

CALIFORNIA STATE UNIVERSITY, NORTHRIDGE

EXPLORING THE ROLE OF GROWTH MINDSET IN THE TRANSFER EXPERIENCES OF  
COMMUNITY COLLEGE STUDENTS

A dissertation submitted in partial fulfillment of the requirements  
For the degree of Doctorate of Education, in Educational Leadership

By

Genevieve Bertone

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The dissertation of Genevieve Bertone is approved:

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Frankline Augustin, D.P.P.D, M.S.H.A.

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Date

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Richard Cortes, Ph.D.

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Date

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Nathan Durdella, Ph.D., Chair

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Date

California State University, Northridge

## Dedication

To Will, Soji, and Viva,

For all your love, support, and sacrifice.

To my dad for always providing me perspective on what's important.

To my mom for always believing in me and providing me opportunities to learn.

And to all those with a growth mindset in the face of challenges, this is for you.

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feedback, getting help from others, and responding positively to challenges are key concepts to academic success and certainly my own work would not have been completed without these growth mindset concepts.

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## ABSTRACT

### THE ROLE OF GROWTH MINDSET IN THE TRANSFER EXPERIENCES OF COMMUNITY COLLEGE STUDENTS

by

Genevieve Bertone

Doctor of Education Degree in Educational Leadership

The purpose of this study is to examine the relationship between growth mindset and the transfer experiences of community college students in a large urban public setting. Through qualitative methods of interviews, document review, and researcher notes, this study explored the usefulness of noncognitive skills, such as self-efficacy and growth mindset, in promoting student success in the transfer process. The growth mindset principle of intelligent practice, defined as effort, plus good strategies, and seeking help from others, was used to frame the interview protocol. This study examined to what extent students utilized growth mindset principles in their transfer process. The goal of this study is to explore how growth mindset can be used to help promote greater student success for students that are interested in transferring to a four-year institution. The results of the study show that growth mindset concepts do influence the transfer experience, especially in regard to a student's interest in seeking feedback, getting help from others, and responding to challenges. However, increased stress was also observed. Principles of growth mindset supported students both in the transfer process and beyond, including the necessary grades and preparations leading to transfer and dealing with transfer shock.

## **Chapter I: Statement of the Problem**

### **Introduction**

The effectiveness of California Community Colleges is under greater scrutiny than ever before. In 2009, President Obama set a goal of eight million new college graduates by 2020, the pathway between community colleges and four-year institutions, also known as the transfer process, will be critical to achieving this goal. The President's charge directly linked successful education of the nation's high school graduates to the opportunities and access of community colleges. Due to this increased focus on community college education from the national level and chronic budget challenges at the state level, policy makers and employers alike want to ensure that the state's educational system is producing meaningful results. From all perspectives, the need for students to succeed has never been stronger. Yet, despite rigorous state accountability measures and policies aimed at facilitating success and limiting failure, the road map for student success has not gotten any clearer. In fact, one conclusion that this focus has confirmed is that we are not really sure how to get there, only that we must continue to try. Efforts to quantify student success in hopes of improving it are happening at all levels of the academy from the classroom to the state capitol. Furthermore, a culture of metrics and measurable outcomes is driving educational policy and influencing the direction of funds (Duckworth & Yeager, 2015).

In 2012, California state legislators passed State Assembly Bill 1456, known more commonly as the Student Success Act. This Assembly Bill included several measures all aimed at increasing completion of degrees, certificates, and transfers. Two of the major outcomes of the act are the development of the Student Success and Support Program (SSSP) and the introduction of a Student Success Scorecard. The Scorecard utilizes metrics such as headcount, FTES, diversity profile, student-counselor ratio, completion rates, degrees awarded, units

completed, persistence rates, remedial progress rates, CTE certificate completion rates, and career development and college preparation course completion rates (California Community College Chancellor's Office website, n.d.). The SSSP and Student Success Scorecard together have become central to planning and programming in California Community Colleges. Through new funding and strict guidelines for measuring success, the Student Success Act has given community college administrators a more defined vision of what it means to be effective. From supplemental instruction and tutoring to assessment test support and professional development for pedagogical approaches, the focus on student success is undeniably centered on improving student's intellectual capacity.

Yet, studies show that cognitive outcomes and standards alone do not provide a complete picture of student success. Clearly, being educated means a person has a certain command of knowledge, skills, or a specific discipline. However, being educated also implies that a person has skills that are less tangible, such as problem-solving skills, self-control, persistence, and a certain level of academic confidence (Garcia, 2014). These skills are commonly known as non-cognitive skills and recent studies have shown that these skills are not only important in and of themselves, but they also support the development of cognitive abilities.

New information is bringing to light the importance of these skills, more focused on personal development, which is largely ignored in higher education planning and practice. This realm of noncognitive skills is just beginning to find its place in community colleges. These interventions may be particularly useful in reducing stereotype threat and gender gaps in junior high students (Aronson, Good, Inzlicht, 2003). Other studies have shown the ability for growth mindset interventions to support the persistence and performance of developmental math students (Paunesku, 2013). Given the recent focus on completion from SB 1456 and the

framework of the Student Equity funding, these findings are particularly important. More important than legislation and funding is the promise that these interventions have to support the students who need it the most.

Growth mindset and other noncognitive skills may hold this potential. The potential to address the persistent question of achievement gaps, the potential to support the students that will be most challenged as they move through their developmental course sequence and provide students with a transferable skill that can be used in any discipline and ultimately support the development of their cognitive abilities. Understanding how noncognitive skills are developed or discouraged can help institutions support students on their educational journey from a community college to a four-year university and beyond. Clearly, unless students believe that they can affect the situation and achieve the desired results through their actions, they have little incentive to make the sacrifices necessary to achieve academic success (Bandura, 1996). Therefore, understanding the role growth mindset plays in academia will be critical in designing effective programs.

Growth mindset is the belief that one's own intelligence can be developed with effort. This belief can shape students' approach to overcoming obstacles encountered on their academic journey. In 1907, William James proposed a program of study that encouraged psychologists to consider two broad problems. First, what are the types of human abilities and second, by what diverse means do individuals unleash these abilities (Duckworth, et. al, 2007). In order to truly understand and increase student success, we must look deeper into human success and what this field of study might help us understand about the important skills that lead to greater achievement and quality of life. These noncognitive skills, such as motivation, mindsets, self-

control, grit, self-efficacy, and perseverance are instrumental in understanding and improving student success.

The foundational work for mindsets comes from Albert Bandura, one of the leading scholars in the field of educational psychology. Bandura (1997) defined self-efficacy as the levels of confidence individuals have in their ability to execute a course of action or attain specific performance outcomes. For decades researchers have been studying behavior, motivation, and achievement of goals in an academic setting (Paunesku, 2013). Research shows that “the beliefs that students create and develop and hold to be true about themselves are vital forces in their success or failure in all endeavors and, of particular relevance to educators, to their success or failure in school” (Pajares & Schunk, 2002, p. 2). Students who have high beliefs about their abilities to improve are more likely to put forth effort, engage in opportunities to practice in areas where they need more development, and have higher achievement in comparison to grade-level peers who do not have these high beliefs (Dweck, 2010). Exploring the instrumentality of this concept in achieving academic goals will be central to my research. I will delve into this through personal interviews with students at various stages in the transfer process, including students that have recently transferred. Connecting these data to the existing literature and using a grounded theory approach, I present a model for understanding the relationship between growth mindset and the community college transfer experience.

### **Research Problem**

The problem this study addresses is rich and two-fold. First, while there has been more recent research performed on the role noncognitive skills play in academic settings, little work has been done to explore the role growth mindset plays in transfer from community college to a four-year institution. Second, with the adoption of SB 1456 and the increased focus on student

success, this study explores an intervention that might be useful in addressing achievement gaps and improving outcomes for developmental course sequences. The transfer process begins as soon as a student states their educational goal as transfer and begins the journey toward meeting the requirements to transfer. In the state of California, only 31 percent of students who enroll in a developmental math course will ever progress to a transfer level math course (Student Success Scorecard, 2014). The statistics are even bleaker where students of color are concerned. Latino/a students in developmental math courses have only a 29.4 percent chance of advancing to a college level math course, and African American students in developmental math courses have only a 17.4 percent chance of advancing to a college level math course (Student Success Scorecard, 2014). The magnitude of this problem becomes apparent when we realize that between 70 percent and 90 percent of students entering California community colleges test into pre-college levels core skills including English and math (Recommended Basic Skills Outcome Measures, 2009).

While considerable resources are being allocated through programs such as the Student Success and Support Program to mitigate this situation, most of these resources focus on cognitive programs such as increased tutoring, assessment preparation, and discipline specific “boot camps.” As noted previously, examples of this can be seen in the newly released Student Success Scorecard, SSSP and equity funding programs, and even in the institutional effectiveness and planning processes at most California Community Colleges. In fact, most institutions of higher learning are growing their institutional research departments as a method for capturing activities that support student success. This trend is also evident at the secondary level, with the wide-scale adoption of the Common Core, which among other goals, aims to improve students’ performance on standardized tests ([www.corestandards.org](http://www.corestandards.org)). With these

patterns of policy and practice educators across disciplines tend to focus more on targets and outcomes than on the student learning and development.

Yet, there is more to teaching and learning than outcomes and targets. There are important attributes of the human mind, such as self-efficacy and self-discipline that help students persevere in the face of challenge and adversity both in school and beyond. It is important to remember that, students are likely gaining more from their education than a degree, a job, or a G.P.A. At the end of the day, it may matter less what a student's I.Q. or GPA is and more about the student's ability to "stick to something" or their belief in their ability to achieve success. While student success may be at the top of everyone's agenda, research has shown that cognitive skills, opportunity, and talent do not provide a complete picture of the process towards academic achievement. According to research spanning more than four decades, students' beliefs about whether effort leads to success have a dramatic influence on their success in school (Rothman, 2014). More specifically, researcher Auten (2013) found that students who employed growth mindset strategies showed significant improvement in "ability, persistence, and success" (p. 2). This study attempts to build on these findings and provide additional perspectives to create a more holistic approach to student success.

### **Research Purpose**

The purpose of this study is to examine the relationship between growth mindset and the transfer experience for community college students. For purposes of this study, I define the transfer experience as students' thoughts, feelings, and reflections about their transfer decisions, preparations, application process, acceptance, and ability to navigate a four-year institution. The goal of this study is to help community college leaders understand the importance of developing growth mindset in their transfer-oriented students. The results of this study support faculty and

administrators that are interested in facilitating student success through the development of noncognitive skills.

### **Research Questions**

To explore the relationship between these growth mindset and the transfer process, I used the following research question: What role does growth mindset play in the transfer experiences of students in a large public urban community college? I was curious to see how the concepts of growth mindset presented itself through the transfer experiences of community college students. In this sense, I intended to explore how students' utilize the concept of "intelligent practice" defined as effort, plus strategies, and help from others through the transfer process (Powers, 2015, p.51). By answering the research question, we will have a greater understanding on how to achieve student success as defined by the Student Success Task Force and Scorecard metrics of degree, certificate, and/or transfer completion, persistence rate, and developmental pathway completion rate.

### **Theoretical Frameworks**

Broadly speaking, this study focused on noncognitive skills and the student experience of transferring from a two-year community college to a four-year institution. I examined the relationship of these two phenomena in higher education setting using qualitative research methods. I did not intend to focus on the institutional process or logistics of transfer, but rather the psychosocial disposition and experiences of students going through the transfer process. Through the lens of growth mindset, I examined how students apply effort, seek resources, work with others, and respond to challenges, setbacks, and failures in the educational environment. Using the problem statement and research questions as a guide, I have examined two domains of literature: student success and the transfer process and noncognitive skills, focusing on growth

mindset. Based on this review of the literature, I used a multi-theoretical framework combining elements of Bandura's theory of self-efficacy and Carol Dweck's goal theory and mindset framework. An important policy framework that informs this study is the definition and measurement of student success as defined in the Student Success Act of 2012.

### **Bandura's Theory of Self-Efficacy**

Bandura's social learning theory (1989) and concepts of self-efficacy are just two of many foundational conceptual frameworks that continue to shape the ongoing conversation about the importance of noncognitive skills. Bandura's theory on self-efficacy is an extension of his Social Cognitive Theory, which describes how knowledge is created by observing others through social interactions and experiences. One of the most important findings in Bandura's work is that self-efficacy can be developed (Bandura, 1989).

Other related theoretical frameworks include Weiner's Attribution Theory (1972) and Wigfield's Expectancy-Value Theory of Motivation (2000). Both of these and other educational psychology studies have contributed to ongoing dialog about broadening the scope of education to include psychological factors that are by nature noncognitive (Farrington, et. al., 2012 & Bembennutty, 2012).

### **Dweck's Mindset Theory**

Building on the work of Bandura, she has performed relevant studies focusing on goal theory, social cognition theory, motivation and success. In 2006, Dweck published the book *Mindsets: The New Psychology of Success*, which details the importance of self-efficacy in developing a growth mindset and in achieving more interpersonal success and achievement. Her research has found that individuals with a growth mindset, as opposed to a fixed mindset, are more likely to be interested in learning. Those with a fixed mindset see no value in learning since

they do not feel that they can significantly impact the outcome of any given situation. Because of this, Dweck goes so far as to categorize those with a growth mindset as “learners” and those with a fixed mindset as “non-learners”. This helps to draw the connection between one’s beliefs in one’s own abilities and academic achievement.

### **Overview of Methodology**

In effort to explain how growth mindset impacts the transfer process, I used a grounded theory design. According to Bloomberg & Volpe (2012), "grounded theory is to move beyond description and to have the researcher generate or discover a theory of process, an action, or an interaction grounded in the views of the research participants.” This study generated a student-centered theory of academic mindsets and the transfer experience from community college into a four-year B.A. granting institution.

The study site, Bodhan Community College (a pseudonym), is a large urban community college with a diverse student body. Bodhan Community College (BCC) maintains one of the state’s highest transfer rates from community college to the University California system. Through theoretical and criterion sampling, I recruited, selected, and interviewed seventeen students at various stages in the transfer process. Participating students were either preparing for transfer, applying for transfer, or recently transferred within 2 years. All participants were currently enrolled at an institution of higher learning. I sought to include a diverse pool of participants, similar to the research setting’s student demographic profile. Participants were provided with a formal invitation to participate, an informed consent form, and an interview protocol which was used to conduct each interview.

Personal interviews were held in a location of the participants choosing. This helped to create a sense of comfort and control in the participants. Interviews lasted approximately one

hour. I conducted follow-up emails as needed. Follow-ups only occurred for early participants. This is because as a grounded theory study the interview protocol was refined as the data collection and analysis created a deeper understanding of the phenomenon being studied and core themes emerged. In addition to in-depth personal interviews, students were invited to provide personal materials including their personal statement, assignments, or transfer applications materials. Other documents included agendas and minutes from related institutional committees, as well as materials gathered from the Student Success Task to create a comprehensive understanding of growth mindset and student success for community college students.

Throughout the process, the protection of participant's privacy and protection of data was paramount. I informed students of their right to discontinue participation in the study at any time. I stored the data on password-protected computers and storage devices, participants were given a pseudonym, and all identifying data was removed as soon as data collection was complete. I used research journals, peer-review, and member-checking to help mitigate any researcher bias. The goal of these procedures was to maintain a thorough process and deliver a holistic theory on noncognitive skills and the student transfer experience.

### **Expected Outcomes of the Study**

As you will read in the following review of the literature, there is ample research documenting how growth mindset interventions can result in meaningful academic achievement, especially for underserved students (Aronson, Fried, & Good, 2002; Blackwell, Trzesniewski, & Dweck, 2007; Cohen, Garcia, Purdie-Vaughns, Apfel, & Brzustoski, 2009; Good, Aronson, & Inzlicht, 2003; Walton & Cohen, 2011). Since several of the students whom I interviewed are already successful in many regards, including having transferred to a university, I expected to

observe growth mindset thinking in their approach to transfer. My goal was not necessarily to further prove that having a growth mindset improves educational outcomes, such as transfer. Rather, as a grounded theory study, my goal focused on further understanding *how* growth mindset influences the transfer process and to develop a deeper understanding of growth mindset that is grounded in the experiences of community college students.

### **Limitations and Delimitations**

This study focused on students in a large urban community college. The institution of study has a “culture of transfer,” meaning the majority of students declare transfer as their primary goal. At Bodhan Community College, over 70 percent of its incoming students declare their primary goal as transfer. It is possible that a study performed at a small, rural college or an institution that is more focused on preparing students for the workforce may have different results.

To understand the role of noncognitive skills, I focused on how growth mindset and other noncognitive skills shape the transfer experience. However, the noncognitive domain includes many other skills such as self-discipline, perseverance, and passion that are not examined in this study. In order to truly understand the role these skills play in student success additional research is needed. Additionally, this study is limited to the transfer process, but examining the role self-efficacy and growth mindset play in reducing transfer shock and post-transfer retention is an important next step to providing students the skills to succeed in college and beyond.

### **Organization of the Dissertation**

This study is an examination of the role growth mindset plays in the transfer process. Chapter 1 starts by putting the study in context of student success and provides a general overview of noncognitive skills. This chapter gives the reader a sense of the ongoing discussion

that this study will contribute to and some of the gaps in literature and in practice around student success. A brief overview of the methodology and theoretical frameworks is provided.

Chapter 2, the literature review, goes into more depth about student success and noncognitive skills. This will help the reader more thoroughly understand the current perspectives on student success. It will also provide both a broad understanding and a specific use for noncognitive skills; what they are and why they are important for facilitating student success across disciplines and demographics.

An in-depth review of the study's methodology is provided in Chapter 3, which includes information on the research tradition, setting, sampling procedures, research instruments, data collection, data analysis, and researcher roles. This chapter will help to identify the parameters of the study and provide validity for the transferability of its findings.

In the next chapter, Chapter 4, I provide the results of my study, including direct quotes from the participants from the interviews. This chapter provides the student voice and brings to life the concepts of growth mindset through the words of the student. This chapter provides the foundation for discussion in the next chapter. In Chapter 5, I discuss the results in context of the literature and the conceptual framework. I connect the student voice to the theory of growth mindset through the lens of the transfer process. I conclude by providing recommendations for practice and future research.

## Chapter II: Review of the Literature

Recently, policymakers and community college practitioners have increased focus on standardized assessment, outcomes, and targets in the California Community Colleges. In response, some researchers are examining what skills are being left behind as educators focus on mechanisms for achieving these standards and outcomes, instead of student learning. Research is finding that important psychological behaviors and personal beliefs such as self-efficacy, self-control, mindsets, and grit are directly related to long-term student achievement. These skills are often referred to as noncognitive and studies show that developing them in an academic setting can positively impact student success in a variety of ways including increased GPA (Korgan, C., Durdella, N., & Stevens, M., 2013).

