioned the image, “Hummingbirds represent my family in Mexico, my heritage, and my drive to have a better life than they did, and to give them a better life as well.

This keeps me going!” (Student Facebook Caption. October 18, 2015). Later on in the focus group, Diana went into greater detail about the symbolism of the hummingbird. She stated that she vividly recalls attending church with her family in Mexico and hummingbirds surrounding the entrance of the church. She also recalled that her family’s financial situation in Mexico was quite dire. Diana (Justice Studies, junior) said,

Mexico. I loved it. I was with my family but we had nothing. We wouldn’t even wear shoes. We barely had enough food. We had to grow our own food so when the season was bad, we barely had anything. This reminds me that someday I am going to be with my family again, but it’s not going to be in those conditions that we were before. It’s going to be different, and I put it on myself that I am going to be part of making that difference (Focus group. October 21, 2015).

Similarly, Itzayanna (Biomedical Engineering, junior) shared the symbolism of a mango tree, and what that represented for her family’s *testimonio*. She captioned the photo, “I



don't really think about this a lot, but I've realized that my culture is a crucial part of who I am. My family has shown unconditional love" (Student Facebook Caption, October 14, 2015).

*Figure 10. Photo-elicitation - Familial capital 4.*



In the focus group, Itzayanna (Biomedical Engineering, junior) described how the mango tree picture represents her family's agricultural traditions in Mexico. The picture reminds her of how physically demanding her family members' daily lives are because they did not obtain an education. Itzayanna stated that this family history makes her first-generation pursuit of a college education so important. This sentiment was agreed upon by all the participants. They stated that just as much as their family's *testimonios* fueled their academic pursuits, they knew that their reality as college students was a source of pride for their family. Therefore, the participants all stated that one of the most important things to them was to make their family members proud by being a college graduate. Both humbled and driven by familial capital, one other source of strength and protective

factor emerged from the data and is discussed next—their gratitude for college opportunity.

**Gratitude for college opportunity.** Although college access for Latina females have largely increased, there is still a graduation rate disparity that exists (Fry & Lopez, 2012). This fact was something that the participants were largely familiar with and it was their actual reality. The participants all discussed throughout multiple points in the study how they were immensely motivated to succeed in college because they felt that being a college student was a tremendous opportunity that they were grateful for. This theme was coded and referenced 43 times in the study and appeared in all data sources, amongst all participants. They often compared their presence in a university setting to the stark living conditions, or histories of their family members and communities. Amalia (Psychology, junior) said:

Wow, I have so much. I have tuition paid for and I don't have to worry about where I live and how I get from school to my house. It's just a huge motivation. I think it's the number one motivator for me honestly (Focus group, October 21, 2015).

Some of the participants experienced seemingly insurmountable challenges to get to college, which fueled their gratitude for the opportunity to attend even further. Four of ten of the participants faced the institutional barrier of immigration implications and had to personally deal with the bureaucracy of navigating residency applications, petitions, extending visa stays and even postponing their education and returning to Mexico until their immigration statuses were resolved. One participant, Bella (Women and Gender Studies, senior) captured this in a photo-elicitation session as one of her primary

protective factors. She shared a picture of her permanent residency card. She captioned the image, “While this is a blessing it helps me to remember how privileged I am and how I cannot give up on my dreams... dreams that I never thought would come true” (Student Facebook caption, October 21, 2015). She later elaborated in the focus group that she did not learn that she would be eligible for federal financial aid until she was a sophomore in high school because of her residency status. Once she learned that she could have the opportunity to pursue a university education, she jumped at the chance and became the first person in her family to do so.

*Figure 11. Photo-elicitation - Gratitude for college opportunity 1.*



Similarly, Flora (Microbiology, junior) discussed how immigration issues almost prevented her from having the opportunity to be a college student. In one of the photo-elicitation sessions, she shared an image that portrayed her and her family’s immigration journey. She attributed this experience as playing a huge role in sparking and motivating her college aspirations. She captioned this image as, “I am motivated by knowing I was lucky enough to make it to ‘El Norte,’ and to made it back home to ‘Merica’” (Student Facebook caption. October 17, 2015).

*Figure 12. Photo-elicitation - Gratitude for college opportunity 2.*



She interpreted the image in the focus group for the rest of the participants as the two types of shoes she has had to wear to become someone who could become a college student. The first shoe on the left represents ‘huaraches’ or sandals she remembers wearing as her family crossed the border and also a pair of military boots which ultimately paved a path of citizenship for her. As she recounted this story to the rest of the participants in that focus group session, the remaining six participants who were citizens shared that although they did not have to deal with immigration bureaucracy themselves, they had members in their family or in their close community who did.

Amalia (Psychology, junior) said:

I was born here so I didn’t have to worry about a lot of the things that other friends who weren’t as fortunate had to go through. A lot of my friends didn’t go to college because of, like, a paper. I think that motivates me because I don’t want

to waste this opportunity. Maybe in the future I can be one of the people that helps change that (Focus group, October 21, 2015).

All of the participants stated that they were very grateful for attending college and saw it as a tremendous responsibility. Participants stated in various ways that they learned to minimize distractions, practice discipline and prioritize their academics above all else because they could not risk the chance of jeopardizing scholarships, academic standing or their family's disappointment. In this sense, being grateful for a college opportunity manifests into a protective factor in the college classrooms, but sometimes leads to feelings of alienation in settings such as residence halls. Of the ten participants who participated in this study, 7 out of 10 lived in the residence halls their freshman year. All but one of these participants stated they felt isolated when they were living in the residence halls because they felt that their peers did not experience the same level of responsibility. The participants in this research study all agreed that they interacted with peers who did not seem to regard their college education with gratitude. Diana (Justice Studies, junior) said:

Every step that I took was going to impact me in some bigger way. I just felt like everyone else around me didn't feel like it was that important. I just felt like no one really understood me, or they thought I was stuck up because I didn't want to hang out with them. It wasn't that, it's just I felt like I had to prioritize.

Socializing is important, but right now, I've never been in college, I've never worked, and I just didn't want to screw it up. It was like the decisions they were making were different than the decisions I was making (*Testimonio*. September 11, 2015).

Participants connected this feeling of isolation back to those moments of when they discovered social capital connections from peers who did experience similar challenges. They relished in the fact that although college was a huge responsibility, that they were not alone in having to navigate this privilege into action.

**Research Question #2 Summary of Findings.** Findings for the second research question in this study revealed two primary sources of protective factors that emerged to help students remain resilient in classrooms: familial capital and gratitude for a college opportunity. This adds to the previously named protective factors of social capital connections and aspirational capital connections addressed in the first research question. These findings suggest that familial support in the shape of emotional encouragement and the family's own *testimonios* propelled the participants to be academically successful.

Secondly, they were tremendously grateful to attend college because they saw many people in their families and their communities who were not afforded similar opportunities. This cultivated the sense of college being a serious responsibility that they could not jeopardize and led to the students prioritizing their academics first and foremost. The next section of this paper goes into greater details about findings for the third research question in this study.

### **Research Question #3 Findings**

The first two research question findings centered on where protective factors are defined and developed and which protective factors emerged to help this study's participants remain resilient in college classrooms. The third research question focuses on how students operationalize these protective factors to navigate the classroom environment. The question is, *do students utilize these protective factors as resiliency*

*capital to navigate the classroom environment?* Data analysis of this research study revealed these two themes—**work ethic and sacrifice** and **active implementation of resilience tactics**.

**Work ethic and sacrifice.** Most of the participants in this study (8 out of 10) came from Latino families who were first-generation immigrants working in manual labor jobs. A resounding similarity amongst all of the participants was the tremendous work ethic they observed and witnessed from their families and how they transferred that observation to be applicable to their academic success. Flora (Microbiology, junior) shared this photo-elicitation image of her father’s hands and captioned it as:

When it gets tough, I think about my parents, especially my dad. My dad has worked so hard throughout his life since he was four being a slave to the ranch life, to now, he busts his back working outside in the blazing Arizona sun. I’ve never heard my dad complain. I know that what I am going through would never compare to what my dad has been through (Student Facebook caption. October 9, 2015).

*Figure 13. Photo-elicitation - Work ethic.*



While participants faced challenges in and outside of the classroom, they felt that those challenges were minimal compared to their family members' past and current sacrifices. Participants agreed in multiple ways throughout the study that observing their family's back-breaking work ethic allowed them to put things into perspective and see beyond themselves. One participant Diana (Justice Studies, junior) said:

Sometimes whenever I want to just give up I am like, 'Well, this is not hard at all. My dad works outside in the sun during the hottest days with concrete and I am here sitting down in the 'ac' just reading.' That's nothing compared to what he does. I see it as an opportunity for people to look around and see what other people go through and what their struggles are and how easy we have it especially as students. It doesn't break your back (Focus group, October 21, 2015).

The participants resolutely described themselves as hard-working, determined and focused, and clearly named their families as the inspiration for those characteristics. For example, Itzayanna (Biomedical engineering, junior) said, "That's one of the things that I got from my parents...like their work ethic and their responsibility. They are very responsible. They are always early to things and that's one of the best things that I got from them" (Focus group, October 21, 2015).

Additionally, the participants were reminded frequently by their families that hard work combined with an education was the best way for them to avoid having to live a difficult life. The participants also spoke often about how their parents emphasized that a college education would lead to a career and not just a job that helped to pay the bills. The participants' recited those statements in various ways throughout the study and used



their parents' work ethic and sacrifice as a mantra to work hard in school and to value education.

**Active implementation of resilience tactics.** Along with implementing work ethic and sacrifice into transferable lessons that propelled academic success, the participants in this study also demonstrated that they discovered, refined and consistently implemented resilience strategies throughout their college career to navigate the classroom environment and the overall university experience. This theme was coded as “refined resilience” and “wellness strategies” and was referenced over 41 times in this study. These implemented resilience strategies can be best defined as the combination of discovered college capital, discovered sense of self and wellness approaches.

