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UNDERSTANDING WHAT THE 2% KNOW: A MIXED METHODS STUDY ON
GRIT, GROWTH MINDSET AND VULNERABILITY AMONG THRIVING
COMMUNITY COLLEGE STUDENTS

A Dissertation
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education
in
Educational Leadership

by
Mark Jeffrey Hartley
December 2018

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Approved by:

Bonnie Piller, Committee Chair, Education

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ABSTRACT

Currently, the California Community College system is graduating 2.83% of its first-time freshmen from these two-year institutions in a two-year period of time (CCCCO, 2017). In addition, less than 40% of this same group are graduating in a six-year period of time. This study sought to find commonalities between the students who were in the 2.83%, as well as to learn if these thriving students' experiences centered on possessing the skill sets of grit (Duckworth, 2007), growth mindset (Dweck, 2006), and vulnerability (Brown, 2006).

For this study, thriving students were defined as first-time college students during the fall of 2017, who had a GPA equal to or greater than 3.0 on a 4.0 scale, and who had obtained a minimum of 30 units towards graduation and/or transferring at the time of the study. A sequential explanatory mixed methods approach was used to identify skill sets obtained by thriving community college students who were on track to graduate and transfer in a two-year period of time. First, a 58-question quantitative survey was sent to thriving community college students in a three-college district in southern California. The survey combined questions on the topic of grit, growth mindset, and vulnerability. Three weeks after the online survey closed, 10 students participated in a three-hour focus group based on the same topics. The goal for the focus group was to better understand from the thriving students' perspective the primary skill sets they possess for academic success. In addition, the participants were asked if these skills could be learned by other students.

The results from the survey revealed that grit, growth mindset, and vulnerability were non-significant skill sets in the students' journey towards graduation and transferring to a four-year school. Conversely, the focus group revealed that all three were major factors in contributing to the academic success of the participants. While the quantitative data was not statistically significant, there were four key elements within the survey which did reveal significance. These key elements aligned with the findings of the qualitative data from the focus group, which revealed eight additional elements thriving students consider significant.

The contradictory results were interpreted by the researcher to mean more research on grit, growth mindset, and vulnerability needs to be done at the community college level. However, it is clear that there are key elements embedded within grit, growth mindset, and vulnerability, which could positively impact students towards achieving higher graduation and transfer rates.

ACKNOWLEDGEMENTS

First and foremost, I want to thank God for giving me the strength to endure, the courage to pursue, and the wisdom to excel in this grueling program called life. It was certainly not my own strength, or knowledge, that I made it to this educational pinnacle. Continue to help me always put YOU first!

To my dissertation chair, Dr. Bonnie Piller. Thank you for your positive outlook in every situation. I feel we are kindred spirits. I am so thankful you opened up your heart and your home; you allowed me to pursue completing this dissertation when I felt hopeless and helpless. You have been the rock I needed during some very tough storms. Thank you from the bottom of my heart!

To Dr. Edna Martinez and Dr. Doris Wilson. Thank you for your encouragement, feedback, and constructive criticism during every phase of this dissertation. You both were instrumental parts of this dream team and I was ecstatic when you agreed to be committee members.

To my doctoral mentor and friend Dr. Audrey Hovenesian. Your honesty, support and patience were priceless. You always made me laugh and told me the truth even when I didn't want to hear it. I am most grateful for you lending me a shoulder to cry on during the lowest point of my professional career. Go Kings!

To my peers and friends in Cohort Eight (The OCHO!). Since day one, we have been a tight knit group. Your GroupMe texts and words of encouragement have gotten me through some tough days and some tough courses. They don't just give these degrees away. We have all earned them, but we could not have earned them without each other!

To the late Dr. Will Keim. From the first time I saw you speak on stage until the last time I spoke with you on the phone, you inspired me to be more than I thought I could be. You were the Dean of College Speakers and I was blessed to call you my friend. Thank you for encouraging (demanding) me to pursue my doctorate degree. Since I was 18 years old, you have been a mentor, father figure, and leader in my life. I am a better person for having known you. Rest in peace my friend!

To Nana Diane Haring. Thank you for opening up your home every Sunday so I could read, write, research and study. Your sanctuary was the birthplace of many of my inspired ideas and concepts. The hummingbirds, lunches, and great talks were an extra bonus for me.

To my Friday Morning Men's Group. Fellas, your accountability, tough love, gracious encouragement, and Godly wisdom have made all the difference in the world. I cannot thank you enough for the extra pushes you gave me when I thought the only hope was to throw in the towel! You saved my life on more than one occasion and helped to remind me that when I put God first, everything else falls into place.

To my mother Lauriel Hartley and my late father Dana Hartley. Thank you for encouraging me to always get my homework done before I went out to play. You helped me "keep the main thing, the main thing!" I love you and am grateful for you!

To my brother Daryl and niece Shantelle. Your encouragement throughout the years has meant more than you will ever know! Thank you both!

To my fun-loving and brilliant kids Keegan and Alexa, as well as our energetic dog Mercy. Daddy spent a lot of time away from you while I went to school. My hope when I started this program was that I could be an example of never giving up on your dreams. My hope and prayer now is that I will be able to make up the time I missed as you grew up. Let's go ride our bikes together and play at the park, in the mountains, and at the beach!

Last, but not least, and most importantly, to my amazing wife Heather Hartley. Thank you for being a "single-mother" for the past four and a half years as I pursued this degree. This was a team effort and there is NO WAY I could have done this without you by my side. You are the real hero in this doctoral journey. I am grateful for you and the many, many sacrifices you made for me and our family in the pursuit of this degree. I love you and praise God daily for you! Olive Juice!

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CHAPTER ONE

INTRODUCTION

Problem Statement

Background of the Study

As community college students pursue their academic goals, they face many difficulties along the way, such as financial struggles (Brooks, 2016; Levine & Nidiffer, 1996), limited academic advising (Garcia, 2016), high remediation rates (Bol, Campbell, Perez, & Yen, 2016), and limited information regarding college admissions (Bowen & Bok, 2016; Shumaker & Wood, 2016). These factors lead to limited knowledge regarding the higher education system, as well as difficulty understanding how to navigate the excessive bureaucratic rigmarole found within higher education (Cohen & Brawer, 2008). If any educational system should be prepared to help address these challenges, it would be the California Community College (CCC) system. The California Community College Chancellor's Office (CCCCO) reports that their system of higher education is the largest in the United States (CCCCO Student Success Scorecard, 2017). One in five community college students in the United States attends a CCC and based on 2017 statistics, more than 2.1 million students were enrolled in the 114 campus system (CCCCO, 2018). There are now 115 community colleges in the system, with Compton College

becoming the newest brick and mortar college in 2017, and the addition of an online college established in 2018. Yet in 2014, the CCC's associate degree and transfer rate for six-year completion was less than half, 48.0 % (N=197,720), for students who were first-time students in the fall of 2008 (CCCCO, 2017). "Completion Rate" was defined by the CCCCCO (2017) as the "Percentage of degree, certificate and/or transfer-seeking students starting first time in 2010-11 tracked for six years through 2015-16 who completed a degree, certificate or transfer-related outcomes" (Institutional Effectiveness Partnership Initiative Advisory Committee, p. 1).

The 2017 American Association of Community Colleges (AACCC) affirms that "community colleges must design programs that are data driven, based on sound data analyses, and measure conceptually meaningful outcomes" (AACCC, p. 1). This study aims to identify skill sets of thriving community college students to better understand their experiences with the goal of providing guidance for the development and expansion of on-going retention programs to assist future CCC students. Thriving in the general sense is defined as progressing toward or realizing a goal despite or because of a circumstance (Merriam-Webster, 2017). However, thriving in this study was described as a community college student who was on track to graduate and/or transfer to a four-year college or university within two years. Other interpretations of thriving, including prospering or flourishing, are purposefully ignored in this study. Describing students as thriving is not meant to infer some sort of superiority of character or goodness. The identified group of students could have been called completers instead of

thriving students but simply identifying them as completing a course of study in a given time does not get at understanding the process of getting to the stage of completion. Using the term thriving students is meant to seek understanding through students' voicing of their experiences along the way to completion. A thriving community college student has a GPA of 3.0 or higher, is on track to graduate based on credit hours, and/or transfer to a four-year college or university in a two-year period.

Challenges within the Community College System

A Master Plan for Higher Education in California, 1960-1975 (Coons, Browne, Campion, Dumke, Holy, & McHenry, 1960), was a seminal guide for educating an unprecedented amount of students in a highly efficient system. In the process, this plan helped California become the most prominent and celebrated system of public higher education in the nation (Brower & Cohen, 2008). In the Master Plan, the authors referred to community colleges as “junior colleges.” There were six instructional functions of the junior college. The first two clearly state the intended duration of time expected for a student to complete his or her education. “The junior colleges will provide: 1) The first two years of a collegiate education for students planning to complete work for baccalaureate degrees 2) Two-year associate in arts degree programs with broad application for citizenship, health, family living, science, and basic communication needed by citizens” (p. 208). It should be noted that in 2014, the California Senate approved and launched a pilot program which allowed 15 community colleges to award baccalaureate degrees at their institutions (CCCCO, 2017). This was a

major shift in the strategy for California institutions of higher education. In the master plan, the community colleges were envisioned as a bridge to get students from the two-year school into one of the many baccalaureate degree granting California State University or University of California institutions.

While scholars have argued that the community college system has provided access (Bailey & Morest, 2006; Bambara, Harbour, Davies, & Athey, 2009; Cohen & Brawer, 2008) to students, the vast majority are not completing a certificate, degree, or transferring in two years. Based on statistics from the CCCCO Data Mart, an interactive, online statistical database, less than 3% of students are getting a degree, certificate, and/or transferring to a four-year institution within two years. If the goal is to get a degree, certificate, and/or transfer in two years, more than 97% of students attending public community colleges in California are not achieving this goal. Responsibility for this should fall on the community college system and not necessarily on the student (Bambara, Harbour, Davies, & Athey, 2009; Castro & Cortez, 2017; Hammond, 2016; Nora, Cabrera, & Sutton, 1998; Nora, 2017; O'Banion, 1997).

The purpose of this study was not to debate who is at fault for the low graduation and transfer rates, nor was it to find systemic solutions for the CCC systems. Rather the researcher aimed to explore the role of grit, growth mindset, and vulnerability as skill sets in thriving community college students' success for the goal of providing strategies and suggestions for community college practitioners and students. These three skill sets have the potential to be a

means of retaining and graduating students at higher levels.

The Association of American Colleges and Universities (2017) agrees with O'Banion (1997) and Cohen and Brawer (2008) by noting that community colleges provide an ideal forum for providing a learning college. By implementing new strategies, community college students can learn how to better deal with the bureaucracy of their institution, while advancing in their academics so they are on track to transfer or graduate within two years. However, different practices work differently on different student populations at different two-year colleges (Nora et al., 1998). Thus, whatever solutions work on one campus might not work on another. Nevertheless, if administrators know students are not graduating or transferring in a timely fashion, yet do nothing about it, they are shirking their fiduciary responsibilities. "Persistence and transfer, within this context, become even more instrumental in meeting the goals and mission of community colleges" (AACU, 2017, p. 1) because college administrators have an obligation to help students achieve their personal goals, as well as the stated mission of the institution. As an example, Table 1 shows the low number of students transferring after two years from a southern California community college district, and although the numbers improve annually up to year six (39.47%), less than 3% are graduating in in a two year period of time.

Table. 1

California Community College 2009 – 2010 New Student Cohort Percentage of Students who Transfer to a Four-Year College or University

Years	# of Students who Transferred	# of Students in Cohort	% of Students Who Transferred
2- Years	3,817	134,549	2.83%
3- Years	13,081	134,549	9.72%
4-Years	29,846	134,549	22.18%
5-Years	43,914	134,549	32.64%
6-Years	53,104	134,549	39.47%

California Community College Chancellor’s Office Management Systems Data Mart, 2017, Retrieved from http://datamart.cccco.edu/Outcomes/Transfer_Velocity.aspx.

Purpose Statement

The purpose of this mixed methods study was to identify skill sets and factors which influence thriving community college student success. Simply knowing that retention and graduation rates within the CCC are low does not resolve the problem. However, delving into the experiences of students who have succeeded despite institutional and personal challenges has the potential to aide in developing intervention programs and success strategies, which will have a lasting effect on individuals’ pursuit of a college degree. In an effort to develop best practices for community college students, this study considered the experiences of thriving students in terms of grit, growth mindset, and vulnerability to learn if these skill sets impact the likelihood of students having increased

retention and graduation rates. Quantitative data was obtained through surveys and qualitative data was obtained through focus groups.

The study's objective was to gain insight into the strategies thriving students availed themselves to in streamlining their graduation and transfer timelines. Thriving in this study was described as a community college student who was on track to graduate and/or transfer to a four-year college or university within two years. This study sought to learn if thriving students' experiences centered on possessing the skill sets of grit, growth mindset, and vulnerability in accomplishing their academic goals.

Research Questions

The purpose of this mixed methods study was to identify skill sets and factors which influence thriving community college student success. The following research questions guided this study:

- 1) What role, if any, does grit play in influencing or shaping community college students' success?
- 2) What role, if any, does growth mindset play in influencing or shaping community college students' success?
- 3) What role, if any, does vulnerability play in influencing or shaping community college students' success?
- 4) Which factors do thriving community college students attribute to their own success?
- 5) What are the shared skill sets of thriving community college students?

Assumptions about the Research Questions

- 1) Grit plays an influential role in the retention of community college students;
- 2) Students with a growth mindset view their struggles and difficult circumstances as reason to succeed rather than reasons to quit college;
- 3) Thriving community college students are willing to be vulnerable and ask for help when they find themselves in difficult situations, as well as prior to finding themselves in difficult situations.
- 4) Thriving community college students believe involvement in existing institutional programs, as well as seeking out mentor relations, contributes to their success;
- 5) Grit, growth mindset and vulnerability are shared skill sets among thriving community college students.

Significance of the Study

Understanding the skill sets and factors which empower community college students to complete their course of study in a timely manner was the focus of this study. Additionally, by examining the experiences of community college students, this study will aid the CCC leadership in ongoing efforts to understand the experiences of community college students (Bambara et al. 2009; Castro & Cortez, 2017; Hammond, 2016). This study used the above explanation for guiding the work.

This study is unique, in that many studies about community college students examine either the systemic challenges faced by students (Fong, Davis, Kim, Kim, Marriott, & Kim, 2017; O'Day & Smith, 2016) or ways to purposefully participate in the learning process at a community college (McClenney, 2007; Pendakur & Furr, 2016). By using a mixed methods design, this study was able to delve into the experiences of students from multiple community colleges to learn how and what role the skill sets of grit, growth mindset, and vulnerability mattered in influencing thriving students who were on track to successfully complete their community college experience in a two year period of time.

Conceptual Framework

The conceptual framework for this study were three broad categories for developing and maintaining integration in the community college environment as a way to positively reinforce student success. The categories were grit (Duckworth, 2007), growth mindset (Dweck, 2006), and vulnerability (Brown, 2006). The Venn diagram Figure 1 shows the intersection of the three potential assets converging with a thriving community college student at the center.

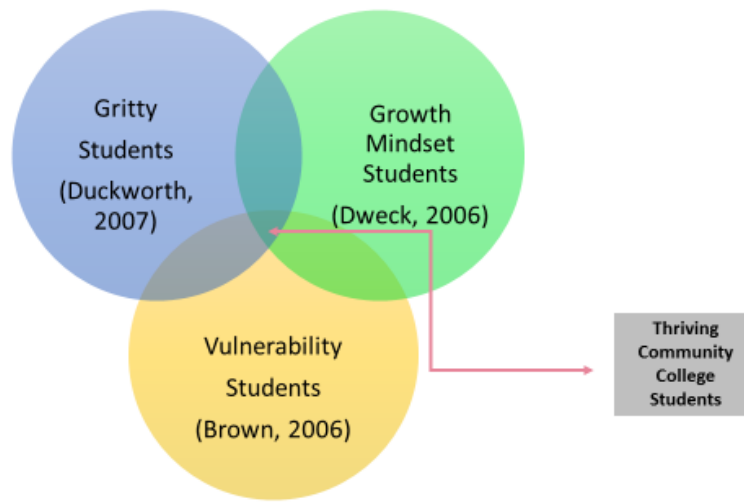


Figure 1. Intersection of Assets. Thriving community college students can have more assets than those listed in this Venn diagram; however, the literature points to grit, growth mindset, and vulnerability as being key components to student success.

Assumptions

This study assumes that the student self-reports are an accurate, reliable, and valid method of gathering data. Many studies, which have been validated over time, rely on self-reports, including The Community College Survey for Student Engagement (CCSSE) and the Cooperative Institutional Research Program (CIRP) (Kuh, 2008). This study also assumes that students would rather graduate in a two-year period of time than in three or more years.

Limitations

There are several limitations to this study which merit attention. First, this study only investigated degree-seeking community college students and did not explore individuals seeking certificates. Career and Technical Education (CTE)

students were not included in this study because the scope varied from campus to campus. This decision was made because one community college included in the study did not have any CTE programs. Although this is a potential weakness, not including CTE students in the study allows for future researchers who do not have CTE programs on their campuses to be able to compare similar sample groups. Regardless, the trustworthiness of the findings regarding thriving community college students who are seeking to transfer, or obtain an associate degree, was not compromised in this study. Lastly, this study was restricted to community college students within the state of California, specifically in southern California. Data from other states was not included in this study. Replication of this study with regional students in other states has the potential to serve to strengthen retention efforts throughout the nation.

Delimitations

The researcher intentionally restricted this study to a community college district in southern California and focused on the specific needs of the district's population. CCC data was used in the study as an effort to frame the challenges found within this district, as well as the state, but did not use national data in the study.

In addition, the researcher did not investigate social factors of the students, such as relational issues, health issues, or judicial issues as reasons for retention or graduation rates. While these are noble criteria to consider, the

study was narrowed to understanding of the skill sets related to grit, growth mindset, and vulnerability.

Definition of Key Terms

In reviewing the literature on community college students, several key terms ascended as powerful phrases emphasized by the academic experts.

Below are some key terms used throughout this study:

At risk of not completing: For the sake of this study, the term at risk of not completing describes a student who is on the verge of not being retained by the college or dropping out. While the literature refers to at-risk as being of low socio-economic status, a student of color, or a first-generation college student, this study only identified students as those who are at-risk of being retained.

Best Practices: The term Best Practices has been loosely associated with programs or activities in a particular field that have had proven success over a duration of time. In the field of Student Affairs, the term is specific to co-curricular programs, which are having a positive impact on student success, retention, graduation, and/or affinity to the campus. In most cases, Best Practices have correlating data to support their efforts at a particular institution or on a national level.

Completion Rate: Completion rates are calculated by the percentage of students who complete a degree, certificate, or transfer within a given time period (Knapp et al., 2012; Romero, 2016; and Tinto, 2012).

First-generation College Student: A student for whom no parent or guardian

has earned more than a high school diploma nor has any, or limited, college experience. The United States Department of Education (DOE) defines first-generation as “students who are the first members of their families to attend college” (Chen & Carroll, 2005, p. iii). The DOE goes on to claim, “...such students are at a distinct disadvantage in gaining access to postsecondary education” (p. iii).

Fixed Mindset: A belief that individuals’ intelligence, skills, and talents cannot be changed, similar to eye color or adult height, they are innate factors. A person with a fixed mindset believes things come easy to people who are true geniuses. That there is no effort involved in the process (p. 43). Dweck (2006) shares, “lurking behind that self-esteem of the fixed mindset is a simple question: If you’re somebody when you’re successful, what are you when you’re unsuccessful” (p. 32)?

Grit: Firmness of character or an indomitable spirit. Duckworth (2006) defines grit as “perseverance and passion for long-term goals” (p. xiv). Duckworth, et al. (2007) define grit as “perseverance and passion for long-term goals...and entails working strenuously toward challenges, maintaining effort and interest over years despite failure, adversity, and plateaus in progress” (pp. 1087 - 1088).

Grit Scale: a test developed by Duckworth (2006; 2007; 2013; 2016) and her colleagues, “that, when taken honestly, measures the extent to which [one]

approaches life with grit” (2016, p. 9). Talent is not taken into account on this scale, merely grit.

Growth Mindset: Dweck (2006) states that “growth mindset is based on the belief that your basic qualities are things you can cultivate through your efforts” (p. 7). It is a belief that success is based on effort and hard work, whereby an individuals’ intelligence and talents can be improved upon over time. She says, “The passion for stretching yourself and sticking to it, even (or especially) when it’s not going well, is the benchmark of the growth mindset” (p. 7).

Persistence Rate: The percentage of first-time students with minimum of 6 units earned who attempted any Math or English in the first three years and achieved the following measure of progress (or momentum point): Students who are enrolled in the first three consecutive primary semester terms (or four quarter terms) anywhere in the CCC system. Persistence Rate is reported for the overall cohort, as well as by lowest level of attempted Math or English. Romero (2016) described persistence as a student’s intention to maintain enrollment (p. 37).

Shame: Brown (2006) defined shame as “an intensely painful feeling or experience of believing we are flawed and therefore unworthy of acceptance and belonging” (p. 45).

Retention: Romero (2016) describes retention as the institution’s ability to keep students enrolled (p. 36).

Thriving: Thriving in this study was described as a community college student who was on track to graduate and/or transfer to a four-year college or university within two years. Merriam-Webster (2017) defines thriving as progressing toward or realizing a goal despite or because of a circumstance. Other interpretations of thriving, including prospering or flourishing, are purposefully ignored. Describing students as thriving is not meant to infer some sort of superiority of character or goodness. The identified group of students could have been called completers instead of thriving students but simply identifying them as completing a course of study in a given time does not get at understanding the process of getting to the stage of completion. Using the term thriving students is meant to seek understanding through students' voicing of their experiences along the way to completion. In this study, a thriving community college student began college in the fall of 2017, has a 3.0 or higher GPA, is on track to graduate and/or transfer to a four-year college or university in a two-year period, and has earned at least 30 units after their first year of college. Bean and Eaton (2002), McIntosh (2012), and Schreiner (2010) all support the study of thriving, which focuses on students' well-being and is grounded in the psychological model of student retention.

Vulnerability. For the purpose of this study, Brown (2006) defines vulnerability as uncertainty, risk and emotional exposure. She said if we want “greater clarity in our purpose or deeper, meaningful, spiritual lives, vulnerability is the path” (p. 33). The definition for this study does not use the Merriam-

Webster (2017) definition of vulnerability as capable of being physically or emotionally wounded; open to attack, damage, or criticism.

Summary

In 2018, the CCC system is failing to meet the mission and vision outlined in the Master Plan for Higher Education in California 1960-1975 (Coons et al., 1960) by not graduating and helping students to transfer to four-year colleges at acceptable rates. As a result, students have less than a 40% chance of getting out of the two-year California Community College system in six years and less than 3% in two years (CCCCO, 2017). The purpose of this mixed methods study was to identify skill sets and factors which influence thriving community college student success. This research explores the possibilities of learning success strategies from students' experiences who are thriving by finding a way to graduate and transfer in a timely fashion despite systemic and personal challenges. Through online surveys and a semi-structured focus group, the researcher gained a comprehensive understanding of the experiences of thriving community college students in southern California. Recommendations were made for institutional programming around the topics of grit, growth mindset, and vulnerability.

CHAPTER TWO

LITERATURE REVIEW

Introduction

Research has shown that when college students are exposed to institutionalized, success-oriented programs and resources, such as freshmen orientation (Bailey, 2005; Barbatis, 2010; Hawley & Harris, 2005) or sophomore year experiences (Gahagan & Hunter, 2006; Schreiner, Louis, & Nelson, 2012), they are retained and graduate at higher rates, as well as do better academically than their peers who have not had similar exposure (Astin, 1993; Astin, 1999; Bean & Eaton, 2001; Pascarella & Terenzini, 1991; Tinto, 1987; Tinto, 2012; Tinto & Russo, 1994). According to the California Community College Chancellor's Office's (CCCCO, 2017), only 2.83% of community college students transfer within two years and less than 40% transfer after six years. Rather than focus on the perceived failures of the system, the purpose of this mixed methods study was to identify skill sets and factors which influence thriving community college student success. This study explores whether or not grit, growth mindset, and vulnerability are infused into the daily lives of thriving community college students and if these are skill sets which have contributed to these students being on track to transfer and graduate within a two year period of time. If so, could the creation of intervention tool be developed to significantly increase transfer and graduation rates for the other 97.17% of students who are not moving on after two years?

The literature review is divided into the following sections; an overview of community colleges and their mission, demographics, and unique challenges facing today's community college students. The next section includes barriers for community college students and assets contributing towards student success. In this section, the researcher introduces the concepts of Grit (Duckworth, 2007) and Growth Mindset Theories (Dweck, 2006) as potential assets of community college students, as well as an unusual concept, at first glance, known as vulnerability (Brown, 2006). Vulnerability will be discussed as an asset, while its counterpart, shame, will be discussed as a barrier. The review of the literature segues into a new understanding of vulnerability (Brown, 2006) and its relevancy to grit and growth mindset. This chapter concludes with an exploration of how the combination of grit, growth mindset, and vulnerability are among the shared skill sets of thriving community college students. The findings could have a significantly positive impact on community college decision-makers as they seek to increase retention, graduation, and transfer rates within their campuses.

Community College Mission and Struggles

Scholars may disagree about the nuances of the mission of higher education; however, many agree that the purpose of higher education is to enlighten, support, and guide students towards developing their own dreams, desires, pursuits, and passions (Astin & Astin, 2000; Dunne, Bennet, & Carre, 2000; Neddings, 1995; Teichler, 1999). While enlightening students may or may not lead to material gains, Allen (2017) suggests that higher education should fill a student's soul with an unquenchable thirst to pursue an even deeper level of

learning. Smetanka (2012) proclaimed, “This should be the goal of higher education – to impart character, virtue, and wisdom in addition to the knowledge and skills of professional preparation” (p. 1). Community colleges would be a sensible place to begin, due to the fact that the history of community colleges is one of being innovative and student focused (Bogue, 1950; Cohen & Brawer, 2003; Goodchild & Wechsler, 1997; Mellow, 2000). Community colleges in the United States have succeeded in providing access to higher education and hope for upward social mobility through open enrollment policies (Beach, 2011; Cohen & Brawer, 2008; Dougherty, 2001; Romero, 2016; Rosenbaum et al., 2006). Others disagree, stating community college divides social classes (Kimura-Walsh, Yamamura, Griffin, & Allen. 2009) and sidetrack students from achieving their dreams (Brint & Karabel, 1989).

The community college, also referred to as junior college, in the United States was developed during the early part of the 20th century to specifically train young men in various trades and crafts who were not going to universities. Historians have identified Joliet, Illinois as the location of the first public junior college in 1901. Brawer and Cohen (2008) assert there was a growing demand for access to college in the early 1900s. Many leaders in higher education were pushing for the community college to “relieve the university of the burden of providing general education for young people” (p. 7). Pederson (2000) argued that the community college was birthed out of the need to assist in the development of local communities’ interest and aid in the alleviation of poor social conditions. From the beginning of the community college model through

the present, the debate continues over the mission of the institution (Ayers 2005; Ayers, 2015; Dougherty, 2001).

In 1922, The American Association of Junior Colleges defined their mission as “an institution of strictly collegiate grade” (Bogue, 1950, p. xvii), meaning they were focused on the first two years of college, then have students transfer to the main university. Cohen and Brawer (2008) suggest that the term “junior college” in the 1950s and 1960s was a way to describe lower branches of private and religious affiliated universities, while the term “community college” was used for two-year schools associated with publicly supported institutions (p. 4). Beginning in the 1970s, the term “community college” was used interchangeably regardless of the affiliation and was further defined by its “regional accreditation and ability to award associates degrees in arts and science as its highest achievable degree” (p. 4-5). Today, the American Association of Community Colleges (AACCC) has a vision for “being a bold leader in creating a nation where all have access to the learning needed to participate productively in their communities and in the economy” (Parham, 2017).