At first glance, the existing literature regarding noncognitive skills is limited. However, once a deeper understanding of exactly what these skills are and why they are important is established, the literature opens up, becomes interconnected, and is quite fascinating for anyone interested in helping students succeed in college. Among this emerging research several questions and gaps remain. Such as, what exactly are noncognitive skills? Are some noncognitive skills more important than others for supporting student success? Most importantly, what can institutions do (or not do) to increase these skills in the community college students?

To understand how noncognitive skills influence student success, an understanding of the theoretical frameworks is needed. Once we have examined the broad theoretical underpinnings of noncognitive skills, a more detailed definition of these skills is provided. Several examples of noncognitive skills are examined more carefully within the context of educational research, including self-efficacy, growth mindset, self-discipline, and grit. Following these more in-depth examinations, a review of the benefits of noncognitive skills is included to help the reader

understand the importance of developing these skills and specifically how these skills impact student success. Then, a brief review of students' transfer experiences will be presented. Finally, the literature review ends with a summary of findings on two proposed mechanisms for developing noncognitive skills in students.

## **Noncognitive Skills and College Student Success**

### **Defining Noncognitive Skills**

In order to understand why these skills are important to community colleges, first, it is necessary to more carefully define noncognitive skills. Noncognitive skills by name are the opposite of cognitive skills. Cognitive skills are the mechanisms in which knowledge is obtained and processed, such as reading and writing. Therefore, it would follow noncognitive skills are skills that are not associated with knowledge acquisition and bare little influence on academic performance. Studies show that this is in fact not true and that these important skills are often overlooked by educators who perceive them as “soft skills” that are ancillary to the learning process (Farrington, et. al, 2012). Although often overlooked, the importance of noncognitive skills is not a new concept. Thomas Edison wrote that, “genius is 1 percent inspiration and 99 percent perspiration” (Heckman & Rubinstein, 2001). Yet, the idea that cognitive ability, including content knowledge, is the most important factor in determining academic success has been given a boost by the recent passage of the Common Core Standards. Additionally, many states and districts are also developing measures of high school and college readiness based on the number and sequence of advance placement courses (Farrington, et. al). This suggests that academic achievement rests primarily on content mastery.

Yet, there is little evidence that raising standards and increasing course content will necessarily lead to more success. In fact, longitudinal studies have shown stronger correlations

between grades and long-term achievement, such as degrees obtained and earnings gained, than have been found with performance on standardized tests (Duckworth, Peterson, Mathews, & Kelly, 2007). This is because grades capture something that standardized testing does not, namely noncognitive skills such as perseverance, motivation, attitude, passion, teamwork, and interpersonal dynamics (Farrington, et. al, 2012). Noncognitive skills are behavioral and are measured in attitudes, values, and personality characteristics. These skills can be difficult to quantify, which is problematic in an increasingly data driven environment.

In a recent meta-analysis of noncognitive skills performed by the Consortium on Chicago School Research (2012), researchers used empirical studies and theoretical frameworks to classify these skills into five major, interrelated categories. First is academic behaviors, such as attending class, arriving ready to work, paying attention, and participating in instructional activities outside of class (p. 15). Second, academic perseverance which has a more complicated definition based on the literature, can be defined primarily in three ways: completion of assignments, persistence or grit, and self-control or self-discipline (p. 9). The third category of noncognitive skills defined by the Consortium is academic mindsets, which is how one perceives the academic work in relation to one's self (p. 9). Fourth is learning strategies, which essentially means knowing when you don't know and employing tactics to assist in retaining the knowledge (p.39). There is a reciprocal relationship between the first four categories. Learning strategies help students perform better in class, getting good grades empowers students and validates positive mindsets, feeling like the work is personally valuable and that one is part of an academic community increases motivation or perseverance, and when students persevere they are more likely to show up on time and ready to work.

Of course, this process works in a negative feedback loop as well, which is why identifying methods for bolstering these skills is so important. The final category of noncognitive skills is social skills, such as empathy, cooperation, teamwork, and responsibility (Farrington, et. al., 2012). These are those general “people skills” that assist students with interpersonal relationships both with other students and also with teachers. These skills are also important for working with community partners, service organizations, or employers. The following sections examine three interrelated noncognitive skills that can be found in the emerging literature and research.

**Self-Efficacy.** Self-efficacy is the belief in one’s ability to perform and accomplish goals or tasks (Bandura, 1989). Academic self-efficacy refers to a student’s perception of their own ability to successfully complete academic tasks (Ormond, 2006). Understanding the role self-efficacy plays in educational settings is important. If students believe they are born with a certain set of skills that cannot be changed, they are less motivated to engage in activities that might improve their situation, activities like learning. However, if students believe they can overcome limitations and achieve success through their own commitment they are more likely to engage in challenging tasks and recover quickly from setbacks and failure (Bandura, 1996). Self-efficacy is not a new concept, but the recent focus on the role noncognitive skills play in academic achievement and student success has led to further inquiry examining the relationship

Several studies have linked self-efficacy to academic achievement (Bandura, 1996; Korgan, Durdella, & Stevens, 2013; Zuffianò, Gerbino, Kanacri, Di Giunta, Milioni, Gian, & Caprara, 2012). But as with most educational phenomenon, it’s not a perfect causal relationship. Sometimes high self-efficacy can lead to students becoming overly confident and putting forth less effort. This can result in short-term failures that can lower a students’ self-efficacy

(Merriman, 2012). Unbundling self-efficacy from self-discipline and other noncognitive skills is also challenging because they are all so closely related. Survey tools and assessments rely heavily on self-reported data.

One recent study looked at the relationship between GPA and self-efficacy and found that self-efficacy predicted 18 percent of the variance in GPA (Komarraju & Nadler, 2012). However, this study also found that this relationship was partially mediated by effort regulation. Students with high self-efficacy were able to achieve more, not only because they believed they could impact the outcome, but also because they monitored and regulated their impulses and were, therefore, able to persist in the face of difficulties (Komarraju & Nadler, 2012). The following section includes a more detailed review of the literature regarding the impact of self-discipline on student success.

**Academic Mindsets.** Mindsets refer to a student's attitudes, beliefs, and dispositions about school and learning and associated with student success (Fancsali, Snipes, & Stoker, 2012). Academic mindsets influence a student's perseverance, behavior, and development of learning strategies (Farrington, et. al., 2012). These factors in turn influence a student's academic outcomes. According to research on noncognitive skills, learning strategies alone are not enough to help students achieve success (Yeager & Walton, 2011). Instead, students need to be trained to have an incremental mindset, the idea that their intelligence can grow, in order to be motivated to seek out those strategies that will serve them in their academic pursuits. Through a variety of studies, in a wide range of settings Dweck has developed a comprehensive model of academic mindsets and motivation. Her work, in partnership with other well-known researchers in the field, has consistently shown that the introduction of psycho-social interventions, specifically ones that develop a concept of intelligence as malleable, can be highly effective at improving

academic success (Dweck, Chui, & Hong, 1985; Dweck, et. al., 2006; Dweck & Leggett, 1998; Aronson, Fried, & Good, 2002; Blackwell, Trzesniewski, & Dweck, 2007; Walton & Cohen, 2011). If students have a fixed mindset they are less likely to be motivated to persist in the face of challenges. Psychological interventions that change students' mindsets can help them take view these challenges as learning opportunities and ultimately achieve greater success (Yeager & Walton, 2011). Sadly, many students suffer setbacks when faced with challenges, and some never recover. Fostering a growth mindset can help students apply more effort, overcome challenges, and seek help from others (Blackwell & Dweck, 2007; Powers, 2015). Growth mindset is also directly related to other noncognitive skills, including self-discipline.

**Self-Discipline.** Certainly when students that apply themselves and demonstrate restraint are more likely to succeed. However, in order to consider policy implications of such a claim, the strength and consistency of this finding is important. Angela Duckworth (2005), a well-known psychologist that has extensively studied the role of noncognitive skills in student success, published a study of that demonstrated a connection between low self-discipline and poor grades. In fact, her study found that self-discipline was more closely correlated to academic achievement ( $r = .67$ ) than IQ ( $r = .47a$ ). Similarly, researchers Wolf and Johnson (1995) found self-discipline to be the strongest of 32 personality variables in predicting college GPA, even surpassing SAT scores. More recently, Tangney, Baumeister, and Boone (2004) found self-discipline correlated positively with self-reported grades. Beyond that, the study also showed positive correlations with self-esteem, reduced substance abuse and a host of other interpersonal strengths. The following section examines the concept of grit, which includes aspects of self-discipline and self-efficacy.

**Grit.** In 2007, researchers, Duckworth, Peterson, Mathews, and Kelly, introduced the construct of grit, defined as a personality trait defined by having perseverance and passion for long-term goals. They studied three independent data sets: grade point average in Ivy League college undergrads, retention in two classes at Westpoint Military Academy, and ranking in the National Spelling Bee. Grit accounted for an average of 4 percent of the variance of successful outcomes. Grit did not correlate positively to grade point average, but was highly correlated to the Big Five Conscientiousness (Duckworth, et. al, 2007). In 2009, a follow up study was performed to further test the two-factor scale of the original survey, but with fewer items and improved psychometric properties. Again, this report provided predictive validity among adults and was positively associated with educational attainment, retention, and final round advancement in the National Spelling Bee (Duckworth & Quinn, 2009). Since these reports, the topic of grit has gained much attention in the educational field, including more in-depth look at self-discipline.

### **Benefits of Noncognitive Skills**

The promise of noncognitive skills is has been around for many decades. In 1930, Platt and Munk published the *Little Engine that Could*, a story of a little train engine that exhibits empathy by agreeing to help carry a heavy load up a steep mountain despite the immense challenge. During the journey he puffs, “I think I can, I think I can, I think I can” (Piper, 1930). This beloved American children’s book is the essence of growth mindset. Perhaps a more relevant introduction to the benefits of noncognitive skills can be found in the nationally recognized charter school network Knowledge is Power Program model, more commonly known as KIPP. This school model focuses on a single mission: college graduation. Yet, it is not the singular mission that makes this school unique. It is how they achieve it. KIPP’s motto is, “Work

hard. Be nice.” By focusing on character development and a scope of noncognitive skills they have achieved one of the highest graduation rates in the country (<http://www.kipp.org/>).

Similarly, a study by Heckman & Rubenstein (2001) on the success of students who had received the GED versus those who had completed high school illustrated that while GED students may have achieved equivalent cognitive standards, they typically did not achieve the same level of income or quality of life as those who have completed high school through traditional processes. In other words, these students had something that the GED students did not. Heckman and Rubenstein hypothesized that noncognitive skills contributed to higher achievement in a variety of areas (p. 5).

**Economic attainment.** For years researchers have studied the connection between cognitive abilities, measured by test scores and educational attainment, and occupational outcomes (Kerckhoff, Raudenbush, & Glennie, 2001). However, as interest in noncognitive skills continues to grow, more researchers are investigating the impact of noncognitive skills and even comparing them to the impact of cognitive abilities. This interest has been fueled by the understanding that these skills are critical for a global economy (Lipnevich & Roberts, 2011).

The studies by Carneiro and Heckman (2003), Carneiro, Hansen, and Heckman (2003), Heckman, Cunha, and Navarro (2005) and Heckman, Stixrud, and Urzua (2006) establish that noncognitive skills are an important factor in predicting labor market success. In fact, Kerckhoff, Raudenbush, and Glenning (2001) found that noncognitive skills explained more of the variation in income than did cognitive abilities, even when controlling for educational attainment.

**Academic achievement.** Numerous studies have linked noncognitive skills such as self-efficacy, grit, and self-discipline to increased performance (Bandura, 1996; Korgan, Durdella, & Stevens, 2013; Heckman & Rubenstein, 2001; Zuffianò, Gerbino, Kanacri, Di Giunta, Milioni,

Gian, & Caprara, 2012). However, studies have also shown a link between noncognitive skills and other valuable academic accomplishments such as retention and completion (Heckman & Rubinstein, 2001). In the Westpoint study conducted by Duckworth and Peterson (2008), grit predicted successful completion in a rigorous summer program better than any other of the Big Five personality traits, as well as the Military Performance Score. Furthermore, DeWitz, Woolsey, and Walsh (2009) found that self-efficacy was positively correlated to purpose in life. This study was building on Viktor Frankl's model that purpose in life increases engagement and success. He further posits that without purpose we exist in a vacuum and become bored and disengaged (DeWitz, Woolsey, & Walsh, 2009). Therefore, if self-efficacy increases purpose, and purpose increases engagement, it would follow that increasing self-efficacy would lead to greater retention. Given that noncognitive skills development results in so many positive outcomes for students, it is critical that educators explore ways of fostering these skills on their campus.

**Reducing stereotype threat.** In 1995, Steele and Aronson hypothesized that racial stigma contributed to the achievement gap of African American students. They performed a series of studies to test how self-perceptions of racial stereotypes influenced performance. In all of the studies, African American students' performance was negatively impacted as a result of being reminded of negative stereotypes. In their general discussion following the three studies, they write:

The existence of a negative stereotype about a group to which one belongs, we have argued, means that in situations where the stereotype is applicable, one is at risk of confirming it as a self-characterization, both to one's self and to others who know the stereotype. This is what is meant by stereotype threat. (p. 808)

Research has shown that noncognitive skills can help to reduce achievement gaps and stereotype threat (Yeager, Walton, & Cohen, 2013; Oyserman, Bybee, & Terry, 2006; Silva & White, 2013). In 2002, Aronson further explored the role of self-characterization and stereotype threat by partnering with Fried and Good to explore how theories of intelligence can reduce stereotype threat in African Americans. They delivered a pen-pal style intervention to 109 Stanford students. In this experiment, the participants were educated on the malleable nature of intelligence and the importance of effort. They were then asked to write a letter to an “at risk” middle school student and were especially encouraged to include the idea that intelligence is not fixed and can be changed with effort. Through the process of writing, the study participants internalized the concepts of growth mindset. As predicted, the African American students (and to some degree the White students) reported greater enjoyment of the academic process, greater academic engagement, and obtained higher grade point averages (Aronson, Fried, Good, 2002).

Reducing stereotype threat is not just about making students feel more welcome or confident. In a variety of studies researchers have demonstrated how stereotype threat leads to increased agitation (Murphy, Steele, & Gross, 2007), reduced working memory capacity (Schmader et al., 2008), and increased emotional suppression (Johns, Inzlicht, & Schmader, 2008). In 2010, a study was done to examine the effects of stereotype threat on the learning process and found that stereotypes about women in math reduced their level of mathematical learning and led to poorer performance in negatively stereotyped domains (Rydell, Rydell, Boucher, 2010). This means that stereotype threat not only affects someone’s ability to test well, but also negatively impacts the learning process, the uptake of information, and the ability to retrieve this information as needed.

## **Developing Noncognitive Skills in College**

Given the recent focus on outcome-based assessments, much of the neglect of noncognitive skills is due to the challenge in measuring and assessing them (Heckman & Rubinstein, 2001), followed closely by the lack of clarity on exactly how to foster them. Given the benefits of developing noncognitive skills, both for students and institutions, it is important to explore programs that will support this effort. In the literature, the primary method for developing noncognitive skills is through targeted interventions (Nussbaum & Dweck, 2008; Yeager & Dweck, 2012; Blackwell, Dweck, Trzesniewski, 2007).

However, there is also evidence that engagement programs and co-curricular learning can foster self-efficacy and other noncognitive skills. For example, service-learning has been shown to provide positive benefits in several of the five categories of noncognitive skills presented in the meta-analysis, especially social skills (empathy and responsibility), academic mindsets (feeling like your work matters), and academic perseverance (Farrington, et. al., 2012). The recent resurgence in research and interest about noncognitive skills makes a strong case for including the development of these skills in academic settings. Research indicates that students who participate in service-learning demonstrate greater empathy, are kinder to others, and are more likely to persist in academic environments (Bilig, 2000). Co-curricular programs have also shown to foster noncognitive skills and increase student success.

**Co-curricular activities.** There is extensive literature on the relationship between student engagement and student achievement or success. But why? How does engaging students in activities make them more successful? The answer is noncognitive skills. These programs develop a student's ability to find their passion, develop the self-discipline, and see their effects on a community which builds confidence and self-efficacy.

Building on this idea, one study performed at the Department of Educational Leadership and Policy Studies at the University of Florida found that students with higher academic engagement actually had a lower persistence rate than students with high social engagement (Hu, 2010). The Community College Survey of Student Engagement states unequivocally that the more engaged a student is in both academic and social aspects of academic life, the higher the likelihood of increased student learning outcomes (McClenney, et. al, 2012). Increasing pressure on institutions to improve outcomes, retention, and completion require them to look more carefully at ways to engage students in meaningful collegial experiences. The literature clearly supports the idea that programs that bring students together outside of the classroom and create friendships, develops social skills that assist students in creating social capital across campus, and can ultimately lead not only to increased academic performance, but also to greater retention, completion, and student success (Mundy & Elyer, 2002). Some studies that have examined the relationship between noncognitive skills and economic attainment have also examined how these students were acquiring these skills. In 2008, researcher Christy Lleras found that participating in sports accounted for a 3 percent increase in earnings. She also found that participation extracurricular activities helped reduce the achievement gap between low and high socioeconomic status students (Lleras, 2008).

Another key study that addresses the themes presented in this review looks at the relationship between extra-curricular activities (including service-learning) and noncognitive skills in students of low socioeconomic status (SES). This study found that participation in extra-curricular activities was particularly beneficial for closing the achievement gap, reducing participation in risk behaviors, and developing noncognitive skills that led to greater student success (Covay & Carroonaro, 2010). This is particularly important for community colleges that

are increasingly tasked with closing the achievement gap and basic skill remediation. For some students, developmental courses are their first step on a long journey towards transfer. The literature on transfer from community colleges is presented in the section below.

### **The Dark Side of Noncognitive Skills**

Although noncognitive skills have been studied for their benefits, recently a study by Lucas, Gratch, Cheng, and Marsella (2015) found that students that scored high on the Grit Scale were more willing to risk failing to complete a task to persist on individual items. In other words, even though failure appeared to be imminent and there may have been benefits or rewards in quitting, individuals with grit, kept persisting on individual tasks. Similarly, research has shown that individuals with high levels of self-efficacy were often over confident about their abilities, which could reduce performance over time (Stone, 1994; Moores & Chang, 2009). Both findings are important considerations for students that might be at risk for high levels of stress, misjudgment of abilities, or inexperienced at balancing the multiple demands of academia.

### **Student Transfer Experiences and Outcomes**

Community colleges offer opportunities for millions of Americans each year to improve their quality of life through educational attainment. These institutions attract students from a wide variety of backgrounds, interests, and goals. The inexpensive tuition, flexibility, local access, and wide variety of undergraduate classes provide students who might not be ready or able to attend a four-year university the opportunity to gain important skills and experiences. Flexibility in scheduling, location, and load are a critical part of the open access mission. According to U.S. News Education Report, approximately sixty percent of community college students attend part time while working or attending family needs. Community colleges are often the first step towards larger personal goals, such as degree, transfer, or promotion.