These categories represented elements that the participants wish they knew when they were freshmen. When they discovered these elements, they were actively implemented in their college routines and helped them continue to be academically resilient. Some examples included *practical discoveries*, such as finding study spaces and on-campus resources and having a planner; *well-being related discoveries*, such as exercising and stress relief techniques; and *self-empowerment discoveries* such as self-advocacy and mindset. Below are some examples of these resilience tactics.

*Figure 14. Photo-elicitation -Active implementation of resilience tactics: practical discovery.*



In the picture above, Jessica (Industrial Engineering, junior) shares a practical discovery that she wishes she would have known about sooner—the importance of having a planner. She captioned this photo as, “I wish my freshman year I would have known how important it is to have an agenda. I use it every single day and try to color code everything because it definitely keeps you organized” (Student Facebook caption. October 2, 2015).

*Figure 15. Photo-elicitation - Active implementation of resilience tactics: well-being related discoveries.*



In the picture above, Sammy (Industrial Engineering, senior) shares a well-being related discovery which is her approach for managing stress—going to the gym. She discussed this in the focus group and elaborated on how this helps her remain academically resilient. Sammy said:

The gym has helped me manage some of the stress because I hold a lot of frustration. If I don't get something right away it gets me upset. I feel like taking time out of your day to do something else that doesn't involve making your brain throb is good. I realize after, 'okay I am ready to do this again' (Focus group, October 21, 2015).

Several participants shared other well-being strategies such as hiking, going for walks, and focusing on a talent outside of school.

*Figure 16. Photo-elicitation -Active implementation of resilience tactics: self-empowerment discovery.*



In the picture above, a participant shared something she wish she knew when she was a freshman—the importance of asking for help. Amalia (Psychology, junior) captioned this photo as, “In my experience, I see asking for help as one of the most important skills to learn because we get the answers we need and we get to the places we need to go” (Student Facebook caption. October 1, 2015). The participants shared these resilience strategies with each other in the group sessions and even learned new tips that they verbally committed to implementing in their current college routines. This theme suggests that the participants were malleable, adaptable and resourceful. They found various ways to cope with the challenges that academics presented and this allowed them to navigate the classroom environment.

**Research Question #3 Summary of Findings.** Findings for the third research question in this study revealed two themes which emerged to demonstrate how Latina, low-income FGCS operationalize protective factors to navigate the classroom environment. The first theme, work ethic and sacrifice, addressed how students transferred the work ethic and

sacrifice they observed from their parents into academic resilience. The second theme, active implementation of resilience tactics, reflected the discovery and implementation of practical, well-being and self-empowerment resilience strategies which the participants have utilized to navigate the classroom and university environment. The participants' commentaries and their photo-elicitation images suggest their increasingly complex ability to take lessons learned from sources of capital and from their own self-discoveries and to operationalize those assets as resiliency capital. The next section of this chapter discusses the findings for the last research question of this study.

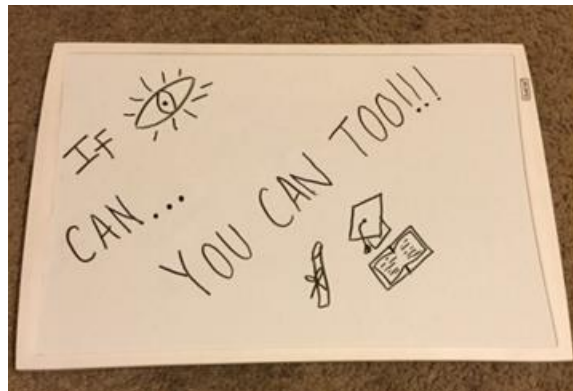
#### **Research Question #4 Findings**

The final research question in this study focused on how participants in this study could see themselves increasing the academic resiliency of students who might share similar experiences as them. The question is, *how do students further build upon these protective factors to increase the academic resiliency for other low-income FGCS?* There are two themes highlighted in this section—**pay it forward** and **changing the course**. These two themes capture how participants expressed perspectives and actions that typified their ability to help other individuals become academically resilient. These two themes demonstrate that participants in this study felt compelled to impact the lives of other students especially in their pursuits of a college education.

**Pay it forward.** As the title of this theme suggests, the participants in this study expressed their desires to pass on the resiliency capital they have cultivated along their educational journeys to other people. This theme was referenced over 94 times amongst all participants and across all data sources. It resonated as one of the most commonly discussed topics in the photo-elicitation facilitation sessions and in the participant

*testimonios*. Participants valued the experience of paying it forward and several were already doing so prior to the group sessions. They cited formal initiatives such as being guest speakers in their former high schools where they spoke about college access and volunteering in outreach programs through the university. They also discussed informal initiatives such as being a role model and a “college expert” for their families. They assisted with tasks such as FAFSA completion, helping siblings with homework and even giving tours to family members on campus. Participants commented that they wanted other Latina, low-income FGCS to see the possibilities of their future, and they felt compelled to share their experiences to model that college is achievable. Sammy (Industrial Engineering, senior) shared this photo-elicitation image.

*Figure 17. Photo-elicitation - Pay it forward.*



The image reads, “If I can... you can too!” This sentiment was shared across all of the participants. They reflected that they overcame trivial and large obstacles to be college students and they wanted to help alleviate those struggles for other students. They used phrases such as “share that knowledge” and “help someone figure out” to convey this sentiment. Jenny (Robotics, junior) said:

When you're first generation, you have to be really resourceful and figure everything out on your own. If I can help someone not stress out as much, or if I can help someone without them having to figure it out on their own, that's really making a positive impact (Focus group, November 4, 2015).

The participants added that they wanted to place an emphasis on being transparent with other Latina, low-income FGCS about the obstacles they face as college students,

Itzayanna (Biomedical Engineering, junior) said:

What we can do is just mentor people or share our life's successes but also the problems that we've had. I do this a lot. I tell a lot of people when they say, "Oh, it looks like you have your life together." I'm like, "No. I was really stressed last night. I was trying because I struggle with calculus. Now I'm trying to get myself together" (Focus group, November 4, 2015).

Most of the students discussed the pay it forward theme from the perspective of one individual at a time, and they often started with their own families. All of the participants had younger siblings who they wanted to mentor and support. They equated college to a future lined with success, and they wanted that to continue with other members of their family. Jessica (Mechanical Engineering, junior) said:

I want to be able to push through all the hardships and challenges that come with being an engineering student and get my degree so that way my little sister could want to do the same and pursue getting an education. I just want her to succeed in life and I'm willing to be her guide the whole way (Student Journal, October 20, 2015).

One distinct piece of data that emerged in this theme revolved around paying it forward with an emphasis on mentoring for individuals who were the same gender as them and were also engineering students. They discussed an emphasis on increasing the presence of minority women in STEM. They wanted young girls to know that females could be good at science and that they have just as much right to be in STEM fields as males. Jenny (Robotics, junior) still volunteers at her Robotics club at her high school and she shared this:

It's really important for me to go back to my community and where I came from and help them out. Trying to help everyone go to college, but specifically for girls to go into engineering and to go to college (Focus group, November 4, 2015).

This sentiment was shared by the other four engineering student participants and they discussed ways they could work together to advance this initiative. They talked about joining each other's student organizations and volunteering together.

In summary, an overarching component in the pay it forward theme is this concept of 'it starts with us.' The participants all agreed that they wanted to epitomize all that was missing in their first-generation student journeys. They wanted to inspire others and be credible sources of information that could bridge the college capital gap that their parents could not answer for them. They also wanted to advance this ability to pay it forward so that the ripple effect impacted other students not just within ASU, but also across the country. Serena (Sociology, senior) said:

If we can support each other among the Latinas or among the other minorities and show each other that, "No. All these other people did it. We're doing this, you guys can do it too." On a micro level, it's going to start by helping ourselves and



our community which will eventually become something bigger at a macro level. Not just helping our university, but it'll expand to different states and different universities and countries. That's why I think it starts with us (Focus group. November 4, 2015).

**Changing the course.** Participants in this study identified that they felt that changing the experiences of other Latina, low-income FGCS started first with them. This theme was categorized as changing the course. The participants discussed that they knew that their abilities to remain academically resilient could change the course for themselves, their families and their communities. Her, Anna (Industrial Engineering, sophomore) shared a photo-elicitation image and captioned it as, “I feel like this picture really displays what we need to do when we graduate from college: BE THE CHANGE” (Student Facebook caption, November 4, 2015).

*Figure 18. Photo-elicitation - Changing the course 1.*



They placed parallels on becoming college educated to being the solution to help transform large scale situations such as poverty and quality of life that impact their families currently. Serena (Sociology, senior) said:

When I graduate and have a good job, I can help financially support my mom who is disabled and my dad who has struggled to find adequate work in a slow economy; I will also be setting the example for my younger sister who graduates soon and I can use my knowledge to guide her through the process of going to college to assure her success (Student Journal, October 22, 2015).

They also mentioned how a college education affords them the opportunity to be in a career path that is aligned with serving others or making a societal impact. Diana (Justice Studies, junior) shared this photo-elicitation example and captioned it as,

After I retire from the military, I want to become a JROTC instructor in a low-income school like the one I attended because I can help students think about higher education and motivate them to seek options to attend college (Student Facebook caption, November 3, 2015).

*Figure 19. Photo-elicitation - Changing the course 2.*



Study participants acknowledged that their abilities to finish their college education could lead to an infinite amount of return on investment financially, socially and personally. One thing they all shared in common was their dedication to making sure that while this journey might start with them as first-generation college students, it would continue moving forward. Amalia (Psychology, junior) said, “It doesn’t matter where you come from, what religion, what culture or anything. If you have a dream, you can pursue it. Just like exactly how I’m doing” (*Testimonio*, September 9, 2015).