California Community College Master Plan

Levin (1998) contends community colleges were originally established to support their four-year institutions counterpart and emphasizes the two-year school as being “non-traditional and untraditional; they do not even adhere to their own traditions. They make and remake themselves” (p. 2). Levin’s point is that in the early 20th century, community colleges were often rogue institutions with little or no congruent mission. As the rest of the country was dabbling with

the concept of a community college, California was aggressively moving towards establishing a strong mission for the community colleges. With the help of the presidents from the University of California and Stanford, California led the way and the rest of the west followed eagerly. California sought to create a three-tiered structure of higher education, which became known as A Master Plan for Higher Education in California 1960-1975 (Coons et al., 1960). Cohen and Brawer (2008) state that by developing this Master Plan, the community college system opened its doors to students in the West. Currently, “more than half of the college students in Arizona, Washington, and Wyoming, as well as California, are in community colleges” (p. 20). Now “community colleges are everywhere” (p. 35).

Nationally, as well as within the state of California, the community college system is continuously open to new ideas, sharing best practices, and never adhering to the status quo (Bogue, 1950; Cohen & Brawer, 2008; Goodchild & Wechsler, 1997; Mellow, 2000). Cohen & Brawer (2008) assert that community colleges have open-door policies for any individual who has a suggestion to solve an existing problem. One positive aspect of the community college system is no matter ones’ financial status, they open the door for anyone desiring to change his or her life for the better through education. The concept of community colleges being untraditional (Cohen & Brawer, 2008) represents the essence of the United States; meaning, at their best, community colleges represent the diversity and wide array of ideas, which exemplify this nation. At their worst, they

are dysfunctional organizations that create liabilities, that is, barriers, posing as assets (Cohen & Brawer, 2008; Mellow, 2000).

Demographics of Community College Students

Community college students across the country are a microcosm of the United States. Based on data provided by the AACC as of June 2017, there are 1,108 community colleges in the United States: 982 public, 90 private, and 36 tribal. Of the 1,108 community colleges, 114 of them reside in the state of California. During the 2014-15 academic year, 806,766 Associate Degrees and 516,820 Certificates were awarded nationally. Of those attending classes for credit, 4.5 million (62%) were part-time students, while 2.7 million (38%) were full-time students. There were 56% women enrolled and 44% men with the average age being 28 and the mean age was 24. Students 21 years old and under represented 51% of the student body, 39% were between the ages of 22-39, and 10% were 40 years of age or older.

Students' economic status is worth noting. More than 62% of students applied specifically for federal aid, while 72% of students applied for aid of any kind (federal, state, local, and institutional). Nearly three in five students received aid (58%) to attend their community college. Of those receiving aid, 38% received Federal grants, 19% received Federal loans, 12% received State aid, and 13% received aid from their respective institutions. The average annual tuition and fees for public community colleges within a student's district was \$3,520 for academic year 2016-17, compared to \$9,650 for an in-state four-year public college. 35% of federal aid distributed to community college students was

in the form of Pell Grants, 18% was in Federal Work Study, 24% was in Federal Student Loans, and 19% was in Federal Supplemental Educational Grants.

Other relevant demographics for this study include ethnicity, first-generation, and parental status. There was no majority ethnic group represented at the community college level during 2016-17. Whites made up 48%, Hispanics 23%, African American/Black 13%, Asian/Pacific Islanders 6%, Native Americans 1%, two or more races 3%, Other/Unknown 4%, and nonresident Alien 2%. Students who were the first in their families to attend college made up 36% of the community college population, while single parents represented 17% of the community college population nationwide. Military Veterans were 4% of the population, students with a disability were 12%, and students who had already obtained a bachelor's degree made up 7% of the community college population.

Community College Students' Barriers

The following section gives an overview of the pertinent literature around specific barriers to community college students' success. These barriers include: insufficient financial aid, low socio-economic status (SES), first-generation college students, students-of-color in a predominately Eurocentric system (Yosso, 2005), poor study skills, and lack of college preparation. To be clear, each of these categories on their own is not a barrier to a student becoming successful; however, with high concentration of students who fall into multiple categories at community colleges, the odds of institutional success decreases, thus making it more difficult for an individual student to succeed in terms of retention and graduation.

Financial Aid and Pell Grants

Developed under President Lyndon Johnson's administration, the Higher Education Act (HEA) of 1965 was established to provide financial assistance to students who desired to join the college ranks, yet lacked the financial resources to attend. Tinto (2006) noted financial aid for community college students, specifically the Pell Grant, afforded students the opportunity to participate in higher education in greater numbers, especially at two-year colleges. The Pell Grant was viewed as a way to decrease the dropout rate as well. Estimates indicate that decreasing the drop-out rate by half would create \$5.3 billion in total taxpayer revenue by increasing lifetime income of graduates (Schneider & Yin, 2012). "In 1973-74, the first year of the Pell Grant program, 62.4% of Pell Grant recipients were enrolled in four-year colleges and universities" (p. 11), while approximately 37.6% were enrolled at two-year colleges. By 2001-02 the share of Pell Grant recipients enrolled in two-year colleges had grown to 55.1%, an increase of 17.5% (p. 11). At its core, the HEA and the Pell Grant "promised to remove financial barriers to college for any student academically qualified" (Cervantes, et al., 2005, p.1), specifically low-income. More than 50 years after the inception of HEA, we are not any closer to living in a world where educational access for all socio-economic levels has been achieved, nor has the Pell Grant been able to keep up with the ever-increasing cost of tuition. The next section of the chapter reviews the scholarly literature specific to the effectiveness of bringing college education to the masses, specifically in relationship to the impact realized by low income, first-generation and students of color.

Low Socio-Economic Status

One of the missions of the community college system is to provide opportunities for the masses (Romero, 2016) and low-income college students are abundant on these campuses. Students of low socioeconomic status (SES) have an uphill battle when attempting to climb the economic ladder or to change their future generations' class status. While higher education has been one very effective way to create this change, it is not the only way. Apprenticeships and mentoring programs have also proven effective (Dennen, 2004; Gershenfeld, 2014). However, higher education provides individuals an opportunity to network and to collaborate with like-minded individuals from all walks of life. In addition, the collective brain power of faculty, staff and administrators in a learning environment creates a laboratory of social capital (Coleman, 1988) for willing students who strive for success. This network of educators can be impactful for low-income, first-generation, and students of color in college. Likewise, community college students from low-socioeconomic backgrounds bring a wealth of culture capital to the campus in the form of aspirational, linguistic, familial, social, navigational, and resistant (Yosso, 2005).

“Many community college students who enter postsecondary education at age 25 or older are low-income” (Prince & Jenkins, 2005, p. 2). Community colleges enroll a higher percentage of financially challenged students than four-year universities (Horn & Nevill, 2006). Looking at the various types of higher education colleges and universities, community colleges enroll students from the lowest 25% socioeconomic category (Horn & Nevill, 2006).

Students of low socioeconomic status have received little to no information, have been misinformed, or are unaware of requirements for attending college, including both knowledge of the college admissions process and knowledge of financial aid (Perna, 2006). Although access to information about college is available through most guidance counselors, students who are financially challenged continue to face difficulties paying for college compared with students of higher socioeconomic status (Bowen, Kurzweil, Tobin, & Pichler, 2006). This occurs because high schools lack the availability of resources. The most qualified students based on test scores tend to get more financial assistance and counseling help and these students are often the ones with the highest income and SES (Perna, 2006).

Students of low SES are much less likely to graduate from college (Walpole, 2003) due to competing priorities. Townsend and Twombly (2007) assert that a major difference between students at a two-year college and other college students is the amount of time spent working in part-time or full-time employment. Community college students are “more likely to work while attending classes and are much more likely to enroll in classes part-time due to work and home responsibilities” (p. 208).

However, intervention programs, such as the California’s public assistance program, known as CalWorks, has been known to successfully combat low SES by helping students develop stronger time management skills as well as alleviate some financial pressures for students in this program (Mathur, Reichle, Strawn, & Wisely, 2004). Mathur et al., (2004) explored the academic outcomes,

employment rates, and earning progress of participants in CalWorks, who were enrolled in a California community college and exited the system in 1999-00. They compared CalWorks recipients' academic and financial outcomes to those of all females leaving the California community colleges during the same duration. Mathur et al (2004) found CalWorks students were two times as likely to work year-round post community college as before enrolling. Earnings improved significantly for CalWorks students post-college, even for those who entered community college without a high school diploma (Mathur et al., 2004). Additional findings from Mathur et al (2004) showed that CalWorks students who completed a vocational certificate or two-year AA degree tended to have higher earnings and increased employment opportunities than did those who completed non-vocational programs. Among vocational program enrollees, the longer the program, the greater the economic payoff. Interviews with CalWorks students indicated that the intervention programs, targeted support, and employment services offered by the California community colleges, such as on-campus child care and work-study were key interventions in these women's academic success (Mathur et al., 2004). CalWorks is an impressive example of an intervention program working successfully to retain, graduate, and transfer CCC students.

Low household income is a risk factor because it is correlated with other at-risk categories emphasized in higher education research, such as academic under-preparation and first-generation status (Harding, 2011; Lacour & Tissington, 2011; Mathur et al., 2004). Academic under-preparation and first-

generation status are more common in low-income communities (González, 2013; Harding, 2011; Lacour & Tissington, 2011).

First-Generation College Students

Students from all walks of life deserve a chance to receive a postsecondary degree (Romero, 2016). However, the rising cost of college has prevented many with the desire and the aptitude from achieving this goal. A first-generation college student is “one whose parents did not attend college” (Romero, 2016, p. 27). Pike and Kuh (2005) suggest that students have greater academic success when at least one parent has completed some college. Many low-income college students do not have role models or family members to ask when seeking financial advice on how to pay for college. Equally, first-generation students are dependent on community members, high school counselors, other administrators, and/or in many cases friends in the neighborhood (Perez & McDonough, 2008) to learn about programs such as the Pell Grant. González (2013) affirmed the primary explanation for this phenomenon is that first-generation college students do not have the dominant (Yosso, 2005) forms of social and cultural capital needed to navigate the college completion process. First-generation students are likely to enter college with less academic preparation due to limited access to information about the college experience from high school guidance counselors (Richardson & Skinner, 1992; Thayer, 2000; Tym et al., 2004).

Pike and Kuh (2005) suggested first-generation college students’ lack of confidence, which is perpetuated by invalidating experiences (Rendon, 1994),

has negative academic implications. Tym et al. (2004) and Striplin (1999) agree that first-generation students are placed in vocational, technical, and/or remedial programs at higher rates than their non-first generation peers. In many cases, this hinders their advancement toward transferring to a university.

First-generation college students “lack guidance” (Romero, 2016, p. 27) regarding academic and social preparation for college and higher education institutions have done a poor job aiding first-generation students in receiving the help they need (Gonzales, 2015; Yosso, 2005). As a result, community colleges have struggled in helping first-generation college students feel at home when entering college. Community colleges have failed to provide first-generation students with important knowledge about time management, college finances, budget management, and the bureaucratic operations of higher education (Thayer, 2000; Tym et al., 2004).

Choy (2001) and Tym et al.’s (2004) review of the literature regarding first-generation students revealed large discrepancies between non-first-generation students in age and family background: They are older: 31% of first-generation college students were 24 or older, compared to 13% and 5%, respectively, of students whose parents had some college experience or a bachelor’s degree; They have lower incomes: 42% of those who were dependent were from the lowest family income quartile, less than \$25,000 per year, compared to 22% and 18%, respectively, of the other 2 groups (p. 6).

Choy (2001) and Tym et al. (2004) also found that first-generation students are less likely than their non-first-generation counterparts to attend

school full-time: 44% enrolled full-time and full-year, compared to 52% and 62%, respectively, of students whose parents had some college experience or a bachelor's degree (p. 8).

Most first-generation students begin college at a community college. The student may transfer to a four-year college after earning the required number of credits for transfer (Tym et al., 2004, p. 8). Striplin (1999) found that while some first-generation community college students experience smooth transitions to four-year institutions, many struggle during the acclimation process because of poor transfer support services. Students whose parents had not attended college received less help from their parents in applying to college and were less likely to receive help from their school (Choy, 2001; Tym et al., 2003). Institutions are least likely to retain students from first-generation and low-income backgrounds. As such, students are less likely to complete a degree. Tym et al. (2004) and Thayer (2000) suggest institutional retention efforts must take the needs of first-generation students into account to achieve more equitable attainment rates for future success.

Students of Color

Community colleges also enroll larger percentages of students of color than any other type of college or university (Horn & Nevill, 2006; Perna, 2000). Horn and Nevill (2006) found that in 2003-04, almost half of community college students were from non-White races compared with 39% of all college students. Perna (2000) shared that students of color generally have lower college graduation rates than non-minority students. Yosso (2005) and Gonzales (2016)

have argued this is due to systemic barriers rather than lack of ability on the students' part.

Students of color, low-income, and first-generation students are especially likely to be disadvantaged when it comes to specific institutional college knowledge (McIntosh, 2012; Tym et al., 2004). Often, and due to no fault of their own, they are not well-versed in understanding the steps necessary to prepare for college, which includes knowing how to finance a college education, how to complete basic admissions procedures, and how to make connections between career goals and educational requirements (Tym et al., 2004; Vargas, 2004). In many cases, this disconnect can be traced back to cultural differences between dominant and minority members of society (Rendon, Jalomo & Nora, 2000). Rendon et al. (2000) contest Tinto's (1975, 1987, 1993) work and provide a critical analysis of his academic and social integration models which calls for the student to integrate into the model set forth by the institution in order to succeed both in and out of the classroom. Assimilation for many students of color is not an option; their culture is extremely important to them and change is non-negotiable.

Researchers have explored many different facets of the experience of students of color on American college and university campuses, with "no clear evidence that there is a single variable responsible for the lower success rates of students of color" (McIntosh, 2012, p. 22).

Poor Study Skills

There are many challenges facing today's community college students. Poor preparation for college-level work makes college retention and graduation

rates inadequate measures of judging institutional success or failure (Price, 2005). Students at community colleges vary greatly in their level of academic preparedness and study skills (Hunter & Sheldon, 1980; Price, 2005; Townsend & Twombly, 2007). Community colleges enroll a higher percentage of academically underprepared students and students requiring remedial coursework (Townsend & Twombly, 2007). Students at community colleges are less likely to put in the needed amount of time studying for quizzes and exams and spend less time on their homework than the four-year counterparts (Hunter & Sheldon, 1980; Price, 2005; Townsend & Twombly, 2007).

Hunter and Sheldon (2008) found the mean number of credit hours completed per term was between seven and eight, but the mode was three – in other words, one course. This trend has continued and translates into a longer duration of time students must spend at a community college. Students get frustrated with their slow trajectory towards a degree, stop studying, and drop-out or stop-out to pursue life obligations (Hunter & Sheldon, 2008).

Competition for Seats

Many community college students do not realize the tremendous competition they are up against simply to obtain a seat in a college classroom (Romero, 2016). In California, community college students are competing for seats with students from four-year campuses, in addition to other two-year students. In 2001, over 48% of the 92,594 graduates receiving bachelor's degrees from the University of California and the California State University systems took one or more classes at a California Community College during the

preceding three years (Cohen & Brawer, 2008). Nearly all were credit courses. Community college students are competing with students at four-year schools to get the classes they need to graduate, which makes scheduling classes around work and family responsibilities even more difficult.

Poor Preparation for College

Cohen and Brawer (2008), Tinto (1999), and Price (2005) all conclude that community college students come to the institution less prepared than their counterparts at four-year colleges. High school test scores may be a poor indication of a college students' preparedness; however, they do shed some light on the overall readiness to attend college. In 2005, the national Scholastic Aptitude Test (SAT) composite score was 841 (420 Verbal, 421 Math) for students who indicated a two-year college degree as their objective, whereas it was 968 (481 Verbal, 487 Math) for students with bachelor's degree aspirations (NCES Digest, 2006, Cohen & Brawer, 2008, p. 51). Cohen and Brawer (2008) consider these to be large warning signs for failure rates of community college students. They strongly state, "in general, students who enter community colleges instead of universities have lower academic ability and aspirations and are from a lower socioeconomic class" (p. 57). Sacks (1997) diametrically opposes Cohen and Brawer, arguing that there are implicit biases with our nations' standardized testing system. He states, "Meritocracy's gatekeepers brand those who score poorly on standardized tests as somehow deficient, incapable," (Sacks, 1997, p. 25) but this is just another example of an institutional barrier.

The community college student barriers listed in this section are not exhaustive; however, they each represent a segment of the problem which keeps students from moving on to their next educational or life goal. The next section converges on the institution's contributions to low retention, graduation, and transfer rates. At the same time, the research showcases some ways Student Services and Academic Affairs are striving to create solutions to fortify their shortcomings.

Student Services Shortcomings and Failures

While it would be easy to suggest the preceding barriers are the sole reason for students' lack of success at the community college level, that is simply not the case; the institutions bear a great deal of responsibility for low retention, graduation, and transfer rates. Yosso's (2005) research on cultural capital challenges the models of student retention and persistence which tend to define success as the percentage of students who complete a degree from the same institution where they initially enrolled (Braxton, 2008; Seidman, 2012; Tinto, 1993; Tinto & Russo, 1994).

"Despite their name, most 'community' colleges lack consensus on institutional purpose" (Cohen & Brawer, 1996, p. 271) and ways to create a communal environment for all students. This misperception in the name of the institution is in itself a shortcoming for the college, when they do not serve the population in which they reside. As a result, a crucial challenge for student services professionals in community college settings is to engage students through counseling, student activities, and ongoing orientations, to keep them

connected to the campus long enough to achieve their academic goals (Cohen & Brawer, 1996). O'Banion (1971) alludes to the fact that the student personnel profession was established because "campus presidents were in need of help in regulating student behavior" (p. 8). Put another way, students needed to be managed for the sake of institutional control. According to Cohen and Brawer (1996) the underlying rationale was not only for the "guidance of students into the proper programs, but also admissions and registration, student activities, student government, record-keeping functions and discipline" (p. 219).

Pascarella and Terenzini (1991), in their extensive review of the literature, ascertained that two-year community college candidates were less likely to persist until graduation than four-year college counterparts. This relationship transpires in spite of holding constant for characteristics variables such as personal, aspirational, academic, socioeconomic, and family background (Pascarella & Terenzini, 1991). Even among students with "high qualifications" for college, 69% who begin at a four-year institution will graduate, compared with a mere 19% who begin at a community college (Mellow & Heelan, 2014).

Dassance (1994) states student services must link all college functions and work with the faculty in order to be maximally effective. Lack of communication and slow processes between student services offices are often the cause of failure, frustration and strife for community college students (Dassance, 1994; Mellow & Heelan, 2014). Community college faculty members cannot do it all. Their primary responsibilities need to be in the classroom, with some time allocated to guiding and mentoring students. This is where student

services professionals can aid in the success of students (Cohen & Brawer, 2008; Dassance, 1994; Pascarella & Terenzini, 1991). “The Board of Governors of the California Community Colleges in 1990 listed the responsibilities of student services that should be incorporated in matriculation activities: admissions, orientation, academic progress, research and evaluation, and coordination and training of staff” (Cohen & Brawer, 2008, p. 231). The list extended in 1998 to include other support services: “financial aid, health services, campus employment placement, Educational Opportunity Programs and Services (EOPS), campus child care, tutorials, disabled student programs and services, and specialized curriculum offerings such as pre-collegiate basic skills and English as a Second Language” (Cohen & Brawer, 2008, p. 221-222).

Lee and Ramsey (2006) suggested an additional challenge is addressing the mental health needs of students, as many are arriving on campus with serious medical, psychological and social programs, and these may not even include the high levels of stress and anxiety experienced by a great many normally functioning people (p. 3). Sandeen (2004) stated student services leaders must be “efficient administrators, effective problem solvers, and sensitive handlers of crisis” (p. 31).

All students can benefit from additional student services resources, but community college students seem to have the greatest number of needs. The Community College Survey of Student Engagement (CCSSE) (2006) stated, “Students in developmental programs were more likely than others to find the services ‘very important’ to their overall success in college” (p. 242). An important

component of communicating the resources available to students is a robust orientation program. Cohen and Brawer (2008) agree that most studies of orientation and advising (Astin 1984; Pascarella et al., 2004; Tinto, 1993) have found a positive relationship between completing orientation and increased retention and graduation rates, as well as between advisor-student contact and increased retention and graduation rates. In general, “the more that students used services, the more successful they were, a finding confirming the adage that research is often a way of lending credence to what we already know” (Cohen & Brawer, 2008, p. 242).

One of the biggest challenges for community college stakeholders and decision-makers is continuously maintaining a balance between student services programs and the formal instructional programs taught in the classroom. There are limited resources when it comes to staffing, time and finances; however, a balance in all of these areas needs to be achieved in order to assist students in their academic journey. Cohen and Brawer (2008) suggest community college administrators who can blend theoretical concepts with real-world experience have the ability to retain and graduate students at higher rates.

College students who were identified as first-generation were more likely than their non-first-generation counterparts to record low levels of academic honesty, 30% versus 19%, as expressed by students’ responses to questions regarding how often they attend career-related events, meet with academic advisors, or participate in study groups (CCSSE, 2006). Tym et al. (as cited by Nunez and Cuccaro-Alamin, 1998), share “these differences exist at public two-

year schools, 40% versus 29%, while being virtually nonexistent at public four-year schools, 16% vs. 15%” (p. 11-12).

While it is true that many community college students do not enroll with the intention to graduate from a community college, degree completion rates continue to function as the primary measure of success for community college students (Bailey, 2012; California Community Colleges Chancellor’s Office, 2010). However, “the present completion rates have become increasingly unacceptable” (Romero, 2016, p. 36).

Retention is often used synonymously with persistence. Nevertheless, there is a distinction between the two terms. Romero (2016) describes retention as “the institution’s ability to keep students enrolled, while persistence is a student’s intention to maintain enrollment” (p. 37). Completion, by contrast, calculates the percentage of students who complete a degree, certificate, or transfer within a given time period (Knapp et al., 2012; Romero, 2016; Tinto, 2012).

Student Services professionals have a daunting task of closing the success gap at the community college. The challenge becomes utilizing the breadth of service, which already exists to aid the depth of students who have not been made aware of those services. Reviewing the data on community college students, several themes regarding success emerged around the topics of retention and graduation. Successful graduates have (a) self-empowerment, (b) strong motivation with clear goals, and (c) the ability to manage external demands (Astin, 1993; Astin, 1999; Cohen & Brawer, 2008; McIntosh, 2012;

Romero, 2016). The following section explores some assets of community college students, which would help students achieve these themes.

Assets of Community College Students

Having addressed some of the barriers community college students face, as well as the shortcomings of the Student Services areas, this study places attention on understanding thriving students as a way to interpret which assets are important to their success. Tym, McMillion, Barone, and Webster (2004) noted amongst students who had a goal of obtaining a certificate or associate degree by their third year after entering postsecondary education, first-generation students were as likely as others to persist and to obtain the degree. However, for “students with a bachelor’s degree goal, three years after enrolling in postsecondary education, first-generation students were less likely to still be enrolled, 52%, than were students whose parents had a bachelor’s degree, 67%” (p. 9). The persistence gap vanished for first-generation students who took a rigorous high school curriculum, with “rigor” measured by the number of courses students had taken in academic subjects, the level and intensity of courses taken in math and science, and whether students had taken any Advanced Placement courses (Choy, 2001). Tym et al. (2004) agreed with Nunez and Cuccaro-Alamin (1998) who stated that among first-generation college students who were academically prepared, those attending full-time, and who began at two-year schools, first-generation students had similar persistence and attainment rates as those of their non-first-generation counterparts (p. 10). Thus, claiming academic preparedness upon entering college eliminates the retention gap between first-

generation and non-first-generation college students. As a result, academic preparedness can be viewed as a form of thriving, especially when students face systemic challenges beyond their control.

Thriving Students

The purpose of this mixed methods study was to identify skill sets and factors which influence thriving community college student success. Community college students come from diverse backgrounds. They bring varying forms of knowledge from their homes and communities into the classroom (Yosso, 2015). Administrators on these campuses can learn from the wealth of social and cultural capital students bring as a way to help additional students thrive at the college level. Thriving is defined as progressing toward or realizing a goal despite or because of a circumstance (Romero, 2016; Schreiner, 2010a; Schreiner, Louis, & Nelson, 2012). Schreiner, Louis, and Nelson (2012) further state that thriving is a state of psychological engagement in one's academic and social development, along with the experience of psychological well-being. Keyes (2002) stated the constructs of thriving were derived from research on flourishing within adult populations, which emerged from the positive psychology movement. "Human flourishing is conceptualized as positive emotions and optimal well-being" (McIntosh, 2012, p. 46). Flourishing individuals are connected to the world through emotion (Haidt, 2003); they display moral emotions such as charity, gratitude, awe, and vulnerability toward others and the world around them. Haidt (2003) also identified compassion, empathy, courage, and loyalty as positive

moral emotions. “Individuals who flourish bring flourishing into the world around them, positively and indelibly changing their world” (McIntosh, 2012, p. 47).

The construct of thriving builds on the psychological well-being implied in flourishing and encompasses elements critical to college students’ success. The six factors of thriving are engagement learning, academic determination, positive perspective, diverse citizenship, openness to diversity, and social connectedness (McIntosh et al., 2009; Schreiner, 2010). Not only do aspects of thriving positively impact the student, but they positively impact the college in which the student enrolls. According to Schreiner (2010), students who thrive are actively involved in their community and give back in service to the others within the community. Schreiner’s Thriving Model is comprised of three areas which aid students’ thriving in college: psychological, interpersonal, and academic (Schreiner et al., 2013). These areas are constructed from research in student development and positive psychology. Collectively, they cover students’ intra-personal well-being, social skills, experiences of students, and the educational perspective in which students’ function. Within these three areas, Schreiner presents five factors which comprises her model of thriving: positive perspective, social connectedness, diverse citizenship, academic determination, and engaged learning. Thriving, according to Bean & Eaton (2002), is based on a conceptualization of student behavior, including engagement and persistence, as psychologically motivated. “Thriving students are fully engaged intellectually, socially, and emotionally, which facilitates students’ overall success and well-being” (McIntosh, 2012, p, 47).

Bean and Eaton's (2002) psychological model of student retention builds on Tinto's (1975) sociological model. Bean and Eaton contend:

Students enter college with a complex array of personal characteristics. As they interact within the institutional environment several psychological processes take place that, for the successful student, result in positive self-efficacy, reduced stress, increased efficacy, and internal locus of control. Each of these processes increases a student's scholarly motivation. (p. 58)

McIntosh (2012), who did a 32-item confirmatory factor analysis study of the five factor models of thriving originally developed by Schreiner, Edens, and McIntosh (2011) which involved 2,474 students of color from 13 institutions, supported Bean and Eaton's statement. McIntosh said, "Students who are psychologically engaged in life and vibrantly connected to the world around them, are engaged with all aspects of their learning and the community within which they learn, which leads to persistence" (p. 47-48). The process of interaction between the student and the institution is identified by Bean and Eaton (2002) as reciprocal and leading to "academic and social integration, institutional fit and loyalty, intent to persist, and to the behavior in question, persistence itself" (p. 58).

McIntosh et al. (2009) explained that thriving transpires within three domains (a) academic thriving, (b) intrapersonal thriving, and (c) interpersonal thriving (Schreiner, 2010). He explained:

Academic thriving includes psychological constructs previously linked to academic success, such as learning engagement, self-regulated learning,

and effort regulation, environmental mastery, and hope. Intrapersonal thriving includes measures of student perceptions of the quality of their circumstances in life and includes items measuring optimism and subjective well-being. Interpersonal thriving explores the social connections of life, such as positive relationships, openness to diversity, and civic engagement with a desire to make a difference in one's community. (p. 48-49)

It should be the aim of student services professionals, as well as faculty members to help students achieve proficiency in all three domains of thriving in an effort to create a well-rounded and holistic student (Palmer, 1999).

