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Jennifer Gomez-Chavez

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**HOW DO PEER MENTORS IMPACT COLLEGE STUDENTS  
IN UNDERGRADUATE GATEWAY COURSES AT A  
LARGE PUBLIC UNIVERSITY?**

BY

**JENNIFER GOMEZ-CHAVEZ**

B.A., Criminology, University of New Mexico, 1990  
M.A., Counseling, University of New Mexico, 1994

DISSERTATION

Submitted in Partial Fulfillment of the  
Requirements for the Degree of  
**Doctor of Education**

**Educational Leadership**

The University of New Mexico  
Albuquerque, New Mexico

**May 2014**

## **DEDICATION**

In 2008, I received my final diagnosis of having Multiple Sclerosis (MS). I was 40, and worried about my future. Thanks to the National Multiple Sclerosis Society in Albuquerque for supporting me during this time. My first MS mentor, Dr. Caitlin Anderson was a former University of New Mexico faculty member. She guided me through learning how to balance work, family, and this new illness. With her assistance, I connected to so many wonderful individuals that have become my MS family to include Jorge Enriquez, Vicki Kowal, Jeanne Hamrick, Krista Hein, Joleen Trujillo, Patricia Hoice, Barbara, Patty, Holly Ridgeway, Maggie Scholds, and the rest of the many other volunteers. Obtaining a doctorate was always on my bucket list of important things to accomplish, and a year after my diagnosis, I set out to reach it. I dedicate this dissertation to all individuals living with MS. You each inspire me to stay motivated and pursue every dream. Thanks for helping me realize that I am UNSTOPPABLE!

To my grandmother, Estella Gomez, who became my angel when I was diagnosed. She taught me hard work ethic, and was a profound female role model for me as she was a small business owner of a restaurant and bar in Hagerman, New Mexico better known as the Gomez Club. She surrounds me with her spirit, and guides me daily.

Last but not least, I dedicate this dissertation to my children Derek (10 years old) and Monique (15 years old). Since you both were born, I have experienced great joy watching you grow to become wonderful individuals. As you go forward, remember to aspire in reaching high on your goals and dreams, no matter what challenges you may face, do NOT quit. I want you to remember that I believe in you and all your abilities to do or be anything your hearts desires. Find your passion in life, as I have in mine. I love you bunches.

## Acknowledgements

My educational journey has been supported by so many wonderful individuals who at this time I wish to recognize. My amazing committee comprised of wonderful role models that saw me through the dissertation process from beginning to end. Mil gracias to Dr. Alicia Chavez, my dissertation chair for the guidance and support. Thank you for believing in my abilities. Dr. Jozi De Leon, Dr. Eliseo Torres, and Dr. Minthorn I owe much gratitude for serving as my dissertation committee. They offered much strength, support, and motivation especially during times when I wanted to give up.

To mi familia my mother Mony Gomez who pushed me to reach great heights, my 92 year old abuelita Lupe Ramirez who prays for me daily, and my brother little Joe, I cannot thank him enough for being a caring sibling. To my husband, Lawrence Chavez, a million of gratitude and love for your patience and support as I studied mornings, weekends, and late nights. I am blessed to have a partner in life that loves and values his family. Thank you for supporting me during this stressful but rewarding journey. To my beautiful children who are young at this time, and might not quite understand why I took so much time away to study. Their young lives gave me the hope and inspiration to complete my doctorate so that one day they can reap the benefits of this accomplishment.

A community of friend support is what got me through this journey. Thank you to my best friend and colleague, Dr. Lawrence Roybal. He kept pushing me toward the bright light of completion, and reminded me that I would get there when it was my time. Thanks for believing in me. Vanessa Harris and Stephanie Hands, my other best friends, who always lent a shoulder to cry on and ear to listen when I just didn't know how to juggle work and studying. I'm indebted to the both of you for a lifetime.