**Research Question #4 Summary of Findings.** Findings for the final research question in this study revealed two themes which emerged to demonstrate how Latina, low-income FGCS could see themselves increasing the academic resiliency for other students with similar identities. First, participants wanted to ‘pay it forward’ to share the college capital and resiliency strategies they had experienced with other students through activities such as mentoring and being a role model. The second theme, changing the course reflected the participant’s acknowledgement that they needed to remain academically resilient, persist, and graduate to initiate a ripple effect that will impact their lives, their families, their communities and for other Latina, low-income FGCS.

## CHAPTER 5

### DISCUSSION

The focus of this study was to explore if photo-elicitation facilitation and reflection groups influenced minority low-income FGCS to identify their sources of protective factors as a method of increasing their academic resiliency. This study was prompted by the need for educational research that taps into the unheralded strengths of Latina, low-income FGCS at ASU, positions them as experts and draws out their experiences as academically resilient students. The *testimonios*, group dialogue and photo-elicitation images shared in this study shed light on the protective factors they harness to continue to be academically resilient and the ways they view themselves as being able to build upon these protective factors to help other students who share similar identities. This study was guided by the following research questions:

1. Do minority low-income FGCS define and develop their academic resiliency in college classrooms? If so, how?
2. What are the protective factors that have emerged to help students to remain resilient in these classrooms?
3. Do students utilize these protective factors as resiliency capital to navigate the classroom environment? If so, how?
4. How do students further build upon these protective factors to increase the academic resiliency for other low-income FGCS?

In this chapter, I present a culminating discussion on this 10-week experience, implications for practice and research and the limitations of this study. Additionally,

recommendations from the participants are included in this section, and closes with lessons learned and concluding thoughts.

## **Discussion**

This 10-week qualitative research study led to several themes that highlight how the Latina, low-income FGCS participants define, develop, and operationalize academic resiliency to navigate the classroom and university environment. Most notable themes present in this study were the following: *Relatable peers and future aspirations as sources of development for academic resiliency, Family support and gratitude for college opportunity, Implementation of work ethic and resilience strategies, Motivation to pay it forward and change the course for others.* The following section is organized by each of themes that emerged from the study.

### ***Relatable peers and future aspirations as sources of academic resiliency development***

This study demonstrated the ability of Latina, low-income FGCS to use social capital connections to relatable peers and aspirational capital connections to their future to define and develop their academic resiliency in college classrooms. This suggests the importance of classroom experiences outside of the classroom being a stimulating atmosphere where minority, low-income FGCS can discover people and experiences which complement the learning they are receiving in the classroom. This theme aligns with research by Tinto (1975) which posits that students persisted in universities to the degree which they felt academically and socially integrated into the life of college.

Tinto's studies have been largely critiqued for its poor representation and applicability of the experiences of non-traditional students, such as racial and ethnic minority students. Therefore, modern iterations of Tinto's theories ask what type of

integration do racial and ethnic minority students experience (Davidson & Wilson, 2013). This study suggests that Latina, low-income FGCS at ASU are integrating into formal and informal peer networks at the university who then act as proxies to social capital that continuing generation students are privy to. These peers also serve as guides for assisting students to negotiate and navigate the pervasive hidden curriculum in the classroom. The participants in this study found that having peers who were also minority low-income FGCS in their classrooms, their student organizations and/or their social networks provided them opportunities to further define and develop their academic resiliency. This aligns with other academic resiliency research conducted with racial and ethnic minority youth which posit that when students develop relationships with other academically engaged peers, this acts as a protective factor (Perez, Espinoza, Ramos, Coronado, & Cortes, 2009).

Furthermore, the participants in this study further sharpened the development of their academic resiliency through their aspirational capital connections, or their visions of their future. Their abilities to navigate to an academic major and potential career path that they felt comfortable and confident in further propelled their academic resiliency. This points to the limitation of research that suggests that because FGCS lack a robust professional network, they will have significant challenges to their career exploration (Tate et al., 2015). This study suggests otherwise; that despite perceptions of FGCS having a lack of a robust professional network, participants in this study were actually able to cultivate those networks and successfully pinpointed their future aspirations and this continued to define and fuel their academic achievement.

### *Family Support and Gratitude for College Opportunity*

This study demonstrated that the emotional support and high expectations that the participants' families provided is one of the primary protective factors that helped them to remain resilient in academic classrooms. This defeats the deficit notion that permeates the definition of a first-generation college student—despite not being college educated themselves, family members were influential in ways that repeatedly encouraged students to succeed. Families having a pivotal influence on academic achievement aligns with scores of resiliency research which purport that family characteristics, customs and attitudes can all compose elements of environmental protective factors (Morales & Trotman, 2004). Family members in this study offered doses of encouragement through small acts, such as sending messages of care and compassion, and expressing their pride over their student's academic decisions.

Then, through deeper acts like reminding participants of the power of education to transform their lives or by serving as an anchor to cultural and spiritual connections, all of which participants attributed as salient protective factors. The ability of family members to model caring, coping and providing lessons represents the familial capital (Tara J. Yosso, 2005) so frequently referenced in this study. While researchers suggest that continuing generation students possess a cultural capital that is significantly tied to academic performance and achievement (DiMaggio, 1982), the findings of this study suggest that academically resilient Latina, low-income FGCS draw on familial capital as a protective factor and it allows for similar academic performance and achievement that their continuing generation peers experience. This aligns with growing literature that suggests that family factors are protective for Latino college students in areas of

academic adjustment and psychological well-being despite the lack of socioeconomic advancement and the benefits that come along with that (Ong, Phinney, & Dennis, 2006).

Moreover, Latina, low-income FGCS in this study largely expressed their gratitude for the opportunity to be in college and they credited this as a protective factor that allowed them to remain resilient and persist. The students were grateful for the opportunity to attend college because they saw many people in their families and their communities who were not afforded similar opportunities for a variety of reasons, such as immigration barriers and poverty. This gratitude propelled the participants to view college with a tremendous sense of responsibility.

### ***Implementation of work ethic and resilience strategies***

This study demonstrated that Latina, low-income FGCS operationalize protective factors as resiliency capital by tapping into the lessons of work ethic they observed from their family members and by utilizing intervening processes through the implementation of resilience strategies. All the participants in this study came from low socioeconomic backgrounds. Many described the back-breaking work that they observed their parents go through. They made parallels between the difficulties of their parents' work experiences to their academic struggles, but felt that the two could not compare and this motivated them to persist and to make their families proud. They recognized that their academic achievements were not just about their own accolades; they believed that they were obligated to succeed because of the lessons they learned from their family's hard work. Maintaining a disciplined work ethic aligned with other findings in the existing literature about Latina undergraduates which suggest that they harness work ethic to critically



navigate and respond to a variety of risk factors, such as perceived low expectations or unsafe campus climates (Yosso, Smith, Ceja, & Solorzano, 2009).

Students also learned to cultivate resilience tactics as intervening processes for their academic resilience in the institution. They combined hard work ethic with these strategies which embodied three main categories: 1) practical discoveries (i.e. finding study spaces on campus), 2) wellness strategies (i.e. stress relief techniques) and 3) self-empowerment strategies (i.e. learning to ask for help). These intervening processes highlight the resourcefulness and adaptability of Latina low-income FGCS. Therefore, although literature suggests that low-income FGCS students are more likely to exhibit lower self-efficacy (Aspelmeier, Love, McGill, Elliott, & Pierce, 2012) and are less academically prepared (Atherton, 2014), the participants in this study contradict these deficit perspectives and instead showcase their tremendous ability to be academically resilient by harnessing their family's work ethic and their discoveries of resilience tactics.

### ***Motivation to pay it forward and change the course***

This study demonstrated that participants in this study perceived the idea of paying it forward for other minority, low-income FGCS as an obligation they had to uphold. Now that they had successfully navigated getting into college, had experienced a couple of years of college classes and were on academic good standing, they felt a tremendous sense of responsibility to change the norms in their families so that everyone could have the same opportunity to pursue a university education. They offered assistance in multiple ways—by helping younger siblings with navigating college access, volunteering in outreach activities at the university, and other types of change strategies.

Additionally, the participants were driven to change the course, because they perceived that their attainment of a higher education would produce a ripple effect that could change the lives of their families, their communities and those of other minority, low-income FGCS. These findings suggest that the Latina, low-income FGCS in this study could see themselves as institutional agents (Stanton-Salazar, 1997) for other students like them and that they could pass on lessons learned and exchange the resiliency capital they obtained so that other students could also succeed.

### **Implications for Practice**

The purpose of this research study was to understand the academic resiliency of Latina, low-income FGCS. As a student support services administrator, I am often asked to propose solutions that champion student success. My additional positionalities of personally experiencing the challenges and celebrations of minority, low-income FGCS and now conducting research on this population gives me additional perspectives to consider. All of these positionalities serve as lenses that influenced this research study. The first implication for practice results from the stated impact the photo-elicitation facilitation groups had on the participants. Many of the participants stated this was the first time they had been asked questions that reflected on their educational experiences and their strengths. Despite the fact that many of the participants were upperclassmen, participating in the photo-elicitation group sessions was a landmark experience for them in many ways. They stated that they often did not get a chance to gather together with other Latina, low-income FGCS. Serena (Sociology, senior) said:

This has been so extremely valuable to me. I never thought about what my strengths were because people usually never ask me; to critically think about what

motivates me and then put it into an image was challenging but rewarding. I now am conscious of those motivating factors in my daily life and that perspective helps me to stay positive (Student Journal, November, 5, 2015).

Serena and the other participants welcomed the creation of a safe space that intentionally fostered dialogue about their experiences and resiliency. They all stated that getting together for each session was something they continuously looked forward to and that they wished they had these experiences earlier in their academic careers. This sheds light on the reality that perhaps ASU is not providing enough of these opportunities for the participants to discuss their lived experiences and to learn from each other. As this study has shown, creating that space can be transformative for students, and this is supported by growing literature on the importance of allowing students to have these dialogic experiences. They can be easily implemented in multicultural learning communities (Jehangir, 2010), student-led communities of practice (Power & Hibbert, 2016), first-generation specific student organizations, and also as points of conversation with effectively trained faculty and staff.