Persistence

Much of the historic research on college student persistence stems from Tinto's (1975) Interactionalist Model of Student Persistence. In his benchmark model, Tinto describes the relationship between student entry characteristics, goal commitment (initial and subsequent), integration (academic and social), and institutional commitment (initial and subsequent) to the outcome of persistence. Even though Tinto (1975) states that each of these individual aspects of the model affect other aspects of the model, as well as ultimate persistence, Braxton et al.'s (2004) research demonstrates that this model does not fit all institutions nor all students, particularly commuter colleges and community colleges. In keeping with Braxton et al. (2004), the only relationship in Tinto's model which holds true for community colleges is that student entry characteristics directly affect the likelihood of students' persistence in college. These student entry

characteristics have been known to include such elements as motivation, control, self-efficacy, empathy, attention needs, parental education, and anticipatory socialization (Braxton et al., 2004). Mulligan and Hennessy (1990) and Halpin (1990) also agree that social integration is not linked with persistence of two-year college students. However, Saenz et al. (2011) analysis of the CCSSE survey data results revealed institutions can influence students' engagement with, and usage of, support services, which results in improved student outcomes.

Braxton et al. (2004) made obvious that community college student entry characteristics directly affect persistence, but additional research must be done to determine which characteristics apply to these students and whether other models, such as Barbatis (2010) or the Habley et al. (2012) model of characteristics, which lead to persistence are applicable to community college students. In doing so, community college educators will not only better understand their student population, but cultivate the characteristics of successful students in the broader student population to elevate persistence throughout the institution. Bean and Eaton (2000) concluded that students who persist are those who are most able to interact effectively within the campus environment in ways which strengthen their self-efficacy and self-control.

Social Capital

Coleman (1988) describes social capital as a “concept or theory which creates value for individuals based on their network” (p. 118). As a result of belonging to certain networks of people, or alliances, individuals can “gain altruistic benefits, such as trust, cooperation, information, or reciprocity” (p. 118).

These altruistic benefits can be traded in for tangible benefits, which give individuals advantages over others outside of the network. Several have sought to critique social capital (Bourdieu & Passeron, 1977; Yosso, 2005) based on its perceived biases towards dominant groups in society. However, even among the scholars who critique social capital theory there are quarrels. Yosso claims Bourdieu et al.'s description of social capital has created more harm than good towards people of color. Bourdieu et al. (1977) stated social capital (connections or social networks), economic capital (money or other material possessions), and cultural capital (language or education) can be acquired in a combination of either one's family's capital or through formal schooling. Yosso (2005) challenges this form of social capital, claiming "his [Bourdieu et al] theory has been used to assert that some communities are culturally wealthy while others are culturally poor" (p. 76). Yosso (2005) believes all cultures bring different forms of social capital to their environment; they just differ in how they manifest themselves. Yosso described social capital as "networks of people and community resources... [whose] peer and other social contacts can provide both instrumental and emotional support to navigate through society's institutions" (p. 79).

While many of today's community college students who are first-generation or students of color continue to look for a place to call home within their campuses, it can become a daunting task without dominant forms (Yosso, 2005) of social capital. The dominant groups within society are able to maintain power because access is limited to acquiring and learning strategies to use these

forms of capital for social mobility (p. 76). Salazar and Spina (as cited in Yosso, 2005) suggest social capital, and more specifically navigational capital, is recognized as “a set of inner resources, social competencies and cultural strategies that permit individuals to not only survive, recover, or even thrive after stressful events, but also to draw from the experience to enhance subsequent functioning” (p. 80).

Coleman (1988) emphasizes that social capital is an important component of embedding oneself into personal relations and networks of relations to generate trust. This trust leads to “establishing expectations, and eventually creating and enforcing norms” (p. 97). In many cases, the reason students are feeling left out and forgotten is because they lack dominant forms of social capital on their campuses (Coleman, 1988; McMillan & Chavis, 1986).

Second-year college students are often referred to as the forgotten class or compared to the lost middle child. McMillan and Chavis' (1986) Community Theory revealed students need a place to belong somewhere in the campus community. Their Community Theory states that one's social capital, or what an individual needs from community, is comprised of four components: 1) membership, 2) influence, 3) the integrating and fulfillment of needs, and 4) a shared emotional connection. Successful Student Services programs have the potential to fulfill all four categories for students' overall success.

Coleman (1988) identifies three forms of social capital: 1) obligations and expectations, 2) information channels, and 3) social norms (p. 95). These three forms of social capital can clearly be seen in the world of business and

economics; however, it can take on an equally powerful presence in the world of higher education. Having access, or being denied access, to certain classes, professors, and resources can alter a student's fate, either positively or negatively. Coleman goes on to say:

Social capital is defined by its function. It is not a single entity, but a variety of different entities, with two elements in common: they all consist of some aspect of social structures, and they facilitate certain actions of actors – whether persons or corporate actors – within the structure. Like other forms of capital, social capital is productive, making possible the achievement of certain ends that in its absence would not be possible. Like physical capital and human capital, social capital is not completely fungible, but may be specific to certain activities. A given form of social capital that is valuable in facilitating certain actions may be useless or even harmful for others. (p. 98)

The actors in the screenplay of higher education are students and their social capital can be based on who they know, what organizations they are a part of, or how they position themselves both in and out of the classroom (Coleman, 1998). One educational example of social capital is a legacy student by the name of Joel (pseudonym). Joel's parents graduated from the same university he is currently attending and are now donors to the institution. He certainly had a plethora of social capital built up even prior to stepping onto the campus for the first time. However, a seemingly less obvious example would be a first-generation, Pell Grant recipient by the name of Maria (pseudonym) who appears

to have very little social capital at first glance. Nonetheless, Maria gained an equal amount of social capital as the college legacy student by immersing herself into the college experience. For example, she ran for a student government position, took on student leadership roles, and got a Federal Work-Study job in the President's Office (personal communication, 2018). Social capital can take on many shapes and forms (Bourdieu et al, 1977; Coleman, 1988; McMillan and Chavis, 1986; Yosso, 2005). Simply put, social capital, in the college setting, can assist students in reaching his or her goals and interests in a more timely and cost effective manner. Coleman (1998) reveals relations are key to any successful business, partnership, or endeavor. Social capital in these relationships has the potential to exponentially elevate a person in a given situation. The literature suggests by purposefully developing intervention programs, community college students can gain awareness of various assets which can lead to stronger social capital consciousness (Coleman, 1998). As a result, students will be in a better position to obtain their educational goals and interests.

Theories of Emerging Assets

The following section will explore three areas which have the potential to improve a student's ability to thrive at the college level. These emerging assets for community college students include grit, growth mindset, and vulnerability. Each originated through academic research and have since found their way into mainstream society through TED Talk videos and New York Times Best-Selling books to help individuals gain higher achievement when actualized. This study is

focused on the theories and concepts with respect to student’s experiences as they achieve and thrive academically within the community college setting.

Galton (1869) was the first scientist to study and report on high achievement. He concluded that ability alone was not paramount to success. Rather “ability combined with zeal and with capacity for hard labor” (p. 33) was the key to high achievement. Nearly sixty years later, Cox (1926) discovered three traits, which predicted lifetime achievement – provided IQ was held constant. These high achievement traits were: 1) persistence of motive and effort, 2) confidence in their ability, and 3) great strength or force of character (p. 218). One of the differences of this study is that it does not account for IQ as Cox’s research did in 1926. However, in this section, Cox’s three traits are correlated with grit, growth mindset, and vulnerability, respectively, as well as establishing an intersection of these three traits, illustrated in Table 2, as an intersection of assets; which is a means towards developing higher retention and graduation rates among community college students.

Table 2

<i>Predicted Lifetime Achievement</i>	
Pioneering Theory in the Literature	Emerging Theories in the Literature
Persistence of motive and effort (Cox, 1926)	Grit (Duckworth, 2007)
Confidence in their ability (Cox, 1926)	Growth Mindset (Dweck, 2006)
Great strength or force of character (Cox, 1926)	Vulnerability (Brown, 2006)

Duckworth's Grit Theory

The debate between talent and effort, as a greater determinant of success, has emerged over the past fifteen years (Duckworth, Peterson, Matthews, & Kelly, 2007; Duckworth & Seligman, 2005; Duckworth & Quinn, 2009; Dweck, 2012; Leslie, 2016; Yeager, Johnson, Spitzer, Trzesniewski, Powers, & Dweck, 2014). Duckworth (2006) aligns grit theory to Cox's (1926) first achievement trait known as persistence of motive and effort (p. 218). Duckworth, et al. (2007) define grit as "perseverance and passion for long-term goals. Grit entails working strenuously toward challenges, maintaining effort and interest over years despite failure, adversity, and plateaus in progress" (pp. 1087 - 1088). Special emphasis should be placed on passion. Grit is not just working hard towards a goal, but rather working hard towards something one is passionate about. Duckworth et al.'s hypothesis is that grit is an integral component of high achievement. Duckworth (2016) expanded her definition of high achievers by sharing common characteristics of the grittiest individuals she interviewed:

...the highly successful had a kind of ferocious determination that played out in two ways. First, these exemplars were unusually resilient and hardworking. Second, they knew in a very, very deep way what it was they wanted. They not only had determination, they had direction. (p. 8)

Thriving community college students can be described in much the same way. Duckworth (2016) discovered adults who'd successfully earned degrees from two-year colleges scored marginally higher on the grit scale than graduates of four-year colleges. This baffled her team at first but they soon ascertained that

“the national dropout rates at community colleges can be as high as 80%. Those who defy the odds are especially gritty” (p. 11). More than a century ago, James (1907) publicized, “We are making use of only a small part of our possible mental resources...men the world over possess amounts of resource, which only exceptional individuals push to their extremes of use” (p. 322-323). If community college educators can help students become grittier, they will be providing these students with ways to use more of their mental resources.

There may be institutional and social barriers in the way of community college students; however, grit has the possibility of giving these students stamina through the vicissitudes of life. While some may incorrectly assume or argue that community college students may not be the smartest or most talented, Duckworth and Eskreis-Winkler (2013) view entering community college students as the tortoise in the higher education world, while soon-to-be Ivy Leaguers would be considered the hare in the race towards college graduation.

The metaphor of achievement as a race recalls Aesop’s fable of the tortoise and the hare. This oft-told story, which many of us heard as children in one form or another, preaches the value of plodding on, no matter how slow or uneven our progress, toward goals that at times seem impossibly far away. At the starting line, it is the hare who is expected to finish first. Sure enough, the hare quickly outpaces the tortoise, accumulating so great a lead that he lies down to take a nap mid-race. When the hare awakes, the tortoise, who all the while has been laboring toward his destination, is too close to the finish line to beat. Tortoise 1, Hare 0. We have, in other words, focused our attention on

identifying and understanding the hares among us. It is time to think seriously about the tortoises and what keeps them going (p. 1).

Critics of Grit

Not all authorities in the field are in agreement about grit being the distinguishing skill set to help students achieve greater academic success (Golden, 2015; Gonzales, 2016; Stokas, 2015). Golden (2015) argued against the legitimacy of grit, stating grit takes the focus off of the institutional deficiencies and social injustices, which have failed society especially students of color. Gonzales (2016) agrees with Golden, stating, "...typical approaches to studying grit are unable or unwilling to understand, historically, contextually, and culturally how students intersect with the institution of post-secondary education, and in this way, there is little attempt to account for organizational responsibility" (p. 19).

Golden conducted a qualitative, narrative analysis, case study of a 20-year old male, with the pseudonym "Elijah," who was in pursuit of his general education degree. Golden suggests the emphasis on grit is the cause of many societal ills, rather than the cure. According to Golden (2015) "The popularity of what I and others call the 'grit narrative of success' as the answer to systemic issues and needs in urban schools and communities is of deep concern" (p. 347). He further states how urban communities are chronically underfunded. As a result, "the framing implicit in the grit narrative pushes researchers, policymakers, and practitioners away from generative political action for a meaningful educational reform movement that works for equity and access" (p. 347). While

Golden's arguments have tremendous validity in the global sense, they do not help support the individual on the micro level (Duckworth et al., 2005; Duckworth et al., 2007; Duckworth, 2016). Golden recommends national and statewide reform, a revamping of the education code, and a change in tax structure to support urban education. However, it could be argued, that none of Golden's suggestions would have helped Elijah while he was a student in school due to the fact that those changes take years to implement (Duckworth, 2016). While Golden's proposed changes may have a positive impact on the system as a whole, decades could pass before the effects would be realized. In the meantime, students like Elijah could be developing stronger grit skill sets, which would sustain him as he pursues his degree and beyond. Even though Golden opposes grit, he recognizes its power by stating, "A focus on grit, resilience, and other 'noncognitive' factors is framed as necessary, precisely what learners need to succeed in and through education and a competitive world" (p. 346).

Another critic of grit is Stokas (2015) who's "contention with grit is more a matter of its elevation as a solution to inequality rather than a wholesale dismissal of its existence or necessity" (p. 515). Stokas cited two prime examples of grit in her argument against the concept: the American cowboy and the boxer. In her thesis, she "explores grit as a disposition that contributes to the mythology that achievement is predominantly the result of individual hard work and questions if this is a disposition we ought to value in public education today" (p, 516). The foundation of Stokas' argument is rooted in the socioeconomic and social justice theory whereby "low-income children need access to greater

resources and opportunities, not just more effort” (p. 516). Wolters and Hussain (2015) add “even if one assumes that academic success and graduation is something all [college] students want to achieve, assessing and promoting their level of grit may not be an especially useful endeavor for postsecondary educators” (p. 308). Even Duckworth (2013) herself ponders the negative side of grit, conjecturing if more grit is always better or, alternatively, whether there is some cost to being gritty that must be traded off against its benefits. While the literature on grit is relatively new within the educational ranks, it should be noted that even the detractors of grit concede it is a positive trait for students to have as a life skill (Golden, 2015; Stokas, 2015). They simply push back on the idea that grit should be institutionalized when there are so many other systemic barriers prohibiting students from graduating and transferring.

Gonzales (2016), while not a complete critic of grit, does have some reservations about its use in the educational field primarily because it lacks an asset-based methodology. Gonzales loosely defines asset-based methodology as research that assumes “students’ families and communities cultivate important powerful resources that are generally unknown and not recognized by mainstream institutions, like colleges and universities” (p. 13). She further argues that there needs to be a sense of organizational responsibility to unveil hidden histories grounded in the experience and knowledge of marginalized communities. This can be done through investing in counter story telling projects and the collection of oral histories through interviews with community members

who detail their relationship with their college. Gonzales shares her thoughts on grit research by stating:

The conventional approach to studying grit aims to understand how students “make it” through barriers, and there is not an attempt to revise the organizational, structural, and cultural causes of said barriers, when historically underserved students are given the opportunity to describe capital and knowledges that they draw from their communal and familial experiences, the possibilities for understanding grit are greatly expanded, in ways that can be built into college and university programming and practices. (p. 15)

Like Golden (2015) and Stokas (2015), Gonzales makes a strong argument that too much emphasis is being placed on the students to obtain more grit in order to succeed, rather than on institutions to break down systemic barriers which hinder students from reaching their academic goals.

Grit Research

Duckworth et al. (2007) developed a self-report questionnaire, entitled The Grit Scale, which was created out of necessity due to the lack of an adequate existing tool. Duckworth et al. (2007) hypothesized that grit would be highly correlated to self-control and Big Five Conscientiousness (Costa, McCrae, 1992), while at the same time being unrelated to IQ. Big Five refers to the five factors of openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism, which describe varying personality traits. Conscientiousness is typically characterized by a tendency to being prepared and organized rather

than messy or scattered in thought (Costa & McCrae, 1992) and is most correlated to grit. In their six study report, Duckworth et al. (2007) “learned surprisingly little about how personality traits and intelligence are related and about their relative contributions to performance” (p. 1089). However, their findings did reveal “...in every field, grit may be as essential as talent to high accomplishment” (p. 1100). In addition, Duckworth et al. suggested “as educators and parents, we should encourage [students] to work not only with intensity but also with stamina” (2007, p. 1100). Table 3 showcases each of the six studies, along with the sample population and significant findings.

Table 3

Duckworth et al. (2007) Research Data and Findings

Study & Methodology	Research Question	Demographics & Sample Size	Significant Findings
Study 1: Cross Sectional Quantitative Study “for which the major purpose was to develop and validate a self-report measure of grit” (p. 1090).	Does grit grow with age?	1,545 participants aged 25 and older (<i>M</i> = 45 years old; 73% women, 27% men).	More educated adults were higher in grit than less educated adults of equal age. Participants with an associate degrees were significantly higher than those with less education and interestingly also higher in grit than those with Bachelor’s degrees, although this difference failed to reach significance (p. 1091).

<p>Study 2: Similar to Study 1, except they tested for correlation with Big Five Traits (conscientiousness, extraversion, neuroticism, agreeableness, openness to experience) (pp. 1092-1093).</p>	<p>Does grit provide incremental predictive validity over and beyond Big Five traits (John & Srivastava, 1999)? Also is there evidence that grittier individuals make fewer career switches than their less gritty peers?</p>	<p>706 participants aged 25 and older ($M = 45$ years old, $SD = 11$; 80% women, 20% men).</p>	<p>In a binary logistic regression predicting high versus low career change from grit, age, and all Big Five traits, grit was the only significant predictor, OR stands for Odds Ratio. (OR = 0.65, $\beta = .44$, $p = .001$). Individuals who were a standard deviation higher in grit than average were 35% less likely to be frequent career changers (p. 1093).</p>
<p>Study 3: Quantitative study which tested whether grit was associated with cumulative GPA among undergraduates at an elite university</p>	<p>Would grit be orthogonal (statistically independent) to intelligence and, therefore, explain variance in GPA over and beyond that explained by intelligence?</p>	<p>139 undergraduate participants (69% women, 31% men) majoring in psychology at the Univ. of Pennsylvania.</p>	<p>“Gritty Students outperformed their less gritty peers” (p. 1093).</p>
<p>Study 4: Quantitative study using Grit questionnaire to determine if grit could predict retention of West Point Cadets better than self-control or the organization’s</p>	<p>Does grit predict retention among West Point Cadets better than self-control? (p. 1094).</p>	<p>1,218 freshman cadets who entered the United States Military Academy, West Point in July 2004 (p. 1094).</p>	<p>Grit predicted completion of the rigorous summer cadet training program better than self-control and Whole Candidate Score (combination of SAT scores, high school class rank, Leadership Potential Score, and Physical</p>

own Whole Candidate Score, which combines SAT scores, high school class rank, Leadership Potential Score, and Physical Aptitude Exam.

Aptitude Exam) ($p = .1095$).

Study 5: A replication and extension of Study 4, except this Quantitative study using Grit questionnaire tested whether grit had incremental predictive validity for summer attrition over and beyond Big Five Conscientiousness (conscientiousness, extraversion, neuroticism, agreeableness, openness to experience) ($p = .1096$).

Does grit predict summer attrition over and beyond Big Five Conscientiousness amongst freshmen West Point Cadets?

1308 of the 1310 cadets in the Class of 2010.

Whole Candidate Score was related to conscientiousness ($r = .12, p < .001$) but not to grit ($r = .03, ns$).

As in Study 2, grit and conscientiousness were highly related ($r = .64, p < .001$). Nevertheless, summer retention was predicted better by grit ($\beta = .31, OR = 1.36, p < .02$) than by either conscientiousness ($\beta = .09, OR = 1.09, ns$) or Whole Candidate Score ($\beta = .02, OR = 1.02, ns$). When all three predictors were entered simultaneously into a binary logistic regression model, grit predicted summer retention ($\beta = .39, OR = 1.47, p < .03$), but Conscientiousness (β

= 17, OR = 0.85, *ns*), and Whole Candidate Score ($\beta = .04$, OR = 1.04, *ns*) did not.

<p>Study 6: Quantitative prospective, longitudinal study involving finalist in the 2005 Scripps National Spelling Bee Tournament (p. 1096). Grit was measured against two variable outcomes, 1) final round reached and number of prior competitions in which children participated.</p>	<p>What is the importance of grit to exceptional extracurricular accomplishments – to avocational rather vocational pursuits?</p> <p>Is there a correlation of grit (in this case, time on task or number of hours spent studying for this spelling bee) and the number of final round competitions entered (p. 1096)?</p>	<p>175 of the 273 (64%) finalist in the 2005 Scripps National Spelling Bee participated in self-reported questionnaire taken prior to the June 2005 competition.</p>	<p>Grit predicted advancement to higher rounds in competition. In an ordinal regression model with final round as the dependent variable, grit ($\beta = .34$, OR = 1.41, $p < .04$) and age ($\beta = .28$, OR = 1.32, $p < .05$) were significant predictors, indicating that finalists with grit scores a standard deviation above the mean for same-aged finalists were 41% more likely to advance to further rounds. (p. 1097).</p> <p>Gritty finalist outperformed their less gritty peers at least in part because they studied longer. Specifically, weekend hours of practice mediated the relationship between grit and final round (p. 1097).</p>
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Wolters and Hussain, (2015) found the research examining grit could be measured reliably and is empirically distinct from other trait-like individual differences (p. 294). Grit has been depicted as a stable characteristic or disposition of the individual who, similar to traditional personality traits, has attitudes and behavior across diverse contexts (Duckworth & Quinn, 2009; Kleiman et al., 2013; Reed et al., 2013; Wolters & Hussain, 2015). Maddi et al. (2012) found a singular indicator of grit was a strong predictor of retention and performance in a sample of military cadets. Wolters & Hussain (2015) study, which was an ethnically diverse survey sampling of 213 college students which used descriptive information and bivariate correlations, sought to find a link between grit and self-regulated learning. Their results revealed “it may be impractical for educators to focus on making students “grittier” within a particular course or even within their postsecondary educational experience more generally” (p. 307). Their study was largely associated with students’ desire to be successful within the context of academic achievement.

Strayhorn’s (2013) grit study using multivariate statistics and hierarchical regression techniques found an overall indicator of grit was a positive predictor of self-reported grades among African-American males attending a university with a predominantly White student population. In his study, grit was a stronger predictor of college grades than high school GPA and other standardized college entrance exams.

MacCann and Roberts’ (2010) correlational analysis found that both dimensions of grit – passion and perseverance – but especially the perseverance

of effort, were positively correlated with life satisfaction, multiple aspects of conscientiousness, and teacher's rating of social behavior, but not to grades or academic readiness among a sample of high school students. Higher levels of a general measure of grit have been linked to increased intensity of exercise (Reed et al. 2013) and reduced suicide ideation (Kleiman et al. 2013). Overall, Wolters and Hussain (2015) are proponents of grit; however, they claim the evidence linking grit, specifically to students' academic achievement is still very limited and somewhat inconsistent (p. 295).

Duckworth et al. (2007) developed an initial self-report measure of grit and provided some evidence that it was different than traditional personality constructs, such as conscientiousness. Although analyses with an adult sample suggested that it consisted of two related dimensions, Duckworth's team examined grit using a single 12-item scale. Based on samples from several distinct populations, these researchers showed that this broad indicator of grit was related positively to educational attainment, college grades, self-control, retention for military cadet training, and youth's achievement in a competitive national spelling bee (Wolters & Hussain, 2015; Duckworth et al., 2007).

Wolters and Hussain (2015) state, "Despite the lack of studies examining grit ..., research investigating similar trait-like individual differences supports the need to investigate these relations" (p. 297). Over the past 25 years, self-regulated learning, also known as SRL, has emerged as a major framework used to understand, evaluate, and improve students' functioning within academic contexts (Schunk and Zimmerman, 2008). Wolters & Hussain (2015) suggest

that results from one aspect of grit - perseverance of effort - was a consistent and useful predictor for all indicators of SRL including “value, self-efficacy, cognitive, metacognitive, motivational, time and study environment management strategies, and procrastination” (p. 293). The evidence linking grit specifically to students’ academic achievement, however, is still very limited and somewhat inconsistent, especially at the community college level. For instance, the two studies which examined the relation of grit with students’ course grades produced conflicting results (MacCann & Roberts 2010; Wolters & Hussain, 2015). MacCann and Roberts (2010) findings of high school students (N= 291) suggest “correlational analyses ... [the] relationships of Time Management, Grit, and Self-Control to students’ grades, teacher ratings, examination percentiles, and gaining a place on the honor roll were entirely mediated by Conscientiousness” (p. 79), and not grit alone. On the other hand, Wolters & Hussain (2015) maintain their findings provide insight into the “relation of grit to academic performance, and the possibility that engagement in [self-regulated learning] may mediate this relation” (p. 306). As stated earlier, but to reemphasize the point, Wolters and Hussain (2015) implore “it may be impractical for educators to focus on making students ‘grittier’ within a particular course or even within their postsecondary educational experience more generally” (p. 307).

Most grit theory studies conducted thus far deal with elementary and high school students. While the literature on grit theory in higher education is in its infancy stages, there are a few studies which pertain to community college students and their success (Duckworth et al., 2007; Ivcevic, & Brackett, 2014;

Sandoval-Lucero, E., Maes, & Klingsmith, 2014; Traver, Volchok, Bidjerano, & Shea, 2014). Regardless of the limitations in breath of research beyond the elementary and high school levels, this study will not examine grit alone. If combined with other assets, the research on grit has shown to be one potential skill set to help students achieve their long-term goals (Ivcevic, & Brackett, 2014). This research aims to combine grit with growth mindset and vulnerability.

Duckworth (2015) concedes that gritty people have a cognitive mindset to focus on things that can be changed, rather than a bias to focus on the many things that cannot be changed and have no control over. To understand grit, one must also recognize the differences between the two mindsets: fixed and growth, (Dweck, 2006). The next section will discuss the differences between these two mindsets, while making the case for growth mindset as an additional skill set to help student success within the community college setting.

Dweck's Growth Mindset Theory

Growth mindset is the belief that your ability is changeable while fixed mindset is the belief that people's basic qualities, like their intelligence or talent, do not vary and talent alone creates success without effort. (Duckworth, 2015; Dweck, 2006). Dweck (2008), the leading authority on growth mindset, states intellectual skills can be cultivated and improved through effort (p. 4). Nevertheless, if one does not believe in the concept of effort, developing new intellectual skills would be impossible. Individuals who are characterized with having a growth mindset believe intelligence can be developed. Individuals with a fixed mindset hold fast to the belief that intelligence is a trait which cannot be

adjusted; it is fixed in stone. Those with a fixed mindset view intelligence like a physical characteristic, such as skin color, eye color or adult height. These items are unchangeable at best and diminish over time at worst. One is born with a certain amount of intelligence and there is virtually no way to alter the intelligence level (Dweck, 2008).

Upon reviewing Dweck's research findings, David (2015) further defines the two types of mindsets as follows:

“Mindset” refers to implicit theories that individuals hold regarding the nature of intelligent behavior; to the degree that individuals attribute intelligence to fixed traits, they hold a “fixed” theory of intelligence, that is, a fixed mindset, and to the degree that they attribute intelligence to learning, effort, training, and practice, they hold a “growth” theory of intelligence, that is, a growth mindset. (p. 5)

Mahan (2016) suggests developing a growth mindset and “focusing on the long-term goal of transfer, degree, or certificate completion may, in fact, help motivate a student to persist and to demonstrate resilience in a time of academic difficulty” (p. 6). If a student has a growth mindset, or believes his or her intelligence can be changed based upon dedication and effort, the student may be more likely to have an internal locus of control and accept responsibility for his or her own failures (Ciccarelli & White, 2015). A student with a fixed mindset believes failure is due to a deficit in ability and intelligence can't be changed. As a result, Mahan (2015) states “students tend to be more likely to demonstrate an external locus of control and blame others for his or her academic difficulties” (pp. 5-6). The two

mindsets are explained in detail in Figure 2, which was developed by Dweck's research team.

Mahon (2016) looked at four variables (grit and growth mindset being two of them) to pose her primary research question, which was "Controlling for background and demographic characteristics, do measures of students' grit, academic self-efficacy, mindset, and motivation (GEMM) correlate with successful removal from academic probation?" (p. 7). Her findings indicated that: ...despite the fact that 100% of the GEMM tutorial intervention students stated they found the tutorials helpful, and personally felt that the intervention assisted them academically, when compared to students who did not participate in the intervention, they were no more likely to remove their academic probation status than were the students who did not participate in the interventions. (p. 72)

Mahon's research did not explore whether or not the intervention helped to retain the students or got them closer to graduation.