# **HOW DO PEER MENTORS IMPACT COLLEGE STUDENTS IN UNDERGRADUATE GATEWAY COURSES AT A LARGE PUBLIC UNIVERSITY?**

**by**

**Jennifer Gomez-Chavez**

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## **ABSTRACT**

Peer mentoring is a growing trend utilized to improve graduation and retention rates of college students across campuses. It is a strategy being used either outside or inside the classroom to assist students with learning, connecting to resources, and increasing student success in gateway courses. Southwest State University is an example of an institution, initially funded through a Title V grant, using peer mentoring in gateway courses. Peer mentors are placed in high failing gateway courses such as the ones chosen for this study to include Earth and Planetary Science 101, Chemistry 121, and Math 121. Gateway courses are defined as large lecture courses often difficult for students to pass because of class size and subject. Southwest State University includes gateway courses students are required to pass to progress through their intended major. The purpose of this qualitative study was to learn how peer mentors impact student success in gateway courses at one university in the southwest. Course mentors, students, and instructors were interviewed and courses observed to seek understanding of influences peer mentors have in the classroom. Common themes contributing to the effectiveness of peer mentoring in gateway courses were explored to determine how peer-to-peer mentoring is influencing these courses and to explore the overall research

question of: How do peer mentors impact college students in undergraduate gateway courses at a large public university?

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## **List of Definitions**

**Gateway Courses** – An undergraduate college course that is considered being a gateway class to continuing onto other courses. Gateway courses typically have an enrollment of 100 or more students.

**Peer Mentor** – An individual that provides academic, social, and personal support to individuals who have less knowledge or experience.

**Title V** – A federal grant awarded from the U.S. Department of Education based on the Higher Education Act to public institutions of higher education to build capacity to increase retention and graduation rates amongst Hispanic and low income students.

**Supplemental Instruction** – An academic assistance model that places upper class undergraduate college students in high failing courses. SI instruction provides outside of the classroom review sessions to reinforce understanding of course material and models good student behaviors to learn from peers.

**HSI** – Hispanic Serving Institutions defined by the federal government Higher Education Act for public institutions of higher education with a 25% or more of fulltime Hispanic undergraduate enrollment.

**First Generation** – Individuals whose parents have never earned a four year college degree.

**Low Income** – A term defined as poverty created by the U.S. federal government based on economic guidelines.

## **Chapter 1**

### **Introduction**

In a rapidly changing global economy, access to a college education is simply not enough. Increasing the competitiveness and prosperity of our workforce requires that our students complete their course of study and cross the finish line to success. - Senator Mike Enzi

Staying competitive in a global market is a popular sentiment among national and local governments encouraging higher college completion rates to meet the United States economic and educational demands (Pell Institute, 2008). Institutions of higher education must begin to address low graduation rates among undergraduate students to enhance the U.S. workforce and economy. In an effort to address these needs, colleges and universities moved to quickly establish innovative student success models that strive to graduate more students. To explain this movement among institutions of higher education more clearly, I chose to study a four-year public university located in the Southwest United States under the pseudonym Southwest State University. In 2006, a peer-to-peer mentoring model was created at Southwest State University, in an attempt to academically support students. With the hope that peer mentors can influence students passing large gateway courses, Southwest State University applied financial resources, peer mentor training, and faculty training to directly influence student success and graduation rates by placing upper-class students in gateway courses to support classroom learning.

### **Responding to a National Educational Crisis**

Improving graduation rates within institutions of higher education is a recent priority across the United States of America. With a presidential order in 2010, President Obama and his administration called all colleges and universities to develop strategic



master plans to increase graduation rates. Universities were asked to re-evaluate their commitment to student success by outlining specific initiatives that would directly impact their undergraduate graduation rates. (Excelencia, 2010; FSG, 2012, Complete College America, 2012; Lumina Foundation, 2012; Achieve, 2011). Recently several national agencies, suggested that one way to maintain a vibrant U.S. economy while remaining competitive in the global market is to graduate more college students by 2020 (Achieve Inc., 2012; College Board, 2011). The National Center for Higher Education Management Systems reports the U.S. overall six-year undergraduate graduation rate at 55.9%. This statistic represents an alarming educational crisis among U.S. colleges and universities; only about half of students who enter college complete their education (NCHEMS, 2008).

Attention to college enrollment is spurred by recent reports that outline occupation projections for 2018. The report indicates approximately 63% of available jobs will require some level of higher education degree (Carnavale, Smith, and Strohl, 2010). Much research defines how a postsecondary degree or credential opens the door of employment in a competitive job market, while improving overall life experiences (College Board, 2011; Lumina, 2012).