Providing students the opportunity to have these spaces is a way for the institution to build necessary bridges that Jehangir (2010) suggests can serve multiple purposes:

A conduit between the home and school world of first-generation students, a link between their inner and outer faculties as learner, a connector with peers with similar and different experiences, and an opportunity to allow students and their communities to inform the academy (p. 549).

The institution's university-wide implementation of these spaces sends a clear message that ASU supports the lived experiences of low-income, minority FGCS and can be one

of many steps the university can continuously strive to take to ensure that the climate supports the success of these students.

Another implication for practice is the intentional use of methods that recognized the power and voice of students as experts. The use of *testimonios* (Espino et al., 2012) and photo-elicitation from a participatory approach (Wang, 1999) taps into the call to action and the expert knowledge of students as just as influential in carving retention strategies and initiatives as seasoned administrators. Student-centric innovations and strategies should be vetted or endorsed by students themselves. In this study, the participants named specific recommendations they feel ASU should establish to support students like them. The recommendations were discussed in the final focus group of the study and are listed here:

- 1) Establish a first-generation resource center at ASU.
- 2) Train faculty and staff to understand the needs of minority, low-income FGCS.
- 3) Recognize the success of resilient minority, low-income FGCS and celebrate the values they bring to the university.

These recommendations illuminate that the participants in this study recognize that there are environmental, resource-based and value based conditions that are lacking for minority low-income FGCS at ASU. They call for a need for a centralized space where students can connect with each other. This then suggests that not every place at ASU is a welcoming climate for these students. As Itzayanna (Biomedical Engineering, junior) said,

We don't have a space where we can talk like we talked in this room. Even though we only met four times, it seems like I've known you guys for a really

long time. That would be really beneficial for first-generation students. Get people to brainstorm and reflect on their lives. (Focus group. November 4, 2015).

The second recommendation involves offering and bolstering training support and resources for the institutional agents that minority, low-income FGCS often work with. This is further elaborated upon with this quote by Serena (Sociology, senior),

I know advisors are trained to be helpful but it is hit or miss. It depends on what school you're in or if your advisor really wants to help you. I'm not super familiar with what their training is, but if you've been an advisor for like 10 years you probably haven't had your training updated. Maybe we could start doing some inclusion training for advisors, how to work specifically with first-generation students and how you have to give them the extra nudge, give them the extra encouragement, and offer them the extra resources. Really take the time to check in with them (Focus Group. November 4, 2015).

This quote demonstrates that personal interactions with institutional agents at ASU are not always impactful because of a perceived lack of understanding the current experiences of minority, low-income FGCS.

Lastly, students are calling for a formal institutional recognition of minority, low-income FGCS as inherently resilient. This is demonstrated by this statement from Diana (Justice studies, junior),

I feel like they expect us all to struggle and drop out because we don't have the resources and we don't have the background. We're first-generation, things like that. I feel like instead they should say they can do it, they're the very unique spark that are going to make it (Focus group. November 4, 2015).

The participants shared that they were aware of ASU's mission to provide access and excellence to students whose demographic mirrored their own. They were proud to attend an institution that hailed these values, but they expressed that if ASU really wanted students to succeed, there needed to be obvious support and resources that are specifically for first-generation college students. Therefore, as a result of these findings a final implication for practice is the need for ASU to be crosscutting by convening the slew of institutional agents and multiple departments at the university who are working towards supporting the success and retention of minority low-income FGCS through a formal declaration and genuine commitment that consists of institutional support, financial resources and a university-wide expectation to champion success for these students.

### **Implications for Research**

Research lessons learned from this 10-week qualitative research study points to additional areas of study to consider. The focus of participant driven photo-elicitation is to understand how images are given meaning by participants and to offer them the opportunity to give voice to complex experiences (Clark-Ibáñez, 2004). Similarly, *testimonios* as a research genre builds solidarity and exposes individual experiences marked by marginalization (Solorzano & Bernal, 2001). As a researcher and practitioner, these two research approaches have transformed my potential next steps in the future. Having the opportunity to observe the participants' reflection, growth and recognition of their educational journeys was extremely validating and rewarding. It made me realize the power of individual and collective stories to externally and internally make a lasting impact.

Further research using these methods could be extended to additional audiences. This study can be conducted on other student groups at ASU who are retaining and graduating at a lower rate, such as other students of color. Latina, low-income FGCS in the liberal arts and in STEM majors were the participants for this study, but this process could be replicated to understand the experiences of Native-American students, Black/African-American students, Pacific-Islanders, and Asian-American students in these same fields, but also in other academic colleges. Additionally, it would be powerful to use this approach to understand the academic resiliency of other student groups, such as Veterans, student athletes, and LGBTQ students. I firmly believe that local research is one of the best ways for ASU to truly understand the educational experiences of the students we serve.

Another direction that this research could take is by understanding how academic resiliency is cultivated for students at a different trajectory of their educational career. This study primarily focused on academically resilient students who were on good academic standing and making timely progress towards graduation. Perhaps the findings of the study could shed additional insight on how marginalized student groups define and develop their academic resiliency earlier on, i.e. in first-year students or in students who are just about to enter the university setting. Future research may also look more closely at the ways that cultural capital is valued by ASU. There are varying ways that universities privilege capital—some are rewarded, and others are ignored or punished (Pazzaglia & Margolis, 2008). In this study, the participants named the support their family provided as a primary protective factor.

Questions surrounding this potential research study could explore how the university absorbs and interprets family support of FGCS. Research findings could discover if and how familial capital may be effectively embedded as a retention mechanism at ASU. There are many routes that this research study could expand upon in its next iteration. The most important aspect is that some foundations have been laid and findings support that photo-elicitation facilitation groups can be a vehicle for understanding the educational experiences of Latina, low-income FGCS. The next section goes into further detail about the steps I will take to further the next cycle of this research as a planned project.

### **Next Steps**

To advance this research as a planned project that will lay the groundwork for future action research studies, the next cycle involves creating in-person meet up groups specifically for low-income, minority FGCS. These meet up groups will also have access to using online social community avenues such as the private Facebook group in this study. The purpose of these meet-up groups is to allow students the opportunity to connect, share their experiences and exchange resiliency tactics with each other. The groups will be peer-led and self-managed. Students who participate in these groups will have access to a repository of reflexive prompts created by students that allows them the opportunity to ask each other questions and share information visually, verbally and digitally regarding their lived experiences as low-income, minority FGCS and the ways in which they have learned to navigate and negotiate obstacles encountered at the university. These meet-up groups will have direct access to share any institutional recommendations directly with university leadership. This proposed project is scalable,



duplicable and keeps student voices and perspectives central to its purpose. There are currently no initiatives like this at the institution and this research study illuminates the need to create these reflexive, student-centric spaces for low-income, minority FGCS. The next section provides information on limitations of this research study.

### **Limitations to the Study**

There are several limitations to this research study that warrant explanation. In chapter three, several strategies were mentioned to ensure validity in this qualitative study, including member checking, triangulation and researcher transparency and reflexivity. There are two limitations to this study that are important to consider. First, the nature of the use of photo-elicitation as a data collection method purposefully recognizes the subjective view and the lived experiences of the ten participants in this study. However, the strength behind the use of photos as a data source is it offers both a subjective and an objective view, "... the camera is susceptible to the selectivity of the operator, but it is not selective once the shutter is opened" (Collier & Collier, 1986). The photos selected by the students offers another way of showcasing their voice and visions, which aligns with the qualitative nature of this study.

Second, another limitation in this study is my role as the researcher. As stated in earlier sections, I was transparent with the students about my identities as a minority, low-income FGCS as well as a researcher and an administrator at ASU. An attempt to minimize my influence on the participants was done through my sampling and recruitment approach. Although I work closely with many students in my work role, I intentionally recruited from outside of my spheres of influence. I did not know any of the

participants prior to this study, but we did establish great rapport immediately through the collection of their *testimonios* in a 1:1 manner, and through the group facilitation process. I recognize that there's a potential for researcher bias to exist in this research study because I am committed to improving the educational experiences of minority, low-income FGCS, yet I am also employed and have benefitted from this institution as a graduate and as a professional. These perspectives can lead to blind spots in the way I critically analyze and report on the data. However, I did my best to remain cognizant of my role as the researcher by structuring my protocols and questions so that it avoided asking leading questions. I also relied on the participatory nature of participant driven photo-elicitation to have the students take the direction of the group sessions to what resonated with the group at that point.

### **Lessons Learned**

This research study and the development of this dissertation has taught me a lot about what and who to ask. When I started this doctoral program, I knew early on that I wanted to hone my research study on a population that I was passionate about and familiar with—first-generation college students. I always envisioned my growth as an educational leader to continuously have a sense of stewardship towards FGCS because I understand their experiences and have walked in their shoes. At the culmination of this research study and through the deep dive in analysis and the writing of the findings, I realized that there was still so much for me to learn about minority, low-income FGCS. The most important lessons I learned throughout this process have been to surrender my perceptions of what I thought I knew about these students, and to wholeheartedly engage and inquire straight from the source.

I learned to listen intently, to become agile as a researcher and practitioner and also to be receptive to feedback and correction. I learned that the central voice in this study is not mine, not my profession and not my institution. I also learned that no matter how well intentioned a program, a person or even an institution may be that we can still fall flat if we are not including students in our design and implementation of support initiatives. I also saw that I am more vigilant in detecting when systems are perpetuating deficit thinking about FGCS and when we are consciously or subconsciously privileging certain cultural values and neglecting others. When I first started seeing familial capital connections emerge as a protective factor in this study, I recall sitting in a meeting for work with other administrators where we were discussing student concerns in a case management function. The higher education staff around the table were concerned about a student (who happened to be minority, low-income FGCS) because she continuously went home on the weekends and did not engage with other students in their residence hall. Instead of seeing this student's familial capital connections as an asset that could very well influence her persistence at the institution, it was seen as a deficit. Right before my eyes, I saw the manifestation of how higher education systems emphasize cultural ideals of a privileged class (Pearl, 1997). Equipped with the findings of this local research study, I feel more confident about guiding the spheres of influence I operate in to operate first from the perspective that minority, low-income FGCS are resilient and should be viewed as so and to challenge the ways that deficit thinking permeates our daily practices. Minority, low-income FGCS are clearly not "the problem to be fixed" (Power & Hibbert, 2016); the institutional and systemic risk factors that they have to be resilient against are what warrants immediate correction.