Examining the transfer process has been the focus of research for many decades. This can be partially explained by the sheer magnitude the role community colleges play in student success. Community colleges are the largest postsecondary education system in the country. Surveys indicate that between fifty and eighty percent of these forty-four million students intend to seek to earn a bachelor's degree (Handley, 2011). California community colleges enroll roughly two-thirds of all California college students and approximately one-fourth of all community college students nationwide (Horn & Lew, 2007). In 2013, responding to the important role transfer plays in shaping the University of California system, the UC president created a special task force charged with identifying recommendations that will strengthen and streamline the pathway from community college transfer to university.

The literature on community college transfer is rich and multi-faceted. However, there are several themes that emerge from the research that should be considered in the context of examining growth mindset and community college transfer experiences. Studies on the number of transfers, the successful outcomes of community college transfer students, and the transfer transition, also known as “transfer shock”, are each facets that can be found in the academic literature on transfer from community college to university. There has also been significant research performed on various strategies or programs that aim to improve the quantity and quality of transfer students. As well as research on efforts to streamline and improve the overall transfer process. Perhaps most importantly, is the rich body of knowledge that examines the disproportionate impact and underrepresentation of students from diverse backgrounds in the transfer from community college to university. Each of these themes are discussed in the following section, however, there is also notable research on discipline specific transfer experiences, such as students in STEM, math, or developmental courses.

**Transfer rates.** Transfer is a critical part of the California Community College mission (Townsend, 2006). According to the California Community College Chancellor's office, twenty-nine percent of University of California and 51 percent of California State University graduates started at a California community college (CCCCO website, n.d.). Furthermore, transfer students from the California Community Colleges to the University of California system currently account for 48 percent of UC's bachelor's degrees in science, technology, engineering and mathematics (CCCCO website, n.d.). Clearly, transfer is a significant driver of student success at the UC and CSUs. Both systems are invested in supporting and improving the transfer process.

In 1991, Grubb identified several important functions of a transfer program for community colleges. First, transfer programs help to test and validate the quality of education provided at the community college level. Second, a successful transfer program indicates the ability for colleges to respond to their students stated goals and wants. Finally, community colleges have widely promoted their ability to provide access to education to those that would otherwise not have pursued it. While, Associate degrees and certificates are still evidence of this commitment, clearly the ability to provide pathways to Bachelor programs are also an important part of this open access mission (p. 195-6).

While this study is over two decades old, it provides important perspective on historical transfer trends from the seventies and eighties (New Directions for Community Colleges, 2002). The main focus of the 1991 study was to examine declining rates of transfer students and examine programs that have emerged to address this concern. The author concluded that there are many factors that influence transfer rates, "among them the changing demographic backgrounds of students, declining achievement during high school, a collapse of career counseling in the high school, an increase in the numbers of "experimenters" in community

colleges, the shift from academic to vocational programs within community colleges, the apparent weakening of academic Associate degrees linked to transfer, and a decline in federal aid” (p. 215). More recently studies have shown that transfer rates from community colleges are improving. Partly, in fact, due to addressing of several factors identified decades earlier by Grubb. Among other efforts, this includes increases in federal aid, improved Associate degrees linked to transfer, and a renewed emphasis on partnerships with high school counseling departments.

**Transfer student outcomes.** Community college transfer students are among some of the most successful at four-year institutions. Transfer students typically earn a degree in less than 3 years and sixty two percent of graduating students from CSU and UC universities have taken courses at a California Community College. Many studies have examined time to degree and GPA of transfer students. One study examined the specific attributes of community college students in successfully obtaining their baccalaureate found that gender, SES, high school curriculum, educational expectation upon entering college, GPA earned from community colleges, college involvement, and math remediation were the most closely correlated with student success (Wang, 2008). Particularly applicable to this study, they also found that perceived locus of control was a significant predictor of persistence. Transfer students benefit universities in a variety of ways. They bring diversity in age, experience, and background. They also bring some challenges, specifically integration and transition.

**Transfer transition.** Over the several decades, significant research has been performed examining the transition and performance of community college transfer students. Much of this research has focused on the academic attainment differences, and more specifically GPA (Laanan & Santos, 1996). The dip in GPA that is sometimes experienced by transfer students in

their first few semesters at the transfer institution has become known as “transfer shock” (Hill, 1965; Ishitani, 2008). Extensive studies have been performed that examine this phenomenon and potential solutions (Ishitani, 2008; Cejda, Kaylor, & Rewey, 1998; Cejda, 1997). One study identified the timeline for transfer as a critical determinant of student success. Transfer students that entered in their freshman year had significantly lower rates than students that began at the same institution. However, this trend was reversed when comparing sophomore and junior level transfers with native students.

What is most striking about the research on transfer students is that the majority of it is on quantitative factors such as GPA and time to degree, and very little of it focuses on the transfer experience of the students going through the transition from community college to university (Townsend & Wilson, 2006). One qualitative study that addresses this gap is the Townsend & Wilson study that interviewed 19 students that had recently transferred from a community college to a large state research-intensive university. This article defines the transfer process as “determining to which institution to transfer, securing its application, completing and submitting it, sending transcripts, and learning which community college credits would be accepted in transfer and how they would fit into the degree requirements for the desired university program” (p. 444). Using this definition and Tinto’s conceptual framework, the article generated several recommendations for improving the transfer process, including creating or strengthening community college transfer centers, university orientation programs, educating students about the cultural differences between community college and research institutions, and several pedagogical and student service approaches to facilitate integration of transfer students.

Similarly, Cuseo (1998) identified academic rigor, higher faculty involvement, better articulation, more effective institutional research, and advising services to influence transfer rates

(p. 12-14). In contrast to these institutional surveys, another study performed in 2008, identified more cognitive attributes to transfer success, such as having an academic focus and performing well in academically rigorous courses (Hagerdorn, Cypers, & Lester, 2008). This study identified the need for developmental course sequences as a major barrier to transfer.

**Methods for improving transfer rates.** In 2011, a paper by Judith White likened the transfer process to navigating a “shapeless river on a dark night.” Certainly, the process of transfer can be daunting for even the most nimble and resilient students. This 2011 study starts with a premise that the lack of structure at the community college level is at least partially responsible for this student experience. The paper examines potential solutions to this problem, including intrusive counseling, using technology to streamline process and remove bureaucracy, learning communities, and constrained curriculum, which is more commonly referred to as guided pathways. The author also discusses Tinto’s theory of student engagement as a mechanism for improving student success. These techniques are gaining traction in community colleges today. In fact, in 2015, several key researchers at the College Research Center at Columbia University’s Teachers College published the book *Redesigning America’s Community Colleges*, which promoted moving from the cafeteria model to more of a “pri-fixe” menu as an important structural change for community colleges that will increase student success, including transfer.

The UC Transfer Action Team also provided recommendations for changes that would increase support for transfer from the community college system to the UC. In the report issued by this group in 2014, the following recommendations were provided: 1) improved messaging about the affordability and easy of transfer, 2) increased UC’s presence at community colleges, 3) improved transfer preparation programs including curricular redesign, admission policies, and

a common course number system that improves communication and support for transfer students, and 4) providing support for the transfer transition including on campus housing for transfer students, improved transfer centers, peer to peer mentoring, and a transfer credit evaluation for every CCC transfer student, and lastly, 5) improved collaboration and strategic planning between the UC s CSUs, and CCCs (p. 7).

**Transfer of underrepresented students.** In addition to these themes another important area of focus in the literature around community college transfer is the disparity of transfer rates for underserved students. Access to education has long been identified as improving quality of life outcomes such as increase in economic attainment, lower crime rates, and improved health. Education has the potential to improve society as a whole, by helping those that need it the most to identify and achieve their academic goals. Underserved students are still struggling to access education in balance with the national average. Lower costs and an open admissions policy makes California Community colleges an important gateway to universities for students from a wide variety of backgrounds. However, research shows that transfer rates for underrepresented students falls behind institutional and national averages (Wassmer, Moore, Shulock, 2004). The general findings for these studies show that socio-economic status, age, and academic preparation are among the most important factors influencing transfer rates for students of color (Dougherty & Kienzl, 2006). Other studies have identified psycho-social aspects of transfer students, such as integration, belonging and stereotype threat as negatively impacting transfer rates for community college students of color (Yeager, Walton, Cohen, 2013). In addition to looking at overall transfer rates and achievement gaps, other studies have looked more closely at the transfer rates of various ethnic groups, such as Latinos or African Americans. These studies all confirm what we already know. There are achievement gaps for all underrepresented students,

and unfortunately, this patterns includes in the transfer rates from community colleges to university.

### **Conceptual Framework**

The conceptual frameworks that support my study have been used to improve student success in a variety of academic settings, for a variety of diverse students. The frameworks interconnected by the overarching model of social cognitive theory of learning. This theory was developed by Albert Bandura in the early sixties and was a significant diversion from the dominant theory of the time which was behaviorism (Bandura, 2011). Behaviorism held that learning primarily occurred through direct experience paired with a series of rewards and punishments (Bandura, 2011). In contrast, social cognitive theory held that learning occurred in a social setting absent of any direct feedback to the learner. In the following section, a brief review of social cognitive theory as it relates to Bandura's theory of self-efficacy and Dweck's mindset theory.

#### **Bandura's Theory of Self-efficacy**

Self-efficacy and growth mindset are both situated in the framework of Social Cognitive Theory. Albert Bandura first introduced this psychological theory of learning in the 1960s through a series of experiments, widely known as the Bobo doll experiments. Social Cognitive Theory looks at the relationship between behavior, cognitive factors, and environment. One of the assumptions of Social Cognitive Theory is that learners set goals for themselves and then direct behavior towards achieve those goals. This goal oriented framework is why growth mindset, and other social cognitive theories, can be a useful tool in educational environments. We know that most students have an academic goal in mind. Even if that goal is simply to finish the class. Using this goal and building on known cognitive frameworks, educators can influence

educational outcomes by changing the environment and influencing behavior. The concept of social learning and the idea of how students' ability to learn can be shaped by their own beliefs is the foundation for Bandura's theory of self-efficacy.

Bandura claimed that of all the aspects of personal action, or agency, none was more important than an individual's belief in their own ability to influence or control their functions in relation to the environmental demands (Bandura, Barbaranaelli, Caprara, Pastorelli, 1996). In other words, "unless people believe that they can produce desired effects by their actions, they have little incentive to act" (p. 1206). This theory, known as self-efficacy, is central to a person's goal setting, effort or motivation, response to challenge, resiliency, and vulnerability. These are all important aspects of academic success. Social cognitive theory and self-efficacy provide a framework for growth mindset.

### **Dweck's Mindset Theory**

Carol Dweck's has been researching motivation in success in children for nearly 40 years. One of her first published works on motivation was in 1978. The article *An Analysis of Learned Helplessness: Continuous Changes in Performance, Strategy, and Achievement Cognitions Following Failure* published in the Journal of Personality and Social Psychology examined two approaches to failure and how these approaches influenced children's ability to succeed. In this article, you can begin to see the formation of Dweck's mindsets theory. She found that children that were categorized as "helpless" focused on the cause of failure. Whereas, children that were identified as "mastery-oriented" focused on the remedy to failure. She also identified two types of goals: learning goals, where the goal of an activity is to learn, and a performance goal, where the goal of the activity is to achieve.

Dweck's research continued to focus on achievement of goals and her research broadened the conceptualization of goals into both performance goals and learning goals (Dweck & Leggett, 1988). Her research then looked at how individuals respond differently to each type of goal. These two foundational studies led to Dweck questioning why individuals when faced with the same situation would respond so differently. When looking for the answer to this question, Dweck and others developed the concept of implicit theories, which can be simply defined as one's theory about one's self (Blackwell & Dweck, 2007).

In 1986, while teaching at the University of Illinois, Dweck published *Motivational Processes Affecting Learning* where she refines her theory on the two types of mindsets. First, is Entity Theory (fixed mindset), which is defined as the belief that human attributes are fixed or invariant. Second, is Incremental Theory (growth mindset), which she defines as the belief that human attributes can be improved or developed (Burnette, O'Boyle, VanEpps, Pollack, Finkel, 2012). Dweck's focus on motivation continued and in 1988, she partnered with researcher Leggett to build on previous research that establishing how learners respond to failure. This work continues to be useful in understanding how children persist to achieve their academic goals.

In 1992, Dweck published a paper on the relationship between motivation and belief about intelligence. This study focused on how a large data set of children age's five to seven responded to failure and challenge. Specifically, it examined if the children engaged in self-blame and helplessness or were instead motivated by the experience. Ultimately, this study led to the important principles of growth mindset, which includes embracing challenge and accepting of feedback as a learning opportunity.

## **Growth Mindset and Community College Student Success**

Since the introduction of growth mindset, academic mindsets have started to receive considerable attention because of their important role in facilitating student motivation and success (Farrington et al., 2012; Yeager & Walton, 2011). Significant research has been done to examine the effects of non-cognitive interventions in education. However, most of the research on self-efficacy and growth mindset has occurred in the K-12 system. Very limited research has examined growth mindset at the community college level (Powers, 2015). Furthermore, the limited research that has been done is primarily focused on developmental math sequence performance and completion (Blackwell, Dweck, Trzesniewski, 2007; Powers, 2015; Paunesku, 2013). Despite the fact that 28 percent of University of California graduates and 55 percent of California State University graduates transfer from a community college and even greater number of community college students claim transfer as their primary educational goal, there are no studies that examines the relationship between noncognitive skills, such as self-efficacy or growth mindset, and transfer (Student Success Task Force, 2012).

One of the few studies at the community college level was performed by Paunesku in 2013. In this study of approximately 645 students, an online growth mindset intervention of reading a scientific article neuroplasticity and student's ability to improve with effort was given and followed up with several writing exercises. The results showed that basic skills math students who participated earned higher grades than the control group, experienced a decreased the rate of unsatisfactory math course completion, and had overall higher GPAs (Paunesku, 2013). These results confirm what Dweck, Blackwell, and Trzesniewski found in 2007 when studying the role of incremental theory (growth mindset) in junior high school math, where

growth mindset was positively correlated with increased effort, low helpless attributes, learning goals, and the implementation of positive strategies (p. 250).

Student success for all students is important and in general growth mindset and other psychological interventions are underutilized in higher education (Garcia, 2014). However, in California there has recently been an increased focus on achievement gaps of historically underrepresented students and significant resources are now being devoted to identifying interventions that “move the needle” for disproportionately impacted populations. One study done in 2003 found that growth mindset and with other noncognitive skill interventions were able to reduce stereotype threat, increase performance on standardized test scores, and virtually erase the gender gap for math and science (Aronson, Good, Inzlicht, 2003).

Given the recent focus on completion from SB 1456 and the corresponding framework of the Student Equity funding, the findings of these studies are particularly important. More important than legislation and funding is the promise that these interventions have to support the students that need it the most. Students with disadvantaged backgrounds and those that are vulnerable to stereotype threat may benefit the most from the development of noncognitive skills. Another one of the many benefits of growth mindset is the ability for interventions to be implemented with very little curriculum development, customized learning, or materials (Paunesku, 2013). This potential along with the relative ease of implementation of growth mindset activities is encouraging.

Overall, the overwhelming evidence surrounding noncognitive benefits to students and institutions merits educational organizations and policy makers to examine potential interventions. These interventions do not necessarily need to take the form of direct growth mindset activities, but may be infused with existing institutional activities such as orientation,

service learning, learning communities, or extracurricular programs. According to the findings included in this literature review, developing these skills can result in greater retention and achievement. In this outcome driven environment, this will not only benefit the institutions, more importantly it will lead to greater student success, not just in college, but in life. The next chapter reviews the methodology used in this study, which aims to investigate another important aspect of student success: the transfer experience of community college students.

## **Chapter III: Methodology**

### **Introduction**

#### **Research Purpose and Question**

The purpose of this study was to examine the relationship between growth mindset and student transfer process at an urban community college. The results of this study illuminate this relationship using qualitative inquiry including interviews, reflections, documents and artifacts from the student perspective. The goal of the study was to address the lack of information available about the role academic mindsets plays in achieving student success at community colleges, particularly the transfer process. By contributing to a broader understanding of student success, I hope that the results of this study will encourage a more holistic approach to supporting students beyond cognitive capabilities and intellectual capacity. This information should be useful to educational institutions that are currently being given the opportunity to improve student services using SSSP and Student Equity funding, which is directed towards improving educational outcomes and student success. In effort to understand the phenomenon of growth mindset and the role it may play in fostering student success at community colleges, a single research question will be used: What role does growth mindset play in the transfer experiences of community college students?

#### **Chapter Organization**

This chapter will review the research purpose and questions for this study and provide a broader context for understanding the importance of this inquiry. I will provide information on the grounded-theory tradition, which is one of the most popular research design used in qualitative research today (Birks & Mills, 2011). I will discuss in detail how using this research tradition will support the exploration of growth mindset as studied through the lens of transfer.

Following this, an overview of the research setting will be provided, highlighting specific features of the site that may influence the data collection and findings. Various data sources and sampling strategies will be provided to give the reader with a comprehensive and transparent understanding of the research methods used. I will review the data collection instruments and procedures which will also be included as appendices. Finally, in effort to be transparent and explicit, my role as a researcher and participant reactivity, including personal and professional bias, will be disclosed. Details on the various mitigation strategies, which will be utilized to address any researcher bias, will conclude the chapter.

### **Research Tradition**

Student success is a socially constructed phenomenon that is rich with personal context and experience. In this study, I explored the relationship between growth mindset and successful student transfer using a grounded theory tradition. According to Bloomberg & Volpe (2012), "grounded theory is to move beyond description and to have the researcher generate or discover a theory of process, an action, or an interaction grounded in the views of the research participants." The goal of this study was to generate an exploratory model that will guide institutional programming and improve student success related to transfer outcomes. A grounded theory research tradition supports this type of exploration, by first gathering the data and allowing for the theory to emerge, rather than testing a hypothesis. Keeping my focus on this specific topic will allow me to delve deep into the phenomenon being studied. Generating a theory on the relationship between two phenomena is also common practice in grounded theory studies. In this way, my study is exploratory, reflective, and is rich with personal experience.

In 2008, Creswell defined grounded theory research design as "examining a number of individuals who have all experienced an action, interaction, or process" (p.61). This study will

examine the experiences of community college students that have participated in experiential learning and have successfully transferred. Since I interviewed multiple individuals from a variety of socio-economic and cultural backgrounds, grounded theory design was useful to capture the similarities and differences in their experiences and provide evidence in the development of a theory or understanding of student success. I was eager to understand the impact of noncognitive skills on student success from the student perspective and to expand on the existing theoretical frameworks of Bandura (1997) and Dweck (2006) to develop an exploratory model that is grounded in practice and rooted experience, but can be transferred to a variety of educational practices, disciplines, and settings.

Finally, grounded theory presents an organized approach, a step-by-step guide that is useful to novice researchers and dissertation committees (Creswell, 2008). Grounded theory design principles provided structure to a complex conceptual exploration of the role noncognitive skills play and the student transfer experience. However, for this study, I did not use a strict systematic design, but rather an emerging theory model combined with a constructivist approach (Creswell, 2008). Using interview data, site observations, and artifacts I coded data and search for “themes and patterns to build the theory” (Glesne, 2011). This provided a meaningful picture of the participants and their setting as they relate to the transfer phenomenon.