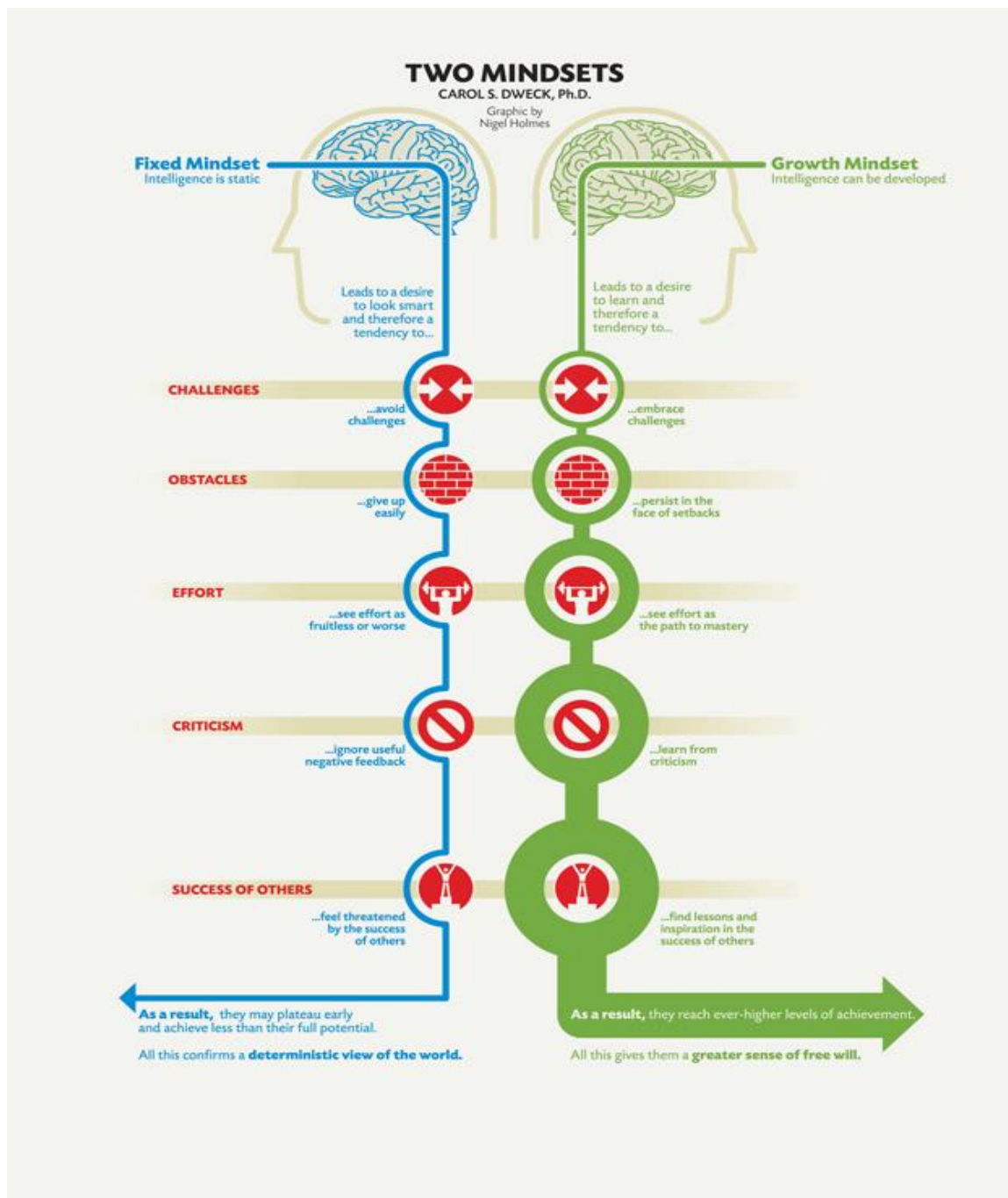


Figure 2. Fixed Mindset Verses Growth Mindset Chart

Dweck, C.S. (2006). *Mindset: The new psychology of success*. Random House Incorporated. New York, NY.

Paunesku et al. (2015) posed the question, “Are academic mindset interventions effective on a small scale only with carefully managed administration? Or do they have the potential to scale up and thereby serve as a partial solution for pervasive underachievement in U.S. high schools?” (p. 790). Are academic mindset interventions a practical way to raise achievement in the United States, especially for underperforming students? If so, this would constitute a major contribution of psychological science to social policy and justify increased investment in psychological approaches to educational and social improvement (p. 785). Academic mindset interventions target students’ core beliefs about school and learning (N= 1,594), such as “Can I learn and grow my intelligence?” (Growth Mindset beliefs) and “Why should I learn?” (Sense-of-Purpose beliefs). In so doing, they can change how students interpret and respond to challenges in school, increase students’ resilience, and set in motion positive recursive cycles, which increase success over time (Garcia & Cohen, 2012; Paunesku et al., 2015; Yeager & Walton, 2011). Paunesku et al. (2015) noted “Growth mindset interventions convey that intelligence can grow when students work hard on challenging tasks—and thus that struggle is an opportunity for growth, not a sign that a student is incapable of learning” (p. 785).

In studies conducted by Dweck and her team, students were asked to think about statements, such as number 16 on their mindset quiz, “You can learn new things, but you can’t really change your basic intelligence” (Appendix B). Individuals who strongly agreed with this statement were defined as having a fixed mindset. While individuals who strongly disagreed were defined as having a

growth mindset. As one might expect, there were also individuals who were somewhere in the middle. However, when analyzing the range of responses, Dweck determined through subsequent questioning, that the more a student disagrees with statements similar to this one, the more he or she had a growth mindset, and the better they do in school. Dweck et al. (2006) surmised this was because students with a growth mindset approach school differently than students with a fixed mindset. Growth minded students have different goals in school.

The primary goal for students with a fixed mindset is to perpetuate how smart they are (Dweck, 2006) or to hide how unintelligent they are. Students with a fixed mindset will avoid asking questions in class when they do not understand the subject matter because they want to preserve their smart image or hide their lack of intelligence in a given academic area. Dweck further asserts the logic of this if one believe this is something individuals either have or don't have. Fixed minded individuals want to show that they have it.

Diametrically opposed to this view are those who adhere to the growth mindset of intelligence (Dweck, 2006; Paunesku et al., 2015). This group views intelligence like a muscle. They believe with effort comes expansion. If a person applies effort, he or she has the ability to get smarter, learn new skills, develop new habits, and positively change his or her life. An athlete working out at a gym can increase muscle mass by lifting heavier weights or, simply put, by creating new challenges. Likewise, a person with a growth mindset believes mental effort can increase intelligence.

Growth mindset students' main goal is to learn. This also makes a lot of sense, if you think that intelligence is something you can develop. The way you develop your intelligence is by learning new concepts, ideas, and theories. So students with a growth mindset will ask more questions when they don't understand something because that is exactly how they will learn.

When asked about effort in the learning process, students with a fixed mindset viewed effort negatively. Dweck (2006) concluded that fixed mindset students are under the impression that, if one has to try, then he or she must not be very smart in a given subject. Conversely, growth mindset students viewed effort as the central way in which they learned; as the way that one gets smarter.

Where Dweck and her colleagues really saw a difference in students with fixed and growth mindsets were when they faced challenges or setbacks. Students with a fixed mindset gave up when faced with adversity because they thought their setback meant they were not smart. But students with a growth mindset actually thrived in the midst of a challenge. Growth mindset students stated, if I already knew how to do something, it would not be an opportunity to learn; to develop my intelligence (Dweck, 2006). Duckworth (2015) agreed with Dweck:

In clinical psychology, one of the features we know about the cognitive mindset of those who suffer from depression and anxiety is that they tend to catastrophize. When things go wrong they immediately focus on what they can't change about the situation and they blow it out of proportion.

And Gritty people do just the opposite. Like-minded gritty people have a

sense of optimism. They tend to focus on what went wrong and ask “what about that can I fix or change.” It’s not that gritty people don’t see the negative, but if in any problem, there are 90% of things that cannot be changed and 10% that can be changed, the gritty person will focus on the 10%. (p. 1)

Given that elementary students with a growth mindset try harder in school, especially in the face of a challenge (Dweck, 2008), it is no surprise they do better in school (p. 50). Operant Conditioning, the theory of Skinner (1950; 1953; 1954, 1957; 1968; 1971), is based upon the idea that learning is a function of change in overt behavior. Changes in behavior are the result of an individual's response to events – stimuli - which occur in the environment. Growth mindset is a starting point for change, but people need to decide for themselves where their efforts towards change would be most valued (Dweck, 2008).

While growth mindset correlates to Cox’s (1926) second trait of “confidence in one’s ability,” it is his third trait of having “great strength or force of character” (p. 218), which has the greatest potential to aid in increasing retention and graduation rates for community college students. Having great strength or force of character is correlated to Brown’s (2006) concept of vulnerability, which has its roots in destigmatizing shame and understanding the power of asking for help. The next section will help illuminate the power of vulnerability with a focus on understanding how shame has a negative impact on student success.

Brown's Vulnerability Research

The concept of vulnerability as a positive skill set has gained traction over the last decade. Vulnerability has gained currency in socioeconomic literature (Mupedziswa, 2012) and has traditionally been considered a profound weakness; one which needs to be eradicated from individuals' lives. Brown (2012) declares that vulnerability is not weakness, but rather has the potential to positively fuel our daily lives. She contends that "Vulnerability is our most accurate measurement of courage. To be vulnerable, that is, to let ourselves be seen and honestly known, is living with our whole heart" (Brown, 2012).

To understand vulnerability in its fullest, Brown (2006) reveals that one must grasp the real enemy or root cause, which is shame. Brown defines shame as "the intensely painful feeling or experience of believing that we are flawed and therefore unworthy of love and belonging – something we've experienced, done, or failed to do makes us unworthy of connection" (Schaubert, 2017). After speaking with hundreds of men and women around the country in qualitative interviews and focus group sessions, Brown delved into the idea of how shame affects the way one lives, loves, works, parents, and builds relationships. What emerged in the data from these interviews was the concept of connection through being vulnerable. Shame unravels connection and does not allow us to be vulnerable, thus bringing us down. Empathy, on the other hand, moves us towards meaningful relationships, builds connections, and unleashes the power of vulnerability (as seen in Figure 3).

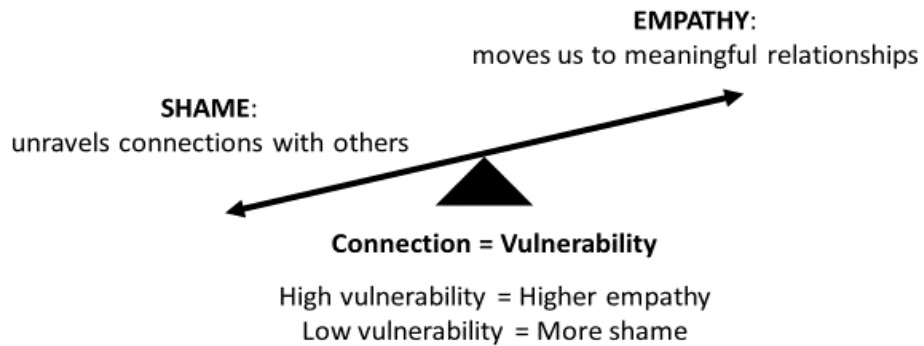


Figure 3. Connection Continuum: Adapted from Brené Brown's 2010 TED Talk.

Connection is our ability to build and forge meaningful, authentic relationships with other people and the fundamental way to create connection is through vulnerability (Astin, 1984; McMillan & Chavis, 1986; Brown, 2006). Brown (2006; 2012) believes connection through vulnerability is the essence of the human experience; it is what gives meaning to our lives.

Cox's (1926) third skill, great strength or force of character, correlates to Brown's research on vulnerability. Brown (2012) elaborates:

If you think about connection on a continuum: what I have learned is that empathy is on one end and shame is on the end. Empathy moves us towards deep meaningful relationships and shame unravels our relationships and connections with other people.

If we want to understand connection and understand what fills the human spirit, we have to understand what anchors both ends of the continuum; empathy

and shame (as seen in Figure 3). Vulnerability is the nexus which tips the scale to get one closer to empathy and move one further away from shame (Brown, 2010).

Lewis' (1971) seminal work on shame and guilt in neurosis revealed shame as the preeminent emotion experienced by clients of psychotherapy. Shame was more dominant than feelings of anger, anxiety, fear, or grief. "Although shame is one of the most primitive and universal of human emotions, it is often still considered a taboo topic among researchers, practitioners, and clients" (Brown, 2006, p. 43). Shame is an epidemic in our culture; to get out from underneath it, to find our way back to each other, we have to understand how shame affects us (Brown, 2006) in our everyday life. Palmer (1999) adds that vulnerability often leads to more shared humanity, more openness, and mutual healing.

Similar to shame, vulnerability has been associated in the literature with negative undertones. Vulnerability has been associated with such topics as poor quality housing (Yuen & Kumssa, 2011), low-income households (Anand & Seetharam, 2011), and natural disasters (Mosha, 2011). Brown (2006, 2010, & 2012) reframes the conversation by declaring that vulnerability is the birth place of innovation, creativity and change. One has the potential to increase his or her chance of reaching the desired goal, when that individual can adopt the understanding of letting go of shame and embracing the positive attributes of vulnerability (Brown; 2006; Dweck, 2006). Palmer, Zajonc, & Scribner (2010) subscribe to Brown's concept of vulnerability suggesting the importance of

having confidence enough to be vulnerable, yet being secure enough to open ourselves to the unknown. One must acknowledge that fear and shame are synonymous (Palmer, 1999; Brown, 2006; Brown, 2010; Brown, 2012).

Shame research is grounded in various fields of study, but primarily in mental and public health, as well as social work research. Shame is widely described as the fear of disconnection and can be identified by asking the question - Is there something about me that, if other people saw or knew, I would not be worthy of connection; I would not be worthy of love or belonging (Brown, 2010)? In order for connection to happen, one has to allow her or himself to be seen; to be vulnerable.

Brown (2010) shared in a TED Talk presentation the single variable which separates people who have a strong sense of love and belonging verses people who struggle for it. The variable was, "the people who have a strong sense of love and belonging believe they're worthy of love and belonging. That's it. They believe they're worthy." Worthiness is the intersection of growth mindset (Dweck, 2006) and vulnerability (Brown, 2006) and is a major factor missing in students who struggle at the community college level (Cohen & Brawer, 2008; Romero, 2016). Vulnerability has been described as the epistemology of love (Palmer, Zajonc, & Scribner, 2010) and can be extremely therapeutic in healing mental health wounds. Therapeutic presence is the atmosphere for attending to the person's pain and vulnerability while engaging their inner resiliency and wholeness (Parker et al., 2010, p. 192-193).

Participation and vulnerability leads to inner resiliency and wholeness. What was outside us is now internalized (Palmer et al., 2010). In the classroom, this is displayed most prevalently in Socratic Dialogue, whereby professors engage their students in discussions to find precise answers to universal questions. Successful senior faculty members are skilled at demonstrating knowledge, but also at modeling that they are vulnerable learners, as well. These faculty members make it possible for students to express their own strengths and vulnerabilities and to appreciate these traits in others (Palmer, et al., 2010) in and out of the classroom.

Palmer (1998), as cited by Komives (2009), uses the phrase “head, heart, and practice” to describe paradoxes in education and the absurdity of keeping the head (knowing and intellect) disconnected from the heart (being), and even further disconnected from practice (doing). Palmer argues we should work towards the blending of all three elements in the teaching process – and the same should be considered for the learning process. When we are in our best vulnerability state, meaning open: we are willing to share not only our strengths, but also our struggles which moves us towards empathy. Empathy is about being vulnerable with people in their vulnerability (Brown, 2007).

Significance of the Research on Potential New Assets

There are many possible assets which have the potential to aid the academic and social improvement of community college students. As stated earlier in, McMillan and Chavis' (1986) social capital theory states that students need a place to belong. They pose the four following conditions into the relevant

literature: 1) membership, 2) influence, 3) the integrating and fulfillment of needs, and 4) a shared emotional connection. In addition, some of the more popular assets in the literature are persistence, resiliency, and social justice. While there is justification for including all of the above when considering assets, this study specifically limited the scope to focus on grit, growth mindset, and vulnerability for three main reasons. 1) The three leading authorities for each category are current professors on college campuses and have a sense of the current challenges students face in the world of academics. While it can be argued that each scholar teaches at the graduate school level of a four-year school and is far removed from community college students, many of their students are administrators and faculty members at community colleges. 2) Each scholar has spoken on the TED Talk stage, while garnering millions of views – the least among them has received more than 6 million views – for their 17-minute or less presentation. Finally, 3) all three scholars are New York Times best-selling authors, two of them currently have multiple books on the list.

Table 4 gives an overview of the academic and mainstream success each scholar has received. This study focused on these three scholars unique perspective of the barriers and assets facing today's college students through scientific research. Concurrently, these scholars each found ways to connect their data to mainstream audiences via the internet and through book sales. This study hopes to identify if their mainstream concepts could also improve retention and graduation rates of community college students in California.

Table 4

Accolades for the Researchers of Grit, Growth Mindset, and Vulnerability

	Angela Duckworth Grit	Carol Dweck Mindset	Brené Brown Vulnerability
Educational Credentials	Earned an A.B. in neurobiology at Harvard College in 1992. Then graduated from the University of Oxford in 1996 with an M.S. in neuroscience on a Marshall Scholarship. In 2006, she received her Ph.D. in psychology from the University of Pennsylvania.	Earned a Ph.D. from Yale University in 1972. She taught at Columbia University, Harvard University, and the University of Illinois before joining the Stanford faculty in 2004.	Received her Ph.D. from the Graduate College of Social Work at the University of Houston in 2002.
Academic and Professional Awards	She is currently the Christopher H. Browne Distinguished Professor of Psychology at the University of Pennsylvania. A 2013 MacArthur “Genius” Fellow. Duckworth has advised the White House, the World Bank, NBA and NFL teams, and Fortune 500 CEOs. Recipient of the Beyond Z Award	Currently, Dweck is the Lewis and Virginia Eaton Professor of Psychology at Stanford University. She has been elected to the American Academy of Arts and Sciences and the National Academy of Sciences, and has won nine lifetime achievement awards for her research.	Her articles have appeared in many national newspapers. Appears on the Oprah Winfrey’s network as part of Super Soul Sunday.

from the KIPP
Foundation.

Published Books (*New York Times Best Selling)	*Grit: The Power of Passion and Perseverance (2016)	Mindset: Key Takeaways, Analysis and Review (2015)	*Dare to Lead (2018)	
		Essays in Social Psychology: Self-Theories: Their Role in Motivation, Personality and Development (2013)	*Braving the Wilderness (2017)	
		*Mindset: The New Psychology of Success (2006)	*Rising Strong (2015)	
		Self-theories: Their Role in Motivation, Personality, and Development (1999)	*Daring Greatly (2012)	
			Men, Women & Worthiness (2012)	
			*The Gifts of Imperfection (2010)	
			I Thought it Was Just Me (but it isn't) (2007)	
			Women & Shame (2004)	
	TED Talks – date and Number of Views (as of October 27, 2018)	Grit: The power of passion and perseverance April 2013 15,298,459 Views	The power of believing you can improve November 2014 8,303,559 Views	The power of vulnerability June 2010 36,682,588 Views

Listening to
shame

March 2012

10,019,638
Views

The scholarly literature produced by these three academic researchers, coupled with their unquestioned mainstream success, was the impetus to explore the research questions being posed in this study.

Summary

The purpose of this literature review was to narrow the focus of the program of practice at the community college level. The researcher identified the low retention, graduation, and transfer rates of the California Community College system with the goal of looking at barriers contributing to low rates. Next, the literature review identified common characteristics, behaviors, and traits of the small, yet thriving, percentage of community colleges students who persist, graduate, and transfer to four-year colleges. The researcher hoped to explore new themes in an in-depth manner, as well as behavioral patterns of successful community college students. This process was best suited for a mixed methods study, which allowed the researcher to probe more deeply into both quantitative and qualitative data as it relates to participants' experiences to gain a broader understanding of the phenomena of thriving community college students.

This study explored strategies related to the combination or intersection of grit, growth mindset, and vulnerability theories and the following research questions were posed to delve into the experiences of thriving community college students:

1. What role, if any, does grit play in influencing or shaping community college students' success?
2. What role, if any, does growth mindset play in influencing or shaping community college students' success?
3. What role, if any, does vulnerability play in influencing or shaping community college students' success?
4. Which factors do thriving community college students attribute to their own success?
5. What are the shared skill sets of thriving community college students?

By gaining a better understanding of the experiences of community college students, this study sheds light and insight for the development of educational programs for college decision-makers as a way to increase retention and graduation rates. The next chapter will go into depth regarding the methodological approach taken to explore the research questions with the sample group of students.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

The following chapter describes the research methods which were incorporated in this study. The chapter begins with a brief introduction describing the use of a sequential explanatory mixed-method research design (quan+QUAL). The first major section of the chapter focuses on pre-study considerations of research design and recaps the purpose of the study along with the research questions. The second section concentrates on the research setting. The next section centers on the sample population, as well as the participant selection in both the quantitative and qualitative phases of the study. This section then outlines the methods for collecting and analyzing the data. Finally, the chapter concludes by providing a statement about the trustworthiness of the research study, the boundaries of this study's limitations, as well as provides a positionality statement along with the role of the researcher as instrument.

Introduction

This study attempted to explore if the skill sets of grit, growth mindset, and vulnerability factor into the success of thriving students attending a two-year community college district, and if so, to what extent did these skills sets contribute to their academic success. The study sought to gain a better understanding of the experiences of thriving community college students through a sequential explanatory mixed methods research design using surveys along

with a follow-up focus group. Krathwohl (2009) states, "Since qualitative and quantitative methods both offer views of the same world, when they turn up the same findings they usefully reinforce one another" (p. 616). Creswell (2014) describes sequential explanatory mixed-methods as "one in which the researcher first conducts quantitative research, analyzes the results and then builds on the results to explain them in more detail with qualitative research" (p. 15). Given the goals of this study, the sequential explanatory mixed-methods design was the best approach.

Restatement of the Research Problem

Faculty, staff and administrators often overlook students in their second-year of college as evidenced by the lack of support and extensive academic research pertaining to this group (Lemons & Richmond, 1987; McMillan & Chavis, 1986; Pattengale & Schreiner, 2000; Peguesse, 2008; Van Valkenburg, 2013; Vuong, Brown-Welty, & Tracz, 2010). As a result, students in their second-year sometimes become an after-thought due to other pressing campus needs, such as admitting new students. Tobolowsky (2008) accurately articulates that over the past 40-50 years, "institutions of higher education have looked at their budgets and determined their resources are best spent on first-year students" (p. 59). Incoming freshmen have received support because the transition into college reflects the high attrition rate for new students. The literature suggests students in their second year of college are at higher risk of dropping than any other year in higher education (Hunter et al, 2010; Peguesse, 2008); however, community college students have not been disaggregated from this data. While

minimal research has been done to understand the dropout rate of second-year community college students, even less research has been conducted to highlight the success stories of thriving second-year community college students. The focus of this study is to identify specific skill sets of thriving community college students by the use of a sequential explanatory mixed methods analysis, which utilizes surveys and follow-up focus groups in an effort to better understand the thriving process of these students through the lens of grit, growth mindset, and vulnerability theories.

Purpose of the Study

The purpose of this mixed methods study was to identify skill sets and factors which influence thriving community college student success. This study concentrates on learning about the experiences of thriving community college students. Many, but not all, community college students come from low socio-economic backgrounds and many, but not all, are first-generation college students. This study was designed to explore students who succeed at the community college level, despite their circumstances and lack of real, or perceived, institutional support. In this study, thriving in this study was defined as a community college student who was on track to graduate and/or transfer to a four-year college or university within two years.

Research Questions

There are five key research questions guiding this study:

- 1) What role, if any, does grit play in influencing or shaping community college students' success?

- 2) What role, if any, does growth mindset play in influencing or shaping community college students' success?
- 3) What role, if any, does vulnerability play in influencing or shaping community college students' success?
- 4) Which factors do thriving community college students attribute to their own success?
- 5) What are the shared skill sets of thriving community college students?

Understanding the strategies thriving students used to succeed can provide tremendous insights for administrators who coordinate programs aimed towards increasing community college retention, transfer and graduation rates.

Research Design

Creswell (2014) describes the sequential explanatory mixed methods design as consisting of two separate and distinct phases: quantitative followed by qualitative. In this design, a researcher first collects and analyzes the statistical, quantitative data. Then qualitative data, or text, is collected and analyzed to better understand the statistical results obtained in the first phase. In this study, surveys were used to collect the statistical data and focus groups were used to collect the text data. Surveys were emailed directly to students at three colleges, each college is part of the same community college district, with the help of their Admissions and Records staff. The email distribution list was created by sorting students enrolled as first-time freshmen in the fall of 2017, who had a 3.0 cumulative GPA or higher and had obtained at least 30 units towards graduation.

Two of the initial questions in the demographic section of the survey were, “I received college credit while in high school” and “I am planning to graduate and/or transfer to a four-year college in the next 3-10 months.” This criteria helped to identify thriving students within this community college district. These demographic questions were followed by questionnaires pertaining to grit, growth, and vulnerability, along with some opened questions including, “Would you be interested in participating a focus group to further discuss grit, growth, and vulnerability?”

The second phase, the qualitative analysis, built on the quantitative analysis, and then the two phases were considered in totality in the final stage of the study. “The rationale for this approach is that the quantitative data and their subsequent analysis provide a general understanding of the research problem” (Ivankova, Creswell, & Stick, 2006, p. 5). The text data from the qualitative phase and their analysis refine and explain those statistical results derived from the quantitative phase by exploring participants’ views in more depth (Rossman and Wilson 1985; Tashakkori and Teddlie 1998; Creswell 2003).

Creswell (2003) further explains that the sequential explanatory mixed methods design is a collection and analysis of quantitative data followed by a collection and analysis of qualitative data. Its purpose is to use qualitative results to assist in explaining and interpreting the findings of a quantitative phase. The sequential explanatory mixed methods design was specifically chosen for this study because the quantitative survey questions could best ascertain if grit, growth mindset, and vulnerability were in fact skill sets needed to be considered

a thriving community college student. The three surveys (grit, growth mindset, and vulnerability) used were vetted in other academic studies and provide consistency when analyzing the local data to other national data collected on the topics. For this study, the researcher slightly modified the instruments to be appropriate for college students and the three surveys were combined into one larger survey. Participants also had the opportunity to answer optional demographic information as well as some open-ended questions to elaborate on specific topics, such as ways they saw themselves as being gritty or vulnerable, where appropriate.

After the surveys were complete, students were invited to participate in the qualitative focus groups in an effort to delve into the students' experiences with the goal of determining to what extent, if at all, the skill sets of grit, growth mindset, and vulnerability played in their educational journeys.

The strengths and weaknesses of this mixed methods design have been widely discussed in the literature (Creswell, Goodchild, and Turner 1996; Green and Caracelli 1997; Creswell 2003, 2005). Its benefits include straightforwardness and opportunities for the exploration of the quantitative results in more detail. This design can be especially useful when unexpected results arise from a quantitative study (Morse, 1991). The limitations and setbacks of this design are length of time and feasibility of resources to collect and analyze both types of data. By using this sequential explanatory mixed methods approach, the study anticipated using focus groups to create deeper, meaningful data, thus being able to make recommendations for campuses to

develop specific programs, workshops and curriculum targeted at second-year community college student success.

Research Setting

The setting for this research took place within one community college district in southern California. The district was comprised of three campuses with a total headcount of more than 37,000 and more than 12,600 full-time equivalency students (FTES). This district's website boasts of being home to one of the oldest community colleges in the state (established in the early 1900s). The district will be referred to as the Southern Community College District, SCCD, and is known as a leader in the state due to its colleges' recurrent national and state commendations for "innovative programs and initiatives--many of which become models for other higher education institutions" (SCCD, 2016, para. 2). These include *Passport to College*, which was the precursor to the national Gear Up early college awareness initiative; *Gateway to College*, the first Bill and Melinda Gates Foundation-supported charter school in California; and, *Completion Counts*, a college access and success initiative which is a model for private/public education partnerships.