## **Concluding Thoughts**

Undoubtedly, minority, low-income FGCS face a challenging and ultimately rewarding journey in their quest to attain a bachelor's degree. Higher education institutions are faced with the economic and moral imperative of ensuring that these students not only access higher education, but that they are also linked to the plethora of skills, resources, and people that can support them to persist and graduate. Increasingly, higher education institutions are trying to assess predictors to student success and are attempting to measure and understand how factors such as grit (Duckworth & Quinn, 2009) and mindset (Dweck, 2006) can be cultivated in students matriculated at the institution. The experience I gained through this research study indicated that minority low-income FGCS already experience and are well aware of this notion of the importance of persevering against all odds. Instead of asking what else minority, low-income FGCS should be individually doing to succeed, universities should instead turn their attention to its own systematic and structural approaches.

Higher education institution staff should be assessing their abilities to effectively create conditions and environments where minority low-income FGCS do not have to stumble by happenstance upon networks of support or are advised to neglect their primary protective factors because it does not align with what the university values. There is a greater need to determine what the institutional predictors of success are that makes the higher education environment a place where minority low-income FGCS thrive not just because of their keen navigational capital and their academic resilience, but because the university environment intentionally created it so with student voices as a critical stakeholder in the design. For as Paolo Freire (Freire, 1970) said, "One cannot

expect positive results from an educational or political program which fails to respect the particular view of the world held by the people. Such a program constitutes cultural invasion, good intentions notwithstanding.” It is time for universities to recognize students as experts in their educational journeys; as this study’s results revealed they are willing to pay it forward and change the experiences of other students like them. They remain grateful and optimistic despite the systemic and institutional barriers they face. Armed with this knowledge and this research experience, I am confident in continuing my personal and professional commitment to advance student expertise as central to championing student success.

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APPENDIX A

IRB/HUMAN SUBJECTS APPROVAL





EXEMPTION GRANTED

Daniel Dinn-You Liou  
 Division of Educational Leadership and Innovation - West  
 -  
 dliou@asu.edu

Dear Daniel Dinn-You Liou:

On 7/15/2015 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Students as Experts: Using photo voice facilitation groups to understand the resiliency of Latina low-income first-generation students
Investigator:	Daniel Dinn-You Liou
IRB ID:	STUDY00002784
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	<ul style="list-style-type: none"> <li>• Recruitment Email Edited July 12, Category: Recruitment Materials;</li> <li>• Social Behavioral Protocol (Edited July 13), Category: IRB Protocol;</li> <li>• Primary Investigator CITI Training Document, Category: Other (to reflect anything not captured above);</li> <li>• Individual Interviews Protocol, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions);</li> <li>• Condensed Consent form for Photo Voice and Interviews, Category: Consent Form;</li> <li>• Unique Identifier Instructions.pdf, Category: Other (to reflect anything not captured above);</li> <li>• Photo Release Form Edited July 12, Category: Participant materials (specific directions for them);</li> </ul>

	<ul style="list-style-type: none"><li>• Photo Voice 101 Training for Participants, Category: Participant materials (specific directions for them);</li><li>• Overview of Study Presentation , Category: Participant materials (specific directions for them);</li><li>• Photo Voice Protocols Updated July 13, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions);</li></ul>
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The IRB determined that the protocol is considered exempt pursuant to Federal Regulations 45CFR46 (2) Tests, surveys, interviews, or observation on 7/15/2015.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Sincerely,

IRB Administrator

cc: Lindsay Romasanta  
Lindsay Romasanta

APPENDIX B  
INSTRUMENTS

*Testimonio Protocols*

Interviewer Name: Lindsay Romasanta, researcher

Length of Interview: 75 minutes

Location of Interview: Private space on campus, i.e. office, or conference room

Data Storage Method: All interviews will be recorded through Audacity and Super Note.

The data will then be stored in a password protected Dropbox

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Opening Statement:

Hello, first I would like to thank you for agreeing to participate in my study. As you already know, this interview is part of my doctoral dissertation study. The purpose of this first interview is to ask you a series of questions that will focus on getting to know you better and also gaining a deeper insight on being a minority low-income FGCS at ASU and the role that plays within your educational experiences.

- I. Describe yourself as a college student.
  - a. Who influenced you to attend college?
  - b. What has college meant to you?
  - c. What has college been like for you?
  - d. What kind of student would you describe yourself as?
  - e. Is college life as it stands now what you expected? Or was it different?
  - f. What does it mean to you to be the first in your family to go to college?
  - g. Tell me about the types of courses that you have taken- what classes have been your favorite and why? What classes have been your least favorite and why?
  - h. Have you faced any challenges as a student at ASU?
  - i. Did you overcome them? And if so, how?
  - j. What, if any, special support programs have you participated in at ASU?
  
- II. Can you tell me about a college memory related to a classroom or a lecture hall that stands out for you?
  - a. What happened?
  - b. Why does that memory stick out for you?
  - c. How were you treated by your professor?
  - d. How were you treated by other students?
  
- III. Have you ever felt that you were treated differently in a college classroom because of your
  - a. Racial/ethnic background?
  - b. Income Level?
  - c. Being the first in your family to go to college?
  
- IV. Looking back on your freshman year, what did you not know about college that you feel like would have been important to know?

- a. Related to your professors, what do you wish you knew?
  - b. Related to classroom expectations, what did you wish you knew?
  - c. Related to classroom interactions with your faculty, what did you wish you knew?
- V. How did you learn the things that you wish you knew?
- a. Did you go to your family?
  - b. Did you go directly to the professor?
  - c. Did you go to your friends?
  - d. Did you go to someone in your community?
  - e. Did you go to other adults at ASU?
  - f. Did you go to a resource at ASU?
- VI. Describe for me the most challenging class you ever had at ASU.
- a. What was particularly challenging about it?
  - b. Was there anything in that class that you didn't know about but you wish you did?
  - c. Would you describe yourself as successful in that class?
  - d. Would your professors and classmates describe you as successful in that class?
- VII. Describe for me the most rewarding class you ever had at ASU?
- a. What was so rewarding about it?
  - b. Was there anything in that class that you didn't know about but you wish you did?
  - c. Would you describe yourself as successful in that class?
  - d. Would your professors and classmates describe you as successful in that class?
- VIII. Finish this sentence for me, when the going gets tough I \_\_\_\_\_.
- a. Why would you say that?
  - b. Who or what do you rely on to stay motivated?
- IX. When you were a freshman, did it ever cross your mind that maybe college wasn't for you? If so, can you tell me more about it?
- a. What did that feel like?
  - b. What could anyone here at ASU do differently to make you not feel that way?

- X. For my study, I asked students who were academically successful to participate. What do you think has been important in you becoming so successful?
- a. What worked against you being successful?
  - b. What was key in overcoming this?
  - c. What has been discouraging to you as a student?
  - d. What has been encouraging?
- XI. Do you have anything else that you would like to share about your college educational experiences?

*Photo-elicitation Protocols*

Facilitator Name: Lindsay Romasanta, researcher

Length of Session: 120 minutes

Location of Interview: Private space on campus, i.e. office, or conference room

Data Storage Method: All sessions will be video recorded and audio recorded. Pictures will be uploaded to a shared google drive folder per participant. All data will be saved in a password protected drop box.

Other: To build community and help with continued participant engagement, food will be provided at each session.

Period	Focus of the Time Period	Length of Time
Weeks 1-2	Initial <i>Testimonios</i> gathered from each participant	1 h 15 minutes each
Week 3	First Session: Group Introductions, Purpose of Study, Photo-elicitation 101	2 h total
Week 4	Participants gather photos, journal about the photos and the prompts.	30 minutes-1 h
Week 5	Second Session: Processing of photos, focus group	2 h total
Week 6	Participants gather photos, journal about the photos and the prompts.	30 minutes-1 hour
Week 7	Third Session: Processing of photos and the prompts, focus group, define assertions.	2 h total
Week 8	Participants gather photos, journal about the photos and the prompts.	30 minutes-1 hour
Week 9	Fourth Session: Processing of photos and the prompts, focus group, develop academic resiliency handbook.	2 h 30 minutes
Total Participant Time Commitment:		11 hours- 12.75 hours

First Session:

- I. Group Introductions and Icebreaker
- II. Researcher presents 30-minute presentation on what Photo-elicitation is
- III. Researcher provides 10-minute overview of the purpose of the study, defines hidden curricula and academic resiliency
- IV. Researcher shares information on first set of photos to take:

Take 3-5 photos that illustrate your impressions of the classroom environment at ASU in regards to faculty interactions and faculty expectations. Think of looking back to your freshman and sophomore years and try to capture aspects about the classroom that you didn't know then, but you wish you did. What are those images?

After you have taken your photos, please write a brief journal on the google drive folder sent to you using any or all of the following prompts:

- 1) I wish I would have known this as a freshman or sophomore...
- 2) It took me a while to figure this out, but...
- 3) Not everyone knows this but...
- 4) In my experience I see...
- 5) I am....

Second Session:

- I. Rapport building, checking in (10 minutes)
- II. Researcher asks each participant to show 2 pictures from their sample and share it with the group. (40 minutes)
- III. Researcher asks processing questions related to hidden curricula images taken in the first phase of Photo-elicitation collection (50 minutes)

- 1) What are some of the commonalities or differences that you see in the pictures shared at today's session?
- 2) What influence do you think those commonalities/differences have on a minority low-income first generation college student's ability to succeed or not succeed here at ASU?
- 3) What do you think ASU could do better regarding the themes you mentioned today?
- 4) How comfortable would you feel sharing these experiences with the ASU community?
- 5) What benefit would knowing about these "unknowns" have on other minority low-income FGCs at ASU?