In the last thirty-five years, students registering for college doubled with nearly 15 million students enrolled as undergraduates in U.S. colleges and universities (NCES, 2007). An additional factor is the growing number of students from ethnically underrepresented backgrounds attending post-secondary institutions, a 60 percent increase since 1970. Although college enrollments increased among a more diverse student population throughout the last decade, college completion rates remain

disturbingly low. This data may be motivating colleges and universities to change the way they are conducting teaching and learning on their campuses (Buckley, Korkmaz, & Kuh, 2008; Kinzie, Gonyea, Kuh, Umbach, Blaich, & Korkmaz, 2007).

In particular, as considerable student demographics change, higher education will benefit from embracing a more diverse student population along with new learning styles (Lumina, 2012; Excelencia, 2010; Chávez, A. & Herrera, F.). Commitment to provide access and equitable college opportunities to the underserved has increased (Lumina, 2012). However, the issue is complex and troubling as we look at current statistics indicating that degree attainment for first generation and low-income students is significantly lower than students who come from high-income backgrounds with parents who have post-secondary education.

Recent data reconfirms assumptions that educational inequities still exist at the college level (Sacks, P., 2007; Zweig, M., 2004). The U.S. has seen positive movement of students from low-income backgrounds obtaining college degrees with a 6 percent increase from 1970 to 12 percent in 2005 (Excelencia, 2011). Although this group made great strides, students from high-income backgrounds made significant leaps within the same years from 40 percent to 73 percent (Mortenson, 2007). This data indicates that students from higher income backgrounds continue to outperform and progress academically at a greater pace than low-income students.

The reality is that the education gap exists among many different groups of students. Historically underrepresented students continue to demonstrate low high school graduation rates and college graduation rates (Lumina, 2012). Additionally, there are huge disparities among males of color in terms of completing high school, entering post-

secondary, and completing a bachelor's degree (Excelencia, 2011). On the forefront are many organizations attacking this educational crisis to reform the educational system (Lumina, 2012). Peer to peer mentoring might be the strategy used to close the achievement gap.

### **Barriers to College Completion**

Today's college student differs from ten years ago. A report, *They Have Their Whole Lives Ahead of Them* (Gates Foundation, 2009), points to traditional myths about college students. Students are no longer attending college full-time, working a small amount of hours, and supported by their families. The more common student profile now is a student who works full-time, attends college part-time, and might be financially independent (Lumina, 2012).

With student changes, universities are left to redesign systems that primarily met the needs of traditional college going students. Consequently, today's average college student stumbles upon very distinctive barriers. So what are the barriers that today's college student's face that may lead them to drop out? To understand how Title V peer mentoring contributes to keeping students on track towards graduation, it is vital to understand barriers to college completion.

While graduation rates continue to look dismal across the United States, scholars seek to understand why undergraduate students drop out. Much research has been conducted to determine key barriers that keep students from completing their college degrees. The goal of much of this research is to offer knowledge to institutions of higher education with ideas for addressing social, personal, student engagement, and economic factors that influence a student's ability to successfully complete their education (Kuh,

2008). At the top of the list are four major issues discussed in a recent report, *College Success for Low-Income, First Generation Students* (Pell Institute, 2012): economic barriers, academic unpreparedness, the college environment, and first generation to attend college are all interrelated obstacles that prevent students from finishing their degrees.

### **Economic barriers.**

In the United States, earning a college degree is linked to economic capital. The more education an individual obtains, the higher their socioeconomic status is likely to be (Battle & Pastrana, 2007; O'Conner, 2009). Approximately sixty-two percent of children, who live in low-income homes, have parents who earned only a GED or high school education (Becerra, 2010). Sociologist Karl Marx described the economic social status system as broken into two classes, people in charge and laborers (Haralambos, 2000). Marx and others suggested that educational achievement is clearly influenced by social class, and voiced the concept of 'material deprivation' as the prime reason for students' inability to progress academically. Material deprivation is the concept that people with "less money" are unable to build on educational capacities available to them (Conley, 2001). Too often, educational systems cater to white middle class students, and discount the academic abilities minorities bring to the learning environment (Haralambos, 2000; Douglas, 1971). Middle class parents and their children often hold a different view of education than working class families (Douglas, 1971). Economic barriers continue to be one of the main reasons students disenroll from college (Kuh, Kinzie, Buckley, Bridges, & Hayek., 2007).