### **Research Setting**

I situated this grounded theory study at Bodhan Community College (pseudonym) a large, ethnically diverse, transfer-oriented, urban community college in the Western region of the United States. Within the state-wide system, Bodhan Community College (BCC) has one of the largest student enrollments, serving approximately 34,000 students every year. BCC is a two-year community college accredited by the Western Association of Schools and Colleges and

provides certificates or Associate Degrees in more than 80 fields of study (Institutional Website, redacted). BCC has approximately 2,000 faculty and staff, including one of the largest counseling departments in the state. It also maintains one of the highest transfer rates in the state. Student demographic data from the institutional website, states that over 70 percent of the matriculating students claim transfer as their primary goal (Institutional Website, redacted). The culture and institutional support around transfer makes BCC an excellent setting to study the role of noncognitive skills in transfer success. From large, robust transfer fairs to transfer center activities like workshops, field trips, and application review, BCC invests significant amount of resources in supporting student transfer. They also boast a high transfer rate and brand themselves as a transfer institution.

BCC's marketing approach includes global themes, such as having representation of different ethnicities and strong promotion of a wide variety of cultural events. The institution is designated as a Hispanic Serving Institution (HSI), and Latino students are the majority student population at the college. This marketing message reflects the college-wide strategic initiatives and value of global citizenship and student diversity. Currently, the institution is embarking on an initiative to foster noncognitive skills in students in effort to support the institution's mission to successfully transfer students to four-year institutions. This initiative is also recommending the development of an experiential learning center in effort to develop non-cognitive skills. This may provide additional data and support for this study, including data from a bi-monthly committee made up of faculty and managers that is focused on various programs and tools for developing noncognitive skills. While this program's existence is not critical to the study, having a sounding board and institutional context for the research will benefit both the study and my own critical thought process. Furthermore, while there are risks involved with backyard research,

this committee will provide peer-review that will assist in mitigating any personal biases discussed later in the researcher roles section of this chapter.

### **Site Selection Process**

I selected Bodhan Community College using a mixed sampling approach, including criterion sampling, theory sampling, and opportunistic sampling strategies. Criterion sampling uses specific characteristics to define a site or pool of participants that will be used in a study. This approach works well with studies where the participants have all experienced the same phenomenon (Bloomberg & Volpe, 2012). I used the following criteria: urban institutions, with an ethnically diverse population, that have more than 50 percent of its population seeking transfer as a stated goal, with experiential learning opportunities such as service-learning or internships. Access to targeted funding and commitment to student success was also considered in site selection.

I also utilized theory or concept sampling for selecting this site. This sampling strategy is purposeful sampling based on the idea that this site assisted me in developing a theory (Glense, 2011). Since this site has a culture of transfer and a high student population that has selected transfer as their primary educational goal, I had greater access to a wider pool of participants that have successful transfer experiences. This provided more opportunities to see linkages and relationships that assisted in building my theory growth mindset and transfer.

In addition to meeting my research criteria, this site also has faculty members that utilize experiential learning methods, a robust internship program, strong student life presence on campus, and active learning opportunities such as an onsite community garden and public policy institute. Finally, this site is currently engaging in a discussion of noncognitive skills as a mechanism for improving student success. These factors helped me to build on Dweck's theory

of growth mindset as it relates to student transfer experiences. It also introduced aspects of student life that might impact the development of growth mindset, such as various instructional approaches, student services, and counseling interventions.

The third and final site selection strategy used in this study was opportunistic sampling strategy, which is characterized by taking advantage of existing relationships or unfolding events (Creswell, 2008). This study is opportunistic because it involves backyard research, where I have existing connections to students, faculty, and staff. I also used the networks of active learners and referrals from other students and faculty. As a former manager at the institution, I was easily granted time with key players and students that met my participant selection criteria. As a novice researcher, eliminating these logistical barriers assisted me more time to focus on the qualitative features of the study and the research findings. This site provides a rich environment for developing a theory about the ways in which growth mindset and other factors influence student transfer success. It is my goal for this study to support the institution's commitment to student success and to assist administrators in identifying interventions that will enhance student's transfer success and educational experiences.

### **Data Sources and Sample**

I investigated the role growth mindset plays throughout the transfer process. Therefore, I interviewed 17 students along the transfer process continuum to explore how growth mindset shapes movement through the process. Participating students were either 1) actively preparing for transfer; 2) currently applying for transfer; or 3) had recently transferred from a community college to a four-year institution (within two years). With a sample size of 17 students, I attempted to generate a broad theory on the role growth mindset plays in the student transfer process (Creswell, 2008). Therefore, gathering data from participants with a wide range of

backgrounds and perspectives will be instrumental in developing a well-rounded theory. The data sample is varied in gender, ethnicity, and academic program of study (major). There were ten women, and seven men. There was a variety of ethnicities, including two mixed race, two Asian, six Latinos, six White, and one African American student. The age range for the student data sample reflects the institutional student demographics of ages 20 to 31 years of age.

My primary data source is student interviews. I requested a copy of the students' personal statements which were included in their college applications, as well as other class assignments, essays, or other written work generated by the student during the transfer process. As noted earlier, my study site is a good fit for this criteria since over 70 percent of the students identify transfer as a primary goal and it has multiple counseling and student services programs that are relevant to the transfer process.

### **Sampling Strategy**

I used a mixed sampling strategy of criterion sampling combined with theory or concept sampling. Theory or concept strategy is defined by Creswell (2008) as "purposeful sampling strategy in which the researcher samples individuals or sites because they can help the researcher generate or discover a theory or specific concepts within the theory" (p. 216). As noted above, the primary criteria that was used is that the student is preparing, applying, or has recently transferred from a community college into a four-year institution. Participating students were currently enrolled in either a community college or a four-year university.

For my recruitment plan, to begin the sampling process I contacted the institutions research department to gain access to students, faculty, and staff. Next, I identified a pool of potential student participants from three primary sources: the counseling Transfer Center, the Environmental Resource and Action Center (ERAC), and referrals from participating students.

To gain access to these sites, I contacted the directors of each center or initiative and asked for permission and student referrals. Additionally, I posted fliers in these areas. Then I sent an invitation email to all participants detailing the study and beginning the scheduling process. I offered a \$10 gift card to all participants as a show of appreciation for their time and participation. All participants of the study are protected and participated on a strictly voluntary basis. More information on how participants and data was protected is detailed below.

### **Data Protections**

Before, during, and after the study protecting participants' privacy and rights remained at the forefront of my study. Several steps were taken to ensure the study is ethical and sound. First, in accordance with University policy, a research application to the Standing Committee for the Protection of Human Subjects, California State University, Northridge was submitted for their review and approval of the study protocol and instruments. As part of that process, participants were given an informed consent that clearly states that their participation is voluntary, that they may freely choose to discontinue their participation in the study, and that they will be made aware of any aspects of the research that might affect their well-being (Glense, 2011). I held the interviews in a location chosen by the participants. Following data collection, I maintained data in separate, but equally secure locations. During the analysis, I provided member check as a method of maintaining objectivity, but also supporting the intention of the informed consent. In the final narrative, all qualifying information that might identify individual students was not included in the study analysis or findings.

### **Data Collection Instruments**

The purpose of this study was to understand the role growth mindset plays in successful transfer experiences. Therefore, it was important to understand this topic from the student

perspective. I conducted 17 personal interviews with students who are nearing transfer or have recently transferred from the research site (Bodhan Community College) to a four-year university. The instruments used to collect data included an invitation to participant in the research, an informed consent form, and an interview protocol. Each interview took place in a location that was most convenient for the participant, but that was also comfortable and inviting. The data collection instruments included details about the interview, but I also allowed for more time and for additional follow up as desired by the participant.

### **Research Invitation**

The first step in recruiting individuals for participation in the study was an email invitation. This invitation was sent only to students who have met the research sampling procedure criteria. The invitation included a brief introduction to the study topic and purpose. It also detailed the process of data collection, including a request to respond to the researcher to schedule the interview within the next month. The invitation included details on the study's confidentiality procedures and security measures that were taken to protect all participants.

### **Informed Consent Form**

The informed consent detailed the processes for collecting, maintaining, and protecting data gathered from the participants. The consent also included information about the nature of the interview, including the personal nature and possible discomfort that could arise as a result of discussing personal, and sometimes stressful process of transfer. The informed consent form reminded the participants of their rights, including the right to review material, to remain anonymous, and the right to discontinue participation at any time. For this study, all personal information was kept private and any identifiable data was removed immediately following the

data collection process. Examples of all data collection instruments can be found in the appendices.

### **Interview Protocol**

To guide the data collection process a semi-structured interview protocol was utilized. This data collection tool included eighteen main questions and fifteen follow up questions or probes that are each directly linked to the research question, purpose, and conceptual framework. While this tool was used consistently to guide the interviews, natural inquiry and spontaneous data collection may occur depending on the participant's response. Data collected during the interviews is at the center of this study, and provides "an opportunity to learn about what one cannot see and to explore alternative explanations of what one does see" (Glense, 2011, p.104). Therefore, the questions were open-ended and allowed the participants to interpret and respond in their own way. This approach was partnered with continual data analysis and the questions were refined as I move through the data collection process.

The interview began by asking for general information about the participant, including questions about the students' name, age, gender, and ethnicity. These questions were used to warm up the participant and create the practice of easy responses. As the interview progresses, I moved to more and more specific questions aimed at examining the participants academic mindset throughout the transfer process. Such as, "How much effort did you spend on your transfer application?" or "What challenges did you encounter when preparing for transfer?" and finally, "Did you seek help when applying to transfer?" In this way, the interview questions not only moved towards developing a theory of growth mindset as it applies to the transfer experience, they also moved through the chronological experience of applying and preparing for transfer. This helped guide the student and create a timeline for understanding the development

and impact academic mindsets have in supporting successful transfer from community colleges to four-year institutions.

### **Data Collection Procedures**

This grounded theory study utilized interviews, document collection, and field notes as data sources. Data sources were gathered using the sampling procedure described earlier in this chapter. Once a sample of approximately 20 students was identified, I sent the research interview invitation via email. Responses were logged in a simple excel database. The target sample size was 20 participants.

### **Interviews**

Since the focus of this study was to explore the role of academic mindsets in the transfer process, the primary source of data collection was semi-structured, personal interviews with community college students who are preparing for transfer, applying for transfer, or have recently transferred to baccalaureate granting institutions within the past two years. Once I identified participants, I arranged the interviews via phone or email and decided on a location based on participants' preference. According to Glense (2009), interviews should take place at a location that is "convenient, available, and appropriate" (p. 113). I used these guidelines to mutually determine an optimal location, date, and time for the initial interview. The interview protocol discussed earlier in this chapter guided the interviews. However, as with many other aspects of grounded theory, interview questions evolved according to the emergent data that was provided by the participants (Birks & Mills, 2011). The research question and purpose also guided all questions and probes.

Upon meeting for the interview participants reviewed and signed the informed consent and received a brief introduction to the purpose of the study. Interviews were approximately 60

minutes in length and participants were informed of the potential for a follow up interview or questions via email or phone. Due to the evolving nature of grounded theory studies, I revisited early interviews later on in the study as the relationship between growth mindset, transfer, and counseling interventions became more evident (Berkes & Mills, 2011). On some occasions, I utilized Skype or telephone to interview students that have transferred to universities not in my area. This approach was utilized only as a last resort for access and scheduling barriers. In total two Skype interviews were needed.

I recorded interviews using my iPhone. These recordings were stored on a password protected, non-mobile computer until transcription was completed. Transcription took place within five days of each interview. In effort to mitigate researcher effects on the data, I sent participants a copy of the transcription for member-check. Birks and Mills (2011) defined member checking as, “returning participant analysis of qualitative data to participants to check and comment upon with the aim of validating findings” (p. 99). Following the member-check, I included all edits and changes requested by the participants. Only seven participants provided member check feedback. I assigned a pseudonym or code to all participants. Once transcription was completed all identifiable data, including the audio recordings and code list was permanently deleted, including all back up data, sent emails, and paper and digital copies.

### **Documents and Artifacts**

Data collection included a variety of documents from the institution and from students. I invited students to share their personal statement from college transfer applications. This provided additional insight into how students may view their intellectual capacity or how they have reacted to failure or challenges in their academic history. These documents will be gathered

electronically by email. I removed all identifying data and deleted all documents once data collection was complete.

### **Researcher Notes**

As a higher education administrator closely involved in student engagement programs, I am often exposed to a variety of student interactions that provide insight into the development of growth mindset and transfer. During the research and interview process, I used researcher notes to systematically document student behavior regarding the transfer process. The notes were both descriptive and analytical and also provided a rich context for understanding my own thoughts, ideas, questions, and concerns about the study including the data collection process (Glense, 2011). During the transfer application period, I journaled about my interactions with students that are applying for transfer. Informal and formal counseling sessions, project based learning opportunities, and committee work provided experiences for my observations and journal. My journal also provided insight into researcher reflexivity and helped to identify and mitigate any researcher bias.

### **Data Analysis Procedures**

The purpose of data analysis is to turn raw data into meaningful information by analyzing them and making connections between discrete pieces of information (Bloomberg & Volpe, 2012). In grounded theory studies, specific procedures for data collection and analysis that include continual data sampling, coding, categorizing, and comparing in order to generate theory about social phenomenon (Glense, 2011). This constant comparison method results in an iterative analytical process that is both well-defined and prescribed but also flexible and organic.

Because the collection process deeply informs the analytical process early data stages of the study includes analytical aspects such as constructing a literature review, developing concept

maps, choosing who to interview for field journals, and defining your sample. Along the various stages of data analysis a variety of analytical tools are used to explore concepts, themes, and relationships related to the research question and purpose.

### **Preliminary Data Analysis**

Using the literature review and concept map a list of preliminary codes was created. The primary data source is student interviews. Using this data, the interviews were transcribed. A combination of paid transcription and self-transcription were used. I provided specific instructions via protocol to any hired transcribers, this protocol included ways of conveying emotion and format guidelines. To proof the transcriptions, I read the transcriptions while listening to the audio files. I also member checked the transcriptions and include edits from the member checking process. Simultaneously, while interviewing and transcribing, I collected secondary sources of data, such as field notes, meeting agendas and minutes, and institutional information. I also kept a reflective journal that records my thoughts and reactions to the data collection process. Using this information and process, I created a comprehensive filing and labeling system and organize the data by preliminary codes.

I began the data analysis process by frequently reviewing all the data collected. This gave me a sense of the data as a whole before segmenting it into its coded parts (Bloomberg & Volpe, 2012). After reviewing all the data, I revisited my literature review and concept map to develop preliminary codes and refine my filing and labeling process. I then began segmenting the data to identify key concepts and themes and relationships between them.

### **Thematic Data Analysis**

As themes emerge, I continued to read and re-read my collected data. I took time to reflect and meditate on the connections that are being created. Comprehensive themes and quotes

were condensed into codes. The coding process evolved through the data collection and analysis process. As I read, reflected, and continued to collect I will refined and collapsed codes, apply codes across data files, and developed code families. I used computer-assisted data analysis software ATLAS.ti to facilitate the process of data analysis. This software provided an efficient and effective way to categorize and shape the data. A hierarchy of codes emerged and codes were clustered together and pulled apart as needed (Glense, 2011). Creswell (2013) suggests clustering codes in four ways: 1) codes linked to topics in the literature; 2) codes that are unexpected; 3) codes that are outliers; and 4) codes that address a theoretical concept related to the study or hypothesis. This process helped in the discovery of relationships between codes and in making meaningful connections through data interpretation.

### **Interpreting**

Using themes, codes, and clusters, as a final step in data analysis I created networks of codes to visually represent the relationships that are found in the data. I examined these relationships for directionality and interaction. I collected more data based on these relationships and used additional interviews to confirm or refine the theory that was emerging. At this point, I revisited the literature to research similar findings. The final step in my data analysis process was to put forth a theory based on my findings, connect this theory to existing literature, and translate this new information into potential policy implications for community colleges.

### **Researcher Roles**

Researchers play an important role of any study. From experiment design to interpreter, anytime one seeks to discover new knowledge they bring a set of existing assumptions to the process. During this study, I practiced reflexivity, and “critical reflection on how researcher,

research participants, setting, and research procedures interact and influence each other” (Glense, 2011, p. 151). As a researcher I brought several key experiences to the study.

First and foremost, I am a mother of two school age children who are both enrolled in public charter school. My experience in participating in the development and education of my children has deeply impacted my perspective on informal and formal educational opportunities. As highly invested and educated parents, we struggled with the decision on where to send our children to school. We understood the significant social, cultural, and academic influences formal schooling has on children. After much reflection, we chose a non-traditional charter school. Certainly, my experiences as a parent of a child in the public educational system, especially one that has chosen an alternative to the traditional system has influenced my role as a researcher on noncognitive skills and student success.

The second influence I brought to the study is my long history of advocacy and current employment as an equity programs manager at a community college. In social justice activism, the “Power of One,” is a deeply held tenant. The goal of advocacy is to shape a personal and collective goal. At the very least advocates fundamentally believe that they can influence the outcome of the conversation, if not a greater political process. Belief in one’s own ability is at the heart of activism. My experience as an activist and educator of students advocating for causes they believe in influences my perspective on self-efficacy and growth mindset. I witness individual’s ability to influence a situation or outcome on a regular basis. More importantly, as an advocate and educator for many years I have been empowering others to be effective change makers.

In this study, I am sought information that will not only help illuminate the relationship between growth mindset and the transfer experience, but also help institutions identify ways of

developing these mindsets in students in effort to meet the goals of the SSSP and Student Equity. The existing body of literature on noncognitive skills confirms that there is an ongoing discussion about the development and impact of growth mindset in higher education institutions. As I continue to review the literature and collect data for my own study I will remain open to discovering how growth mindset and self-efficacy are developed for students interested in transfer to a four-year institution. The following sections review strategies on how I implemented an objective, but connected study that delves deeply into the lives of students, but remains conscious of the context of the larger discussion. In the section below, I discuss the reaction and influence my role as a researcher might have on the study participants.

### **Participant Reactivity**

Participant reactivity is defined as the influence a participant's knowledge of that they are part of a study or their familiarity with the researcher. (Jean, 2013). Bloomberg and Volpe (2008) characterize this slightly differently for qualitative research. They define it as the "difficulty adjusting to the researcher taking on the role of the interviewer" (p.87). Using either perspective, this presents a potential limitation for my study. As an academic administrator working in the field of Student Affairs, I work closely with students. Most of the students I interviewed came from referrals and personal contacts. This meant that I had a working relationship with some of my participants. In my role as manager of a community college student resource center, I may have supervised participants in the past. It is important to limit participant reactivity; therefore, I was clear about my role as a researcher when recruiting student participants. Because I had recently left the institution, this role was clear to the students, but my relationships still may have had an impact on the interviews.