- IV. Researcher shares information on second set of photos to take:

Take 3-5 photos that illustrate your impressions of what fuels you and keeps you going when classroom experiences with classmates or faculty were challenging, or when you weren't sure what your faculty members wanted from you or when you felt isolated or stressed by academics. You can also take pictures of whatever it is (a person, a concept, anything) that you would credit for getting you where you are today academically. What are those images?

After you have taken your photos, please write a brief journal on the google drive folder sent to you using any or all of the following prompts:

- 1) This fuels me because...



- 2) I am motivated by this...
- 3) \_\_\_\_\_ makes it worth it because...
- 4) I am.....

Third Session:

- I. Rapport building, checking in (10 minutes)
- II. Researcher asks each participant to show 2 pictures from their sample and share it with the group. (40 minutes)
- III. Researcher asks processing questions related to sources of fuel images taken in the first phase of Photo-elicitation collection (50 minutes)
  - 1) What are some of the commonalities or differences that you see in the pictures shared at today's session?
  - 2) What influence do you think those commonalities/differences have on a minority low-income first generation college student's ability to succeed or not succeed here at ASU?
  - 3) Do you think the sources of strength you all shared is unique to your experience as a minority low-income FGCS at ASU?
  - 4) How do you think your current academic status would be different if you didn't have any of the images shared today?
  - 5) How do you think the images shared today could help other minority low-income FGCS at ASU?
  - 6) In our next session, we have the opportunity to create a handbook to share this process today with students and faculty at ASU. What would you want it to say about the hidden curricula at ASU and your resiliency?
- V. Researcher shares information on last set of photos to take:

*Take 3-5 photos that illustrate your impressions of your ability to improve the experiences of other minority low-income FGCS at ASU.*

*Journal prompt:*

- 1) *What has this Photo-elicitation facilitation process been like for you?*
- 2) *How do you see yourself as someone who can create change for other minority low-income FGCS at ASU?*

- IV. Closing, Share logistics about next meeting

Fourth Session:

- I. Gratitude Dinner (30 minutes)

- II. Handbook Legacy Project (60 minutes)  
Create draft with participants (videotape this process)
- III. Final Focus Group
  - 1) What do you think this handbook could do for faculty and students at ASU?
  - 2) How do you think students and faculty at ASU would respond to this?
  - 3) How comfortable do you feel presenting this handbook to the ASU community?
  - 4) Do you know more than you did before about experiences of other minority low-income FGCS at ASU?
  - 5) How confident are you in being able to help influence the experiences of other minority low-income FGCS at ASU?
  - 6) Describe what this eight-week process has been like for you.

APPENDIX C  
TESTIMONIO SUMMARIES

## Bella

Bella is a 22-year old Women and Gender Studies student. Coming to college was not something that was always in the cards for Bella. Bella comes from a low-income family of 7 individuals. Her mother attained a middle school education then dropped out. However, her mother always encouraged Bella to be academically focused. Additionally, Bella did not earn legal status in the United States until she was 16 years old, she said “Once I got that (residency), I was like, okay it’s on. It’s game time you know, if you really want to do this now is your opportunity.”

Knowing that her legal status could lead to federal financial aid, Bella was even more determined to attend college once she learned that she would also be receiving the AIMS (Arizona Instrument to Measure Success) scholarship, a university academic merit scholarship for students who exceed in three areas of the state based standardized test. Bella attended ASU after high school and moved to the residence halls. She found the transition to be quite challenging, “It was very overwhelming; just first of all I didn’t know what university was, to be honest. I didn’t know. I didn’t know what I was going to expect. I didn’t know how it was going to be.”

At the time, she thought about becoming a veterinarian, but decided to change her major once she started taking Biology and Chemistry classes and learned that she did not like these courses. Close to failing her courses, Bella decided to switch out of the Biology major for fear of losing her scholarship. She stumbled upon the Women and Gender studies major and felt energized. Bella said she found alignment in the description of what the academic major offered, she said “For some reason, when I read the description of that major it just, I just, I found it so interesting. I found it so me.”

Bella added, “That major itself just made me change my whole perspective coming from a very reserved family and learning all that. It was amazing to me.”

As Bella progressed through her university experience, she honed in on ensuring she was academically successful by sacrificing social time and sleep to stay on track. Like many other Latina, first-generation college students, she faced out-of-class obstacles. She works 32 hours per week as a pet groomer and a grocery store employee while attending classes full time. Bella helps her mom and her two younger siblings financially but does her best to ensure that she prioritizes her goals as well, “I try to take care of her as much as I can with not pushing myself too much because I have school and work myself.” Below are some examples of how different types of capital resonated in Bella’s *testimonio*.

*Familial Capital.* “My mom has always been supportive. She’s always been so supportive. She was like, ‘Okay, as long as you graduate’.”

*Aspirational Capital.* “There’s always opportunity. I don’t want to just stay in one area. I can get a doctorate.”

### Serena

Serena is a 21-year-old Sociology major. She has two siblings, and grew up in a mostly single parent household with a disabled mother. Serena said:

We’ve always had a weird family situation. I grew up pretty much in poverty my entire life. Around the gamut of food stamps and Section 8. My mom gets disability, social security, that kind of thing. We had ACCHSS healthcare. I’m pretty familiar with all that sense.

Serena attended a local Tempe high school and found that attending ASU due to its close proximity and affordability was a good step to consider. She navigated the college application process on her own, from submitting transcripts to attending freshman

orientation alone. Serena's parents were supportive of her attending college, although they had never experienced it themselves. Serena has a close relationship to her mom, and is driven to make her mom proud. She said,

I wanted to make her proud. I wanted her to know that she doesn't need to feel guilty about her past decisions affecting me and how hard it was for me growing up. I didn't want her to like it was her fault because look, here I'm rising up. I can do it.

Serena particularly enjoyed that college allowed her the opportunity to meet many different kinds of people, allowed her to build relationships with faculty members and offered her the opportunity to develop leadership skills through student involvement. In her freshman year, she secured an on-campus work study student employment position with an academic department on campus. Now as a senior, Serena is an active student leader and serves on the executive board of a drug policy organization on campus, which has led to opportunities to lobby in Washington D.C., taught her professional development skills such as networking, event planning and community organizing, and exposed her to her future career path- social work.

Additionally, Serena has been on the Dean's list five times, exhibiting her ability to manage work, academics and her student involvement. Serena reflected on her college education opportunity as something that she feels lucky to experience. She has witnessed friends have to leave the university because of inability to afford tuition, yet through financial need based grants and scholarships, she is able to attend the university.

I've been really lucky considering I come from no money. No one in my family was able to support me, I feel like it was just by sheer luck and my own will that I've had such a smooth college career. No bumps, no worries about paying for it. I'm just really lucky.

Along with luck, Serena attributes her resourcefulness (navigational capital), peer networks (social capital), family (familial capital) and her future career aspirations (aspirational capital) as sources of motivation to keep her on track in her educational journey. Below are some examples of how these sources of capital have manifested in Serena's college experiences.

*Navigational Capital.* "I learned at a young age that in my situation, if I wanted help I had to ask for it because for the most part no one was going to give it to me. I navigated all that basically by myself."

*Social Capital.* "I depend on a lot of other people to help me. I was super happy because my best friend from high school went to NAU her first year. She like me has some issues. She ended up moving back here to Tempe for more stability. Now she goes here. That's a huge relief to have her back."

*Familial Capital.* "I think my mom always told me how special I was. She and I have a very special relationship. I always really felt that very powerfully. I wanted to make her proud."

With graduation nearing around the corner, Serena is confident that she has the ability to pay it forward and assist other members of her family to be able to access the college opportunities she has had. Her little sister will be starting school next fall and Serena is excited to be the source of knowledge and support for her sister that she did not have.

### Amalia

Amalia is a 21-year-old psychology junior. Her parents immigrated to the United States from Mexico a year before she was born to seek better opportunities for their entire family. Amalia was told by her family early on that she would be a "ground-breaker," someone who would set an example for everyone else. Amalia first remembered hearing about college in 5<sup>th</sup> grade, and as she excelled academically her parent's encouraged her to stay away from distractions and to always make school a priority. Both of Amalia's

parents work in blue-collar jobs. Her father works for a shipping company for airline parts, while her mom works two jobs as a cafeteria attendant and a janitor. Her parents often remind her, “Amalia, don’t have a job like us. Have an office job or do something that you want to do. Don’t be breaking your back over things like this.”

Amalia describes herself as a hard working achiever who learned the importance of speaking up and asking for help, as advised by a mentor. She started off college shy and not talkative, but was encouraged by a mentor to push past her comfort zone and to learn to ask questions. She credits two scholarship cohort-based programs at ASU for introducing her to key people who guided and supported her to navigate the university environment, as well as offering her career and future planning advice. She is grateful for the opportunity to be in college and reminds herself often that even though classes can get hard, she has a unique opportunity that some of her peers may not have.

It really saddens me when I know students, when I have friends who want to go to college, want to pursue their dreams and go to higher level education but at not able to. Either because they don’t have the money or they don’t have the support system. That’s something that’s always affected me.

Amalia stated that she never expected to have a good support system at ASU. In fact, she is often surprised by what the university has offered her in terms of scholarships, opportunities to network and meet new people, and to participate in transformative experiences such as shaking Bill Clinton’s hand at the Clinton Global Initiative or the opportunity to travel to Nicaragua and Argentina to volunteer abroad. Amalia is driven to help others be able to find the same.

I don’t like to see anybody discouraged from not following their dreams because of their economic background. My family isn’t rich. My parents came from Mexico. They basically gave me everything that they could. Just because I didn’t have money, that didn’t stop me from pursuing my dreams. That’s



kind of what I always wanted to instill in people. It doesn't matter where you come from, what religion, what culture or anything. If you have a dream you can pursue it. Just exactly like how I am doing.