Each campus in the district is also known for at least one unique program within the state. One campus offered the first community college-based comprehensive Physician Assistant program west of the Mississippi River (Eastern Community College – pseudonym). One campus opened the Center for Social Justice & Civil Liberties (Northern Community College – pseudonym). Another campus is the site for the National Center of Excellence for Supply

Chain Technology Education. (Western Community College – pseudonym). The Chancellor Emeriti states on the district website (2016):

All of these programs, initiatives, and honors are indicative of what I believe are three of our greatest strengths as a community college: the quality of education we provide, the partnerships we are able to build in the public and private sector, and the support we receive from our diverse communities (para. 4).

The district seeks to set the standard for each campus to become a strong community-oriented leader within the California Community College system.

The students come from a wide range of backgrounds. The most recent statistics (2016) show 55% of the students within the district are female, 44% are male, and 1% are unknown or did not respond. 59% are Hispanic, 21% are White, 8% are African American, 5% are Asian/Pacific Islander and 7% fall into the category of “Other.” The vast majority, 71% of the students are considered traditional-aged, meaning they are under 24 years of age. 13% of students are between 25 – 29 years of age, and 20% are older than 30 years of age.

Thirty-eight percent of students in the district take less than 6 units; 39% take between 6-11 units, and 23% take more than 11 units per semester. The district’s six-year graduation rate was 9.8% in 2011, which was far below the states six-year graduation rate of 39.47%; see Figure 1 (CCCCO, 2017).

Research Sample

Emails were sent out to the pool of thriving participants (N=3,859) with the help of the Directors of Institutional Effectiveness and Admissions and Records

from each campus. Students were told they would be entered into a drawing for a \$100 Visa gift card as an incentive for participating in the survey. The winner was randomly selected and notified within 24-hours of the survey closing. Thriving students were defined in this study as being first time freshmen beginning in the fall of 2017 who held a 3.0 or higher Grade Point Average (G.P.A.) on a 4.0 scale, and who stated they were on track to graduate with an associate of arts or associate of science degree no later than the spring of 2019. These students were all 18 years or older and had completed at least 30 units with an intent to transfer to a four-year college upon graduation. While Institutional Research could sort for most of these items, the “intent to transfer” was a self-selected query as part demographic section in the survey questionnaire. The survey was made available to students online for two weeks and then closed. Three additional emails were sent out during the two weeks to encourage those who had not done so to complete the survey.

After the survey data was electronically collected and analyzed, students who indicated they would be interested in participating in a focus group were sent invitational emails to participate and further discuss their experience and share their educational journeys. Students were emailed directions to the school and a map to the building and room where the focus group took place. A Chinese dinner with soft drinks was offered for those who participated in the focus group.

The audio from the focus group was digitally recorded and the conversations were transcribed later through a paid transcription service. Two recording devices were utilized to ensure the entire focus group was captured.

An unbiased and neutral witness, known as a proxy co-researcher, was also present to take notes and capture the major themes of the focus group. The proxy co-researcher was an educational doctoral graduate who had an interest in the topic and also worked at Western Community College and taught educational leadership at a local four-year universities master's program.

Data Collection

Students who met the criteria for the study were sent one survey made up of five sections via email with a link to [surveymonkey.com](https://www.surveymonkey.com) to assess if they were gritty, had a growth mindset, and were vulnerable, based on the definitions given in Chapter One. Included in the survey were demographic questions to determine age, ethnicity, first-generation status, financial aid status, including a question to have students self-identify as a Pell Grant-eligible or not.

The study's independent variable was the question which asked students if they were in the process of transferring from their two-year community college to a four-year institution within the next three to ten months. Students who fit this criteria were identified in this study as "thriving students." The phrase "in process of transferring," referred to students who were in the process of applying to, or have already applied to, a four-year college.

The survey results were then analyzed to determine if grit, growth mindset, and vulnerability were indeed factors students felt contributed to their overall academic success. When the majority of thriving students who took the survey scored low in the three categories of grit, growth mindset, and vulnerability, there was consideration to not move forward with the qualitative

portion of the methodology. However, upon further exploration, the data did reveal there were strands of each skill set which showed statistical significance, thus the sequential explanatory mixed methods approach was continued via the qualitative phase.

Upon review of the quantitative data, students were invited to participate in a focus group. The qualitative participant goal of this study was to have three to five students attend the focus group from each of the three campuses within the district, making up a focus group of nine to fifteen individuals. The principal researcher sought an equal balance in genders, as well as students with diverse ethnic backgrounds, similar to that of the district's demographic breakdown.

Participants in the qualitative phase were asked to attend a three-hour focus group session, which took place two-weeks after the quantitative survey closed. The three-hour focus group was structured in such a way as to give approximately 45-minutes to each topic - grit, growth mindset, and vulnerability, with additional time at the beginning for introductions and time at the end for closing comments. Participants were given visual reminders of the Grit Scale Survey, the Mindset Quiz, and the TOSCA-3S – Vulnerability Assessment. Some took time to answer portions of each survey by hand to refresh their memories prior to discussion in the focus group. After introductions, the focus group questions concentrated on thriving student's preparation prior to arriving at college, home life, study habits, coursework choices, involvement outside of the classroom, challenges faced both inside and outside of the classroom, and strategies they have used to overcome obstacles. During the focus group,

participants were shown TED Talk videos by Angela Duckworth on Grit, Carol Dweck on Mindset, and Brené Brown on Vulnerability. They were also asked specific questions, such as “Tell us about a time you struggled in a class?”, “Did you persist in that class or drop it?”, and “Why did you choose to persist or not?”

This study did not involve any predictable physical, non-physical, social, financial, criminal, or civil risk to the participants. However, there may have been other risks the researcher and the dissertation committee could not predict. As a participant, students were free to stop participating at any time with no loss of benefits. Equally, the principal researcher maintained the right to stop the study or remove particular participants from the study at any time, if the decision was deemed in the best interest of the student involved, other students, and/or the study as a whole.

Data Analysis

The [surveymonkey.com](https://www.surveymonkey.com) link was sent via email to thriving students who met the criteria for the survey and was made available to students online for two weeks and then closed. After the closing of the survey, the data was analyzed based on the score sheets which accompanied each of the three individual surveys. A sequential explanatory mixed methods research design was adopted. Qualitative analysis employed Analysis of Variance (ANOVA) to examine differences between groups on multiple measures (i.e. grit, growth mindset, and vulnerability) against students' responses to the item “I am planning to graduate and/or transfer to a four-year college in the next 3-10 months. One-Way ANOVA test were conducted and a regression model was used to determine if students

who were planning on attending a four-year college in the next 3-10 months were gritty, had a growth mindset, and/or were vulnerable. Surveys of students who rated high in all three categories were re-assessed in an effort to document and account for demographic anomalies. For example, the principal researcher checked to see if the majority of the growth mindset students were female or were a majority of the gritty students Pell Grant eligible.

Moustakas' (1994) six phases of data analysis principles were commissioned within the qualitative phase of the study. The data reduction proceedings were initiated by implementing "epoche," which Moerer-Urdahl and Creswell (2004) agree executes the disconnection of memories embedded within the researcher regarding the phenomenon being studied. Participants' responses were transcribed verbatim. Coding followed, which involved aggregating the text data into smaller categories of information. Then the smaller categories were labeled (Creswell, 2013) to make sense of the data. The second phase of the data reduction procedures included identifying and highlighting all significant themes rooted within the transcriptions and field notes. Clustering was then implemented to develop significant quotes, statements and testimony in the data reduction process. This process of creating categories through coding and then clustering to denote the significant data, while shedding light on the personal experiences of the participants was a crucial step in the data analysis process. Appropriate quotes directly ascertained from the transcripts, field notes, and member checking process was categorized. Patterns and discrepancies amongst the participants' statements were searched for and notated.

The fourth phase called for a more in-depth reduction of the data and the emergence of themes. Creswell (2012) contends that the development of themes is a critical element in qualitative research as the nurturing of a common idea develops. A constant comparison method was utilized as a means to examine and reexamine the data.

The fifth phase, known as a theme synthesizing method (Moerer-Urdahl & Creswell, 2004) was justified through the data analysis process whereby the intention behind synthesizing the constructed themes was to generate a detailed description of the relevant events each participant experienced in their college journey. To ensure accuracy, transcripts of each interview were shared with the individual participants by email for member checking. Each participant was permitted to review his or her respective transcript for accuracy. Participants were then provided an opportunity to edit, restate, or delete his or her remarks.

The sixth and final stage of the data reduction procedures, which called for a construct and composite description of the overall data findings and themes. Specifically, the intentions of the qualitative section of the study were to capture the distinctive meanings and essence of the experience through intuitive integration (Moerer-Urdahl & Creswell, 2004). All participants' names were changed to pseudonyms for the sake of confidentiality. These six phases were instrumental in understanding, and making sense of, the experiences of the students who participated in the focus group.

Trustworthiness

Lincoln and Guba's (1985) seminal piece provides seven examples for qualitative researchers to validate their work. They include 1) prolonged engagement, 2) triangulation, 3) peer debriefing, 4) negative case analysis, 5) member checks, 6) use of thick, rich descriptions, and 7) external audits.

Trustworthiness Usage

In this study, three of the seven were utilized to ensure trustworthiness. They are as follows:

Prolonged Engagement (Creswell, 2013, p. 250-251). By conducting a three-hour focus group with students from each campus and engaging students in a follow-up discussion regarding their quantitative survey, quality time was spent with the participants getting to know their unique stories. This helped in gaining an understanding of their personalities, as well as the struggles and successes they encountered;

Peer Debriefing (Creswell, p. 251). The utilization of my proxy co-researcher as an objectionable observer in disaggregating the data allowed me to see the coding in a different and unique light;

Member Checking (Creswell, p. 252). By going back to the focus group participants and allowing them to review the transcriptions, coding, and themes, we were better able to increase the level of trustworthiness in the findings.

Limitations

Johnson and Onwuegbuzie (2004) cite five weaknesses of the mixed methods design, all of which were true for this study in varying degrees. Below are descriptions of the five weaknesses, along with an understanding of how they relate to this study.

1. Time Consuming & Expensive. The focus group portion of this mixed methods became extremely time consuming. While the original idea was to drive to each of the campuses to host focus groups, the plan quickly changed to have one large focus group at one campus. In order to entice students to drive, in some cases 30 miles, incentives had to be created. Dinner was the first incentive, coupled with gift cards of substantial value. After the focus group was complete, the transcribing took nearly 16 hours to complete. Originally, a transcribing service was going to be hired to document the data. However, this was a substantial additional expense, which would have helped save valuable time, but could not be justified financially at the time.

2. Difficult finding a researcher with experience in both qualitative and quantitative research. In reflecting on the survey methodology and focus groups, it was apparent that I had chosen two methods which play to my strengths; however, much is left to the interpretation of the data for both. If the students did not actively participate in the survey or if the focus group was not of relevant connection to the students' experiences, it would have been extremely difficult to explore this topic. I relied on my dissertation

chair and proxy co-researcher to give me feedback during each process.

3. Researcher has to learn multiple methods and be able to know how to mix each method effectively. Throughout my literature search, I had not come across anyone studying community college students who did a three-part survey, specifically around the skill sets of grit, growth mindset, and vulnerability, as well as a focus group to explore the students' experiences. As a result, it was difficult to say if I have mixed the methods effectively.

4. Methodological purists believe that a researcher should either pick the qualitative or quantitative paradigm and not both. Although I am not concerned with pleasing the methodological purists, I am motivated to understand community college students through a new perspective, with the hope of being able to create emerging programs for second-year students which will aid in the increase of retention and graduation rate. However, it could not be denied that had I only done either quantitative or qualitative only, the findings and results would have been drastically different.

5. How to interpret conflicting results and analyzing quantitative data qualitatively still need to be figured out. This was certainly a challenge. I thoughtfully consider all known possibilities as I analyzed the data from the survey and the focus groups to develop compelling strategies to increase transfer and graduation rates. With that said, I am well aware that

there will be critics who disagree with my analysis. In fact, I may disagree with my analysis in three to five years given future research.

In addition to the general limitations listed above for mixed methods studies, the following specific limitations applied to this study:

1. This study focused on a small subgroup of community college students, rather than a broader group of national community college students. While the experience of specific subgroups may be important and helpful on a local level, a broad scope might be more useful when it comes to finding generalizable solutions to help community college students.
2. This study represented student experiences within one district where the demographics are almost identical. Again this makes it difficult to generalize across multiple institutions.
3. Participants in this study were limited to those students who self-selected as Pell Grant eligible. This was, in part, due to the high dropout rate for students receiving this grant. At a local California State University, which is one of the more common four-year campuses students transfer to after attending one of these three community colleges in the sample, the variable of Pell-Grant eligibility was being used to create programs geared towards helping California State University at-risk students. I was hoping my findings could aid students in this district, as well as students who transfer to this four-year school, with the hope that further research could be done to track the effectiveness of this study.

4. Community college students have many options. Transferring to a four-year school is just one of them. This study does not track the traits of successful certificate completers, nor does it track students who attend specialized intensive 6 to 8-week training courses offered within the district. These students who complete these programs are equally as successful and are thriving in their own right; however, this study's definition of thriving did not include certificate-earners.

5. Duckworth's Grit Theory is a relatively new theory within higher education, and has not been applied to much research in comparison to other theories. While traditional qualitative research tends to incorporate theory after data collection, this study was guided through the lens of Creswell's (2014) qualitative methods approach, Duckworth's Grit Scale, Dweck's Mindset Quiz, and the TOSCA-3S – Vulnerability Assessment to create the focus group questions. Some researchers may be skeptical of this approach since it includes theory prior to data collection and analysis.

While there were a few limitations attributed to this study, the overall scope provided new research and findings for community college decision-makers to consider as they move forward.

Positionality of the Researcher

This section delves into a synopsis of the researcher's worldview and philosophical assumptions. Creswell (2007) discusses four unique worldviews, primarily found in the literature, upon which researchers may engage. They are: 1) post-positivism, 2) constructivism, 3) advocacy/participatory, and 4)

pragmatism. As Creswell and Plano Clark (2011) illustrate, a person's worldview provides "a general philosophical orientation to research" (p. 40). They go on to explain, the five elements which define a worldview: ontology (nature of reality); epistemology (how we gain knowledge about what we know); axiology (role of values); methodology (the process of research); and rhetoric (the language of research) (p. 42).

As a researcher and practitioner, I feel it is important to share my assumptions and preconceptions related to this study, as well as the factors which I believe contribute to the success of second-year community college students. From my vantage point, as the Dean of Student Life at a community college in southern California, resiliency, a belief that nothing will deter an individual from his or her goal, appears to be the top contributing factor among community college students who graduate with an associate degree and/or transfer to a four-year college. Students struggle with many issues, including family life, relationship challenges, financial struggles, mental health issues, physical illnesses, and more. As a college administrator with more than 20 years of experience in higher education, I believe there are two factors which separate students who succeed in spite of their circumstances from those who struggle, but eventually give up in the face of adversity. These factors are 1) having the core belief that he or she is capable of succeeding (grit and growth mindset) and 2) having a network of peers who support him or her through their struggles (vulnerability and connection). These preconceptions, which I bring to my research, are supported through much of the literature (Brown; 2006; Dweck;

2006; Duckworth, 2016; Duckworth et al., 2007; Feldman & Kubota, 2015; Komarraju, & Nadler, 2013; Metheny & McWhirter, 2013). They also mirror my own personal story of academic success.

As a 20 year-old undergraduate, I faced tremendous adversity, including experiencing the unexpected death of my 47 year-old father. It was with the support of peers through co-curricular activities, a dependency on a pre-established network of faculty, administrators and mental health counselors, and a strong belief in my spiritual faith that kept me focused on continuing with my education. I faced many of the barriers listed in the Literature Review – low SES, first-generation college student, Pell Grant recipient, and a student of color – yet, I found a way to graduate with honors from a four-year university in a four year period of time. Research shows that there is a strong correlation between academic success and both student involvement and connections with peers (Pascarella & Terenzini, 1980; Pascarella & Terenzini 2005; Tinto, 2012). The position I currently hold as the Dean of Student Life was primarily created to increase student involvement at my community college. I was selected as the top candidate due in part to my past track record of creating nationally recognized co-curricular programs which positively engaged students outside of the classroom. On my first day in this position, my Vice President of Student Services assigned me the task of developing a Student Ambassador Program to spark systemic, peer-to-peer connections. This essential program was sought after as a way to increase retention and graduation rates by pairing high performing students with students struggling to find their niche on campus.

My subjectivity is grounded in the literature. Pascarella and Terenzini (1980) developed a longitudinal model to ascertain the persistence and dropout behavior associated with the quality of a student's interactions with the academic and social systems of college (p. 60). As a result of the overwhelming student success literature supporting the need for increased programs to help students persist and develop resiliency, I believe as a researcher I am well-situated to investigate this topic at the community college level.

Our experiences shape our perspectives and vice versa. As a high school student, I was not a high academic achieving student, nor was I involved with any co-curricular activities outside of sports. However, in college, with the prompting of several campus administrators, I became very involved with clubs and organizations and I was eventually awarded the campus' Most Involved Senior Award. The transformation from being uninvolved during my high school days to becoming an exceptionally involved student in college was sparked by one brief encounter: a guest speaker during freshman orientation by the name of Dr. Will Keim, who told me – and the entire freshmen cohort – that getting involved with all aspects of college would pay the biggest return on my college investment. Keim said, "What you do in college is set the banquet table for the feast you will eat for the rest of your life" (Personal Communication, 1989). I took that statement to mean that if I didn't give up, there would be huge rewards for me and my future family in the coming years and decades. That if I was investing my time and money into my education, I better get the most of this investment. Basically, I did not want to waste my parents' money, so I decided to take

advantage of “everything” the campus had to offer with the perception that these activities were “pre-paid” through my tuition and fees. I had the attitude that if I dropped out or stopped out, I would have forfeited my investment.

By getting involved with campus activities, this caused me to become more focused on my academics simply because I had to develop better time management skills. In addition, by being involved, I opened myself up to more networks of likeminded peers who were succeeding both in and out of the classroom. Although I naturally bring my personal experiences of student involvement into my research, I am mindful that there are various other reasons why students can be resilient in their pursuit of a college degree and I am open to those findings.

Summary

This chapter described the research methods being implemented as part of this sequential explanatory mixed methods research study. The chapter began by restating the purpose of the research study and stating the research questions being asked, which are:

1. What role, if any, does grit play in influencing or shaping community college students' success?
2. What role, if any, does growth mindset play in influencing or shaping community college students' success?
3. What role, if any, does vulnerability play in influencing or shaping community college students' success?

4. Which factors do thriving community college students attribute to their own success?
5. What are the shared skill sets of thriving community college students?

The next section focused on the setting, and participant selection. The chapter then explained the use of an Analysis of Variance (ANOVA) to examine differences between groups on multiple measures (i.e. grit, growth mindset, and vulnerability) against students' responses to the item "I am planning to graduate and/or transfer to a four-year college in the next 3-10 months. This was the method used for the quantitative portion of the study. Then, the focus group delved into the three main topics of grit, growth mindset and vulnerability. The last section in this chapter explained the data collection methods, described the ways in which the data was analyzed, provided a statement about trustworthiness, and offered boundaries on the limitations of this research study. The chapter concluded with a detailed description of the positionality of the researcher. Results of the data analysis will be presented in the following chapter.

CHAPTER FOUR

FINDINGS AND RESULTS

Introduction

The purpose of this chapter is to summarize the data collected in this sequential explanatory mixed methods study while reporting on the findings of the research questions. First, presented below are demographics of the participants who took part in the quantitative survey followed by the results and analysis of the survey. Next, the demographics of those individuals involved in the qualitative phase of the study along with the results of the focus groups in which they participated. Then an overview of how the two phases differed from each other in the findings, as well as the similarities in the findings. The chapter concludes with a summary of the key findings of this research study.

The purpose of this mixed methods study was to identify skill sets and factors which influence thriving community college student success. This study explored the theories of Grit (Duckworth, 2007), Growth Mindset (Dweck, 2006), and Vulnerability (Brown, 2006) and sought to determine if these were essential cognitive skills sets shared by thriving community college students who are in the pursuit of transferring to a four-year college. This study espoused that these three theories, as well as previous research in the field, form a comprehensive framework for understanding the relationship between thriving community college students and the skills sets which contribute to these students being prepared to

graduate or successfully transfer from a community college to a four-year institution after two years.

This mixed methods research study sought to understand if thriving community college students credited their academic success to grit, growth mindset, and vulnerability. The following research questions guided this study:

- 1) What role, if any, does grit play in influencing or shaping community college students' success?
- 2) What role, if any, does growth mindset play in influencing or shaping community college students' success?
- 3) What role, if any, does vulnerability play in influencing or shaping community college students' success?
- 4) Which factors do thriving community college students attribute to their own success?
- 5) What are the shared skill sets of thriving community college students?

Findings from the Quantitative Phase

This study incorporated descriptive and inferential statistical analysis to help answer the research questions. The sections of this chapter below begin with the demographics of the sample group of thriving community college students who completed the online quantitative survey. Then One-Way Analysis of Variance (ANOVA) and descriptive analysis along with the findings are presented.

Quantitative Sample

During the summer of 2018, a survey with 58-questions was distributed electronically to 3,859 students who attend a three-campus community college district. The students in the sample were first-time college students during the fall of 2017. Over the course of their first academic year, these students had achieved a cumulative G.P.A. of 3.0 or higher on a 4.0 scale and had obtained at least 30 academic units in a system where a minimum of 60 units are required to receive an associate of arts or associate of science degree. For the purpose of this survey, these students were considered thriving community college students.

Quantitative Demographics

Thriving students were electronically sent surveys to their campus email address if they met the above criteria. There were 409 students who submitted a survey; however, after careful review of the surveys, only 303 were deemed usable questionnaires which resulted in a response rate of 7.85%. Questionnaires were deemed usable if students completed at least the demographic and grit sections of the survey. The rationale for determining the threshold for usability of the survey was based on the unique construction of the survey instrument. The survey was built in sections and as long as an entire section was complete, the data would remain consistent. Understanding the impact of grit was important for this study; therefore, if that section plus the demographic section, was all that was reported in an individual survey, it was still impactful to the overall study. The *N* was adjusted and mean (*M*) scores, or

averages, were substituted in the usable returned questionnaires for missing responses in the sections for Growth Mindset and Vulnerability.

Participants in the survey ($N=303$) varied in age; however, 50.2% ($n=152$) were between 18-20 years old, while another 28.4% ($n=86$) were between 21-24 years of age. Gender was consistent with the population of the district. Female participants made up 67.3% ($n=204$) of the sample, while 29.7% ($n=90$) were males, 1.0% ($n=3$) identified as Transgender, and 2.0% ($n=6$) declined to answer.

The following tables, Tables 5, 6 and 7, illustrate the sample demographic characteristics, which pertain to Gender, Ethnicity, and Age of the participants. The column labeled "percent" lists the actual percentages of the total sample who answered. Valid percent is the percent when missing data are excluded from the calculations.

Table 5

<i>Gender</i>		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	204	67.3	68.7	68.7
	Male	90	29.7	30.3	99.0
	Transgender	3	1.0	1.0	100.0
	Total	297	98.0	100.0	
Missing	System	6	2.0		
Total		303	100.0		

Figure 6

Ethnicity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	American Indian or Alaskan Native	5	1.7	1.7	1.7
	Black or African American	19	6.3	6.3	8.0
	Hispanic or Latino/a	164	54.1	54.1	62.1
	White / Caucasian	94	31.0	31.0	93.1
	Prefer not to answer	7	2.3	2.3	95.4
	African	1	.3	.3	95.7
	American	1	.3	.3	96.0
	Asian Mixed	1	.3	.3	96.3
	Belizean	1	.3	.3	96.6
	Egyptian	1	.3	.3	96.9
	Filipino	1	.3	.3	97.2
	Hispanic/Asian	1	.3	.3	97.5
	Middle Eastern	1	.3	.3	97.8
	Middle Eastern/ Semitic	1	.3	.3	98.1
	Pacific Islander	1	.3	.3	98.4
	Pakistani- American	1	.3	.3	98.7
	Sri Lankan	1	.3	.3	99.0
Missing		2	1.0	1.0	1.0
Total		303	100.0	100.0	100.0

Figure 7

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18 to 20	152	50.2	50.7	50.7
	21 to 24	86	28.4	28.7	79.3
	25 to 29	20	6.6	6.7	86.0
	30 to 34	16	5.3	5.3	91.3
	35 to 39	9	3.0	3.0	94.3
	40 or older	17	5.6	5.7	100.0
	Total	300	99.0	100.0	
Missing	System	3	1.0		
Total	303	100.0			

More in-depth participant demographic characteristics are provided in Table 8 through 13. Income levels showed 76.1% ($n=223$) had a family income less than \$75,000 per year, while 3.6% ($n=11$) had a family income greater than \$150,000. More than half, 51.2% ($n=153$), were eligible for the Pell Grant and another 69.3% ($n=208$) received the Board of Governor's (BOG) Waiver. When asked if they were the first in their family to attend college, slightly more than half 51.8% ($n=157$) said yes. These demographics reveal that the sample group was similar to the general population of the district in all categories and the thriving group was not an exception or anomaly in comparison to general population of the district, nor community college students as a whole.

Table 8

My Total Family Income Last Year Was

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under \$15,000	57	18.8	19.5	19.5
	Between \$15,000 and \$29,999	66	21.8	22.5	42.0
	Between \$30,000 and \$49,999	54	17.8	18.4	60.4
	Between \$50,000 and \$74,999	46	15.2	15.7	76.1
	Between \$75,000 and \$99,999	35	11.6	11.9	88.1
	Between \$100,000 and \$150,000	24	7.9	8.2	96.2
	Over \$150,000	11	3.6	3.8	100.0
	Total	293	96.7	100.0	
Missing	System	10	3.3		
Total		303	100.0		

Table 9

I am Eligible for the Pell Grant

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	153	50.5	51.2	51.2
	No	59	19.5	19.7	70.9
	I don't know	87	28.7	29.1	100.0
	Total	299	98.7	100.0	
Missing	System	4	1.3		
Total		303	100.0		

Table 10

I Receive the Board of Governor's (BOG) Waiver

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	208	68.6	69.3	69.3
	No	67	22.1	22.3	91.7
	I don't know	25	8.3	8.3	100.0
	Total	300	99.0	100.0	
Missing	System	3	1.0		
Total		303	100.0		

Table 11

I am the First One in My Family to Attend College (I am a First-Generation College Student)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	157	51.8	52.2	52.2
	No	144	47.5	47.8	100.0
	Total	301	99.3	100.0	
Missing	System	2	.7		
Total		303	100.0		

Table 12

I Received College Credits While in High School

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	105	34.7	34.9	34.9
	No	196	64.7	65.1	100.0
	Total	301	99.3	100.0	
Missing	System	2	.7		
Total		303	100.0		

Table 13

I am Planning to Graduate and/or Transfer to a Four-Year College in the Next 3-10 Months

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	216	71.3	71.3	71.3
	No	87	28.7	28.7	100.0
Total		303	100.0	100.0	

Cronbach's alpha for the 58-items questionnaire was .87 (58 items; $\alpha = 0.87$), which was found to be highly reliable. Cronbach's alpha was also tested for each of the three sub-surveys within the larger survey and all were found to be highly reliable. The Grit Survey was .80 (12 items; $\alpha = .80$), Mindset Survey Instrument was .96 (16 items; $\alpha = .96$), and the TOSCA-3S Assessment, which tested for vulnerability was .77 (33 items; $\alpha = .77$).

Additional Findings from the Quantitative Phase

The next three sections detail the findings for grit, growth mindset, and vulnerability based on the student surveys. Each of these variables were correlated with the statement in the demographic section which said: I am planning to transfer to a four-year college in the next 3 – 10 months. In all three cases, there were no significant correlations.