Additionally, when asking students personal questions about their belief in their own abilities, students may have felt the need to answer in a positive light. However, my goal is to better understand the role of growth mindset, not necessarily to promote it therefore I will employ a variety of mitigating strategies to avoid students assuming a bias from me or themselves.

### **Mitigating Strategies**

In effort to produce a study that was informed by my personal experiences, but also objective and credible I used several mitigating strategies in my study. In the sections below I discuss strategies that were used to address researcher bias, followed by strategies for mitigating participant reactivity.

**Researcher bias.** It is my goal to produce a study that is credible and contributes to an ongoing discussion about noncognitive skills and student success. Therefore, mitigating my personal bias and maintaining reflectivity was important throughout the study. During data collection, I utilized member check and peer-feedback and observation to assist in maintaining objective data. I designed my interview questions to be open ended and leave room for the participants to answer in a variety of ways. During my data analysis, I reviewed the literature and stayed connected to the conceptual framework that guided my research purpose, tradition, and questions.

**Participant reactivity.** I minimized participant reactivity through a variety of methods. First, as noted earlier, within the constraints of my research needs, I intended to give the participant control of the meeting date, time, and location. Second, I utilized role-play to help diffuse any personal relationships. During data analysis, multi-case and within case comparison was utilized in conjunction with peer-review and triangulation of data. Finally, it should be noted

that I offered participants a small stipend for participating so that it is clear that this is not being done as a “favor.” Finally, through the reading and signing of the informed consent process I clearly defined the role of the participant and researcher and intentions of the study.

The next chapters will summarize the findings of this study and explain the results of these data collection, analysis, and mitigation procedures. These findings are connected to my research problem, design, question and role as a researcher.

## **Chapter IV: Results**

### **Introduction**

The purpose of my study is to examine the relationship between the theoretical framework of growth mindset and the socially constructed process of transfer from community colleges to universities through the lens of student experiences. This study was guided by a single research question: How does growth mindset shape the transfer experience for students in a large public urban community college? The resulting data, which was collected with this question in mind, are presented below.

### **Organization of the Chapter**

In this chapter, I will provide an overview of the data collection and analysis process, including a review of analytical steps informed by my grounded theory research design. Following the data analysis overview, I will provide descriptive statistics on my study sample including the number of students in each phase of transfer and demographic information such as gender, age, ethnicity, and major. Also, I will share short biographical accounts of each participant. These descriptive details illustrate the diversity in my sample and help the reader understand the sources and context of the results.

After providing an in depth understanding of data sources and analysis, I will delve into the results of my data collection and provide rich perspectives from students on transfer through the lens of growth mindset. I will identify four main themes and discuss their interrelated nature. The goal of this chapter is to present patterns in what the participants have shared. I will accomplish this through the student voice, by highlighting the shared experiences of community college students, and demonstrating the breadth and depth of the data that was collected. I also organized quotes and summaries from the perspective of student participants to follow the

meaningful themes that naturally emerged from participant responses. Through this process, I hope to honor the students that gave so willingly of their time and opened their hearts to me in effort to improve the transfer process for future students.

### **Data Analysis**

Grounded theory provides a detailed road map for data analysis. This processes includes several well-defined steps that explore transcribed interview data in a systematic way and helps me move from data analysis to theoretical saturation to eventually production of an explanatory model firmly grounded in experiences of the study participants.

### **Concurrent Data Collection and Analysis**

One of the key principles of grounded theory is the concurrent process of data collection and analysis. While still collecting data, I started to review the transcripts, sent them to the participants for member checking, and identified early codes and concepts to be mindful of as I continued to collect data. Through this process, I allowed the data collection to evolve and made adaptations to my interview protocol and approach to the interviews. I realized there were necessary areas for change both from a research design perspective as well as from a conceptual framework perspective. These changes were informed by emerging themes and information gathered through the student experiences.

From a research design perspective, I realized quickly that my data collection tool was leading my participants to focus on the logistical steps of transfer instead of their thoughts and experiences. From an emerging themes and analysis perspective, I noted that that students were discussing goal formation and goal achievement more than I had anticipated. I adjusted my process to account for these patterns by providing an introduction informing the students that I was familiar with the transfer process and was more interested in their thoughts and feelings as

they moved through the process than in the technical aspects of transfer. By exploring these concepts more fully as I progressed through data collection, I was able to gather rich data that focused on the students' mindsets. I also developed a series of probing follow up questions that were asked if the students initiated a discussion about goals. During the interviews and in reviewing my memos, field notes, and transcripts, I noticed that the students focused much of the discussion on the role that others played in their transfer experience. It became apparent that there was a need for more in-depth collection on the role of others in the process, particularly how students sought and incorporated feedback.

### **Segmenting and Coding**

Following a grounded theory approach, I began data analysis while still collecting data. I began with a simple open coding process, of "identifying key words, groups of words, and then labeling them accordingly" (Birks & Mills, 2011). During data analysis, I also started writing memos and organizing my thoughts about the data. Memo writing aided me in documenting the ongoing internal dialog of how the data is connected to the research question. It is a crucial part of data analysis and helped me to begin the process of theory formation. Also, when I started to see repetition in my memos I noted that I had begun to reach theoretical saturation. Glaser and Strauss (1990) define theoretical saturation as occurring when there are no new codes identified.

After initial coding, I began axial coding which is a deeper level of coding that looks at various properties of a code, including examining the causal conditions, context, core categories, conditions, strategies, and consequences of a code (Creswell, 2008). I used the growth mindset framework to identify codes that merited deeper analysis. Using ATLAS.ti, I developed code networks and examined the interrelationship of my core categories in these networks. This process resulted in the identification of a single core category: "feedback." Following axial

coding, I went through the transcripts one final time with my core categories in mind. This selective coding is the final stage of data analysis and leads to the identification an emerging explanatory model on the relationship between growth mindset and the transfer experiences of community college students.

### **Participants**

For this study, I interviewed seventeen students from Bodhan Community College (pseudonym). I was interested in examining the experiences of students throughout the transfer process. Accordingly, using my sampling strategy, I selected eight students who had already transferred, nine students who had applied to transfer in the fall of 2016, and one student who was preparing to apply in fall of 2016. The study participants were diverse in age, ethnicity, gender, and backgrounds. The sample included two military veterans, three re-entry students, and although it was not explicitly asked, three of the seventeen participants voluntarily identified as LGBTQ representatives. Their ages, ethnicities, and genders roughly matched the demographic profile of the institution. I have provided brief introductions to each participant throughout the results sections. All names have been changed for confidentiality.

Table 1		
<i>Participant Demographic Information</i>		
Demographic Info	Study Sample	BCC Student Body
Age Range	18 – 31 years old	N/A
Gender: Female	58 percent	52 percent
Gender: Male	41 percent	47 percent
Ethnicity: Mixed	11 percent	4 percent
Ethnicity: Asian / Filipino	11 percent	15 percent
Ethnicity: Latino	35 percent	37 percent
Ethnicity: African American	5 percent	9 percent
Ethnicity: White	35 percent	27 percent

## Results

Throughout the data collection and analysis process several themes emerged. My data collection tool was informed by growth mindset concepts, therefore the data and emerging themes are related to this conceptual framework. It is important to remember that this study is not about examining *if* growth mindset results in successful transfer from community college to university. Instead, following the tradition of qualitative studies and grounded theory principles, this study examines *how* growth mindset concepts present themselves throughout the transfer experiences of community college students. With this framework in mind, the central themes identified in the data are that (1) feedback plays a key role in the transfer process; (2) asking for and getting help from outside resources is critical for successful transfer, especially developing a peer network for support; and (3) embracing challenges and failures is essential for students who want to transfer to four-year universities. All of the thematic findings are related to feedback, which is the core theme presented in my results below.

### **Importance of Feedback: Transfer Process and Beyond**

The role of feedback appeared frequently in the data collection process. Although feedback was not specifically built into my conceptual framework, the consistency and interrelated nature of this concept helped me quickly identify it as a central. Feedback was not only frequently identified by the students as vital, it was linked to several of the themes in the growth mindset conceptual framework. Students spoke at length about seeking input, how it helped them in the transfer process and beyond, emotional and practical responses to feedback, sources of feedback, and the importance of peer feedback and support. I examine these interrelated aspects of feedback in the section below.

**Personal statement.** From a transfer process perspective, several students identified feedback, from a variety of sources, such as instructors, friends, and counselors, as a primary tool for improving their personal statements for college applications. One student participant, Lucy, is a highly motivated STEM major. She was accepted into a university, but decided to take a gap year to reduce stress. She highlighted the importance of feedback in the following quote, “I will say definitely having people available for editing and in guidance as resource was, like, the number one thing.” Many students had similar thoughts, calling it “essential,” “insanely useful,” and a strategy they would “definitely recommend” to other students. Most students had between three and five people read their statement. Harriette is a twenty-two year old political science major, currently enrolled at a university. During the interview, she elaborated on the importance of feedback on improving her personal statement, “It was like, wow, I needed these people so much. If I had turned in the first draft I probably wouldn’t have, like, been where I am right now so, yeah, it’s huge.”

Students often used feedback to put their personal story into context. Many students said this was one of the most challenging aspects of the personal statement and that feedback helped them keep their voice, while addressing the questions in a thoughtful way. This is highlighted in the quote from Steve, a twenty-seven year old, STEM major currently at BCC, discussed a length the use of feedback to refine his personal statement:

Sometimes I get, too in my head and I forget that I haven't provided the context to the reader that is necessary to understand what I'm saying. I like writing, and I can have too much fun with words sometimes. I create a phrase that I think sounds cool and have some double meaning or something, but I'll realize that it actually doesn't make so much sense.

Other students described using feedback to refine the statement in a more technical way. For instance, Johnny, a thirty-one year old military veteran, re-entry student shared the challenges of how to edit his vast experiences into the limited allowable space

Since I had two prompts that were similar, but not the same. And it was limited to a 1000 [words] total, the first one that I had to answer was, like, 750 so, I had to squash it in order to make the limit. So, I had to take out a big chunk of my background in order to answer the prompt the in a way that was focused. I never would have been able to identify that without someone else's input.

**Beyond the transfer process.** Given the focus on transfer, students like Johnny provided specific examples of using feedback to improve their personal statements. However, students also spoke about the importance of feedback in refining their academic, professional, and personal goals. It is clear that the students use feedback in a variety of ways beyond the transfer process. For the participants, feedback was described as a value central to the learning process. Inez, a twenty-five year old art student currently at university, spoke about the importance of feedback in improving her onstage performances, "I prefer someone to tell me what I did wrong than me screw up over and over again in front of an audience. Feedback is the only way I'm going to improve." Another student, Cesar, a twenty-three year old, undocumented student currently at university is a passionate community activist. Below he describes how he seeks feedback to better serve communities.

I do [seek] it when I'm working with communities, seeing how I could continue to improve, like, how I behave with them. Because you always have to be respectful to people and when you're working with them and in general collaborating with different communities or organizations for social justice. And so just, you know, I mean, how do

you continue to understand things in a way that's respectful to others. So, I mean I seek it mostly because I am trying to improve my ability to be – my ability to work well with communities. So, maybe my desire to gain feedback is tied to specific goals, long term goals of growth. So, if I had that long term goal of growth, then I'm going to seek criticism and with that the evaluations that help me grow as a person.

Jerome is a twenty-eight year old, African American male, military veteran student. He discussed how being a re-entry student made it difficult to ask for feedback, but that because of his experiences he knew the importance and did it despite feeling uncomfortable. During the interview, he highlights this struggle:

I've been around the country with my [military] unit, so I know a lot more than most students here. But, I think if I really value someone's opinion or input, umm, I'll incorporate their feedback into the final product. Yeah, I've tried to do a lot too, to let go of my ego. This is something I have always struggled with, but I know it's good for me.”

Personal growth was identified as a goal of many students throughout the data gathering process. Several participants discussed their experiences in applying for transfer the year before and not being accepted. They discussed how they sought feedback to refine their applications.

Peter, a twenty-two year old, White male student at a university, was so convinced that he was going to get into his first choice school that he regularly told people he was going to go there. In fact, during the interview he described himself as a “personal unpaid spokesman.” He was surprised when he received the rejection letter and describes how that disappointment led to a desire for feedback.

It was a little bit shocking because I was, like, how many student body presidents applied here? I was kind of wondering that, I was like, wow, and with like a 3.1 GPA, and as the

only one [applying] from my school and everything. So I was kind of wondering, like, I guess there was a sense of wonder of what more I possibly could have done, other than have a 4.0 GPA and I don't know. I was also working too, I mean was working a part-time job, even when I was a student body president, I was still working and going to school full time. So like, I really don't know what I possibly could have done and I was very curious about that, like, I wanted to reach out to the admissions counselors just out of curiosity and asked them like what more they were looking for, and I guess it felt—that was what made it tough was simply just getting a rejection letter without them telling me like why, was a little bit this limiting sense of wonder of what I could have done better.

After receiving a rejection letter, Loretta, a twenty-one year old, Latina student pursuing an Environmental Studies major, did contact the admissions counselor to her first choice to ask for feedback. When asked why, she replied, “To see what I could've done differently. I just would've liked the knowledge, because at that point, I didn't know if I was going to apply again, but I knew I wanted to improve.”

**Sources of feedback.** During data collection, students identified a wide variety of sources for feedback, including counselors, peers, faculty, and family members. One student told a story about how she took her personal statement to Thanksgiving and put it under everyone's plate and asked them to edit it. As noted earlier, students felt feedback was essential, but it also seemed that getting feedback from a variety of perspectives was an important part of their approach. This may seem intuitive at first, but once you understand the commitment and depth of the student's desire for feedback, it becomes a significant aspect of the data. When asked about

the most useful strategy when applying for transfer, Harriette highlighted the desire for feedback from a variety of sources:

Definitely talk to other people who have transferred, other people who been through the process, counselors of the school, any sort of advisor or mentor, even professors can help with the process because if you try and figure out the system on your own it's so easy to miss things.

Another student discusses feedback from a variety of sources as her primary recommendation to other students. "I would recommend the workshops as well, and just talking to your peers about your process is, like, really helpful too, and also the faculty, the counseling, and all that."

While students discussed a variety of sources, it was clear that they gave different weights to each source of feedback. Consistently, among the students interviewed the most influential feedback came from peers. The importance of peer networks will be discussed in later themes, as it was repeatedly a key factor in student's experience. Here you can see how some students felt the relatability of shared experiences was useful. Aria, is a twenty-five year old, undocumented Latino student, who is currently pursuing a sociology degree at a university. She also discussed the importance of peer support:

I mean, I know I can't speak for anybody else, but I always have tons of questions in my head how do you this, you know, where can I find this information or whatever. And just being around people who had similar goals makes a big difference because you can ask them right there and they really got it, you didn't have to explain your question, they just knew what you were asking and how to help.

The process for transfer is stressful for students. Many students expressed similar thoughts of constant questioning. Many students said they just wished someone would "tell them what to

do.” Some students were fortunate to identify a family mentor or advisor early on in the process. In fact, several students discuss the need to have someone who knows you really well that is not family. They often discussed seeking someone with a balance of “close, but not too close,” and expressed appreciation for this feedback in refining personal statements and goals. Mentors, pastors, coaches, and family friends were some of the individuals that filled this role for students. In the quote below, Inez, the art student, discusses getting feedback from someone who worked at the BCC, but wasn’t a counselor. For her, this person was critical because they had gotten to know the students’ siblings and family history. Inez said:

For me, like, having him be like an advisor, like a personal advisor, and he was like ‘from what you’ve told me before and your family history I think that this is something that you should include.’ I would encourage others to find someone that knows you personally not necessarily a family member because then it doesn’t really see you and your family from a bigger broader outside picture, but an advisor can do that.

Other students highlighted the importance of faculty feedback and several said that they took feedback from professors more seriously. Johnny, the thirty-one year old military veteran, discusses how he felt faculty perspective is so valuable because of their rich academic experiences.

I think the faculty that I did reach out to was, I did weigh a little more heavily simply because they had already gone through grad school and everything like that, and they are also used to reading papers all the time, so I think I considered the professors [feedback] more seriously than the students’ [feedback].

Inez also expressed the importance of faculty input beyond the transfer process, and discussed how she felt, as an underserved student, she wasn’t always encouraged by her professors.

Bodhan Community College (pseudonym) was amazing and I loved my professors, but they kind of all have the same look, like, they look at their students like, 'oh well, not all of you are going to transfer.' Not all, but some. Others, they do play a big role in our lives, at least I had one or two in particular. They are always on mind because they -- every time I would go to class they had a different look on their face. When they would see their students it's like, 'you have potential, you can do it, like, I believe in you a 100 percent', even if you perhaps didn't have good grades or what not, they would show that in their faces, that they cared. And then others were just, 'so, I am teaching you this, and I don't know if you're even going to make it sort of.' So, it's the idea of, like, that some people don't really believe in you and it kind of -- it kind of -- you started feeling that for yourself, you know?

**Intentions of feedback.** During the interview process, students expressed that it was not only the role of the person, but also the disposition, relationship, and framing of feedback that made a significant difference for them. Several spoke about focusing on the intentions of the feedback to mitigate negative emotional reactions to getting criticism. Here Hope, a twenty-year old, STEM major and Latina student, describes self-talk that was common among the participants.

And see, it's not like people are doing it because they don't care, they trying to make you better so that you can get into schools, so you can get different opportunities and things. So, always coming from that mindset and remembering it's not because they're trying to hurt your feelings, it's because people are trying to help you with this process and help you get that goal that you want to get and you have to see it from that aspect and that way you don't get your feelings hurt.

Many students spoke about the struggles of getting feedback during such a stressful time as transfer applications, which are typically due at the end of fall semester. They talked about the fact that they were already out of balance emotionally, physically, and that sometimes hearing more criticism was very difficult. Harriette, who was perhaps one of the biggest advocates for feedback, had this to say about how it made her feel:

As much as I love feedback it's sometimes hard to hear and when I had everybody all at once trying fix things and make it better it almost made me feel like my writing wasn't good enough on its own. So that was hard at first but once you internalize it you realize like, yeah, they are helping you and they are not just trying to tell your work is bad, they are just trying to do what you asked really.

Despite voluntarily seeking out the feedback, nearly every student interviewed discussed having a strong emotional reaction to the feedback, similar to the student below. Here, Johnny discusses his reaction to feedback:

At first it was kind of disarming. This is who I am. I'm this person. Now this is me. I don't have to change for you. Why are you criticizing me? That was my initial -- that would be my initial reaction years ago. But now, unless I sense that person is being malicious, then I'll listen to that person.

Other students said they cried, felt like giving up, or had to take a break following receiving feedback. It's also important to understand that just because students sought feedback does not mean they always took it. Several students expressed sentiments similar to this one, "Yeah, little things like that were helpful and it's really important to get an outside perspective. But honestly, I don't think I changed what I wrote changed that much from what I originally had." Another student, Peter, discussed getting too much feedback: "It's funny because the more people that

you reach out to sometimes it can actually be a little less helpful if you reach out to a lot of people because everybody has their own opinion. So, I really did my best to reach out but also go with my guide and follow my heart.”