### **Academic preparedness.**

Academic college success is related to socio-economic status (Becerra, 2010; Phinney, et al, 2005). Students who come from homes with higher economic status have increased educational opportunities and resources that heighten self-efficacy to achieve at the college level (Barrat, 2011; Cushman, 2007; Pell Institute, 2008). Students from middle to high socioeconomic statuses are more likely to establish social and academic expectations at an early age (Schmidt, 2003; Choy, 2001; Thayer, 2000) that are reinforced throughout their adulthood (Engle, 2009). In fact, some students are often discouraged to attend college due to family obligations or a belief that education may require the student to become estranged from their family (Striplin, 1999). At the other end of the economic spectrum, low-income parents are often faced with having multiple jobs to meet basic financial family obligations such as food, housing, and clothing. With lower income families working more hours, it is difficult to be in tune with children's education. Daily priorities are focused on financial survival. Although many desire to help their child reach academic success, finding the time and energy to help a child read, write, and learn is often a challenge (Engle, 2009).

In some cases, access to equitable resources is a concern, as low-income families may live in neighborhoods that do not receive high levels of educational financial support from local, state, or federal agencies. The inability to live in more affluent neighborhoods (Cashin, 2004.) may also lead to less direct educational resources. Support in terms of materials, updated classrooms, and quality teachers, is limited in schools within low-income neighborhoods (Acs & Nichols, 2005). In the last few years, there has been greater attention to revitalization of poor neighborhoods with intention to

increase educational outcomes for students and their families (Urban Institute, 2009). There is a national movement to target financial resources toward these economically afflicted areas by providing skill building to parents. This effort could increase their chances to find employment as well as to offer quality childcare and healthcare and move families toward social and personal security. Also, schools with fewer resources seem to offer less college preparation courses and college planning resources that may influence a student's choice pursue a college degree (Hahn & Price, 2008).

Time constraints are one of several reasons low-income families' struggle to understand how educational institutions operate (Choy, 2001). Students from low-income backgrounds are often unfamiliar with navigating through educational systems, nor are their parents able to learn the process to assist their children to access benefits that could enhance educational experiences (Thayer, 2000; Vargas, 2004; Hsiao, 1992). For instance, students with parents who encourage them to seek a college education, despite their income level, seem to have high levels of academic preparation and college planning (Hahn & Price, 2008).

Social capital is another element that can increase a family's access to higher education (Coleman, 1988). Social capital is defined as social networks shared between persons and institutions (Tierney & Colyar, 2005) that have a common set of behaviors, expectations, rules, and values. These commonalities allow communities to operate on knowledge and resources (Massey, 2003). For minority and low-income families, building social capital is essential to access higher education (Stanton-Salazar & Dornbusch, 1995). Trends to engage families in college planning (Tierney & Auerbach, 2005) intensified with the belief that institutions can increase a family's social capital by

exposing them to the process including college placement tests, financial aid resources, or student activities. (Bourdieu & Passeron, 1977; Coleman, 1988; Massey, 2003; Stanton-Salazar & Dornbusch, 1995; Tierney & Colyar, 2005).

### **College environments.**

Educational inequities that begin early in K-12, continue to spill into the undergraduate student experience. As low-income, first generation students enroll at institutions of higher education, barriers are more apparent as these students face new environments. Along with pressure to be first in their families to earn a degree and bust through economic disparities, these students must engage in a new way of learning, interact with faculty who might not be familiar with their personal and cultural backgrounds, and connect to programs and services that help them meet their educational goals (Braxton, Hirschy, & McClendon, , 2004). In the end, college students from low-income backgrounds, and/or first generation to college, often find themselves academically underprepared to meet required academic rigor. This puts them at high risk of dropping out (Tinto, 1999).

Family financial stability impedes a college students' ability to focus on maintaining a full-time load. Instead, students are likely to work thirty hours or more per week to survive financially (Excelencia, 2011). Working off-campus is the norm, as students believe they can earn more money. Most students are not able to receive financial support from their parents, and may not apply for financial aid for fear of creating debt. These students are less likely to live on campus due to high residential costs which limits their full participation in the college experience and increases their chances of dropping out (Pell Institute, 2008). Students who live in campus residence

halls tend to have higher retention and graduation rates than those who live off-campus (Tillman, 2000; Tinto, 1993; Pascarella, 1984; Chickering, 1974; Astin, 1977).