Grit Findings in the Quantitative Phase

Embedded in the 58-question survey and immediately following the demographic section was the 12-Question Grit Survey developed by Duckworth

and her associates (2007). The full questionnaire can be found in Appendix A. As shown in Table 14 below, there was a non-significant correlation ($p = .219$, $p \leq .05$) on the 12-item Grit Scale Survey between grit and planning to transfer to a four-year college in the next 3 – 10 months, as shown in Table 15.

Table 14

ANOVA – Grit Overall Findings: I am Planning to Graduate and/or Transfer to a Four-Year College in the Next 3-10 Months

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7.522	31	.243	1.203	.219
Within Groups	53.659	266	.202		
Total	61.181	297			

Some sample questions from the 5-point Likert survey included:

1. I finish whatever I begin.
2. I often set a goal but later choose to pursue a different one.
3. I have difficulty maintaining my focus on projects that take more than a few months to complete.

The choices ranged from Very Much Like Me to Not Like Me at All. Despite there being no significant correlation between Grit and Transferring to a Four-Year College, there was statistical significance with two of the questions within the survey. The significant questions pertained to Overcoming Setbacks ($p = .019$, p

$\leq .05$) and Achieving Goals ($p = .003, p \leq .05$), which suggests that these two items were key skill sets acquired by thriving community college students (Table 15). There was no statistical significant difference between group means as determined by one-way ANOVA ($F(2,31) = 1.203, p = .22$).

Table 15

Grit Survey One-Way ANOVA

		Sum of Squares	Df	Mean Square	F	Sig.
G1: Overcome Setbacks	Between Groups	4.033	1	4.033	5.537	.019
	Within Groups	217.768	299	.728		
	Total	221.801	300			
G2: New Distracts	Between Groups	2.691	1	2.691	2.424	.121
	Within Groups	331.907	299	1.110		
	Total	334.598	300			
G3: Interest Changes	Between Groups	.394	1	.394	.380	.538
	Within Groups	311.023	300	1.037		
	Total	311.417	301			

G4: Setbacks OK	Between Groups	.172	1	.172	.126	.723
	Within Groups	408.004	300	1.360		
	Total	408.175	301			
G5: Obsessed for Short Period	Between Groups	.700	1	.700	.542	.462
	Within Groups	386.556	299	1.293		
	Total	387.256	300			
G6: Hard Worker	Between Groups	1.252	1	1.252	2.371	.125
	Within Groups	157.931	299	.528		
	Total	159.183	300			
G7: Change Goal	Between Groups	.050	1	.050	.058	.810
	Within Groups	258.285	300	.861		
	Total	258.334	301			
G8: Difficult with Focus	Between Groups	.655	1	.655	.513	.474
	Within Groups	382.461	300	1.275		

	Total	383.116	301			
G9: Finish What Begin	Between Groups	.157	1	.157	.232	.631
	Within Groups	202.893	300	.676		
	Total	203.050	301			
G10: Achieved Goal	Between Groups	10.518	1	10.518	9.167	.003
	Within Groups	344.184	300	1.147		
	Total	354.702	301			
G11: New Pursuits	Between Groups	1.538	1	1.538	1.345	.247
	Within Groups	343.137	300	1.144		
	Total	344.675	301			
G12: Diligent	Between Groups	.406	1	.406	.707	.401
	Within Groups	172.947	301	.575		
	Total	173.353	302			

Answers to Research Questions from the Quantitative Phase

Research Question #1. What role, if any, does grit influence or shape community college students' success? This study showed that grit as a whole did not influence or shape community college students' success. Nevertheless, two questions in the grit survey were significant: 1) overcoming setbacks and 2) achieving goals. These findings suggest that thriving community college students value achieving goals through goal-setting and are persistent due to overcoming setbacks and challenges in their lives. Further discussion of these skills will be mentioned in the qualitative findings section of this chapter.

Growth Mindset Findings in the Quantitative Phase

Immediately following the Grit Survey was the Mindset Survey Instrument. Choices on the 6-point Likert Scale were Strongly Agree, Agree, Mostly Agree, Mostly Disagree, Disagree and Strongly Disagree. This 16-item survey included statements such as:

1. You have a certain amount of intelligence and you can't really do much to change it.
2. No matter who you are, you can significantly change your level of talent.

On the Mindset Survey Instrument, there was a non-significant correlation between having a growth mindset and planning to transfer to a four-year college in the next 3 – 10 months (Table 16), $p = .77$, $p \leq .05$. Even though there was no significant correlation between these two items, there was statistical significance with one of the statements within the survey. The significant statement pertained

to the belief that one Can Significantly Change [his or her] Talent. The statement, found in Table 17, was “No matter who you are, you can significantly change your level of talent,” $p = .041$, $p \leq .05$. This finding suggests that there is a strong belief among thriving community college students that talent can be improved or acquired over time with effort and persistence. There was no statistical significant difference between group means as determined by one-way ANOVA ($F(2,54) = .842$, $p = .77$).

Table 16

ANOVA - Growth Mindset Overall Findings: I am Planning to Graduate and/or Transfer to a Four-Year College in the Next 3-10 Months

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9.729	54	.180	.842	.772
Within Groups	49.014	229	.214		
Total	58.743	283			

Table 17

Mindset Survey Instrument One-Way ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
GM1: Certain Intel	Between Groups	3.191	1	3.191	1.747	.187
	Within Groups	524.110	287	1.826		
	Total	527.301	288			
GM2: Intel Can't Change	Between Groups	.002	1	.002	.001	.975
	Within Groups	546.443	286	1.911		
	Total	546.444	287			
GM3: Significant Intel Change	Between Groups	.364	1	.364	.329	.566
	Within Groups	316.681	287	1.103		
	Total	317.045	288			
GM4: Honestly Can't Change Intel	Between Groups	.096	1	.096	.064	.800
	Within Groups	428.229	287	1.492		
	Total	428.325	288			
GM5: Substantially	Between Groups	2.991	1	2.991	2.270	.133

Can Change Intel	Within Groups	378.123	287	1.318		
	Total	381.114	288			
GM6: Learn New Things, But Can't Change Intel	Between Groups	.025	1	.025	.016	.900
	Within Groups	462.549	287	1.612		
	Total	462.574	288			
GM7: Intel Change Quite A Bit	Between Groups	.003	1	.003	.003	.960
	Within Groups	369.739	285	1.297		
	Total	369.742	286			
GM8: Change Basic Intel Considerably	Between Groups	1.438	1	1.438	1.174	.280
	Within Groups	350.437	286	1.225		
	Total	351.875	287			
GM9: Certain Amount of Talent and Can't Change	Between Groups	.967	1	.967	.591	.443
	Within Groups					

	Within Groups	468.020	286	1.636		
	Total	468.986	287			
GM10: Talent Can't Change Very Much	Between Groups	.899	1	.899	.493	.483
	Within Groups	522.990	287	1.822		
	Total	523.889	288			
GM11: Can Significantly Change Talent	Between Groups	5.709	1	5.709	4.223	.041
	Within Groups	387.952	287	1.352		
	Total	393.661	288			
GM12: Honestly Can't Change Talent	Between Groups	3.824	1	3.824	2.651	.105
	Within Groups	412.496	286	1.442		
	Total	416.319	287			
GM13: Substantially Can Change Talent	Between Groups	1.564	1	1.564	1.215	.271
	Within Groups	369.481	287	1.287		

	Total	371.045	288			
GM14: Learn New Things, But Can't Change Talent	Between Groups	.577	1	.577	.352	.554
	Within Groups	469.742	286	1.642		
	Total	470.319	287			
GM15: Talent Can Always Change Quite a Bit	Between Groups	2.995	1	2.995	2.469	.117
	Within Groups	346.974	286	1.213		
	Total	349.969	287			
GM16: Can Change Basic Talent Level Considerably	Between Groups	1.167	1	1.167	.910	.341
	Within Groups	368.189	287	1.283		
	Total	369.356	288			

Research Question #2. What role, if any, does growth mindset influence or shape community college students' success? This study showed that Growth Mindset as a whole did not influence or shape community college students' success. However, one response with the growth mindset quiz was significant - the belief that an individual can significantly change his or her talent level over time. Further discussion of this skill set will be referenced in the qualitative section of this chapter.

Vulnerability Findings from the Quantitative Phase

The fourth section of the survey was devoted to vulnerability. The test implemented was known as the TOSCA-3S, which stands for Test of Self-Conscious Affect, Version 3 and it is used in the social sciences to determine levels of authenticity and shame resiliency (Appendix C). There was a non-significant correlation of $p = .39$, $p \leq .05$, between vulnerability and planning to transfer to a four-year college in the next 3 – 10 months (Table 18) on the 11-item questionnaire. However, there was an inverse significant correlation with one of the questions within the survey. The inverse significant question pertained to individuals disagreeing with the statement, "A lot of things aren't made very well these days," $p = .050$, $p \leq .05$ (Table 19). This was the only statement of the TOSCA-3S where there was significance, thus confirming that from the quantitative perspective vulnerability as a whole was not a significant skill set possessed by thriving community college students. There was no statistical significant differences between group means as determined by one-way ANOVA ($F(2,58) = 1.050$, $p = .39$).

Table 18

ANOVA: Vulnerability Overall Findings - I am Planning to Graduate and/or Transfer to a Four-Year College in the Next 3-10 Months

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	12.810	58	.221	1.050	.392
Within Groups	43.524	207	.210		
Total	56.335	265			

Table 19

Vulnerability (TOSCA-3S) One-Way ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
1a. You would think: "I'm inconsiderate."	Between Groups	2.220	1	2.220	1.429	.233
	Within Groups	424.057	273	1.553		
	Total	426.276	274			
1b. You'd think you should make it up to your friend as soon as possible.	Between Groups	.032	1	.032	.038	.846

	Within Groups	230.820	275	.839		
	Total	230.852	276			
1c. You would think: "My boss/professor distracted me just before lunch."	Between Groups	.049	1	.049	.049	.826
	Within Groups	275.353	274	1.005		
	Total	275.402	275			
2a. You would think: "This is making me anxious. I need to either fix it or get someone else to."	Between Groups	1.355	1	1.355	.737	.391
	Within Groups	507.037	276	1.837		
	Total	508.392	277			
2b. You would think about quitting.	Between Groups	.704	1	.704	1.063	.303
	Within Groups	180.664	273	.662		
	Total	181.367	274			
2c. You would think, "A lot of	Between Groups	5.131	1	5.131	3.861	.050

things aren't made very well these days."	Within Groups	362.774	273	1.329		
	Total	367.905	274			
3a. You would feel incompetent.	Between Groups	1.394	1	1.394	.636	.426
	Within Groups	596.244	272	2.192		
	Total	597.639	273			
3b. You would think: "There are never enough hours in a day."	Between Groups	3.174	1	3.174	1.820	.178
	Within Groups	474.333	272	1.744		
	Total	477.507	273			
3c. You would feel: "I deserve to be reprimanded for mismanaging the project."	Between Groups	2.982	1	2.982	1.388	.240
	Within Groups	588.536	274	2.148		
	Total	591.518	275			

4a. You would think the company did not like the co-worker.	Between Groups	.001	1	.001	.001	.981
	Within Groups	383.279	270	1.420		
	Total	383.279	271			
4b. You would keep quiet and avoid the co-worker.	Between Groups	1.098	1	1.098	1.072	.301
	Within Groups	277.459	271	1.024		
	Total	278.557	272			
4c. You would feel unhappy and eager to correct the situation.	Between Groups	.028	1	.028	.029	.866
	Within Groups	268.784	274	.981		
	Total	268.812	275			
5a. You would feel inadequate that you can't even throw a ball.	Between Groups	1.189	1	1.189	.709	.400
	Within Groups	457.807	273	1.677		
	Total	458.996	274			

5b. You would think maybe your friend needs more practice at catching.	Between Groups	1.737	1	1.737	1.355	.245
	Within Groups	349.885	273	1.282		
	Total	351.622	274			
5c. You would apologize and make sure your friend feels better.	Between Groups	.133	1	.133	.337	.562
	Within Groups	108.142	275	.393		
	Total	108.274	276			
6a. You would think the animal shouldn't have been in the road.	Between Groups	3.449	1	3.449	2.500	.115
	Within Groups	376.747	273	1.380		
	Total	380.196	274			
6b. You would think: "I'm terrible."	Between Groups	.672	1	.672	.332	.565
	Within Groups	552.768	273	2.025		

	Total	553.440	274			
6c. You'd feel bad you hadn't been more alert driving down the road.	Between Groups	.910	1	.910	.938	.334
	Within Groups	267.670	276	.970		
	Total	268.579	277			
7a. You would think: "The instructor doesn't like me."	Between Groups	.024	1	.024	.037	.848
	Within Groups	177.612	273	.651		
	Total	177.636	274			
7b. You would think: "I should have studied harder."	Between Groups	.240	1	.240	.351	.554
	Within Groups	188.828	276	.684		
	Total	189.068	277			
7c. You would feel stupid.	Between Groups	.056	1	.056	.027	.868
	Within Groups	553.130	273	2.026		
	Total	553.185	274			

8a. You would feel small...like a rat.	Between Groups	.409	1	.409	.180	.671
	Within Groups	619.540	273	2.269		
	Total	619.949	274			
8b. You would think that perhaps that friend should have been there to defend himself/herself.	Between Groups	1.947	1	1.947	1.011	.315
	Within Groups	525.529	273	1.925		
	Total	527.476	274			
8c. You would apologize and talk about that person's good points	Between Groups	.059	1	.059	.043	.836
	Within Groups	379.783	276	1.376		
	Total	379.842	277			
9a. You would think your professor should have been clearer about what was expected of you.	Between Groups	.247	1	.247	.155	.694
	Within Groups					
	Total					

	Within Groups	431.815	272	1.588		
	Total	432.062	273			
9b You would feel as if you wanted to hide.	Between Groups	.523	1	.523	.229	.633
	Within Groups	621.977	272	2.287		
	Total	622.500	273			
9c. You would think: "I should have recognized the problem and done a better job."	Between Groups	.525	1	.525	.920	.338
	Within Groups	157.536	276	.571		
	Total	158.061	277			
10a. You would think: "I am irresponsible and incompetent."	Between Groups	.654	1	.654	.350	.555
	Within Groups	510.233	273	1.869		
	Total	510.887	274			
10b. You would think your friend	Between Groups	.002	1	.002	.004	.948

must not take
very good care
of her dog or it
wouldn't have
run away.

Within
Groups 153.368 271 .566

Total 153.370 272

10c. You
would vow to
be more
careful next
time.

Between
Groups .291 1 .291 .651 .421

Within
Groups 122.445 274 .447

Total 122.736 275

11a. You
would stay late
to help clean
up the stain
after the
party.

Between
Groups .016 1 .016 .017 .897

Within
Groups 268.621 274 .980

Total 268.638 275

11b. You
would wish
you were
anywhere but
at the party.

Between
Groups .493 1 .493 .194 .660

Within
Groups 689.438 272 2.535

	Total	689.931	273			
11c. You would wonder why your co-worker chose to serve grape juice with the new light carpet.	Between Groups	2.329	1	2.329	1.345	.247
	Within Groups	471.233	272	1.732		
	Total	473.562	273			

Research Question #3. What role, if any, does vulnerability influence or shape community college students' success?

This study showed that Vulnerability as a whole did not influence or shape community college students' success. However, there was an inverse correlation by thriving community college students with the statement "A lot of things aren't made very well these days." More than 70% of student respondents said this statement was "not likely" and less than 5% said it was "very likely." Brown (2006), as well as Tracy, Robins, and Tangney (2007) interpret this to mean these students are committed to taking personal responsibility for their own actions and behaviors. The majority of students in this survey do not believe in blaming others or circumstances for their own misfortunes. Tracy et al. (2007) believe this feeling of self-reflection and guilt is a positive attribute of individuals,

suggesting feelings of tension and remorse often lead to a desire to apologize and repair the problem rather than blame others. This emphasis on taking personal responsibility showed evidence that this was one key skill set acquired by thriving community college students. Further discussion of this skill set will be discussed in the qualitative findings section of this chapter.

Quantitative Research Results

The results from the quantitative survey suggest that grit, growth mindset, and vulnerability were not significant indicators of influencing or shaping community college students' success. The quantitative survey did reveal four key attributes with statistical significance of thriving community college students. These correlating attributes were: 1) overcoming setbacks (grit), 2) achieving goals (grit), 3) the belief that one can significantly change his or her talent level over time (growth mindset), and 4) the disagreement that a lot of things aren't made very well these days (vulnerability), which Brown (2006) and Tracy et al. (2007) interpreted as taking personal responsibility and not blaming others for one's circumstances. As we will see in the qualitative section of this chapter, these four skill sets were independently affirmed by students who took part in the focus group session.

Findings from the Qualitative Phase

The qualitative focus group was conducted during the summer of 2018 three weeks after the online survey had closed. A total of ten students participated, along with one primary researcher and a proxy co-researcher, who is a professor of leadership at the host college's institution. The gender breakdown of the

participants was 7 females and 3 males. The ethnic breakdown of the participants was 5 Hispanics/Latinos/as, 2 Asian/Pacific Islanders, 2 Whites/Caucasians, 1 African-American/Black. Their ages ranged from 19 to 64. Seven were traditional-aged students, age 19-21, one was in his late 20s, and two were older than 40 years old. All ten participants in the study had taken the quantitative survey and had indicated that they would be interested and available to join the focus group at Western Community College (WCC), which for this study was the pseudonym for the host campus.

Once space reservations were made at WCC, interested participants received an email stating the date, time, and location along with a sample Informed Consent Form, which was different from the Informed Consent given for the survey, as well as information about the focus group's format. Interested participants responded to the researcher's email invitation with a confirmation of their ability to attend at the specified time and location. In addition, the students provided their most up to date cell phone number in case there were unexpected changes to the location of the focus group the day of the event. The researcher also provide his cell phone number to the participants in case they had an unforeseen incident occur the day of the focus group. The focus group took place from 4pm to 7pm and a dinner was served to all who were in attendance.

The focus group began with the researcher sharing a brief personal introduction and an explanation of the format of the three-hour focus group. Each participant introduced herself or himself with name, major, school, and college in which they hoped to transfer after receiving their associate degree. The

researcher then showed Duckworth's TED Talk video (2013) on the subject of Grit. Scripted questions and answers followed, along with a discussion regarding if grit played a significant role in the students' community college journey.

Next, while the students ate dinner, Dweck's TED Talk video (2014) on the subject of Mindset was shown. This was followed by scripted questions and answers, along with discussion related to growth mindset versus fixed mindset in the students' academic journey. Then, the group took a 10-minute break.

Upon reconvening, Brown's TED Talk video (2010) on the subject of vulnerability was shown, followed by scripted questions and answers, then a discussion took place on the impact of vulnerability and shame as it relates to seeking help in an academic setting, as well as what role vulnerability has played in the journey of these thriving community college students.

The question and answer portions, as well as the open discussions were audio recorded, although the sound quality was extremely poor due to the loud air conditioning system in the room. In addition, the primary researcher and the proxy co-researcher took hand-written notes of the students' comments and thought-provoking exchanges. Once the focus group concluded, the primary researcher used coding (Creswell, 2013) to create themes for each of the three main topics discussed.

This process of creating categories through coding and then clustering to denote the significant data was extremely helpful in making sense of the students input through the discussion. Below, in order of the topics, were the salient discussion points made during the focus group by the thriving students.

Pseudonyms were used for all students involved in the focus group discussion. The questions asked in the focus group are listed in Appendix D. Not all questions were asked due to time restraints; however, the questions were emailed to the students immediately after the focus group and students were encouraged to answer any they felt were relevant to the discussion and their community college journey. Only one student responded with answers to the email questions.

Grit Focus Group Themes

Three themes emerged in the conversation on grit. They were determination, focus, and perseverance. Students' sentiments related to the themes are shared below.

Skill Set of Determination. While students watched Duckworth's six-minute video describing the essence of grit, their heads were nodding in agreement. They eagerly awaited their turn to speak once it concluded. Students were asked the questions, "Please share your thoughts about grit as it relates to your academic pursuits" and "What are some of the traits of grit that you see in yourself?" Autumn shared, "As a community college student, I feel that determination, courage, confidence, and being able to move forward attributed to my academic success" (Autumn, personal communication, August 22, 2018). Monica added, "Determination and a sense of relaxation; a bad test score or bad grade isn't the end of the world; however, I know I always try and do my best" (Monica, personal communication, August 22, 2018). This sense of not giving up speaks to Duckworth's (2016) grit message of perseverance and passion for long

term goals. This skill set of determination supports the findings from the quantitative survey in this study where students agreed that achieving goals and overcoming setbacks are key traits to a thriving community college student.

Several students chimed in that studying hard and having a high degree of self-determination were key to their overall academic success. They continued by sharing the underlying belief and internal dialogue of “I can do it” was constantly running through their heads when times were tough both academically and personally. Vanessa echoed these determination sentiments with a harsher and fiercer tone by stating:

I know that my hard work and determination were essential factors to my success. I also set a high standard for myself and feel quite incompetent when I do not reach the goals I set for myself. I also have never thought of not completing an assignment in my courses. I am determined to succeed!
(Vanessa, personal communication, August 22, 2018)

Darren helped to bridge the gap between two of the main themes related to grit by stating:

Focus and determination to complete my degree are crucial. I try to be the best I can be even if it's not as great as others, I still put forth my best efforts and it is a rewarding feeling when you achieve something you worked so hard for. (Darren, personal communication, August 22, 2018)

Darren's connection between determination and focus was shared by other students in the group and consistent with Duckworth (2007) findings.

“Whatever it takes, I want to improve!” is almost a refrain of all paragons of grit,

no matter their particular interest, and no matter how excellent they already are” (p. 91).

Skill Set of Focus. Several students expressed their concerns for their fellow peers who they assumed did not have grit. They did not feel they were better than their friends, but rather they had developed a laser-type focus when it came to their academics, which for some reason their friends had not acquired. These students seemed to have a long-term perspective on why they were working so hard in school. Jennifer stated:

The majority of my friends from high school have either failed their classes or are just not interested in furthering their education. I believe what separates me from them most is my understanding that without a good career, the opportunities one receives to live a wholesome life are quite limited, and oftentimes an education is necessary to have a good career. My friends are still naïve in this sense. (Jennifer, personal communication, August 22, 2018)

Vanessa agreed, and stated the following:

The reason for my academic success is because I set my mind on a goal and planned my academic path before I enrolled in my community college. I try to play with my limits and push myself to work harder and exceed my own expectations. I'm organized, detail oriented, determined, focused, and strategic. (Vanessa, personal communication, August 22, 2018)

While time management did not emerge as a major theme in this section, it did appear in the vulnerability section, all of the students in the focus group

agreed that it was a must to succeed academically in college. It was a skill set they said could be taught, but one had to be both focused and determined in order to implement the strategies of good time management. Selina, shared the keys to her success are "...my ability to stay focused through time management, even when the distractions seem more appealing" (Selina, personal communication, August 22, 2018). Joseph compared his academic pursuits to a full-time job suggesting that the same focus was needed. He stated:

My [full-time] job is my ability to focus on my academics. There would be no reason for me not to go to college even if I used the experience to figure out what was next. After high school, I got a whiff of motivation that turned into extreme determination. College is my game to win, and there aren't many downsides to it. I can't explain how my thought process came to be this way, but I know college is that [first] step into the real world.

(Joseph, personal communication, August 22, 2018)

This idea that Joseph brings up of treating his school-work like a full-time job is also echoed by Duckworth (2016). She states, "...hidden behind every effortless performance...are hours and hours of unrecorded, invisible-to-outsiders, challenging, effortful, mistake-ridden practice" (p. 138). Comparing academics to a full-time job can be an excellent analogy. It conjures up images of a blue collar worker punching the clock at a construction site day after day. The daily work does not amount to much on its own, but over the months and years, a beautiful cathedral emerges and the daily effort is not seen, but rather the culmination of many days of unrewarded effort. Only through determination, focus, and

perseverance does this great structure emerge. This leads to the next skill set: perseverance.

Skill Set of Perseverance. Duckworth (2016) describes grit as passion and perseverance towards long term goals. The students in the focus group supported this concept by advocating perseverance as one of the main skill sets needed to thrive and succeed within the community college system. When asked about the shared skills sets of thriving community college students, Vanessa shared, “Perseverance is definitely one of them. I know I have it because I want to give my kids a better future despite having an autoimmune disease” (Vanessa, personal communication, August 22, 2018). Joseph echoed Vanessa by stating, “Perseverance is the most important attribute a student can have to achieve academic success” (Joseph, personal communication, August 22, 2018).

While many of the students in the focus group worked either on or off campus to help offset the cost of tuition, fees, and books, Miguel shared a different perspective when it came to perseverance:

I've gotten access to a lot of academic support, which has allowed me to reach my potential. Because I don't have to worry about paying for college, I've been able to focus on my studies, persevere through difficulties, and love a good challenge. I find pleasure and enjoyment from learning, and I love it when I'm able to push myself further than I thought possible. (Miguel, personal communication, August 22, 2018)

In the closing moments of this discussion, Jennifer shared the following about her passion and faith in the pursuit of academic success:

The going always gets tough, but failures shouldn't obscure the goal. In fact, my failures help me make better decisions for success. I think a lot of students think failures in a class means they should give up, and given the option to drop a class, the emergency escape is often taken in moments when there may not be an emergency to begin with. Having faith in oneself is pretty important. (Jennifer, personal communication, August 22, 2018)

Duckworth (2016) states, "It was this combination of passion and perseverance that made high achievers special. In a word, they had grit" (p. 8). Determination, focus, and perseverance were high on most of the students' lists in the focus group as keys to their personal academic success. In addition, they all felt these attributes could be taught. They felt that grit was not something they were born with, but rather an attitude, or mindset, they chose to adopt on a daily basis.

Mindset Focus Group Themes

While grit was important, choosing to have a growth mindset was agreed upon by the student focus group to be equal to or greater than grit. The two major themes which rose from Dweck's video were goal-setting and having a positive attitude. Even if the students had an ounce of doubt about the possibility of being able to teach grit, there was absolutely no doubt that growth mindset could, and should be taught, at the community college level, if not before.

Two themes emerged in the discussion of growth mindset: goal-setting and positive attitude. Both themes tied to the findings in the quantitative study

section of the mixed methods study. Goal-setting was closely related to the grit findings of achieve goals, while positive attitude was closely related to the vulnerability findings of taking personal responsibility and not blaming others for one's circumstances. The students' comments below were quite insightful as they pondered growth mindset in their own academic journey in the community college setting.

Skill Set of Goal-Setting. The skill set of goal setting emerged as the top theme under the Mindset segment of the focus group. Students were in agreement that having a goal and pursuing it was a worthwhile strategy, which all students should add to their arsenal. Miguel wrote back to the principal researcher via email and stated, "Setting both short term and long term goals is important; however, they need to be WRITTEN DOWN (emphasis given by the student) and not just in your head. A goal without a plan is just a wish" (Miguel, Email Communication, August 23, 2018). Lois agreed by stating, "I believe that the common skill sets shared among students who are succeeding at the community college level are a growth mindset, hardworking, goal-setting, being kind and humble, being open to new ideas, and most of all strong social skills" (Lois, Personal Communication, August 22, 2018). Monica chimed in, "Perseverance, grit, and goal setting are at the top of my list" (Monica, Personal Communication, August 22, 2018).

The students collectively agreed that setting goals prior to the beginning of their academic semester was crucial, but they needed to adjust their goals on a regular basis throughout the term based on their professors' expectations as well

as their own time-management systems. Students used various methods of setting goals. Some wrote down daily to-do-lists, which included daily tasks or chores, as well as incremental steps leading to medium or long range goals. One example given was writing down everything from brushing teeth to writing three paragraphs towards an essay due at the end of the month. Other students used color coding systems and a planner to track their progress towards their academic goals. All of them shared that they had a written goal with a date in which they would graduate from their community college. They also had their written goals of the top three to five colleges they were hoping to get accepted to along with the application deadline dates for each college. When asked where they formally learned this skill set, most said they had never taken a specific class or read a book on goal setting. Rather, they had developed this skill from a high school teacher, mentor, or parent at various stages in their lives.