Amalia calls herself a dream catcher, and wants others to be able to do the same. Fueled by her family's encouragement and immigration story (familial capital), her ability to connect and gain from mentors (social and navigational capital) and a strong desire to ensure that others are not prevented from a quality education (resistant capital). Below are some examples of how these sources of capital emerged from Amalia's *testimonio*.

*Familial capital.* "My mom strongly influenced me to attend college. She would always remind me, it was always in Spanish, but she would say 'We came here for a better life. Understand although school is hard, you need to appreciate what you have here and always pursue your education.'"

*Social and Navigational capital.* "I've always found a mentor. If I didn't have a mentor in a specific field or whatever, I would find one. I was very blessed to be able to reach out and find mentors."

#### Flora

Flora is a 24-year-old microbiology student. She is a veteran of the armed forces, married and was born in Mexico. She came to the United States and started attending school here at the age of four. She recalls attending elementary school in the United States for the first time and enjoying that there were other children to get to know, but also feeling challenged by not knowing English.

I still didn't know English in elementary school and not that well in high school. I never really got into asking questions and stuff, because I felt like my English was not good enough, or I would get picked on. I think I just got into this mentality, not to ask questions.

After high school, Flora joined the military immediately after graduation so that she could earn her residency. She wanted to pursue a college education, but due to state laws that charged out of state tuition to non-resident students, she could not afford to even

attend community college and was also not eligible for federal financial aid. Flora then became a first-generation US military soldier before she became a first-generation college student. No one in her family had prior experience with military life—in fact, she did not even know that soldiers received a salary or any type of stipend. She simply saw it as a way to earn her residency. Flora was not deployed; she spent her four years of active duty domestically in states such as Kentucky, Missouri and Utah. When she came to her end of term service date, she decided to return to Arizona and use her benefits to attend ASU and to sign up for the Army Reserves.

Flora decided to pursue microbiology because of her experience working with dentists. She hopes to apply to dentistry school and eventually help out with organizations who provide medical missions such as Doctors without Borders. At ASU, she is active in a student organization for students who practice a vegan lifestyle and she also actively utilizes a Veteran student success service center.

To overcome some of these outside of class obstacles, Flora relies on her family for support and also uses their life experiences as a source of motivation.

From my experience, this (college life) is nothing like what my parents have to do. They are a lot worse, and this is nothing, and I see how my parents work, so this is nothing, just sitting down and learning, it's nothing compared to what they do.

Flora's parents both work in manual labor –her dad works in construction, pouring concrete in the sun and her mom works in a tortilla making factory. She credits her parents for being open-minded and encouraging her to explore the world. She aspires to make her parents proud, provide a better life for their parents, and become financially secure so that her parents will not have to work in manual labor. The sources of strength

that most resonated in Flora's *testimonio* are her strong ties and commitment to her family (familial capital) and for a better future (aspirational capital).

*Familial Capital*- "I am thankful that my parents are very supportive."

*Aspirational Capital*- "After college, I would hopefully enter a Dentist school program, and after I complete that, I'd want to work as a missionary for at least 3 years, somewhere else, do missionary work."

### Diana

Diana is a 20-year-old junior majoring in Justice Studies. She comes from a large family of 9 siblings, and has been an independent student since she was 14 years old when she experienced her father's deportation and became homeless. Diana had an older sister who attended ASU who would often share with her how much she loved college life and that she was learning so much. When her father left for Mexico, Diana's older sister dropped out of ASU to find a job and financially support the two of them. Active in ROTC in high school, Diana decided to apply to ASU and continue her ROTC experience at the collegiate level. She also works part time on campus and joined a Latina sorority. Diana describes being a first-generation college student in two ways, 1) it means success and 2) it is a challenge.

Being a first-generation college student means success. After you, it's more likely that your family will go to college. You're setting that path and they are more likely to get on it. Second one it like, it is a challenge, because it's true you have no guidance, and you just kind of stumble along and trying to stay on the path to graduate.

For Diana, prioritizing school and working part-time, while also juggling involvement in her sorority and ROTC was a necessity. Diana felt that she did not have a margin of error to fail, and with her father being in Mexico, she had to quickly grow up and ensure that college worked out for her. Although her father was away, his emphasis on Diana

pursuing a college education was heavily embedded in her. Diana stated that her father did not give her or her siblings the option to attend college. Instead, he clearly stated that his expectations were that all his children must go to college. Even when extended family members criticized his expectations due to the family's financial struggles, Diana's father ingrained the message into her that she had to do all that she could to receive an education. This meant that she spent less time socializing with peers in her residence halls and this action often led to her feeling isolated from the people she lived near.

Nobody else around me had that mindset that like it is imperative that I do this right now... I just felt like no one really understood me, or they would think I was rude or weird or stuck up because I didn't want to hang out with them.

Where she did find understanding and acceptance was her sorority. Composed of mostly Latina, first-generation college students Diana found that her sorority sisters shared the same concerns of being working students struggling to find their place and prioritizing their newly discovered responsibilities, while juggling family and cultural expectations. Diana credits her sorority and her involvement in ROTC for teaching her to have structure, to gain professional development skills and to provide her with a community on campus. The sources of capital that most stand out in Diana's *testimonio* are her father's college expectations (familial capital) and her social networks through involvement in student engagement opportunities at ASU (social capital).

*Familial capital.* "He (father) was like one way or another you're going to be successful and one way or another you're going to continue your education and he had no idea how I was going to do that but he always just put it in my head like you're going to be a bad ass pretty much. You're going to go and you're going to do all these things and even today that's what keeps me going."

*Social capital.* "I feel like I found a community, like my community. Everybody says that Greek life is a whole other community but what drew me

in wasn't necessarily being Greek, it was finding that... Not having any family here, it felt like a really important part of my life was missing.”

### Anna

Anna is a 19-year-old sophomore majoring in Industrial Engineering. She was born in Mexico and moved to the United States with her family when she was two years old. She has three older siblings who all attended ASU. Anna grew up in a family where college was the only option and a strong expectation, despite her parents never attending college and her father being the sole provider for the entire family. However, outside of her family she grew up in a community that has one of the lowest rates of college-bound students in the state. This is something that Anna grapples with every day because of an on campus job she secured at ASU where she enters data for a department that surveys high school students from her community. The data she enters includes responses to questions like ‘Do you think it’s possible for you to go to college?’ or ‘What do you think would be something that would stop you from going to college?’ Anna finds the responses disheartening and thinks that all students should think that they are college worthy because she has been able to attend and she comes from that same community.

Along with her on-campus job, Anna volunteers her time with a non-profit organization that sends donated medical supplies to countries in need and also participates in a student organization for Hispanic engineering students. She credits this student organization for providing her with a support system and with a community of peers who she can relate to because many of them are also first-generation, Hispanic engineering students. They did not find it strange when she wanted to go home every weekend to see her family and could relate to not having as much money as other peers to

go shopping or to go out. Additionally, it's a place where she can connect with other Latina STEM students which helps to offset the treatment she feels from her peers in the classroom who are mostly male.

Anna also draws on support from her family as she navigates her first foray into independence—a facet of college life that she named to be her biggest challenge so far.

Anna explained,

I just wasn't used to it. I was always with my parents. I had never even been like home alone overnight. It was something new to me to not see my parents for a week or two and getting used to having to take care of myself.

Additionally, the rigorous college courses in her engineering major was something that Anna had to adjust to. In high school, she rarely had to study or complete homework—it was something that always came naturally to her. At ASU, she found it challenging to keep up with new material and often found herself having to use YouTube and tutoring to help her stay afloat in her classes. Anna said that overtime, she got used to feeling challenged by the rigor of her academic courses,

You definitely get a little bit overwhelmed. Overtime, I guess you get used to that feeling. You get strong; you can keep going. I guess you can get a little bit overwhelmed in the beginning and feel like giving up. It's just a hill. If you can get to the top... You get to the top of a really high mountain, it's like a high altitude. You can't really breathe, but you get used to it right? It's kind of like that.

Anna is still fairly early on in her academic journey as an undergraduate student, yet the sources of capital she has already started to cultivate is her strong connection to her family (familial capital) and the opportunity to share her experiences with like-minded peers (social capital).

*Familial capital-* “My dad is the only one that has ever worked. My mom’s never worked. He’s the only one that’s supported my entire family. I don’t know. I know they didn’t go to college by they still guided us in that way to stay in school and not go to work right after high school.”

*Social capital-* “Being involved in SHPE (Society for Hispanic Engineers) provides a lot of support. They are definitely people I can relate to. Many of them are in a similar situation as me where they are first-generation. It’s like a support system and there’s opportunities there I might not be able to get if I wasn’t in an organization.”

### Jessica

Jessica is a 21-year-old junior majoring in Mechanical Engineering. She started her education journey at the community college where she completed her pre-requisites before transferring to ASU. Despite graduating in the top 3% of her high school class she was drawn to attending a community college so that she could avoid burdening her family with the costs of attending a university for all four years. She was also attracted to the idea of being able to stay close to home and was told that the community college could offer smaller classroom sizes for her 100 and 200 level courses. Now that she’s at ASU, Jessica is finding her place in this larger setting and is determined to complete her degree and to break a cycle she saw of living pay check to pay check and working in a job one dislikes, as her parents have had to do. Jessica’s dad completed his GED and her mom dropped out of community college when she became pregnant with her. Jessica says that it’s important for her to pursue her degree because she knows her parents were not able to and she knows that a college degree will take her closer to finding a career she can be passionate about.

Jessica has always been a studious individual and describes herself to be a disciplined and focused student. She surrounds herself with friends who are also

academically focused and they often get together to study. Her aptitude and enjoyment of math exposed her to the engineering field, and having a fellow female peer pursuing engineering at ASU convinced her to pursue a STEM major. In Jessica's *testimonio*, the sources of capital most evident included the support she receives from peers (social capital), family (familial capital), her ability to navigate the university environment (navigational capital) and her strong attachment to pursuing a career she is passionate about (aspirational capital).