Affordability (Tillman, 2000) is one of the most common reasons students decide not to live in residence halls.

### **Large lecture classes.**

The classroom learning environment is another important element that contributes to student academic success (Consortium for Student Retention Data Exchange, 1999).

Large lecture classes are recognized as courses with an enrollment of 100 or more students (Dorris, 2002). These classes are usually lower division courses that fulfill general education requirements. Many are considered gateway courses into a major (Stanely & Porter, 2002). On a national level, large lecture courses gained the reputation for high rates of failure among freshman and sophomore students and “failure rates in these courses contribute heavily to overall institutional drop-out rates between the first and second years” (Twigg, 2003, p. 24). Learning in large classrooms is a difficult adjustment for students who are accustomed to instruction in smaller more personalized environments. This impersonal experience is referred to as "en masse" meaning anonymous and negatively influences freshmen students' ability to academically excel (MacGregor, Cooper, Smith, & Robinson, 2000). Many college going high school students graduate from schools that have student enrollments of less than 500 (Toth & Magnana, 2002). In turn, most of these students attend universities with enrollments that exceed 10,000 students, a daunting reality often leading to uncomfortable transitions to a new learning environment (Arias & Walker, 2004).



**First generation students.**

First generation students are defined as the first in their family to attend college. This is a growing population across college campuses, yet has the highest college dropout rates among students (Thayer, 2000). Many first generation students are from low-income backgrounds, and enter college as a way to improve their economic and social conditions (Ayala & Striplen, 2002). First generation students tend to be retained at a lower level than those who come from educated families. Primarily, it is a challenge for these students to understand the many programs and services that can aid in college successes (Thayer, 2000; Tym, 2004). Retention among first generation students depends in great part on economic family level. Those who come from middle-income backgrounds are retained in college at higher levels than those from lower income status (Thayer, 2000). First generation students are often discouraged to attend because, within the family, college is often viewed as an alienating factor. This can instill a great sense of doubt in students regarding their academic ability and professional goals (Stirplin, 1999). Quality programs and services are critical in facilitating first generation students' academic, personal, and social success in college. First generation students often learn from such programs that success is not achieved alone, and support programs and individuals foster student success (Bullat & Jan, 2003).

**A Southwestern State's Educational Crisis**

The Southwestern State, where Southwest State University resides, is in the midst of this national educational crisis. Ranked as one of the poorest states in the country with 43% of families living in poverty, Southwest State has some of the lowest graduation rates on a national level averaging 40.3 percent for six year graduation rates (Voices for

Children, 2008). This current lack of economic stability is reflected in low educational attainment rates in the state. A recent report from the National Center for Public Policy and Higher Education (2005) provides information on the state's projected workforce. The report forecasts Southwest State's workforce to become more ethnically and economically diverse with respect to the lowest level of education in the nation. Due to low educational attainment, a decline of workers with a college degree and decreased income per capita from \$17, 281 in 2000 to \$ 17,123 is forecast for 2020.

In 2009, a statewide call to action was made public concerning Hispanic education because of low high school graduation rates statewide. Community leaders, business owners, and parents joined in an educational movement that calls the state to take immediate action. Southwest State became one of the first states in the nation to create a Hispanic Education Act. This legislation is aimed at improving educational instruction and academic achievement of Hispanic students.

Review of student persistence in higher educational institutions, indicates 85% of Southwestern State students are enrolled in community college systems, yet do not achieve a certificate or associates degree, and are not considered "transfer ready" (USDE, 2007). At four-year institutions in the state, Hispanic students are twice as likely to drop out as their white peers (29.6% for Hispanics compared to 15.1% for White Students) as reported in the 2007 Provost Report.