Throughout data collection, it became clear that asking for and utilizing feedback on one’s work, transfer application, performances, and other aspects of life was something the students did on a regular basis. However, that does not mean that it was easy. In fact, most students described having strong, and mostly negative, emotional reactions to feedback. As noted, using a variety of sources and understanding the intentions of feedback helped students cope with criticism and ultimately balancing feedback with their own voice and “following their heart” through the process was critical. Feedback was the primary form of getting help from others expressed by students. However, students had other methods of asking for help, which is reviewed the second theme below.

### **Getting Help from Others: It Takes a Village to Transfer**

Through the interviews, students spoke about getting help from a variety of sources in a variety of ways. During data collection and analysis, it became clear that getting help from others was integral to the experiences of these students. Students described reaching out to the typical sources, such as faculty, counselors, and other campus departments, such as the transfer center, environmental center, or other student support programs. However, there were also regularly occurring stories and experiences that were unexpected. This unexpected information primarily fit into two categories. First, the extent of peer support utilized through the transfer process. While it may not be unexpected to hear students identify peer support as important, the extent to which peers played a central role was notable. Students enjoyed sharing information and resources with other students, creating informal cohorts, and supporting each other in emotional

and social ways, but also in the technical aspects of transfer to university. The second unexpected trend in the data was that students expressed extreme feelings of isolation. This is in direct contrast to the concept of getting help, reaching out, and developing networks. Despite these actions, which were repeatedly identified, students still expressed feelings of loneliness and depression. Several students discussed seeing a therapist to assist them with managing stress, depression, and feelings of isolation.

**Faculty.** Not surprisingly, many students discussed getting help from faculty. One student said professors were more helpful than counselors, even when they did not provide specific advice, but simply related to the students. Peter, the Political Science major at a university discusses how he sought help from faculty:

I remember talking to, like, Dr. White and Mr. Green (pseudonyms), and just getting their feedback and support, and they mostly said, like, that going into school they really had no idea what they wanted to study and that so much has changed even when you get your degree, your path will always be changing. So, that really helped comfort me and not be so consumed by my worries about what I'm exactly going to study, where I'm going to go, and everything like that, especially because I respected them so much. That was almost more helpful than the counseling because it helped me relax and do the work.

**Counselors.** Other students did find help in the counselors, but during the interviews there were mixed feelings about the counseling department's ability to help. Some students said it was "life changing" while other students reported it being "traumatic" and "really, really, bad". Earl, a thirty-one year old re-entry student majoring in global studies explains how the BCC counselors shaped his future. His story is inspiring and is similar to other stories shared during data collection.

And I'm just walking around and I saw the career counseling center. I was like, oh, like maybe that can help me out. So I went in there and I met this woman who is working there. Her name was Mary [pseudonym], who like, I'm still really good friends with now. She was like -- oh yeah, like, you should try this one class -- career planning. ...And I was like okay, like I guess I'll check it out....But yeah, so that class, like, changed everything for me. Later, I went into speak to her again and she wasn't there so I met with Brian (pseudonym). He was amazing. Now, he's been helping me apply to all the, like, all these private colleges. And he let me know, like, that with my income and the fact that, like, my parents' income of course can't be considered, I can have what's called the Cal Grant -- pretty much like the BOG fee waiver here, like, pretty much pay for all my tuition in any of the public schools. So I was like, oh, I didn't know that. And then later I met with another random counselor and they helped me with all the class requirements, and I was able to line up everything, like, in a really short time because of them. They even helped me find my major at all the other colleges...Now I, like, have so many options for transfer.

Students also discussed attending workshops, visiting the transfer center, and going on campus visits and speaking to counselors at the university. The wide variety of campus resources utilized was impressive. Several students did mention that they had wished they knew about the resources, connected with a "good" counselor, or attended a transfer center event earlier. While there was a wide variety of resources utilized and help gathered, by far the resource that was utilized most often was peer support.

**Peer support and social networks.** Peers played an important role in the transfer experiences of community college students. Participants identified several ways of utilizing peer

support, including emotional, social, and technical support. The emotional and social support was highlighted in a variety of meaningful ways, below are two quotes that highlight the empathy and relatability of students to support one another. Peter, who earlier spoke about getting help from faculty, also discussed the important role his friends played through the transfer process:

I talked about things a lot with my friends, like, talking about what I'm going through and realizing that I am on the same page as other people and that I'm not alone, really helps, and knowing that I am not alone in that, there are other people that are struggling in the process as well is really helpful.

Other students shared similar thoughts. For example, Jerome described....

Working with other students, seeing what they were doing, seeing what their interests were because I know that -- students, you know, we all have our various paths that we're from our different backgrounds but we're all on the same journey. So taking on those other perspectives -- they have their own [information] over there and seeing what they had to offer was pretty helpful as well.

However, it wasn't just for emotional support that students created peer networks, students also discussed using peers for technical aspects of transfer. One student mentioned how other students helped her through every step of transfer, "God, even the websites themselves were, like, okay, which was it for this specific application and where was that scholarship. So, yeah, peers would definitely help me, oh you know, help me understand, like, this is what they're really asking."

Students talked about their friends and peers in every aspect of the transfer process, from navigating online resources to finding a major. Jerome discussed how his friend helped him identify transfer schools based on his interest:

It was actually a friend of mine who told me that UC Santa Cruz had a robotics engineering program. I'm like, really, that sounds super specific? I mean, why would they have a -- just robotics engineering. And that's exactly what I want to do which is kind of interesting. I was very fortunate to find that program. It's perfect for me and no counselor had ever mentioned it.

Many students learned about important resources from fellow students. Here, Lilly, a thirty year old, single mother shares...

I didn't even know we had a transfer center, but after my friend told me about how they, like, helped her, like do her statement and everything I was super interested but still kind of like oh, well it, they, won't help me. Then she, like, asked me later, about it and I told her that, um, like, I hadn't gone and she totally got mad and made me go. I'm so glad I did.

As part of technical support, students discussed how creating informal cohorts around their discipline was critical to their success. Kimberly, a twenty-one year old Environmental Science major, currently at university explains...

One of the nice things, at least in the science department of BCC is that it's really small, so everyone kind of has a cohort, and we applied at the same time, so it's nice to just have a group of people who understood exactly what you were going through at the same time and what classes to take. I honestly think, I wouldn't have been, like, here, without them.

Many students told stories similar to this one about sharing strategies with other students. For instance, Lilly...

He was applying as well and I think we kind of shared a lot of like, ‘where are you applying? What are you doing? You should take this class at this campus instead.’ He like, took an ecology class at [another college] because that will make him more competitive and I didn’t even think about it. So, I took the class too I do think it helped. Plus we could carpool, so that was really helpful. He’s also the one that told me about taking the stats class online. Again, I was, like, where do you come up with this, these random ideas, that are like, so important.

Another student shared threads of storytelling related to how students openly and passionately worked with other students from similar backgrounds, which was not only helpful but motivating. Here, Inez describes her experiences as follows:

Learning about the experiences from other people definitely helped me. Because it’s like someone that looks like me, someone that had similar experiences that would tell you how their process went, that, like, meant a lot more.

Students from similar backgrounds expressed both seeking and giving help to others they related to. Here Earl, a re-entry student, explains how he often corrects fellow students that are going down the wrong path:

And like I said, that’s how I found out about all these things and that’s why I like, when I’m hearing other people ask or when I have a friend that asks, I’m like, ‘no dude, this is what you should be doing,’ like, I’ve been helping my friends apply for scholarships and stuff. And he doesn’t even know, he’s kind of on the same boat as me. He’s a re-entry student, just trying to get his school done fast. But he doesn’t necessarily know to, I guess, look for all those things, so I’m helping him out.

It was evident throughout the data collection process that students worked together, collaboratively, intuitively, and proactively to ensure success.

Other students, particularly those from underserved or disadvantaged backgrounds also discussed getting help from their communities. Cesar, the community activist student, discussed how staying connected to his community was a source of motivation: “I mean it motivates you because it helps you connect to a larger – so it helps you to – because see yourself a connection to a larger life or larger community and that’s a beautiful thing when you feel that you’re a part of the bigger picture in life, yeah.” Cesar highlights how community support can inspire student success.

**Mental health.** Although students spoke extensively about getting help from others, there is an interesting contradiction in the data. Students gave detailed descriptions of how they utilized campus resources, developed social networks, and regularly asked for help, learned from others, and leaned on a variety support systems, yet they also expressed feelings of isolation, loneliness, and anxiety. Johnny spoke about his feelings throughout the transfer process in contrast to his military experience:

I really feel like you’re alone in [this process] because, you have to make all your own decisions about everything..... You know, also I feel like there is a lack of understanding about that from a lot of other people here, right. But, I don’t like this part of it is because I was in the military and, we had, we were cohesive, we were in it together. And that does not exist at BCC. Nobody is looking out for you, you have to look out for yourself and I hate it. It’s been really hard transitioning out of the military and to a place that people just don’t care about [you].

Several students discussed feeling especially isolated in the math and sciences. Here, Steve elaborates: “And I’m getting it, but again I feel totally alone, you know that there’s not as many tutors when you get to the higher level math, there’s not as many teachers and they might not be the friendliest.” Jim, a thirty-one year old Filipino student, majoring in Urban Planning, discusses math anxiety and feelings of seclusion: “I will, um, ask for help when I’m in like, history, or poly sci or something, but mostly I feel like, what’s the point in math? That’s where I feel really alone. And most of my friends can’t help because they’re all [a different] major.”

Of the seventeen participants in the study, eight voluntarily discussed the use of psychotherapy, both on and off campus, to cope with the stress and mental health challenges of college-life demands and the transfer process. Even those that did not discuss therapy directly spoke about utilizing coping mechanisms such as gardening, dancing, and journaling to deal with stress. Even students that seemed less affected by stress, still expressed challenges associated with asking for help. For example, this student discusses how, as a shy person, reaching out for support is a constant struggle. Here, Kimberly, says:

I think, well at least, for me, I have been a really shy, more introverted person, and the process of becoming extroverted was necessary, learning how to ask for help is a process that I really learn through the transition of going from community college and starting over and over again, constantly throwing me into these situations where I had to ask for help. It’s there, but you have to ask for it, it doesn’t just come to you. And that’s hard if you’re not good at, or natural, at asking for help. It’s still really hard for me.

Overcoming personal challenges to pursue your academic goals is a critical part of the transfer process. Similarly, other students described a complex relationship with seeking help and also

described a sort of fatigue that sets in after asking for help for so long and still struggling. For example, this student elaborated:

It's weird, because in some cases, I had no problem asking for help. In some cases, it's a lot harder. ... if I get too far behind, I might start feeling I'm drowning in a class and which happened a little bit in the fall, and I'll be less likely to ask for help, because I'll feel too out of touch with the material to even understand the help, and I just kind of don't want to embarrass myself.

While the process of asking for help was discussed from a variety of perspectives, overall, it seemed that students for the most part understood the value of asking for help and did it despite feeling lonely or overwhelmed. Hope, the twenty year old STEM major, sums up the perspective of many students when asking for help.

I think in general when you ask for a help, sometimes you feel like embarrassed because we like to think we could do it all, but once you're asking for help and, like, when you're in the process, I feel like I become, like, proud of myself for, one, getting over it and, two, also thinking like that wasn't a big deal and look how much I've gained.

The process of asking for help can be daunting, but students expressed frequently the importance of working with others, learning from others, or simply leaning on friends as a critical part of the transfer process. Getting help from others, keeping a positive attitude, and just "going for it" was a commonly cited as a response to challenge, which is another theme found in the data.

### **Responding to Challenge**

When reviewing the data, it was moving to see themes emerge around student's response to challenge. Similar to the previous themes around getting feedback and asking for help, students discussing their response to challenges was complicated. However, for the most part

students that had easier transitions or enjoyed their transfer experiences more responded positively to challenges. They consistently responded by working harder, looking for additional resources, put in more time, and stated that giving up was not an option. It wasn't that these students never failed, or never felt challenged, it was the opposite. The more they failed, the more challenged they were, the stronger they became. Many students said the experience of challenge and failure motivated them. This is summarized concisely in the quotes below:

Peter: I mean I think if the class is really easy, I wouldn't put as much effort into it. If I already know all the material and it's not challenging, then I wouldn't be motivated to work that hard. The more challenging it is the more I want to work.

Jerome not only enjoys a challenge, but uses it as an opportunity to seek out additional support, which likely has benefits beyond clarification on a single topic. He elaborates here:

I sort of like the challenge, I mean it gives me, it sort of motivates me, I mean, sure sometimes it can be stressful, but I really like the challenge of it, and I really—one of my favorite things to do is to go talk to the professors and actually just learn from that and asked them questions about their research, and I mean, if I'm not understanding the class, going with questions and getting to know the professors what I want is good.

Jerome is clearly embracing challenge, which is a key component of growth mindset. Typically, people with growth mindset see challenges as an opportunity to stretch their abilities. Whereas, people with fixed mindsets tend to avoid challenges, which make them feel inferior or look unintelligent.

Students in this study shared how that making mistakes in class and through the transfer process was an effective method for learning. This was shared among many of the students and is evident in the quotes below, from Jim: "I think because it was mistakes that, and this is pretty

much everywhere, I made a lot of mistakes with confusing elements and periodic table and nomenclature and stuff, but I think any positive habits I may have formed are a result of all those mistakes I made in that class, yeah, I think so.”

Reframing mistakes into learning opportunities was a key theme for students:

Johnny: Yeah, if you don't learn from your mistakes then your mistakes are true failures.

You know, that you can still be successful in making mistakes, but it's only if you reflect back on that mistake and then not make it again, then it's not a mistake it's learning. I made some mistakes in my application, but I fixed them, and now it's better.

Similar to Johnny, Jerome actually has a growth mindset inspired quote on his phone that says, “I don't lose: I either win, or I learn.” This sentiment was shared by many of the students.

Students also appreciated instructors that challenged them. Lilly, the single mom currently at BCC, discusses how she enjoyed being challenged by her Marine Biology instructor:

That class was definitely uncomfortable, but it was nice because [the professor] wasn't going to let us settle. He wasn't going to settle, he was going to ask for more. So, it was like he saw like good in us. In the moment, it was challenging but I would comfort myself with the idea of the big picture. And so, I would get frustrated with myself because it wouldn't come out right but then I would think, like, growth is uncomfortable and I definitely feel uncomfortable. So, I could assume I'm growing and so I would tell myself those kinds of things.

**Value of learning.** Students with a growth mindset found value in the process of learning. They weren't there simply to get a good grade or transfer, but truly valued the process of improvement. Kimberly discusses how her passion for learning is helping her stay motivated at a challenging university: “For me, that's what keeps me going. The knowledge that I am

gaining through this university, and the people that I am surrounding myself with, is more empowering than a goal to get more degrees or grades or whatever. That is really satisfying for me. That's why I keep doing it, cause, like, I'm getting better. I'm improving." Inez, who spoke about the value of feedback to improve her performances, also discussed the value of improving through trial and error: "I think when I'm wrong, it's all building me to be a better person, especially when I'm wrong, so then I learn and it sticks with you more when you're wrong, and that's the right answer, like, learning, improving."

While students with growth mindset did tend to respond positively to challenge it wasn't always an easy response, and often these same students expressed having an initial response of "beating themselves up" and needed to take a break before jumping back into the process. Jerome shared that he has the growth mindset quote on his phone as a way of reminding himself to embrace challenge, he elaborates here:

I think I try to give myself a little more credit, you know, and realized that I took on a challenge, and it is challenging and I know I will make more mistakes, so I don't beat myself up, which is what I usually do at first.

Lilly talks about how she copes with the stress of learning through feedback, challenges, and mistakes:

Umm, well I mean it seems stressful at first, right, so that's why I kinda avoid it but maybe I'll try to find inspiration somewhere. It could even be just purging any anxiety or whatever, taking a step back or stepping away, leaving the – let's say if I'm at the office, leave the office, take a walk somewhere to get some fresh air, do something that's relaxing, that takes my mind off the stress, and then so that I can come back with a refreshed outlook and that seems to help. Then I'm more motivated.

Taking a break and managing the stress that comes along with challenging yourself was a shared sentiment with nearly all the student participants.

**Stereotype threat.** As noted in the introduction and literature review, growth mindset and other psycho-social interventions, such as belonging or purpose identification, have been shown to reduce stereotype threat. As part of my study, I was interested in seeing how students felt about negative stereotypes and if they utilized growth mindset in responding to these real and perceived threats to their academic success. As one might expect, the responses were mixed in nature, ranging from being seemingly unaffected or even motivated, to feeling mad and “totally limited” by their demographic identity. However, even the students that expressed strong emotional reactions, often ended the discussion with a growth mindset oriented thought or statement. For example, Loretta, the Latina female, had this to say about Latino stereotypes:

I'm getting an education, I'm going to be successful and I might have had disadvantages but those don't make – like don't decide where I'm going. I get to decide where I'm going.

Earl, the re-entry, mixed ethnicity, Global Studies student had similar thoughts:

I've never -- there are certain people that are so against like being labeled -- I don't care.

Label is a label, like sometimes you've just got to put a label on things. And I don't think that that's going to box me into anything.

The majority of students utilized growth mindset in a response to negative stereotypes. For example, Hope, the twenty year old STEM major, spoke about embracing the challenge and about the importance of representing Latinas in the sciences, “I feel like it can be motivating to kind to change minds and change the bar of, like, what we see you know? It's important to have those people represented.”

Inez spoke about choosing a university specifically because Latinos were underrepresented:

I thought, ‘Well let’s go establish ourselves there.’ And so far it’s been pretty good.

Yeah, I don’t regret my decision like – it really has helped me grow.

She went on to elaborate how embracing challenge is important for personal growth.

In the other place I would have been too comfortable. So, you don’t want to be in the same like in a place or situation where it’s comfortable.... So, it’s like you have to put yourself in situations where you feel like it’s challenging or hard, difficult or what have you, in order for you to grow, so I felt like [university] was that for me.

It should be noted that nearly all the students from underserved backgrounds did express the logistical challenges that they struggle with in order to maintain academic progress. For example, Jerome had this to say about having to take care of his mom, who is struggling with alcoholism:

I mean, its fine I guess. It’s just one more thing I have to deal with, you know? It’s like being in school and having a job isn’t hard enough...and then there’s [student government]. You know, some of those kids in [student government], they just do school and [student government]. That’s it. I can’t imagine. I mean, I have to work so hard.

Challenges associated with low socio-economic status were commonly discussed during the interviews, but it seemed that for the most part students utilized growth mindset strategies and viewed their situations as another challenge that they were committed to overcoming.

**Quitting is not an option.** When discussing challenges, many students made comments about not having an option of quitting due to their social, financial, or academic situations. This was usually discussed as a motivator to find additional resources. Lucy, who is currently taking a gap year to reduce her stress following transfer, and the pressure of finishing her degree.