Skill Set of Positive Attitude. The second major theme which emerged in the Growth Mindset section of the discussion was the concept of maintaining a positive attitude. The notion that life is sometimes hard, but the one thing an individual can control when times get tough is his or her attitude. Choosing a positive attitude drew a parallel to two of the major findings from the quantitative study: the belief that one can significantly change his or her talent level over time (growth mindset), and the disagreement that a lot of things aren't made very well these days (vulnerability), which Brown (2006), as well as Tracy, Robins, and Tangney (2007) interpreted as taking personal responsibility and not blaming others for one's circumstances. Having a positive attitude was an underlying

disposition for the participants in the focus group.

This concept of having a positive attitude towards academic achievement was highly favored during the discussion. Nayely shared, “Hard work, grit, being disciplined while studying, having a positive attitude, and implementing a growth mindset are all attributes that I possess and are also found in those whom I choose to invite to be in my study group” (Nayely, Personal Communication, August 22, 2018). Vanessa added, “Students who succeed likely have a positive attitude, a belief that they can get better, and the ability to take responsibility for their errors” (Vanessa, Personal Communication, August 22, 2018). Having a positive attitude is strongly supported by both grit (Duckworth, 2007) and growth mindset (Dweck, 2006) theories.

Vulnerability Focus Group Themes

The final hour of the focus group was devoted to the discussion on vulnerability. At least a few students had previously seen either the grit video or the growth mindset video, but the vulnerability video had not been seen by any of the participants. As a researcher, I took into account that the TED Talk videos helped to provide additional insights and clarification of the concept of vulnerability. I am certain the video provided in-depth examples of the concept to a greater degree than the TOSCA-3S Assessment did on its own. After watching Brown’s (2010) 20-minute TED Talk video, the discussion grew even livelier. Students were on the edge of their seats and were engaging in a nervous laughter throughout the video, which symbolized to me that they were relating to Brown’s scenarios and antidotes. The three major themes which arose from this

conversation were: 1) Asking for Help, 2) Finding Mentors, and 3) Time Management.

Skill Set of Asking for Help. Seminal to success at any level is the ability to ask for help. However, students agreed that this is easier said than done. Students can often feel intimidated by their professors or the red-tape laced community college system in general. Students in the focus group expressed having, or knowing someone to have, diagnosed anxiety disorders. Asking for help might be one of the most difficult tasks for some students to undertake. However, once mastered, it can be one of the most liberating feelings for a student. Lois who shared earlier that she had a fear of looking foolish and thus never asked for help in high school stated, "It's okay to ask for help from professors, counselors, and so forth. Unlike high school, I now surround myself with people who have the answers. I believe I can do it and I keep the end goal in mind" (Lois, Personal Communication, August 22, 2018).

Nayely went on to share her experience with being vulnerable and asking for help:

Some students might believe that being academically successful has to do with natural-born intelligence, which I disagree with. Personally, I think if you commit to having a higher education you will be willing to sacrifice some things in order to gain others. Also, if you are struggling with a class or your career path, seeking help is the best thing you can do. I myself have utilized campus resources such as tutoring and counseling which have helped me succeed or even just simply asking lots of questions

during lectures or setting time aside to go to professor's office hours.

Overall, I had to stop being afraid to ask for help. That's what college is for. (Nayely, Personal Communication, August 22, 2018)

Autumn, who is a self-proclaimed introvert, confessed that she had to change her way of thinking and force herself to ask questions by putting herself in positions where it was more acceptable to approach faculty members when she needed help. She states:

Since I've worked as a tutor, I do know that people can change in how they approach learning and can begin to develop new skills in taking in information, so I don't think we are stuck at one level of intelligence. It's important to acknowledge that everyone processes information differently and many people just need to find a way that works for them, even if it may be way slower or faster than others'. I also think it is okay to be vulnerable and own your mistakes or slip-ups. It's okay not to do every single assignment or task 100% perfectly, as long as you're still doing the assignment and understanding why you're doing the work. By getting help from the professor or other students, re-reading your notes or textbook, not procrastinating, etc. you get better over time. It is okay to ask for help and it is okay not to understand something because that is part of why we're in school. (Autumn, Personal Communication, August 22, 2018)

Brown (2007) shares, "Those of us who were not introduced to that skill set when we were younger will have to work harder to acquire it as an adult" (p. 38).

Asking for help takes commitment, effort, and the courage to be vulnerable.

Students who can develop the understanding that vulnerability is a positive attribute will be more likely to seek help and get it.

Skill Set of Finding Mentors. Asking for help was certainly a key to the focus group participants' success, but they also acknowledged that it had to be help from the right people. Finding mentors who were accessible, available, and friendly was paramount to them moving forward academically.

Joseph's experience with finding a mentor changed everything for him. As a first-generation college student who was also an undocumented immigrant since age six, he struggled with knowing who he could trust when asking for help. Finding a mentor through the Academic Counseling Office proved to be life-changing for him. He proclaimed:

Being vulnerable helped me develop and grow academically, grit kept me on the right trail, but getting involved in a social network of friends who introduced me to a great counselor, which led me to gain access, support and mentorship that I never knew existed was crucial for my academic success. (Joseph, personal communication, August 22, 2018)

Joseph was not alone. Others in the group talked about meeting campus employees ranging from clerical staff members to vice presidents to campus police officers who took the time to guide them and mentor them along their journeys. Still others acknowledged success begets success; their academic success made connections for them, which they otherwise would not have had. Their academic success created additional social capital. Monica spoke about

her acceptance into the Honors Program as a key component to helping her find several mentors.

For the most part, [those in] the Honors Program [have] always been great at communication skills as we're more willing to speak to professors and higher ups in the institution. That allows us inside knowledge to the subjects we're studying and for those who hope to become professors, we are able to have clearer career and educational pathways due to the mentorship of staff in which we have unique relationships with. (Monica, personal communication, August 22, 2018)

This group strongly believed in the phrase, "It's not always what you know, but who you know," and they sought mentors to add to their social capital in an effort to breakdown the institutional barriers created by the community college system.

Skill Set of Time Management. Asking for help and finding mentors both fit within Brown's (2006) vulnerability concept. As discussed in the qualitative section on grit, time management was an important component in the discussion of thriving academically. While time management was not one of the top three skill sets in the grit section, it was mentioned often. However, in the vulnerability discussion, time management emerged as a major skill set brought up in the focus group.

Focus group participants felt strongly that time management was crucial to the success of thriving students and it took being vulnerable to admit their system of managing their time needed help. Time management is certainly a skill set which can be taught, but one must humble him or herself to learn how to do it.

The students generally shared about how they had to seek out others who seemed successful at managing their time in order to learn how to develop their own system that worked. Vanessa discussed what she thought were the keys to her academic success, “I think the two biggest factors I have and use that have helped me the most are time management and mentors. I set time for everything and stick to my schedule as best as I can” (Vanessa, personal communication, August 22, 2018).

Monica stated that she felt “active listening, time management, and great mentors” (Monica, personal communication, August 22, 2018) helped her become a more efficient and effective student. She also stated that by learning new time management skills, she was able to take on more responsibilities at home and at school without allowing those activities to overwhelm her.

Students agreed that vulnerability was central to their own personal journey at the community college level. Vulnerability was key to them having the courage to ask for help when they needed it and asking the right people, particularly their mentors, for help was crucial. Time management was also a key skill set of vulnerability. Students were convinced that one needs to be vulnerable enough to get assistance when devising his or her customized time management system. Other than the survey these students had completed three weeks before the focus group, they had not considered vulnerability as a skill set possessed by successful students. After the video and discussion, they had a different viewpoint.

The skill sets of asking for help, seeking mentors, and developing a time management system are embedded in vulnerability and align with Brown's (2008) core insight that human connection is our highest desire. Being able to build and forge meaningful, authentic relationships with other people is critical, and the most basic way to create this connection is through vulnerability.

Summary from the Qualitative Phase

The findings from the students in the qualitative focus group revealed that grit, growth mindset, and vulnerability were, without question, traits of thriving community college students. The students agreed that these traits could be taught; however, they did not know if all students would embrace them as eagerly as they had in their past. Certainly students with a growth mindset would be more adept to learning about them, but they were not sure if students with a fixed mindset would implement them immediately.

The statements by the students in the above commentary positively answered the first three research questions.

Research Question #1. What role, if any, does grit play in influencing or shaping community college students' success? Students felt strongly that grit played a significant role in shaping their academic success. They cited determination, focus, and perseverance as the key elements within grit, which have helped them achieve them stay on track towards graduation in a two-year period of time.

Research Question #2. What role, if any, does growth mindset play in influencing or shaping community college students' success? Students

overwhelmingly thought that growth mindset played a pivotal role in influencing and shaping their community college success. They felt that goal-setting and having a positive attitude were absolutely essential towards their success. They also unanimously agreed that these skill sets could and should be taught to students. They were torn whether or not they would be quickly embraced by those who had a fixed mindset towards academics.

Research Question #3. What role, if any, does vulnerability play in influencing or shaping community college students' success? Like the first two concepts, students felt strongly about the vulnerability being an essential component to shaping their academic success. Asking for help, finding the right mentors and developing a time management system which works personally for the student were the key skill sets which rose to the surface during the focus group discussion. Even though students were hearing the depths of the vulnerability concept for the first time during the focus group, they were in agreement that it was a crucial element of their own community college success and felt strongly that it, along with grit and growth mindset, should be shared with their peers.

These qualitative findings were much different than the findings to the same questions in the quantitative portion of this mixed methods study. The final two research questions were answered as part of the qualitative study and corroborated with the rest of the qualitative findings. This section delves into the answers of those questions.

Research Question #4. Which factors do thriving community college students attribute to their own success? Thriving community college students in the focus group attributed grit, growth mindset and vulnerability to their own success. Students were very much in favor of the concepts that were brought up in the focus group and felt they were very applicable to aiding students along their community college journey. In order of importance, the group rated them Growth Mindset, Grit, and Vulnerability, but stressed that all three were very important. The group was in consensus that a person with a fixed mindset could do well academically, but when times get tough it would be much more difficult for that person to persevere than someone with a growth mindset. Joseph shared, “talent and intelligence can only get you so far. At some point you have to roll up your sleeves and do what needs to be done despite the odds” (Joseph, personal communication, August 22, 2018). Interesting to this study, none of the students attributed that they had received college credits while in high school, which would have helped them move through the system quicker. This is important to note because students could not rely on their high school success to move through the community college system in a more timely fashion. They were on track to graduate in two years as a result of the skills sets they developed over the years rather than on academic units they acquired prior to arriving to college.

Research Question #5. What are the shared traits of thriving community college students? The shared traits of thriving community college student emerged from the focus group themes collected as part of the coding process

and to a lesser extent from the open-ended questions at the end of the quantitative survey. These themes aided in answering the final research question, which was, what are the shared traits of thriving community college students? The 10-member focus group endorsed the following eight items as their shared traits:

1. Determination (Grit)
2. Focus (Grit)
3. Perseverance (Grit)
4. Goal-Setting (Growth Mindset)
5. Positive Attitude (Growth Mindset)
6. Asking for Help (Vulnerability)
7. Finding Mentors (Vulnerability)
8. Time Management (Vulnerability)

While students agreed that these eight skills sets were the shared traits of thriving community college students, they acknowledged that this list is not exhaustive. They decided that this list did provide a strong foundation for incoming students who desire to be thriving community college students as they matriculate through the system.

Mixed Methods Discussion

The results from this sequential explanatory mixed methods study produced some diametrically opposed findings. The quantitative results revealed a non-significant correlation between the three overarching variables (grit, growth mindset, and vulnerability) and the students transferring to a four-year college in

the next 3-10 months. While there were some sub-sets of each of the three variables which emerged from the quantitative mixed methods findings, the overall results were non-significant. However, the qualitative findings revealed results which point directly to grit, growth mindset, and vulnerability as key skill sets possessed by thriving community college students. Illustrated in Table 20 are the sub-set findings from the survey and the overarching themes which emerged via each of the variables.

Table 20

Mixed Methods Findings

Quantitative Findings from Survey	Qualitative Findings from Focus Group
Overcoming Setbacks and Achieving Goals (Grit)	Determination, Focus, Perseverance (Grit)
The belief that one can significantly change his or her talent level over time (Growth Mindset)	Goal-Setting and Positive Attitude (Growth Mindset)
Taking personal responsibility while not blaming others for one's circumstances (Vulnerability)	Asking for Help, Finding Mentors, and Time Management (Vulnerability)

My interpretation of these findings are that grit, growth mindset, and vulnerability are beneficial skills for community college student to possess. However, even more crucial for their success are the 12-elements embedded within the three main variables. For example, overcoming obstacles, achieving goals, believing that one can significantly change his or her talent level over time, as well as taking personal responsibility and not blaming others for one's circumstances are strong foundational structures, which a new community college student could build upon in her or his efforts to thrive in a post-secondary environment. These 12 underlying elements of grit, growth mindset, and vulnerability, four from the quantitative study and eight from the qualitative study, are what community college leaders should spend a vast majority of their resources exploring and teaching. While I will concede to Golden (2016) and Stokas (2015) that grit, and to some extent growth mindset, and vulnerability, in and of themselves were not statistically significant skill sets, quantitatively speaking, in helping students thrive; nevertheless, these subsequent elements, which have now emerged through the data, might have an even more direct impact in helping administrators and professors develop specific programs and curriculum to help students thrive and succeed at the community college level and beyond.

While qualitative findings contradict the quantitative findings, students in the focus group were adamant that grit, growth mindset, and vulnerability were significant skills sets, which they all possessed. A plethora of conclusions as to why this is the case can be drawn. It is possible that students in the focus group

felt passionate about grit, growth mindset, and vulnerability because of the more personable setting of the focus group. It could be because they viewed three extremely impactful TED Talk videos which were shown prior to the discussion. It is possible that it was a combination of both, or other extenuating circumstances. With that said, the students believed these three variables were the foundation for their success. They elaborated on them by identifying eight additional themes, which were embedded within the three variables. Students spoke at length about how these skills were critical for their own academic success and endorsed the concept of disseminating these skill sets to their fellow peers.

Commonalities between the Quantitative and Qualitative Findings and Summary of Results

While there were contradictory findings between the two methods employed in this research study, it is more important to me to concentrate on the commonalities. Slonim-Nevo & Nevo (2009) suggest contradictions are merely the outcome of the fact that social reality is complex and can at times be conflicting. Let contradictions stand, there is no push to determine which finding is more correct than the other. The finding can be interpreted in context and representing different viewpoints on the same phenomenon. Between the two methods there are 12-elements which have been identified. Of those twelve, two are very similar: achieving goals and goal-setting. While achieving goals focuses on the result and goal-setting focuses on the process, both are essential to moving towards academic success in the classroom and ultimately to gaining an associate degree.

Another set of commonalities I would categorize as a state of mind: determination, focus, perseverance, positive attitude, believing that one can significantly change his or her talent level over time, and taking personal responsibility while not blaming others. While these skill sets are all part of the grit and growth mindset, with some overlap in vulnerability theory, they all can be seen as daily choices one makes to see life, and the world, from an optimistic standpoint. Duckworth's (2007) work showcases that these skills sets are successfully taught in the world of athletics, some cutting-edge corporations, and non-profits, as well as in organizations such as the Army Cadets or Navy Seals. These concepts have deep roots in the high achievement and success literature (Cox, 1926; Galton, 1869); however, both Duckworth (2007) and Dweck (2006) have been responsible for their resurgence in the field of education over the past 12 years.

Finally, overcoming setbacks, asking for help, finding a mentor, and time management appear to be skills which can be taught through workshops, seminars, a short TED Talks video, or encouraged from peer to peer. Overcoming setbacks might be the most difficult skill to teach because the setbacks many students face are traumatic and extremely painful to go through even with a strong support system. The majority of thriving students surveyed (51.8%) in this study were first-generation college students and seldom have an individual in their life to guide them through difficult situations while juggling the rigors of a full college course load. From Dweck (2006) and Brown's (2006) work, learning to overcome setbacks is done alongside a great mentor or friend, as well

as by asking for help from professional mental health counselors. I see these skills sets as functional tools all community college students could use daily to succeed both in and out of the classroom.

In this study, vulnerable community college students would be characterized as those who seek out help; they are willing to lay down their pride, fear, or whatever is holding them back to succeed at the college level. For example, students who are vulnerable will ask questions during class or make appointments to see professors during office hours. Brown's (2006) work proposes that vulnerable individuals do not stop at the first "no" they get. One student, not related to this study who I will call Cameron, gave me permission to share his story of asking for help. He shared that he was repeatedly ignored by the person working the Financial Aid counter. Rather than quit, he persisted until he made an appointment to see the Director of Student Financial Services in order to get his questions answered (Cameron, personal communication, Sept. 7, 2018). Students such as Cameron have discovered ways to build upon their own social capital by being gritty, resilient, and resourceful. They are relentless in their pursuit of their educational goals, while at the same time maintaining a humbleness to know they do not have all the answers, but have the belief that someone on the campus has them and is willing to share. To paraphrase Brown's (2010) TED Talk video, vulnerability sounds like truth and feels like courage. Students who utilize the above skill sets are vulnerable and courageous in the most positive way.

CHAPTER FIVE

RECOMMENDATIONS AND CONCLUSIONS

Introduction

Included in Chapter Five is a description of the major interpretations, conclusions and recommendations of the current study given results discussed in Chapter Four. The results were compared for consistency with previous literature, and conclusions drawn based on the current study's findings. This sequential explanatory mixed-method research study was designed to provide a comprehensive understanding of thriving community college students and answer the question does grit, growth mindset, and vulnerability play a role in the academic success of thriving community college students. For this study, success was defined as being on track to graduate or transfer from a community college to a four-year institution in a two-year period of time.

This final chapter draws conclusions and implications by comparing the findings from the survey results and focus group session. By using the results from this mixed methods study, a series of recommendations have been drawn which could have positive implications on the retention and graduation rates at the community college level. While no guarantees can be made, it is likely that the community colleges which implement the recommendations will see positive increases in students matriculating from their campuses to four-year schools at higher rates than previously realized.

This study asked if thriving community college students would positively attribute the skill sets of grit, growth mindset, and vulnerability to their overall academic success. Overall, the quantitative data did not substantiate these claims; conversely, the qualitative data overwhelmingly indicated these skill sets were indeed positively influential in their academic journeys. The following research questions guided this study:

1. What role, if any, does grit play in influencing or shaping community college students' success?
2. What role, if any, does growth mindset play in influencing or shaping community college students' success?
3. What role, if any, does vulnerability play in influencing or shaping community college students' success?
4. Which factors do thriving community college students attribute to their own success?
5. What are the shared skill sets of thriving community college students?

The mixed methods findings were widely divergent regarding the assumptions that grit, growth mindset and vulnerability were key attributes in the academic success of thriving community college students. In general, thriving students thought others could benefit from the knowledge of these traits, even though there was discrepancy between the quantitative survey data and the qualitative focus group statements.

Summary of Key Results

In general, there were three key results which stood out from the findings of this mixed methods study. There were non-significant correlations between thriving students transferring to a four-year college in the next 3 -10 months and grit, growth mindset, and vulnerability. The survey results revealed, as a whole, that the three variables of grit, growth mindset, and vulnerability did not influence or shape community college students' success, where success in this study was defined as being on track to graduate or transfer to a four-year college after two years at a community college.

The second result was that there were elements within grit, growth mindset, and vulnerability in the quantitative survey which did reveal significance among thriving community college students in their journey towards success. The four key elements identified in the quantitative survey were 1) overcoming setbacks, 2) achieving goals, 3) the belief that one can significantly change his or her talent level over time, and 4) taking personal responsibility while not blaming others for one's circumstances. These four elements were statistically significant and aligned with the literature (Duckworth, 2007; Dweck 2006; Brown, 2006), as well as the sentiments of the students in the focus group.

The final result in this study were derived from the focus group discussions. The students affirmed that grit, growth mindset, and vulnerability were all skill sets they possessed. They also believed these were skills sets, which could be learned by their peers. If their peers had a growth mindset and were willing to be teachable, then the learning curve would be quicker. It was

also agreed upon by the focus group that grit, growth mindset, and vulnerability were crucial for the achievement of academic success within the community college setting.

Throughout the course of the focus group, eight themes were created and nestled under the three main headings of grit, growth mindset and vulnerability. The themes were: Determination, Focus, Perseverance, Goal-Setting, Positive Attitude, Asking for Help, Finding Mentors, and Time Management. Participants in the focus group believed these eight themes were essential in their own success journeys at the community college level and could greatly benefit other students.

The first and third findings are diametrically opposed. One possible explanation for this major difference is the small sample size of both the survey and the focus group. These two limitations may have drastically impacted the outcome of the data. With only 303 usable surveys, it is difficult to make sweeping generalities about the findings. In addition to the small sample size of the survey, the focus group was also small. Perhaps future research will amass more participants for both segments of the study.

Another reason for the contradictions in the findings could be related to the lack of information about the three main variables given to the students taking the survey. Survey participants were not given in-depth definitions of the terms grit, growth mindset, or vulnerability, nor were they exposed to the TED Talk videos or information about the authors' research. As a result, their preconceived notions might have influenced how they responded to the questionnaire. Equally,

the students in the focus group might have been given too much information regarding these topics, thus swaying their perspectives to be strongly in favor of grit, growth mindset and vulnerability. After hearing an introduction on why the study was being conducted, then watching compelling videos on the topics, the participants may have felt obligated to give overindulgent answers highlighting the strengths of each category. The focus group students also had unintentional social pressure. Once one student agreed with an aspect of the research, others tended to agree and support the first one who commented. As mentioned earlier, the TED Talk video may have impacted their viewpoint of the skills sets which shaped their academic success. Regardless of the various findings, future research will have the benefit of learning from this study and building upon it for clearer results.

Literature which Agrees with the Findings

The skills sets derived from this study revealed strong similarities with the theories of grit, growth mindset, and vulnerability. Duckworth, et al. (2007) defined grit as “perseverance and passion for long-term goals. Grit entails working strenuously toward challenges, maintaining effort and interest over years despite failure, adversity, and plateaus in progress” (pp. 1087 - 1088). Some of the related attributes mentioned by the students in both the quantitative and qualitative sections of this mixed methods study, which aligned with grit theory, were determination, focus, goal-setting, overcoming setbacks, perseverance, positive attitude, and taking personal responsibility while not blaming others. Duckworth (2016) discovered adults who had successfully earned degrees from

two-year colleges scored marginally higher on the grit scale than graduates of four-year colleges. She stated, “Those who defy the odds are especially gritty” (p. 11). Being part of the 2.83% who graduate in two years in the California Community College system is certainly defying the odds and truly gritty.

This study found that thriving students, specifically first-generation, were adamant about asking for help, finding mentors, and developing their time management skills. This result was consistent with Perez and McDonough, (2008) who found first-generation students were dependent on friends, community members, counselors or other administrators, to learn about programs, such as the Pell Grant, tutoring services, and study groups. The findings by Richardson and Skinner (1992), as well as Thayer (2000), regarding first-generation students being less academically prepared due to limited access to information about the college experience was supported by the focus group. These thriving students suggested that if first-generation students learned the skills sets mentioned in the findings above, they have the potential to level the playing field for themselves. Dweck (2006) asserts, potential is “someone’s capacity to develop their skills with effort over time” (pp. 29-30). While the K-12 system must find ways to improve their dissemination of information about higher education opportunities, community colleges leaders have a responsibility to develop extensive programs to aid students in developing these skill sets whether they arrive on campus with a basic foundation for these skill sets or not. Based on the age range in the focus group, it was agreed upon that it is never too late to learn these skill sets.

Literature which Disagrees with the Findings

While there was no disagreement in the literature regarding growth mindset and vulnerability, there were a few (Gonzales, 2016; Stokas; 2015; Yosso, 2005) who disagreed with the theory of grit (2007) and Duckworth's findings based on the way it has been generally applied in schools. This study found many benefits to grit in the literature, when appropriately explained to students, and certainly to the participants in the focus group agreed. However, Gonzales (2016) asserted that the explanation was not good enough. In fact, she summarized that there needs to be a sense of organizational responsibility to unveil hidden histories grounded in the experience and knowledge of marginalized communities, and she is completely right. The goal of this study was not to point out the many flaws in the community college system, especially in California, but rather to identify ways where all students could help themselves, while policymakers figure out longer term solutions. This study does not suggest that community colleges themselves are innocent in the low graduation and transfer rates. Rather, the underlying goal of this study was to find skill sets for students to utilize in an effort to navigate the incredible bureaucracy created by the educational system and the lawmakers.

Golden (2015) and Stokas (2015) argued that educators should push back on the idea that grit should be institutionalized due to the fact that there are so many other systemic barriers prohibiting students from graduating and transferring. While I will agree that there are a plethora of barriers hindering students from moving forward with their academic pursuits, educating them about

grit will only help them maneuver past those barriers. Learning about grit, as well as growth mindset and vulnerability, will help students see opportunities for themselves. This will help them to avoid those barriers and move in a direction which will be more productive for their academic advancement.

While there are disagreements in the literature about the relevancy of grit, this should not deter social scientists and educators from conducting more research on this topic. At this point, the role grit plays in the discussion is unclear. If grit has a substantial role in the field of higher education we should pursue it, but dismissing it before more research has been conducted would be foolish at best and unethical at worst.

Recommendations for Future Research

There are three recommendations I would make for future research, if time restraints and funding were not an issue. First, working with a larger sample size would be ideal for the survey portion of this mixed methods study. The survey was open for two weeks during the summer. Students rarely check their student emails during the school year. Expecting them to check it over the summer was near impossible. The reason the survey went out over the summer rather than during the school year was an unexpected delay in the IRB process, which set the research schedule back three months.

Another way to do this would be to obtain data from a larger multi-college district or from the entire California Community College system. Gaining data from a three campus district was very important, but the sample size for this study was not ideal; however, there are larger districts in the state of California,

which might have generated a very different outcome. The challenge of getting through the IRB process was difficult enough with only three campuses, but if time was not a factor it would be worth the wait to seek out an eight or nine campus district or even to work across multiply districts to gain a more robust sample size.

The second recommendation would entail doing one-on-one interviews with students after they had completed the focus groups. Time is limited during a focus group and working towards getting through all of the questions so everyone feels their voices are heard can be challenging. If an additional one-on-one interview with each student were added once the focus group data was coded and themed, a deeper understanding of the thought-process of thriving students might have been acquired. A serendipity of doing this would be the elimination of peer pressure in the responses. Students may feel freer to go against the prevailing dialogue and speak their personal truth rather than add on to the comments of the first person to answer in the focus group.

Finally, without the constraints of time and funding, I would recommend future studies seek out the perspectives and experiences of alumni of community college students who have gone on to four-year schools. These former thriving students could have valuable information about what worked and what did not work at their community colleges. They could share stories of peers who should have graduated in two years, but did not, as well as their own personal stories of how their growth mindset and grit, or lack thereof, helped them to create an environment where they could be vulnerable enough to seek help, overcome

obstacles or achieve their desired goals. The challenge would be to track down those alumni once they went on to a four-year school. Nevertheless, the data which could be garnered from their experience would be invaluable.

Recommendations for Policy Makers

The findings of this study suggest institutional implementation of the twelve elements identified in this mixed methods study of grit, growth mindset, and vulnerability into the fabric of each of the 114 California Community Colleges. This might mean an edict from the system-wide Chancellor's Office, whereby campuses weave educational opportunities to learn these skill set into the new Guided Pathways programs being implemented in all of the community colleges.

New funding models should be looked upon as the state seeks to increase its open access policies. Among the initiatives should be to train faculty, administrators, staff, as well as student leaders on the intricacies of grit, growth mindset, and vulnerability to help students succeed both in and out of the classroom. With the education of these skill sets, more emphasis should be placed on supplemental instruction, peer tutoring, and mentoring. Increased funding should be placed on expanding community colleges' Transfer Centers, as well as additional funding for faculty members who embrace the teaching of these skills sets and incorporate them into their syllabi. Staffing levels and programs should increase to better serve those students looking to go on to four-year institutions.