Low persistence and graduation rates within Southwest State's colleges and universities did not go unnoticed. State legislators and tax payers grew concerned because at that time Southwest State University received funding based on student enrollment rather than completion rates. To find out more about why students were not

persisting, the state legislature conducted an evaluation in summer of 2010 led by the Legislative Finance Committee. The overall evaluation report brought forth a number of items that communicated the importance of completing individual classes and of six-year graduation rates. In 2012, Southwest State University was mandated to follow a new funding formula approved by the state legislature. This newly approved formula requires all state colleges to be financed on outcomes based funding formula model (NM Higher Education Department, 2011). In previous years, funding was determined on students taking courses and not course completion which in turn resulted in paying millions of dollars for dropped courses. For example, the Legislative Finance Committee reported Southwest State University to have \$12.4 million dollar expense for dropped classes over the course of three years. Currently, the new outcomes based funding formula is built on metrics that include course completion, degrees awarded, workforce incentive with a focus on Science, Technology, Engineering, Health, and Math, as well as Pell eligible at risk students. Institutional priorities are now set to make progress toward reaching new funding formula metrics (NM Higher Education Department, 2011).

Gaining a degree matters, and for Southwest State, it could mean creating a stronger economy. According to the 2007 College Board study, students who earn a four year degree will earn approximately \$1 million over their lifetime more than students who earn a high school diploma or GED, and \$500, 000 more than those who attend two institutions. For lower income states, such as Southwest State, it is imperative that residents obtain a higher education to help build economic status, and provide opportunities to pay into the tax structure and build stronger tax revenue for the state and nation (IHEP, 2005).

## **The Influence of Peer Mentoring on Student Retention and Success**

### **Peer mentoring.**

Peer mentoring dates back to the Stone Ages (Dickey, 1996). The idea of the mentor has its foundation on Greek mythology. The main character of the *Odysseus* confides in a close friend to help him prepare to take part in the Trojan War. This symbolic moment in time led to defining peer mentoring as an individual who is wise, and can guide others (Miller, 2002).

Peer mentoring is a strategy used by many educational institutions from kindergarten to college. Within educational institutions, mentoring first started in the 1960s with theorist Paulo Freire and other educators with the belief that individuals who were afraid to accomplish specific tasks or experiences could be guided by those who had already lived through a similar occurrence (Freire, 1997). Mentoring builds on the premise of sharing a personalized relationship between mentor and mentee to listen to any challenges, learn ideas to overcome obstacles, and set new goals to embark on opportunities that might seem out of reach for the mentee (Sipe & Roder, 1999).

Peer mentoring is offered in different capacities to support students academically, socially, personally, and spiritually. In educational institutions, mentoring is most common in K-12 systems to aid youth through any situation that may influence their ability to stay in school, develop academic competencies, self-confidence, and other skills. (Catalano, Hawkins, Berglund, Pollard, & Arthur, 2002; Rauner, 2000; Freedman, 1993). Decades later, there is a greater emphasis on peer-to-peer mentoring at the college level with a focus on career exploration, social and emotional support, and academic and

personal growth that can generate student ability to succeed in a college environment (Johnson, 2006)

Peer mentoring encompasses various models including informal and formal approaches (Roberts, 2000). Formal mentoring is an intentional approach offered by a program or agency with a prescribed outline of requirements and expectations of the mentor and mentee (Sipe & Roder, 1999; Allen & Eby, 2007). Informal mentoring is a naturally occurring supportive relationship without explicit guidelines on how the mentoring should happen (Rhodes, Grossman & Resch, 2000; McLearn, Colsanto & Schoen, 1998). Depending on the mission and goals of a particular mentoring program, the mentoring structure and approach is determined (Roberts, 2000). Important factors to the mentoring relationship between mentors and their mentees consist of the following skills: a learning partnership, resourcefulness of information, positive role modeling, and regular goal setting activities (Cohen & Wills, 1985; Roberts, 2000; Miller, 2002).

### **Peer mentoring on college campuses.**

The role of peer mentoring has taken off on a national level within college campuses. Peer mentoring is considered cost effective with limited financial resources to hire more professional staff (Girves, Zepeda, & Gwathmey, J.K., 2005). With a growing demand for colleges and universities to produce college graduates at a faster pace, peer mentoring is becoming a priority. With rapid student demographic changes on campuses that include a larger number of first generation and low-income college going students, the demand for mentoring has increased because graduation rates are lower among these groups than others (NCES, 2010; Mortenson 2009). Mentoring is used to recruit and retain students who may not be familiar with the college environment (Levine & Nidiffer,

1996). Guiding students to make successful college transition and navigate a new system is critical to increasing their sense of understanding and belonging on campus (Pascarella, 1980; Community College Survey of Student Engagement, 2009).