I definitely am going to be using a lot of peer counseling and tutoring and essay sessions and trying to seek other resources, and just, I can't drop out. It's not option this semester so, you know, it's the last shot so just trying to find resources for help I think is really where it's going to have to come down to because I mean I can't – if I fail any of these classes or if I drop, I can't withdraw, I can't retake any of them.

Jerome spoke about how he'll do whatever it takes to achieve his academic goals:

I just keep on going. I don't feel there's any choice but to keep going. Umm, if I struggle with a concept, I'll find somebody to help me or I'll find some kind of resource to help me whether it's a video or somebody really skilled to make things clear. You know I know that I can't just leave it be. If I need to understand something, I'll find the resource.

Determination and utilization of resources were common responses to failure, but it also speaks to the desperation these students feel about the importance of getting a four-year degree. Jerome's comment above is motivated by his lack of financial resources. Even when discussing the possibility of not succeeding, they didn't really accept this as a failure, and usually discussed having a backup plan already formed. Generally, the backup plan was very similar to their initial goals. Students seemed very adaptive, flexible, yet completely committed and determined to making progress and achieving their goals in one form or another. Johnny's quote below, speaks to a "Plan B" mentality that was common among participants:

If I don't get in for electrical engineering this semester to a college that I can transfer to I'm probably going to change my major and that sucks. But I just can't sit around for another year waiting for this to through again you know, it's like I feel like I've put

everything I can into this one direction and if you are not going to take it than I have to choose a another one. I'll reapply as a different major, or maybe appeal.

Johnny describes changing majors as a strategy to successful transfer, other students said that they would be ok with one more year, but that they would try again, while others discussed the possibility of appealing the decision or being waitlisted. Regardless of which strategy they discussed, most participants indicated transfer as a primary goal and were open to alternative paths to achieving it. The growth mindset conceptual framework, of effort, getting help from others, responding positively to challenge, and utilizing a variety of strategies is represented in this quote that summarizes many of the thoughts and experienced collected as part of my study. Here, Johnny summarizes this point:

For me, it's important to not be afraid to fail, I think like every master in any field has failed way more times than they've succeeded... I always reach out after I get denied from something and asked them, is there anything I could have done better in the interview or in my application and get people's feedback, and really see that as an opportunity to grow each. I try different things and work with people on whatever they tell me. Then, it's kind of like I never really fail.

Peter's thoughts exhibit the kind of "adaptive mastery-oriented" behavior that defines growth mindset.

There were also students in the study that struggled with the process of transfer, and typically, not surprisingly these were also the ones that did not get into their first choice colleges. When discussing failure, these students expressed more helplessness and were less likely to respond positively to challenges. These students also focused more on the perception of intelligence than the value of learning. Carrie, a twenty-two year old Latina student, did not get

into her first choice university. She went with a school that accepted her in a major that she wasn't really interested in just to move forward in the process. She contradicted many of the themes identified by other students that were more aligned with growth mindset. Here she talks about her focus on appearing intelligent. She shared: "Yeah, it's the same concept if I feel that I'm not putting the image that I'm intelligent, because I know I'm intelligent, and if that's not coming across that's when I wanted to give up. I don't like doing things that I'm bad at which is not helpful." Steve, the twenty-seven year old STEM major also expressed fixed mindset beliefs, including a lack of learning and getting help from others, as evident in the quote below, saying: "I really didn't find great counselors here that I had much of a relationship with. I kind of got some bad information in the first semester here so I sort of just started doing it on my own."

Getting help from others is an important part of the transfer process, however, once students have relocated often they leave these support networks, including familiar faculty and counselors, friends, and therapists. The next section discuss the challenges of transfer transition and how students in this study coped with relocating from community college to university.

**Transfer transition.** The challenges of the transfer experience do not end once the application is submitted. Many students spoke of the difficulty of waiting to hear back and about the challenges of their lives being put on hold until they knew their options. Students that had already transferred also spoke about the challenges of transitioning. This is highlighted in the quote from Kimberly, the twenty-one year old female, university student:

The transition from the community college environment into the university environment is, just talking among the other transfers, it's a real challenge, especially coming to [the

University of California system], it's a very challenging process, trying to adjust, trying not only academically, but socially too.

As you may recall, Kimberly is the student highlighted earlier about having to overcome her uncomfortableness with asking for help. However, students that would be considered “out going” or confident also shared similar concerns. For example, Harriette, the student that passed her personal statement around the Thanksgiving table and is currently a cheerleader at her university, shared similar thoughts, which are highlighted in the quote below:

...it was really hard, I liked the niched community that I had made at [BCC] because I felt very happy there, and I felt like I really dug my roots and I loved it—that was a little bit hard to move on from.

Similar to their responses to other challenges both in and out of the classroom. Once again, a growth mindset approach was often utilized to cope with transfer transition. Kimberly followed up the quote above by saying, “It's important to get out of your comfort zone. That's what this is all about.” And Harriet:

I just doubled down and said to myself, “ok, you got this.” Then I found ways of engaging in the community, like with cheer, and basically, just like, rebuilding. I've also been going to tutors and the TA hours to make sure my grades don't fall.

These quotes represent how the students in the study utilized the growth mindset concepts of embracing challenges, utilizing strategies, and getting help from others to address transfer transition.

### **Summary and Concluding Thoughts**

The students in this study represented a variety of backgrounds, including many different ethnicities, genders, sexual orientations, majors, and personal experiences. Yet, the each of them

expressed thoughts and feelings that highlighted the importance of feedback, getting help from others, and responding to challenge and failure with grit, tenacity, and perseverance. They each found value in the process of learning, versus focusing on the perception of their abilities or intelligence. These themes were common among the students. There were other shared experiences, but the data was not as thematic and cohesive. For example, many students described their experiences with using a variety of campus resources. Utilizing various strategies is an important part of growth mindset, however, there were no clear trends in the resources so this information was not described in detail here. There was also robust discussions of stress and coping mechanisms, but again, the reactions were disparate and did not result in meaningful trends connected to the framework.

Overall, the experience of data collection was powerful and reviewing the data during data analysis was moving. As educators and employees, we often take pride in our expertise or knowledge of particular processes or programs. However, the voices and stories told here remind us that in our nine to five day, we touch lives, change futures, and hold the fragility of someone's mental health in our hands. It is vitally important that we remember their journey is our journey and together we can find ways to improve their experiences for the better of the community, the institution, and most importantly the students themselves. Further discussion and recommendations for incorporating these results into academic processes, programs, and policies are presented in the next chapter.

## **Chapter V: Discussion and Implications**

I gathered the data presented in the previous chapter part of this qualitative study using grounded theory as the research design framework. Through a series of one-on-one, semi-structured interviews, I examined the role of growth mindset through the transfer process of community college students. Participants represented diverse backgrounds and stages of the transfer process, including preparing for transfer, applied for transfer, and already transferred to a university. Students were asked questions that were developed using a growth mindset conceptual framework. They were also asked questions about their perceptions of intelligence similar to those used by Carol Dweck in her mindset assessment tool.

I invited students to participate via email. Upon confirmation of interview, I sent them the consent form, which was also reviewed at the interview. The interviews lasted approximately one hour. In total, seventeen interviews were conducted in a variety of settings chosen by the participant. Students represented backgrounds that roughly mirrored the institutional composition. During the interview introduction, I provided a brief review to the concept of growth mindset and encouraged the students to focus on their thoughts and feelings during the transfer process. As presented in the previous chapter, focusing on student's thoughts and feelings resulted in the sharing of intimate details and open dialog about transfer from the perspective of community college students. During the interviews, students shared their experiences, including their thoughts, feelings, and perceptions of their abilities, strategies, motivation, and processes utilized during the transfer process. The themes of the study are summarized in the section below.

## **Summary of Results**

During the data analysis process, several key themes were identified, including the importance of feedback, getting help from others, and responding to challenges or failures. Students identified a variety of sources of feedback. However, the important role of peers was consistently emphasized. Students also expressed having strong emotional reactions to feedback and explained how focusing on the intentions of the feedback was key for ameliorating these reactions and integrating the feedback. Students that had more positive experiences with transfer responded to feedback in more positive ways and exhibited an adaptive mastery-oriented behavior by regularly seeking help, learning from others, and utilizing resources on a regular basis. These types of approaches to goal achievement are each critical components of growth mindset theory. Students also shared common responses to the role of effort, utilization of strategies, and the stressful nature of transferring from community college to a university. These themes were less cohesive and were not included in this study.

## **Discussion of Findings**

Research indicates that students with a growth mindset have improved educational outcomes (Aronson, et. al, 2002; Blackwell, et. al, 2007; Dweck & Leggett, 1998; Good, et. al, 2003; Yeager & Walton, 2011). However, very little research has been done at the community college level with community college students or in the transfer process of community college students. Furthermore, most studies are quantitative and do not focus on student experiences. This study attempts to build on a growing body of evidence in favor of including growth mindset interventions in community colleges by answering the question: What role does growth mindset play in the transfer experiences of community college students?

**Importance of feedback.** The role of feedback has been explored in a variety of ways in a variety of studies on growth mindset. One of the most notable studies was done in 2002 by Dweck and Mueller. This study explored the role of praise and focus on effort versus ability and found that students who were praised for effort developed more learning process oriented goals instead of focusing on performance or outcome oriented goals. In my study, the students who discussed the importance of feedback did discuss the types of feedback received, but more frequently, they expressed thoughts and feelings that are associated with the large body of literature that explores the role of effort and ability in shaping student's self-perception of intelligence. If students believe their abilities are fixed, then there is no purpose in seeking feedback. However, as noted most of my study participants did seek and incorporate feedback throughout their academic journey. One of the defining concepts of growth mindset is how students from different mindsets explain poor performance by either giving more weight to ability or effort (Dweck et al., 1995; Dweck & Leggett, 1998; Heyman & Dweck, 1998; Hong et al., 1999). Students with a fixed or entity mindset, believe their abilities are fixed and cannot be changed. Whereas students with a growth or increment mindset, believe that their abilities can grow and are therefore more likely to seek feedback as an attempt to improve performance (Dweck & Leggett, 1998; Heyman & Dweck, 1998). This is particularly true when students are faced with challenges or failures. Students with a growth mindset see their performance as representing their current abilities, but not their future potential (Dweck & Leggett, 1998).

Similar to my study participants, students with growth mindset seek feedback as a way of improving performance. They also focus on the "power of yet." Mindset Works, a for-profit consulting firm, co-founded by Carol Dweck has a variety of interventions that support the development of a "yet sensibility" in school environments ([www.mindsetworks.com](http://www.mindsetworks.com)). Many

students in this study discussed their commitment to the goal of transfer and had given extensive thought to the development of a “back up” plan. If they did not transfer this year, for them that simply meant that they didn’t achieve their goal *yet*, but fully anticipated achieving it in the future.

In several studies on the role of feedback, positive impacts for both students and teachers have been observed. For example in a recent case study performed at the New York City Department of Education, feedback was cited as an effective tool not only at improving student performance, but also by changing the language used, changes in mindsets were also observed in the teachers of the school (Rothman, 2014). The role of seeking help from others, particularly faculty and friends, is discussed in the section below.

**Getting help from others.** In 2015, Dr. Carol Dweck went on a mission to clarify the role of praise and effort in student success. In the September 2015 edition of Education Week, she explains how the study she completed in 2002 on the role of praise in young children has resulted in the misconception that growth mindset is strictly about effort. She clarifies that her findings through years of research shows that growth mindset it is not about effort alone, but about empowering students to understand the malleable nature of intelligence and learning. She emphasized the importance of encouraging students to “seek new strategies and input from others when their stuck”.

The students in my study consistently expressed utilizing multiple strategies to achieve their academic goals related to transfer, especially collaboration with other students. More specifically, when discussing transfer, students explicitly identified learning from others that have already succeeded in transferring, as you may recall in quotes from Harriette and Peter. This is similar to results found in Nussbaum and Dweck’s 2008 study on maintaining self-esteem

in the face of challenge. Here, they found that students who were encouraged to adopt an incremental or growth mindset primarily opted to improve their self-esteem by seeking feedback and support from others, students particularly chose to investigate the strategies of students who had performed better or achieved success (Dweck & Nussbaum, 2008). This indicates that encouraging students to learn from each other might be a useful strategy at fostering growth mindset and student success.

Research also shows us that how students view their intelligence, either as fixed or malleable, influences the types of goals they set for themselves (Dweck, et. al, 2006; Dweck, Chui, & Hong, 1985). As mentioned earlier, students with a growth mindset tend to develop learning process goals that foster development versus performance goals that measure ability. At first glance, it may seem that transfer is a performance goal. However, given all that goes into the transfer process, students that value the process of learning will be more successful, and therefore be more likely to have achieved the criteria necessary for transfer. They will also thrive through the more structured process of applying for transfer by seeking feedback, getting help from others, and responding positively to challenges that arise through the process.

**Mental health.** There is limited connection in the literature between growth mindset and mental health. However, it was evident in the results of my study that the majority of students that exhibited some form of mental health challenges, from stress and isolation to imposter syndrome and severe self-criticism. In 2009, researchers Oades, Crow, and Nguyen explored the role of growth mindset in a collaborative recovery model for mental illness. However, my results seemed to show something different. Logically, we might expect to see higher stress levels in students that are prone to taking on challenges, exerting intense effort, or frequently researching strategies and resources for help. I witness a type of growth mindset fatigue in these students.

However, this could be confounded by typical stress associated with the transfer process. Therefore, this topic is included in my recommendations for future research. Although, taking on challenges beyond your existing skill set can result in increased stress, the student participants studied here had mostly a positive response to challenge. They tended to embrace challenge and exhibited mastery-oriented adaptive behavior (Dweck & Leggett, 1988) which is discussed in the section below.

**Response to challenge.** In academic environments, and in life in general, challenges are inevitable. Observing how students respond to setbacks, challenges, and failures is an important part of fostering student success. Researchers in the field of growth mindset categorize a student's response to challenge in two ways: either maladaptive helpless behavior where a student gives up and avoids challenges, or adaptive mastery-oriented behavior where a student persists at tasks until their abilities develop enough to master it (Dweck, Chui, & Hong, 1985; Dweck, et. al., 2006; Dweck & Leggett, 1998). Persistence is a key factor in community college student success. Given the research around goal attainment and persistence of students with growth mindset, community college leaders should take interest in developing interventions that foster growth mindset and a culture of risk-taking that allows students to make mistakes as part of the learning process. For example, many students spoke about applying to institutions where it was unlikely that they would be accepted. This risk-taking may be attributed to their growth mindset, the power of yet, and the value they place on the learning process. Like Loretta and Peter discussed, at the very least it could become an opportunity to gather feedback. By encouraging students to be bold in their academic pursuits, more students will aim high in their goals. Some of them will achieve them and some of them will not. But all of them will have learned something, and from a growth mindset perspective that in itself is a goal.

Most of the participants in my study discussed their experiences in responding to academic challenges and identified the value of learning through the process, which is associated with an incremental or growth mindset. The few students that focused on the perception of intelligence and performance based goals, didn't thrive through the transfer process, expressed settling in their achievements, and struggled with self-esteem, as you may recall in the quotes from Carrie. According to research, students with fixed mindsets tend to turn away from challenges and express boredom (Dweck & Leggett, 1998). This maladaptive response is similar to Steve's thoughts in the previous chapter regarding asking for help when feeling challenged. Students in community colleges come from diverse, and often challenging backgrounds, embracing challenge and failure not as a setback but as integral step to learning will be critical in supporting these students on their journey to transfer to a university. Students may start from a variety of places and approach the transfer process with similar strategies, but how they react to challenges along the way will over time affect their long term academic success (Dweck & Leggett, 1998; Yeager & Dweck, 2012).

I commonly observed self-criticism in interviews with students from both mindsets. However, students with a growth mindset discussed moving through it and utilizing strategies, self-monitoring, and relaxation techniques to return to a mastery-oriented approach. "Taking a break" was often cited as an important strategy as disarming the doubt and negative self-talk that naturally comes with taking on challenges. Once students with a growth mindset had a chance to decompress emotionally, they came back enthusiastic about challenges. Again, often telling themselves that those feelings were part of the learning process they valued so highly and working with friends to identify solutions to barriers. Students discussed having an initial negative reaction, but then ultimately being "motivated" and "inspired" by challenges.

A more recent study, and one of the few performed at the community college level, was performed by Powers (2015) and explored the impact of a series of growth mindset interventions. This study found that as a result of participating, community college students adopted a new response to challenge. One-fourth of their participants learned to view failure as a “chance to learn and criticism as feedback” (Powers, 2015, p.129). Using Yeager and Dweck’s (2012) model of “intelligent practice” community college students should be encouraged to view their “intellectual ability as something that can be developed over time with effort, good strategies, and help from others” so that they will be more resilient in responding to challenges in the academic environment (p. 305). These experiences were evident in the interviews for this study, especially with students that had more positive experiences with the transfer process from community college to a university.

**Stereotype threat.** As shown in the literature, growth mindset interventions were shown to reduce stereotype threat and improve educational outcomes for women and students of color (Yeager, Walton, & Cohen, 2013; Oyserman, Bybee, & Terry, 2006; Silva & White, 2013; Aronson, Fried, Good, 2002; Rydell, Rydell, Boucher, 2010). In my study, the participants were not provided an intervention, however, growth mindset was evident in their responses. Students responded to stereotypes in similar ways as to other challenges, including seeking support, applying themselves more in the face of stereotypes, and in some cases embracing or seeking it these situations as a mechanism for growth. In her 2006 book Dweck claims growth mindset helps individuals see stereotypes as simply someone else’s view that is not founded in science. She goes on to say that growth mindset helps people confront it with “their confidence and abilities in tact” (p.78). This is similar to what I observed. Students were not oblivious or unaffected by stereotypes, but they typically viewed them as other people’s problems, not theirs.

**Transfer transition.** Although transfer transition or transfer shock, was not the focus of my study, it was evident in the results that the students that had already transferred to university, utilizing growth mindset concepts in their transition process. Clearly, applying effort, utilizing strategies, getting help from others, and embracing challenge are useful tools when starting a new school. This is especially true when this can also include moving locations, leaving support networks, and even changing to a faster paced quarter system. Students clearly feel overwhelmed. Kimberly expressed this in her interview, “The overwhelming amount of work that I had to do, and this feeling of, ‘Oh my gosh, everyone has been here for so long, and all this stuff they’ve already done.’” Studies have shown how self-theories on intelligence can foster a sense of belonging and improve academic performance. This was demonstrated in the Dweck study on mindset and math achievement for minorities and women (2008), as well as the Aronson, Fried, and Good study on African American student success (2001). My study builds on these findings and indicates that students that successfully transitioned did express concepts of growth mindset to address their transition challenges. For example, Kimberly in the quote above went on to say this when asked how she handled feeling so overwhelmed and left out, “I reached out to other transfer students, and so just being able to talk about it with someone who’s been through it, I think the most important of how I got through it at least.” Peer support was emphasized at every stage of the transfer process, from getting feedback, getting help, and responding to challenges. Students with growth mindset know how to marshal their resources, including their peers. These findings, including study limitations, are summarized below.