*Social capital*- "I have a friend who was studying engineering while I was in high school and she was two years ahead of me. She knew I loved math and she would talk to me about engineering.... She would tell me all this feedback. She definitely played a role in my going to college for engineering."

*Familial capital*- "I have one younger sister who is six. She definitely is a part of my motivation too because I want to be the role model to get a college degree."

*Navigational capital*- "I think it changed for me as I started taking harder math classes. I know that I couldn't just rely on myself anymore. I knew that I would have to reach out for help because I was the first person in my family to go to college. I knew that nobody else knew these things. I needed to get help somewhere so I just started emailing my instructors and going to tutoring and it became really helpful and I just kept going back."

*Aspirational capital*- "I want to be successful. It definitely pushes me and helps me to try to put aside my stress just because I know that as I get older and hopefully when I'm an engineer I won't be stressing like I am now."

### Sammy

Sammy is a 22-year-old Industrial Engineering major in her senior year. She was born in Mexico and moved to the United States when she was four years old. Her earliest childhood memories involve being the only Latina in a kindergarten classroom. Later in life, Sammy attended a high school in the West Valley that was predominantly Hispanic.



The school often underwent curriculum changes, affecting the type of core foundation classes offered at any given year. After high school, she attended community college before attending ASU at the behest of her high school counselors who told her that she probably would not be able to afford the high cost of a university education. Sammy finds this deplorable as she now knows that had she attended ASU in the first place she probably would have received merit-based scholarships.

When Sammy first transferred to ASU, she was a political science major, then switched to business. She didn't consider engineering until a high school friend who also attends ASU informed her about the different tracks the school of engineering offered. In fact, Sammy said, "I didn't think a girl could be good at engineering." With encouragement from her friend, Sammy scheduled an appointment with an engineering advisor and learned that the same principles of product design and efficiency that she liked in business could also be applied to industrial engineering. Now, she has found a fit in a major that validates her love and appreciation for math and science strengths.

Another area Sammy has found a lot of enjoyment in is her involvement in women's STEM student organization programs. Through involvement in this organization and funding from ASU, Sammy recently attended a national women's STEM conference where she was exposed to different people and companies that valued the presence of women in the field of engineering. Sammy finds that this type of support is particularly helpful for her because she is often the only woman in her class,

I'm pretty much the only girl all the time. It's a little intimidating asking for partner work. If someone wants to give you their number, you never know if they are being forward or if they see you as a classmate or as a girl.

Another area that Sammy struggles with in her major is the concept of generational capital. As her graduation year nears, she is anxious about finding employment and securing internships. Many of her classmates are able to land career development opportunities through their parent's connections, but with both of her parents being non-college educated, she has to find other ways to navigate the university experience on her own and to bridge that professional connection gap.

I had a roommate whose parents are educated and they told her how to set everything up. They ask her how her classes are. Her and her dad majored in the same thing so she was able to ask her dad for homework and be able to talk about college life. I didn't even know I needed my own laptop. You know? I just felt like that girl in the movie *Legally Blonde* where she showed up with the little mini inkpad and little orange pen while everyone is on their MacBook's.

Despite these challenges, Sammy is certain that this opportunity to pursue a college education is something that she does not want to take for granted. She often talks to her cousins who still live in Mexico and sees the obstacles they face in trying to pursue education and careers. She stated that she is grateful for the opportunity to pursue a career that many in her family cannot even attempt to do. In Sammy's *testimonio* the sources of capital most often referenced were family (familial capital), peers (social capital) and seeking resources (navigational capital).

*Familial Capital*- "My mom, I can call her crying. I was taking Calc II this summer and I was so scared after an exam because I didn't know how I did and I called her crying. She will tell me to calm down and she helps me a lot with that stuff."

*Social Capital*- "Well I have a friend that went to high school with me. She goes here. I kind of clung to her. Together we started meeting other different people. Then you start realizing that some people where you grew up, they're coming to ASU too and just kind of find each other."

*Navigational capital-* “At first, I wouldn’t really go to their office hours and try to talk to them. That’s something I learned because I applied for scholarships and they ask you for recommendations. Then, I realized I have no one to recommend me. If you’re a good student and you have a good relationship with them, maybe they’ll refer you to something. I actually got one of my professors to write me a letter for one of the Hispanic scholarships and I actually got that.”

Jenny

Jenny is a 20-year-old Engineering (Robotics) student, and a junior at ASU. Jenny was born in Mexico and is the first in her entire extended family to attend college.

Jenny’s father works in demolition and her mother is a home maker. She is passionate about women STEM outreach and hopes to one day pursue a career where she encourages young women to pursue science and math related fields. Jenny received messages early on from her parents about the importance of pursuing higher education. They often told her, “You don’t want to have the jobs that we have, so you need to better yourself.” It was a chance encounter in a high school wood shop that introduced Jenny to the concept of Engineering and higher education. She was seeking help from a math instructor when she discovered that he also coached the high school robotics team. At that time, the team did not have any female members and Jenny wanted to prove to the club’s members that females could be just as good in robotics as any male participant.

They treated me like I wasn’t smart enough or I wasn’t like them. I did show them up. I wanted to see other women there. I wanted them to know what it was like. Once they saw what we did, they liked it as well. I hated to be the only woman I guess.

After attending a couple of meetings, she proved the entire club that she was serious about her passion for robotics and soon started recruiting her female friends to join the club with her. Although she has been a college student for three years now, Jenny still

finds time to devote to her high school robotics team. She now mentors clubs at her alma mater and also at another high school in the same district. This extracurricular involvement has evolved into a full-fledged passion, and as an Engineering student at ASU she knows that the female STEM stigma is still something she faces, yet she sees the benefits of being a female STEM college student, “Sometimes you have to prove yourself more than a guy does. I think that makes you a stronger candidate. Because you work harder than the rest.”

Evident in Jenny’s *testimonio* are her desire to challenge status quo (resistant capital) and her passion to change the course of STEM engineering field for future generations to come (aspirational capital).

*Resistant capital*- “They treated me like I wasn’t smart enough or I wasn’t like them. I did show them up. I wanted to see other women there.”

*Aspirational capital*- “I took this one class; it was an academic refresher or something like that. Just because I wanted to remember why I was here, I guess. One of the things that we learned was to visualize where you wanted to be in your career and five years. Every time like a class is hard or something, then I think about why it’s important. Because it’s going to be important for my future.”

### Itzayanna

Itzayanna is a 21-year- old junior and a biomedical engineering student who moved to the United States when she was in fourth grade. She did not know English and had to work closely with her teacher to grasp a new language, in a new country.

Itzayanna quickly learned and her teacher applauded her for her quick learning skills and her dedicated work ethic. Over time Itzayanna demonstrated strong academic aptitude and solid dedication to her studies. Motivated by her family’s financial struggles, Itzayanna knew that she wanted to be successful and that an education would help her get

there. She also experienced having to pause her education in the United States because of immigration bureaucratic problems—when her family’s visas expired, she had to return to Mexico and was faced with the disappointing possibility of not being able to return to the United States.

When her family resolved their immigration concerns, Itzayanna turned to her education and relished the opportunity to be back in the US and in an American classroom. In particular, she learned that she really liked math, “Math was the language that I could understand and it wasn’t something that I needed to take slow like the rest of the courses.” This combination of harnessed work ethic and a love for math led her to pursue an interest in Engineering. She knew that engineering would be a tough major and she was excited for the challenge, yet her parents were a tad more cautious,

When I told my dad I wanted to be an engineer... I don’t know. It kind of upset me because he said, ‘That’s too hard. You’re going to be stressed all the time.’ That kind of hurt me because I worked so hard my entire academic life.

Despite her dad’s wariness, Itzayanna applied to ASU and learned that she was the recipient of multiple scholarships and that she was accepted into the honor’s college. She was thrilled to start at ASU but experienced social isolation in her first semester. She felt awkward being the only Hispanic student in her honor’s classes and she did not participate in class discussions. When not in class, Itzayanna lived in the residence halls and had a hard time connecting to students on her floor. She often ate alone, did assignments on her own and really struggled with connecting with her peers. One day she was sitting in the dining hall eating by herself when she was approached by a member of a Hispanic engineering student organization and was invited to attend a meeting. She

took him up on his offer and has since been a part of that student organization, where she coordinates STEM high school outreach efforts. Since then she has made lots of friends and her social experience at ASU transformed dramatically. She gained new study partners, new professional development experiences and her involvement in the organization cultivated a sense of desire to serve others. She also noticed that she found herself speaking up in class more.

I just felt like if people saw me really quiet maybe they would think that I wasn't good enough to be in that class, maybe I didn't understand the materials, that's why I didn't comment on anything. It's like I don't want them to see me as inferior or something just because my personality, just because I'm shy or because of my ethnicity or because I'm a female, so that's why I started speaking up.

In Itzayanna's *testimonio*, her peer network (social capital), family support (familial capital) and her desire for a better future (aspirational capital) strongly emerged as sources of capital that she relied on to navigate her educational journey thus far.

*Social capital*- "Basically I received advice from my friends. Since I was a year behind, my friends from high school who graduated with the group that I was supposed to graduate with, they came to college. They gave me little tips. They said, 'You know it always helps if you sit in the front because if you sit in the back you're not gonna pay attention, and you're going to be distracted by other people.'"

*Familial capital*- "I can see it in my dad. When his friends come over and they start talking about college... I know that his friend's kids, some of them are not able to go to college because of money or their grades didn't meet the requirements for scholarships. My dad, he says, 'Oh my daughter's in bio med engineering, and she's living on campus. She's doing really well.' From his voice, I can tell that he's proud of me."

*Aspirational Capital*- "Just because I feel like I want to be successful not just for myself but for my entire family, and for the future generations."