Given what I have found from this research, I believe there needs to be substantial changes made at the California Community College Chancellor's

Office level to systemically structure the onboarding process for students who enter college seeking a degree or hoping to transfer to a four-year college. Certainly, there would be exceptions for students who are seeking Career and Technical Education or those who are wanting to obtain a certificate. However, for degree-seekers and transfer hopefuls, mandatory new student orientation should be implemented state-wide. During these orientations sessions, students should be exposed to five major areas:

- 1) An understanding of how to register online for classes, as well as who to ask for help when they have troubles in the future;
- 2) An introduction to their academic counselor, who could serve as a potential professional mentor, and someone who can help them understand the power of having a strong Student Educational Plan (SEP);
- 3) Campus Tours by peer mentors, who can discuss their personal time management systems for college, as well as antidotes for overcoming obstacles and setting academic and personal goals. The tour would also include classrooms for their first academic term, tutoring centers, writing labs, the library, and other physical resources, which showcase the many opportunities students can utilize to succeed academically;
- 4) Opportunities to meet fellow peers, potential mentors, and faculty members through an activities fair or club fair. Additional

- funding for faculty members should be investigated to encourage greater participation in mentoring students; and
- 5) Exposure to the concepts of grit, growth mindset, and vulnerability theories, along with the 12-key elements, through in-person orientations, keynote speakers, online video series, and zero cost social media campaigns.

Students deserve to know the rules of the game in which they are playing. By providing them with a mandatory orientation program, which outlines the basics of how to succeed in college and beyond, students will have a better chance at success. When community colleges frontload the knowledge to students about grit, growth mindset, and vulnerability, they better equip these students with the resources needed to succeed. In addition, these cannot be taught once and forgotten. These principles need to be woven into all aspects of campus life if college expect students to embrace and utilize these skill sets.

Recommendations for Practitioners

Based on the findings of this study, local practitioners, such as Vice Presidents of Student Affairs, Deans of Student Life, Program Coordinators, and other such professionals can incorporate three projects to assist with new community college students graduating and transferring within a two-year period of time at higher rates. First, share this information with all academic counselors in an effort to disseminate this information to students. Counselors are encouraged to help students set up a personalized Student Educational Plan (SEP). As a result, this time spent one-on-one with students can be influential in

helping students understand the key skill sets needed to succeed at the community college level and beyond. This can also be shared with Student Success Coaches, Educational Advisors, Admissions Officers, and any other professional or paraprofessional staff members who come in contact regularly with students early in their academic career.

Second, including this information in new student orientation, either online or in-person, would be extremely beneficial. Welcome Day events are also avenues for disseminating this information. Bringing in keynote speakers to discuss topics such as goal-setting, time management, or strategies to ask for help would be life-changing for many students. Showing the grit, growth mindset, or vulnerability TED Talk videos and having small group discussions about them afterward would help students find practical uses for these skills. Also, having current thriving students share some of the obstacles and setbacks they have overcome to make it to college would send the message to new students that they are not alone and that asking for help and finding mentors is crucial to navigate college and life.

Lastly, local practitioners can conduct their own internal, yet less-formal, focus groups to find out other areas in which thriving community college students are achieving success. Knowledge of ones' own students is critical to developing programs and workshops which have a positive impact on student success at the local level. I applaud the countless practitioners who have already incorporated similar strategies into their orientations program and on-going workshop series. One goal I have as a result of these findings is to produce a series of five-minute

videos of each of the 12-key elements expressed by the thriving community college students in the focus group. These videos will be made available at no cost to practitioners. They will be introductory videos to usher in the theme, then the practitioner can segue into a workshop on the same topic. The more information we share as a community, the stronger we will become. The real winners in all of this will be the students who take advantage of the knowledge and implement these principles.

Summary

Currently, only 2.83% of California community college students graduate from these two-year institutions in a two-year period of time. In addition, less than 40% are graduating in a six-year period of time. The focus of this study was to find commonalities between the 2.83% of students who are thriving and sought to learn if thriving students' experiences centered on possessing the skill sets of grit (Duckworth, 2007), growth mindset (Dweck, 2006), and vulnerability (Brown, 2006).

Many community college students are first-generation, students-of-color, and are in a low socio-economic status. These are demographics which community colleges do not have any control over, but do have an obligation and duty to serve and educate. Gonzales (2015) and Yosso (2005) ascertain that higher education institutions have done a poor job aiding first-generation students in receiving the help they need regarding academic and social preparation for college. The purpose of this mixed methods study was to identify skill sets and factors which influence thriving community college student success.

Ideally, these skill sets could then be institutionalized and taught to all students who wish to successfully move forward with their educational journey.

This study used a sequential explanatory mixed methods approach to identify skill sets obtained by thriving community college students who were on track to graduate and transfer in a two-year period of time. First, a 58-question quantitative survey was sent to thriving community college students in a three-college district in southern California. For this study, thriving students were defined as first-time college students in the fall of 2017, who had a GPA equal to or greater than 3.0 on a 4.0 scale, and who had obtained a minimum of 30 units towards graduation and/or transferring. The survey combined questions on the topic of grit, growth mindset, and vulnerability netting 303 usable surveys. Three weeks after the online survey closed, 10 students participated in a 3-hour focus group based on the same topics. The goal for the focus group was to better understand from the thriving students' perspective the primary skill sets they possess for academic success. In addition, the participants were asked if these skills could be learned by other students.

The results from the quantitative survey showed that grit, growth mindset, and vulnerability were non-significant skill sets in the students' journey towards graduation and transferring to a four-year school. Conversely, the focus group revealed that all three were major factors in contributing to the academic success of the participants. While the quantitative study was not statistically significant, there were four key elements within the survey which did reveal significance. These key elements aligned with the findings of the qualitative focus group.

The results were interpreted to mean more research on grit, growth mindset, and vulnerability needs to be done at the community college level. However, it is clear that there are key elements embedded within each of the three main variables which have tremendous significance in aiding students towards a more timely graduation or transfer date. The 12-key elements of thriving community college students, which combined the findings from the surveys and the focus group are listed below:

1. Overcoming setbacks
2. Achieving goals
3. The belief that one can significantly change his or her talent level over time
4. Taking personal responsibility and not blaming others for one's circumstances
5. Determination
6. Focus
7. Perseverance
8. Goal setting
9. Positive attitude
10. Asking for help
11. Finding mentors
12. Time management

In identifying these skill sets, this study can add to the growing body of literature on community college success. In addition, this study furthers the research done by Duckworth (2007), Dweck (2006), and Brown (2006).

Conclusions and Implications

Working on a community college campus is an honor and a privilege. The students who attend our campuses are a wonderful microcosm of the country in which we live. When we put aside our differences, we are left with a cohort of students who want a better future for themselves and their families. They are eager to learn, but do not always know the right questions to ask or whom to ask those questions. As a campus administrator, I hold myself responsible for continuously asking the question, “How do we make it better for our students?” I did not say, “How do we make it easier for them?” College is tough and students will struggle. Nevertheless, just like lifting weights, the resistance makes us stronger. The resistance cannot continue to be the institutional barriers which have been assembled within our bureaucratic campuses. Those need to be dismantled, but that will not happen overnight. In the meantime, I believe by educating students on the concepts of grit, growth mindset, and vulnerability, along with the 12-key elements discovered in this study, students can overcome obstacles, develop strength through resistance, and achieve their goal of graduating and/or transferring to a four-year school in a shorter amount of time than they would have without these concepts.

In this study, vulnerable community college students would be characterized as those who seek help; they are willing to lay down their pride,

fear, and other limiting self-beliefs. Students who are vulnerable will ask questions during class or make appointments to see professors during office hours. Vulnerable students do not stop at the first “no” they receive from the person working at the Financial Aid counter. Rather they are gritty and persist until they make an appointment to see the Director of Financial Aid in order to get their desired answer. These students have a growth mindset and have discovered ways to build upon their own social capital by becoming resilient, and resourceful. They are relentless in their pursuit of their educational goals, while at the same time being humble. They know they do not have all the answers, but have the belief that someone on the campus has them and is willing to share.

The implications of helping students graduate in a more timely fashion or transfer to a four-year college after only two-years at our institutions is life changing. Life changing for the student, but also for the community in which she or he will return. Life changing for their children who will have a parent to guide them through college one day because now that child is a second generation college student and has a mentor to lead them through the bureaucratic red tape. Life changing for the communities where these students live, so the child down the street has someone to point to when they are asked, “Do you know any college graduates?” Helping students develop the skills of grit, having a growth mindset, and being vulnerable is life changing work and has the potential for long-lasting and impactful implications.

As educators, we must do more to help our students navigate the difficult red tape of the community college system. We must dig deep to find solutions to

support the next generation of students who enter our doors. We must be vulnerable enough to ask students for help in developing answers to the problems in which they encounter on a daily basis. We must develop a growth mindset and be open to new solutions for old problems. We must get grittier about advocating for all of our students, while at the same time helping them get grittier about advocating for themselves. We must work collaboratively to make the 21st Century one where all community college students have the opportunity to thrive.

APPENDIX A
EXAMPLE OF GRIT SCALE

12-Item Grit Scale

Objective: To learn about the concept of grit and how it applies to academic success

Respond to the following 12 items. Be honest – there are no right or wrong answers.

1. I have overcome setbacks to conquer an important challenge.
 Very much like me
 Mostly like me
 Somewhat like me
 Not much like me
 Not like me at all
2. New ideas and projects sometimes distract me from previous ones.*
 Very much like me
 Mostly like me
 Somewhat like me
 Not much like me
 Not like me at all
3. My interests change from year to year.*
 Very much like me
 Mostly like me
 Somewhat like me
 Not much like me
 Not like me at all
4. Setbacks do not discourage me.
 Very much like me
 Mostly like me
 Somewhat like me
 Not much like me
 Not like me at all
5. I have been obsessed with a certain idea or project for a short time but later lost interest.*
 Very much like me
 Mostly like me
 Somewhat like me
 Not much like me
 Not like me at all
6. I am a hard worker.
 Very much like me
 Mostly like me
 Somewhat like me
 Not much like me
 Not like me at all
7. I often set a goal but later choose to pursue a different one.*
 Very much like me
 Mostly like me
 Somewhat like me
 Not much like me
 Not like me at all
8. I have difficulty maintaining my focus on projects that take more than a few months to complete.*
 Very much like me
 Mostly like me
 Somewhat like me
 Not much like me
 Not like me at all
9. I finish what I begin.
 Very much like me
 Mostly like me
 Somewhat like me
 Not much like me
 Not like me at all
10. I have achieved a goal that took years of work.
 Very much like me
 Mostly like me
 Somewhat like me
 Not much like me
 Not like me at all
11. I become interested in new pursuits every few months.*
 Very much like me
 Mostly like me
 Somewhat like me
 Not much like me
 Not like me at all
12. I am diligent.
 Very much like me
 Mostly like me
 Somewhat like me
 Not much like me
 Not like me at all

Grit Scale Scoring

Step 1: For questions **1, 4, 6, 9, 10,** and **12,** assign the following points:

- 5 = Very much like me
- 4 = Mostly like me
- 3 = Somewhat like me
- 2 = Not much like me
- 1 = Not like me at all

Step 2: For questions **2, 3, 5, 7, 8,** and **11,** assign the following points:

- 1 = Very much like me
- 2 = Mostly like me
- 3 = Somewhat like me
- 4 = Not much like me
- 5 = Not like me at all

Step 3: Add up all the points and divide by 12.

Grit Score: _____

What does my score mean?

- The maximum score on this scale is 5 for extremely gritty.
- The lowest score on this scale is 1 for not at all gritty.

What is Grit?

- Grit is defined as perseverance and passion for long-term goals
- It entails working strenuously toward challenges, maintaining effort and interest over years despite failure, adversity, and plateaus in progress
- Grit is unrelated to talent and can be built through a growth mindset

Duckworth, A.L., Peterson, C., Matthews, M.D., & Kelly, D.R. (2007). Grit:

Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology*, 9, 1087-1101.

APPENDIX B
EXAMPLE OF MINDSET QUIZ AND SCORING SHEET

Mindset Quiz

Place a check in the column that identifies the extent to which you agree or disagree with the statement.

Question	Strongly Agree	Agree	Mostly Agree	Mostly Disagree	Disagree	Strongly Disagree	My Score
1. You have a certain amount of intelligence, and you can't really do much to change it	0	1	2	3	4	5	
2. Your intelligence is something about you that you can't change very much	0	1	2	3	4	5	
3. No matter who you are, you can significantly change your intelligence level	5	4	3	2	1	0	
4. To be honest, you can't really change how intelligent you are	0	1	2	3	4	5	
5. You can always substantially change how intelligent you are	5	4	3	2	1	0	
6. You can learn new things, but you can't really change your basic intelligence	0	1	2	3	4	5	
7. No matter how much intelligence you have, you can always change it quite a bit	5	4	3	2	1	0	

8. You can change even your basic intelligence level considerably	5	4	3	2	1	0	
9. You have a certain amount of talent, and you can't really do much to change it	0	1	2	3	4	5	
10. Your talent in an area is something about you that you can't change very much	0	1	2	3	4	5	
11. No matter who you are, you can significantly change your level of talent	5	4	3	2	1	0	
12. To be honest, you can't really change how much talent you have	0	1	2	3	4	5	
13. You can always substantially change how much talent you have	5	4	3	2	1	0	
14. You can learn new things, but you can't really change your basic level of talent	0	1	2	3	4	5	
15. No matter how much talent you have, you can always change it quite a bit	5	4	3	2	1	0	
16. You can change	5	4	3	2	1	0	

even your basic level of talent considerably							
Total Score							

Scoring:

<u>Categorization</u>	<u>Points Value</u>
Strong Growth Mindset	61-80 points
Growth Mindset with some Fixed Ideas	41-60 points
Fixed Mindset with some Growth Ideas	21-40 points
Strong Fixed Mindset	0-20 points

Adapted from <http://www.classroom20.com/forum/topics/motivating-students-with>

APPENDIX C
TEST OF SELF-CONSCIOUS AFFECT, VERSION 3

Below are situations that people are likely to encounter in day-to-day life, followed by several common reactions to those situations. As you read each scenario, try to imagine yourself in that situation.

Then indicate how likely you would be to react in each of the ways described. We ask you to rate all responses because people may feel or react more than one way to the same situation, or they may react different ways at different times.

For example:

- A. You wake up early one Saturday morning. It is cold and rainy outside.
- a. You would telephone a friend to catch up on news.

Not Likely	1	2	3	4	5	Very Likely
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 - b. You would take the extra time to read the paper.

Not Likely	1	2	3	4	5	Very Likely
-------------------	----------	----------	----------	----------	----------	--------------------
 - c. You would feel disappointed that it's raining

Not Likely	1	2	3	4	5	Very Likely
-------------------	----------	----------	----------	----------	----------	--------------------
 - d. You would wonder why you woke up so early.

Not Likely	1	2	3	4	5	Very Likely
-------------------	----------	----------	----------	----------	----------	--------------------

In the above example, I've rated ALL of the answers by bolding a number. I bolded a "1" for answer (a) because I wouldn't want to wake up a friend very early on a Saturday morning -- so it's not at all likely that I would do that. I bolded a "5" for answer (b) because I almost always read the paper if I have time in the morning (very likely). I bolded a "3" for answer (c) because for me it's about half and half. Sometimes I would be disappointed about the rain and sometimes I wouldn't -- it would depend on what I had planned. And I bolded a "4" for answer (d) because I would probably wonder why I had awakened so early. Feel free to circle your choices.

Please do not skip any items -- rate all responses.

1. You make plans to meet a friend for lunch. At five o'clock, you realize you have stood your friend up.

1. You would think: "I'm inconsiderate."

Not Likely	1	2	3	4	5	Very Likely
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2. You'd think you should make it up to your friend as soon as possible.

Not Likely	1	2	3	4	5	Very Likely
-------------------	----------	----------	----------	----------	----------	--------------------

- c) You would think: "My boss distracted me just before lunch."

Not Likely	1	2	3	4	5	Very Likely
-------------------	----------	----------	----------	----------	----------	--------------------

2. You break something at work and then hide it.

- a) You would think: "This is making me anxious. I need to either fix it or get someone else to."

Not Likely **1** **2** **3** **4** **5** **Very Likely**

- b) You would think about quitting.

Not Likely **1** **2** **3** **4** **5** **Very Likely**

- c) You would think: "A lot of things aren't made very well these days."

Not Likely **1** **2** **3** **4** **5** **Very Likely**

3. At work, you wait until the last minute to plan a project, and it turns out badly.

- a) You would feel incompetent.

Not Likely **1** **2** **3** **4** **5** **Very Likely**

- b) You would think: "There are never enough hours in the day."

Not Likely **1** **2** **3** **4** **5** **Very Likely**

- c) You would feel: "I deserve to be reprimanded for mismanaging the project."

Not Likely **1** **2** **3** **4** **5** **Very Likely**

4. You make a mistake at work and find out a co-worker is blamed for the error.

- a) You would think the company did not like the co-worker.

Not Likely **1** **2** **3** **4** **5** **Very Likely**

- b) You would keep quiet and avoid the co-worker.

Not Likely **1** **2** **3** **4** **5** **Very Likely**

- c) You would feel unhappy and eager to correct the situation.

Not Likely **1** **2** **3** **4** **5** **Very Likely**

5. While playing around, you throw a ball, and it hits your friend in the face.

- a) You would feel inadequate that you can't even throw a ball.

Not Likely **1** **2** **3** **4** **5** **Very Likely**

- b) You would think maybe your friend needs more practice at catching.

Not Likely **1** **2** **3** **4** **5** **Very Likely**

- c) You would apologize and make sure your friend feels better.

Not Likely **1** **2** **3** **4** **5** **Very Likely**

6. You are driving down the road, and you hit a small animal.

a) You would think the animal shouldn't have been on the road.

Not Likely **1** **2** **3** **4** **5** **Very Likely**

b) You would think: "I'm terrible."

Not Likely **1** **2** **3** **4** **5** **Very Likely**

c) You'd feel bad you hadn't been more alert driving down the road.

Not Likely **1** **2** **3** **4** **5** **Very Likely**

7. You walk out of an exam thinking you did extremely well, then you find out you did poorly.

a) You would think: "The instructor doesn't like me."

Not Likely **1** **2** **3** **4** **5** **Very Likely**

b) You would think: "I should have studied harder."

Not Likely **1** **2** **3** **4** **5** **Very Likely**

c) You would feel stupid.

Not Likely **1** **2** **3** **4** **5** **Very Likely**

8. While out with a group of friends, you make fun of a friend who's not there.

a) You would feel small...like a rat.

Not Likely **1** **2** **3** **4** **5** **Very Likely**

b) You would think that perhaps that friend should have been there to defend himself/herself.

Not Likely **1** **2** **3** **4** **5** **Very Likely**

c) You would apologize and talk about that person's good points.

Not Likely **1** **2** **3** **4** **5** **Very Likely**

9. You make a big mistake on an important project at work. People were depending on you, and your boss criticizes you.

a) You would think your boss should have been more clear about what was expected of you.

Not Likely **1** **2** **3** **4** **5** **Very Likely**

b) You would feel as if you wanted to hide.

Not Likely **1** **2** **3** **4** **5** **Very Likely**

c) You would think: "I should have recognized the problem and done a better job."

Not Likely **1** **2** **3** **4** **5** **Very Likely**

10. You are taking care of your friend's dog while they are on vacation. and the dog runs away.

a) You would think, "I am irresponsible and incompetent."

Not Likely 1 2 3 4 5 Very Likely

b) You would think your friend must not take very good care of her dog or it wouldn't have run away.

Not Likely 1 2 3 4 5 Very Likely

c) You would vow to be more careful next time.

Not Likely 1 2 3 4 5 Very Likely

11. You attend your co-worker's housewarming party, and you spill red wine on a new cream-colored carpet, but you think no one notices.

a) You would stay late to help clean up the stain after the party.

Not Likely 1 2 3 4 5 Very Likely

b) You would wish you were anywhere but at the party.

Not Likely 1 2 3 4 5 Very Likely

c) You would wonder why your co-worker chose to serve red wine with the new light carpet.

Not Likely 1 2 3 4 5 Very Likely

APPENDIX D
SCORING FOR THE TOSCA-3S

The TOSCA-3S scenarios that you just responded to were created from the personal experiences of several hundred college students and non-college adults. Your responses can now be used to calculate your scores for Shame Self-Talk, Guilt Self-Talk and Blaming Others.

Transfer your circled answers from the TOSCA to the lines below. For example, if you answered a “4” for item 1a, enter a 4 under the column labeled “Shame Self-Talk” on the line next to 1a. If you entered a “1” for item 1b, enter a 1 under the column labeled “Guilt Self-Talk” on the line next to 1b. And so on. Carefully transfer your responses, because the order for a, b and c will be different for each question.

When you have finished transferring your answers, add up your score for each column. For example, your “Shame Self-Talk Total” score will be the total of all of the numbers written in the first column. Compare your total scores to the scoring interpretation at the bottom of the page.

Shame Self-Talk	Guilt Self-Talk	Blaming Others
1a___	1b___	1c___
2b___	2a___	2c___
3a___	3c___	3b___
4b___	4c___	4a___
5a___	5c___	5b___
6b___	6c___	6a___
7c___	7b___	7a___
8a___	8c___	8b___
9b___	9c___	9a___
10a___	10c___	10b___
11b___	11a___	11c___
= _____	= _____	= _____
Shame Self-Talk Total	Guilt Self-Talk Total	Blaming Self-Talk Total

For Men

If your score on “Shame Self-Talk” is:

0-24 you seldom use shame self-talk

25-32 you use shame self-talk an average amount

33-55 you often use shame self-talk

If your score on “Guilt Self-Talk” is:

0-38 you seldom use guilt self-talk

39-45 you use guilt self-talk an average amount

46-55 you often use guilt self-talk

If your score on “Blaming Others” is:

0-21 you seldom blame others

22-28 you blame others an average amount

29-55 you often blame others

For Women

If your score on “Shame Self-Talk” is:

0-26 you seldom use shame self-talk

27-35 you use shame self-talk an average amount

36-55 you often use shame self-talk

If your score on “Guilt Self-Talk” is:

0-42 you seldom use guilt self-talk

43-48 you use guilt self-talk an average amount

49-55 you often use guilt self-talk

If your score on “Blaming Others” is:

0-20 you seldom blame others

21-28 you blame others an average amount

29-55 you often blame others

Brown, B., Hernandez, V., & Villarreal, Y. (2011). *Connections: A 12-session psychoeducational shame resilience curriculum.*

APPENDIX E
FOCUS GROUP QUESTIONS

**Focus Group Questions for
Understanding What the 2% Know: A Mixed-Method Study on Grit, Growth
Mindset, & Vulnerability Among Thriving Community College Students**

Thriving

1. Which factors do thriving community college students attribute to their own success?
2. What are the shared skill sets of thriving community college students?

Grit

1. After watching Dr. Duckworth's TED Talk video, please share your thoughts about grit as it relates to your academic pursuits. What are some of the traits of grit that you see in yourself?
2. Describe a time in your college career where you had to overcome adversity. What was the situation, the obstacles, and your thought process?
3. What are some of your long term goals both academically and non-academically?
4. What are the differences between your study habits when it comes to academics compared to your classmates who may or may not be doing as well as you are?
5. There are many challenges facing community college students (financial, family, competing interests, etc.). What challenges have you faced and how did you approach those challenges?
6. What are you passionate about and how long have you been passionate about that item?
7. Would you say grit played an influential role in shaping your community college students' success? If so, how?
8. What would be your best GRIT piece of advice to an incoming students?
9. If colleges educated students on the topic of grit, what items should be included in that program or workshop?

Growth Mindset

1. After watching Dr. Dweck's TED Talk video, please share your thoughts about growth mindset as it relates to your academic pursuits. What are some of the growth mindset traits you see in yourself?
2. Tell us about a time you overcame a difficult and stressful situation. Why was it stressful? What did you learn from that situation? Knowing what you know now and the lessons you learned, would you go through it again? Why or why not?
3. Here's a scenario: you study really hard for a test in a class that goes towards your major. You get the test back and your grade is a C. How do you immediately feel upon seeing the grade? How do you feel one week later

- about that grade? How do you feel about that grade right before the next test? What do you do differently to prepare for the next test?
4. All individuals have areas in their lives where they have growth mindsets and other areas where they have fixed mindsets. Can you identify areas in your life where you have a fixed mindset? When involved in that/those activities, how do they usually turn out?
 5. Imagine yourself as an academically fixed mindset person. Would you have the same sort of success academically as you have currently have?
 6. How does your growth mindset effect other areas of your life?
 7. A Pivotal Moment is a significantly positive moment in your life. For me it was hearing Dr. Will Keim speak at my freshmen orientation. I can specifically tell you that was the pivotal moment in my life where mentally I went from good to great. I did not know it at the time, but looking back, I know beyond a shadow of a doubt that his speech was the key moment where I decided to be a great student. Can you look back in your life and identify a specific event or person who influenced you and created a Pivotal Moment for you?
 8. What would be your best GROWTH MINDSET piece of advice to an incoming students?
 9. If colleges educated students on the topic of growth mindset, what items should be included in that program or workshop?
 10. Would you say growth mindset played an influential role in shaping your community college students' success? If so, how?

Vulnerability

1. After watching Dr. Brown's TED Talk video, please share your thoughts about vulnerability as it relates to your academic pursuits. What are some of the vulnerability traits you see in yourself?
2. Shame is a powerful barrier to stop us from achieving our goals. What types of shame do you believe students bring to the
3. Many students look for traits which will help them succeed in the classroom. However, some of them take an act of courage. For example, visiting a professor's office hours. What are some acts of courage you have had to do in order to help yourself rise to the top of your class?
4. Dr. Brown spoke about our need for connection. Can you share some strong connections with peers, faculty members, staff or administrators, you have made while in college? How would you describe those connections?
5. What would be your best VULNERABILITY piece of advice to an incoming students?
6. If colleges educated students on the topic of vulnerability, what items should be included in that program or workshop?
7. Would you say vulnerability played an influential role in shaping your community college students' success? If so, how?

APPENDIX F
IRB APPROVAL EMAIL

April 23, 2018

CSUSB INSTITUTIONAL REVIEW BOARD

Expedited Review

IRB# FY2018-89

Status: Approved

Mr. Mark Hartley and Prof. Piller
Doctoral Studies Program
California State University, San Bernardino
5500 University Parkway
[San Bernardino, California 92407](#)

Dear Mr. Hartley and Prof. Piller

Your application to use human subjects, titled "Understanding What the 2% Know: A Mixed Methods Study on Grit, Growth Mindset & Vulnerability" has been reviewed and approved by the Institutional Review Board (IRB). The informed consent document you submitted is the official version for your study and cannot be changed without prior IRB approval. A change in your informed consent (no matter how minor the change) requires resubmission of your protocol as amended using the IRB Cayuse system protocol change form.

Your application is approved for one year from April 23, 2018 through April 22, 2019. Please note the Cayuse IRB system will notify you when your protocol is up for renewal and ensure you file it before your protocol study end date.

Your responsibilities as the researcher/investigator reporting to the IRB Committee include the following 4 requirements as mandated by the Code of Federal Regulations 45 CFR 46 listed below. Please note that the protocol change form and renewal form are located on the IRB website under the forms menu. Failure to notify the IRB of the above may result in disciplinary action. You are required to keep copies of the informed consent forms and data for at least three years. Please notify the IRB Research Compliance Officer for any of the following:

- 1) Submit a protocol change form if any changes (no matter how minor) are proposed in your research protocol for review and approval of the IRB before implemented in your research,**
- 2) If any unanticipated/adverse events are experienced by subjects during your research,**
- 3) To apply for renewal and continuing review of your protocol one month prior to the protocols end date,**
- 4) When your project has ended by emailing the IRB Research Compliance Officer.**

The CSUSB IRB has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval notice does not replace any departmental or additional approvals which may be required. If you have any questions regarding the IRB decision, please contact Michael Gillespie, the IRB Compliance Officer. Mr. Michael Gillespie can be reached by phone at (909) 537-7588, by fax at (909) 537-7028, or by email at mgillesp@csusb.edu. Please include your application approval identification number (listed at the top) in all correspondence.

Best of luck with your research.

Sincerely,

Donna Garcia

Donna Garcia, Ph.D., IRB Chair
CSUSB Institutional Review Board

DG/MG

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