### **Study Limitations**

I took great care to include a variety of perspectives and experiences for this study, however, no study is without its limitations. Through network and theoretical sampling, students

with a background in advocacy were over represented in the study. Similarly, many students were majoring in STEM fields or fields aimed at policy careers, such as political science, global studies, or environmental studies. Students that had already transferred were primarily representing the University of California system. Only two of my participants either intended to transfer or were currently attending a California State University. Additionally, only two participants provided their statement of purpose or other written assignments as artifacts for data triangulation. However, extensive memos, field notes, and institutional documents were included in the data analysis. I used ATLAS.ti to assist in object triangulation of data and development of core themes. Another limitation, was that students were invited to member-check the transcripts, but only thirty-percent responded to my requests for member-checking.

Traditionally, in grounded theory an extensive review of the literature is not conducted until later in the analytical process. However, as part of the established conventions of dissertations, literature reviews are required in advance of collecting data. Therefore, as a researcher, I had knowledge of the positive impacts of growth mindset interventions, which may have introduced researcher bias. Another diversion from traditional grounded theory approach, was that although potential patterns presented themselves throughout the data gathering process, due to time limitations and concerns about gathering too much data as part of my first study, I did not pursue gathering additional interviews from students that may have confirmed or clarified those themes.

### **Recommendations for Practice and Future Research**

Despite these limitations, significant themes and findings were clearly identified that have implications for improving practices aimed at fostering student success through the transfer process. Extensive research has provided a plethora of detailed recommendations on fostering

growth mindset in academic environments. My study contributes to this body of literature and builds on valuable insights about the importance of feedback, getting help from others, and fostering positive responses to challenges faced in the academic environment.

**Feedback as tool for success.** Although I was initially hoping to identify programs that institutions could take to support students in developing a growth mindset, the importance of feedback brings forward the critical role faculty can play in a student's academic journey beyond the classroom. Much research has been done that shows the value and impact of integrating growth mindset practices into grading processes (Powers, 2015; Dweck, 2008; Mueller & Dweck, Snipes, Fancsali, & Stoker, 2012). Faculty that participated in the Powers (2015) study on growth mindset interventions, recommended providing growth mindset information at strategic times, such as immediately before handing back important assignments or exams (Powers, 2015). This practice helped students see criticism as a powerful tool for learning, instead of viewing it as a finite measure of their abilities. Similarly, the study by Mueller and Dweck, indicates that students will benefit from feedback that focuses on the student's effort and strategies, instead of outcomes and mistakes.

Research by Cohen, Steel, and Ross (2012) suggests that setting high expectations in academic environments and partnering it with messaging that *any* student can be successful through effort, strategy, and help, can reduce stereotype-threat and facilitate growth mindset in students. My study supports this finding, as several students reported being motivated by faculty that set high expectations and supported students by expressing belief that they could be successful. The results of this study indicate that institutions and students would benefit from a robust growth mindset professional learning program for faculty to learn about how, when, and why to give feedback on academic performance. Other recommendations provided in the

literature were to provide less weight or points to earlier assignments, reward progress and emphasize the process of learning over the grade or outcome, and identify strategies used by successful students and encourage students to learn from high achievers (Powers, 2015). By emphasizing the value of learning from one another, peers can be engaged in the development of a culture of growth mindset.

**Leverage peer support.** Students in this study regularly reported utilizing support from peers throughout the transfer process. Most notably, students in the sciences felt a special kinship around the rigorous requirements for transfer in the STEM fields. Extensive research exists in support of learning communities (Cross, 1998; Tinto 2003). Colleges should consider building on this success and exploring ways of scaling up learning communities. Another consideration is the development of discipline specific learning communities, such as the experiences that were shared by the STEM students in this study. Academic departments should incentivize students to participate in group activities that focus on their discipline, such as extra credit for attending a career panel or mixer for majors.

Other ways of formalizing peer support is through Supplemental Instruction, Peer Assisted Learning, or Peer Mentor programs. Based on the results of my study, these programs should consider hosting peer-led events around transfer, such as having students that have successfully transferred meet individually with students currently seeking to transfer. At BCC, much of the peer support occurred in clubs or extracurricular programs such as the Learning Garden, STEM program, and Student Government. These programs allow students to naturally form bonds that can benefit them tremendously in the transfer process.

**Embracing failure.** Challenges and short-term failures are a necessary part of long-term student success. By creating a culture of risk taking, where students are encouraged to go outside

of their comfort zone and mistakes are seen as instrumental to the learning process, students will be encouraged to aim high and embrace process of learning. This will lead to students and faculty developing more learning oriented goals, which as noted above, are more effective at fostering persistence in the face of challenge. All of these concepts are critical at preparing students for successful transfer from community college to a university.

Institutions should train faculty in growth mindset methods of grading and providing feedback, but also in ways to introduce the concept of neuroplasticity, which is the ability for the mind to grow, change, and develop. By understanding the physical process of learning, students will more readily accept challenges and mistakes as part of a developmental process. Many different interventions exist that can easily be integrated into a variety of disciplines. As noted in the study by Powers (2015), introducing growth mindset principles in a uniform approach, such as through developmental English classes or part of campus orientation, is a cost effective method for improving student success (p. 133). Growth mindset interventions that encourage risk taking and emphasize the value of learning, could also be integrated into learning communities and may be especially useful for culturally based learning communities to assist in reducing stereotype threat.

However, as noted in the study results, taking on challenges can be produce additional stress and negative emotional responses in students. A recent study by the National Alliance for Mental Illness (2012) found that eighty-percent of college students feel overwhelmed by their responsibilities. Colleges need to continue to develop robust mental health programs that help students manage stress. In fact, teaching students stress management techniques supports both the idea that mind is malleable, and when partnered with peer interaction, could be effective at supporting the other recommendations supported by this study. Through stress management and

mental health programs, colleges should develop opportunities to teach students how to take a break, instead of giving up.

### **Future Research**

Although there is a growing interest in growth mindset interventions, there remains a gap in the literature for the implications of growth mindset in community college settings. This study is one of the first that examines the role of growth mindset in long term student success goals, such as transfer from community college to a university. Furthermore, it is one of the few studies that uses a qualitative grounded theory approach. Community colleges would benefit from additional research on the role of growth mindset in the achievement of academic goals, such as basic skills pathway completion, transfer, or degree and certificate completion. Understanding the long-term impacts of growth mindset interventions at the community college would also support a more holistic approach to teaching and learning, which would provide balance to the data driven frameworks of the current community college outcome based policies.

While most, if not all, college students experience stress, students in my study seemed to have a high number of negative emotional responses such as anxiety, negative self-talk, imposter syndrome, and frustration. Examining the negative emotional responses that can occur as a result of taking on challenges, seeking critical feedback, and exhaustion from applying oneself through intense effort and utilization of multiple resources needs to be further explored.

Urban community colleges, similar to Bodhan Community College, often attract students from diverse and frequently from historically underrepresented backgrounds. Measures to explore the role of growth mindset in the transfer experiences of underserved students were included in this study. However, because this was not the focus of my study the results should be replicated in additional studies with an emphasis on students from underserved and

disenfranchised backgrounds. . Based on the preliminary results here, deeper exploration on how growth mindset can benefit students of color in the transfer process could result in meaningful findings and recommendations. Similarly, the literature around transfer transition and transfer shock is rich. Building on that research and examining the potential for growth mindset to support a smoother more successful transition from community college to university could benefit both the student and the institutions invested in their success.

### **Conclusion**

This study demonstrates how growth mindset has the ability to influence positive academic behaviors in students, including the development of learning goals, seeing value in mistakes, learning from others who have successfully accomplished shared academic goals, and developing positive responses to challenges, setbacks, and failures. These are useful tools for achieving the goals of the Student Success Act and fostering positive student experiences in the transfer process. Based on the results and findings of my study, growth mindset concepts appears to play a critical role in the transfer experiences of students and should be fostered early in a student's journey towards transfer.

However, my findings also support recent research about negative impacts of growth mindset and other noncognitive skills. This should be considered when fostering growth mindset in students that may already be vulnerable to stress. Research shows that growth mindset interventions have lasting improvements in motivation and achievement. Community college students are perhaps the most vulnerable to experiencing academic setbacks. At the same time, community college leaders are struggling with cost effective, scalable interventions that support student success. Growth mindset addresses institutional and individual struggles in community colleges and should continue to be explored and integrated for the benefit of both.

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Appendix A: Email Invitation

**EXAMINING THE ROLE OF GROWTH MINDSET IN THE TRANSFER  
EXPERIENCES OF COMMUNITY COLLEGE STUDENTS**

Re: Participating in a study on growth mindset

Greetings SMC Student,

I am writing to request your participation in my dissertation study currently being conducted at California State University, Northridge (CSUN). The focus of my research is on the role of growth mindset in the transfer experiences of community college students. I am currently conducting this study as part of the Ed.D. Degree requirements.

The purpose of my research is to understand the role growth mindset may play in supporting and facilitating student success. The findings of this study will be used to inform counseling services at community colleges. Your participation in this study includes participation in one 45-60 minute personal, semi-structured interview. Following the interview I will send you the transcripts and ask for you to “member-check” the content to ensure I captured our conversation accurately. To show my appreciation for your time, I am offering participants a \$10 Starbucks gift card. Any personally identifiable characteristics, such as your name or college affiliation, will not appear in the study in any way. Participating in this study is completely voluntary and you may withdraw at any time.

Your time and participation in this study is greatly appreciated. If you would like to participate, please contact me via email: [geneath@mac.com](mailto:geneath@mac.com), or phone: (310) 663-3673. Thank you in advance for considering participation in this study.

Best,

Genevieve Bertone

Appendix B: Consent Form

**CONSENT TO ACT AS A HUMAN RESEARCH PARTICIPANT**

**EXAMINING THE ROLE OF GROWTH MINDSET IN THE TRANSFER EXPERIENCE OF  
COMMUNITY COLLEGE STUDENTS.**

You are being asked to participate in a research study. The Role of Growth Mindset in the Transfer Experiences of Community College Students is a study conducted by Genevieve M. Bertone as part of the requirements for the Ed.D. Degree in the Michael Eisner's College of Education. Participation in this study is completely voluntary. Please read the information below and ask questions about anything that you do not understand before deciding if you want to participate. A researcher listed below will be available to answer your questions.

**RESEARCH TEAM**

**Researcher:**

Genevieve M. Bertone  
Department of Education Leadership and Policy  
18111 Nordhoff St.  
Northridge, CA 91330- 8265  
310-663-3673  
genearth@mac.com

**Faculty Advisor:**

Dr. Nathan Durdella  
Department of Education Leadership and Policy  
18111 Nordhoff St.  
Northridge, CA 91330-8265  
818-677-3316  
[nathan.durdella@csun.edu](mailto:nathan.durdella@csun.edu)

**PURPOSE OF STUDY**

The purpose of this research study is to understand the role growth mindset plays in the successful transfer of community college students to four-year institutions.

**SUBJECTS**

**Inclusion Requirements**

You are eligible to participate in this study if you:

- are currently enrolled at a community college and are actively pursuing transfer to a four-year institution.
- have attended community college and successfully transferred to a four-year institution within one to two years.  
and
- are currently enrolled in a college or university.

**Time Commitment**

This study will involve approximately 1-2 hours of your time over the course of 6 months.

**PROCEDURES**

The following procedures will occur: After receiving and accepting my interview invitation we will schedule a one-on-one, semi-structured interview in a location of your choosing. The interview will last approximately 45-60 minutes. Following the interview, you will be asked to review the transcripts of the interview to ensure I captured the conversation accurately.

**RISKS AND DISCOMFORTS**

The possible risks and/or discomforts associated with the procedures described in this study include: Mild emotional discomfort when discussing personal issues around motivation, confidence, and achieving academic goals. All of your information will be kept confidential, pseudonyms will be used, and all of the data will be stored in a secure location. This study involves minimal risk. There are no known harms or discomforts associated with this study beyond those encountered in normal daily life. There are several clinics in the west Los Angeles area. Listed below is the contact info for two providers. Participants may incur a cost for services.

Santa Monica College  
Psychological Services  
Liberal Arts Building, Room 110  
310-434-4503

Didi Hirsch Community Mental Health Clinic  
12420 Venice Blvd, Ste. #200  
Los Angeles, CA 90066  
310-751-1200

**BENEFITS****Subject Benefits**

The possible benefits you may experience from the procedures described in this study include an increased understanding of one's own abilities and experiences. Limited direct benefit to the subject is anticipated.

**Benefits to Others or Society**

This study may assist college administrators and counselors in developing effective student intervention programs and facilitating student success at community colleges.

**ALTERNATIVES TO PARTICIPATION**

Written essays answering the interview or follow up questions will be accepted if you are for some reason unable to participate in the interviews.

**COMPENSATION, COSTS AND REIMBURSEMENT****Compensation for Participation**

You will receive a \$10 Starbucks gift card for participating.

**Costs and Reimbursements**

There is no cost to you for participation in this study. You will not be reimbursed for any out of pocket expenses, such as parking or transportation fees.

## **WITHDRAWAL OR TERMINATION FROM THE STUDY AND CONSEQUENCES**

You are free to withdraw from this study at any time. **If you decide to withdraw from this study you should notify the research team immediately.** The researcher may also end your participation in this study if you do not follow instructions, miss scheduled visits, or if your safety and welfare are at risk.

## **CONFIDENTIALITY**

### **Subject Identifiable Data**

All identifiable information that will be collected about you will be removed at the end of data collection. All identifiable information that will be collected about you will be removed and replaced with a code. A list linking the code and your identifiable information will be kept separate from the research data in a locked file cabinet in my workplace office. Names will not be reported in the findings.

### **Data Storage**

All research data will be stored on a computer that is password protected. The audio recordings will be transcribed and deleted at the end of data collection. All of the identifiable data will be kept in a locked file cabinet in my home office and all of the de-identifiable data will be stored on a password-protected laptop. The audio recordings will also be stored initially in a password-protected laptop, but then transcribed and erased as soon as possible.

### **Data Access**

The researcher and faculty advisor named on the first page of this form will have access to all identifiable and de-identifiable data. Any information derived from this research project that personally identifies you will not be voluntarily released or disclosed without your separate consent, except as specifically required by law. Publications and/or presentations that result from this study will not include identifiable information about you.

### **Data Retention**

The researcher intends to keep the research data in a locked file cabinet in my workplace office for five years. With your written permission, other researchers will have access to the data for future research.

### **Mandated Reporting**

Under California law, the researcher is required to report known or reasonably suspected incidents of abuse or neglect of a child, dependent adult or elder, including, but not limited to, physical, sexual, emotional, and financial abuse or neglect. If any researcher has or is given such information, he or she may be required to report it to the authorities.

## **IF YOU HAVE QUESTIONS**

If you have any comments, concerns, or questions regarding the conduct of this research please contact the research team listed on the first page of this form. If you have concerns or complaints about the research study, research team, or questions about your rights as a research participant, please contact Research and Sponsored Projects, 18111 Nordhoff Street, California State University, Northridge, Northridge, CA 91330-8232, or phone 818-677-2901.

**VOLUNTARY PARTICIPATION STATEMENT**

You should not sign this form unless you have read it and been given a copy of it to keep.

**Participation in this study is voluntary.** You may refuse to answer any question or discontinue your involvement at any time without penalty or loss of benefits to which you might otherwise be entitled. Your decision will not affect your relationship with California State University, Northridge. Your signature below indicates that you have read the information in this consent form and have had a chance to ask any questions that you have about the study.

**I agree to participate in the study.**

I agree to be audio recorded

I do not wish to be audio recorded

\_\_\_\_\_  
Participant Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name of Participant

\_\_\_\_\_  
Researcher Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name of Researcher

\_\_\_\_\_  
Date

## Appendix C: Interview Protocol

### I. Pre-interview Session: Introduction/Background

#### **Welcome and introduction:**

Thank you for taking the time to talk with me today. Before we begin the interview session, I'd like to give you the opportunity to read and sign the Consent to Participate in Research.

#### **Purpose of the interview:**

As we discussed, this interview is a one-on-one interview intended to collect information for a research study that explores the relationship between growth mindset and transfer experiences. Growth mindset is the core belief that abilities can be changed and are not fixed.

#### **Timing:**

Today's interview will last approximately 45-60 minutes. Are there any questions before I get started?

### II. Interview Session

#### *Basic Information*

1. What is your full name?
2. How old are you?
3. How would you identify your gender?
4. How would you identify your ethnicity or race?
5. What school are you currently attending?
6. What is your major

#### *Transfer Process*

7. How long did you attend a community college in preparation to transfer?
8. Was it always your goal to transfer?
9. Where are you at in the transfer process?
  - a. How many college applications did you or are you planning to submit?

#### *Effort*

10. How much effort did you put into preparing your transfer applications?
  - a. Did it feel like a lot of effort?
  - b. Do you think that the amount of effort you put into the process made a difference on your acceptance?
11. Have you made sacrifices to achieve your goals related to transfer?
  - a. What were they?
  - b. What was the hardest?

#### *Strategies*

12. What strategies did you use when approaching the transfer application process?
  - a. How did you select which universities to apply to?
  - b. How did you refine your application packet?
13. What strategies would you recommend to others who are starting the transfer process?

### *Getting Help from Others*

14. In what ways did you seek help during the transfer application process?
  - a. For example, did you attend any transfer related workshops?
  - b. Did you have someone read your personal statement?
    - i. If so, how did you feel about the feedback they gave you?
    - ii. If not, why not?
  - c. Did you work with other students on your transfer applications?
15. Did you find these activities to be helpful?
  - a. Why or why not?
  - b. Did you incorporate the feedback you received from these activities? If so, how?

### *Challenges and Stereotype Threat*

16. What did you find most challenging about your transfer experience?
  - a. How have you met those challenges?
17. As a person of color / woman, what obstacles did you face during the transfer process and how did you overcome them?

### *Achievement and Goals*

18. Were you accepted into your first choice of universities?
  - a. How did you feel about that?

### *Mindset Questions*

16. Do you believe intelligence, or in other words the ability to learn, is something people are born with, or is it something that can be developed?
17. Are you in any challenging classes now?
18. How do you feel when you are struggling academically?
  - a. When a task is really difficult, does it make you want to work more or less?
  - b. When you're in a challenging class, how does it feel when you make a mistake?

### **Closing Questions:**

I would like to give you a final opportunity to help me examine these issues. Before I end today, is there anything that I missed? Do you have anything else to add at this time? Have you shared everything that is significant about these experiences with me? If there's anything else that you recall after our interview session, I invite you to share it by contacting me.

### **III. Post-Interview Session: Debriefing and Closing**

Thank you for participating in today's interview session. I greatly appreciate you taking the time and sharing your ideas with me. I also want to restate that what you have shared with me is confidential. No names or personal identifiers will be shared.

After the interview I will send you the transcripts for your review and input. This is called member-checking and is a way for me to be sure that I captured the conversation correctly. Is that ok with you? Do you have any questions at this time?