### **Peer Mentoring and Student Success in College**

Mentoring was first studied in higher education by engineering faculty from the University of Michigan in 1911 (Johnson, 1989). In the late 1980's, researchers began to document mentoring experiences, processes, and functions (Anderson & Shannon, 1988). From 1990 to present, research on peer mentoring in higher education has grown (Aagaard & Hauer, 2003; Atkins and & Williams, 1995; Cohen, 1995; Miller, 2002; Edwards & Gordon, 2006). Positive outcomes toward student success are documented from student to faculty mentoring relationships, out of class mentoring, and intentional formal programs to further develop academic skills (Luna & Cullen 1995; McLearn, Colsanto & Schoen, 1998; Allen & Eby, 2007). In some cases, mentoring of college students increases student GPAs, retention, self-efficacy, engagement, and personal and professional growth (Crisp & Cruz, 2009). Positive role modeling from older adults such as administrators is another significant component contributing to impactful mentoring experiences (Terenzini, Pascarella, & Bliming, 1996; Schlosser, Knox, Moskowitz, & Hill, 2003).

#### **Peer mentoring critiques.**

Critique of peer mentoring includes the following. First, there is no common definition of mentoring, and there are approximately 50 definitions within the field (Crisp & Cruz, 2009). Various interpretations and definitions of mentoring make it difficult to standardize across practitioner groups implementing mentoring programs and approaches (Crisp and Cruz, 2009; Dickey 1996; Johnson 1989; Miller 2002; Rodriguez 1995).

Often, mentoring is described as either a set of activities or a specific process that leads to not establishing a common approach (Roberts, 2000; Bowman & Bowman, 1990; Brown, Davis, & McClendon, 1999).

Critique revolves around mentoring used only from a deficit model, framework, or perspective (Fields, 1996). Mentoring is often assumed a service provided to individuals that need further development of knowledge and skills in a particular area to excel. A common critique in the literature concerns a lack of quality research on the effectiveness of mentoring relationships (Jacobi, 1991). Over the last decade, research has grown significantly, and it is now considered an approach with positive results for improving an individual's situation (Schlosser, Knox, Moskovitz, & Hill, 2003).—Some academic scholars advocate for research in the field conducted regularly based on a valid model (Slicker & Plamer, 1993; Miller, 2005), still there is not enough research evidence to make significant claims about best practices in mentoring.

### **Peer Mentoring at Southwest State University**

#### **Background**

Recent economic conditions spurred enrollment at Southwest State University, which one might think would increase financial resources for institutions, yet the opposite has occurred. State budget deficits forced educational institutions to make significant cuts. Although Southwest State University serves a large low-income and ethnically diverse population, services that benefit these populations were reduced or eliminated. Thirty-six states experienced decreases to their overall operating funds, devastating budgets in this recession. At least 28 states implemented cuts to public colleges and universities and/or large increases in college tuition to make up for

insufficient state funding. Budget cuts are proposed in four additional states. Other states laid-off faculty, increased class sizes, and required staff to take leave with no pay for an average of three weeks (Center on Budget and Policy Priorities, 2008).

Southwest State University continues to face funding decreases while experiencing yearly enrollment increases. This leads to limited resources to support a more personalized learning experience (Dietz, 2002; Wiever, & Qi, 2005). As institutions of higher learning are expected to provide quality teaching, student classrooms were altered to meet growing financial demands. Cost saving efforts were implemented on college campuses including increased class sizes for many courses (Eagan & Jaeger, 2008; Boud, 2001; Miller, Groccia, & Miller, 2001). Similar to most large four-year public institutions, Southwest State University follows this cost savings model and offers most introductory studies classes as large lecture style courses. Large lecture classes have a negative effect on student learning and retention (Dietz, 2002; Wiever, & Qi, 2005). Suggested recommendations for such classes include enhancing teaching strategies to promote student participation, developing intervention mechanisms such as connecting students to resources designed to help them succeed academically, and creating smaller learning groups (Magrath, 2008; Dietz, 2002; Astin, 1984).

Placement of undergraduate peer mentors into university classrooms is a growing model used to improve graduation rates. Southwest State University is at the forefront of this trend and demonstrating how peer-to-peer learning may contribute to student success. Southwest State University continues to fully examine the mentoring program's influence in aiding students with academic pursuits which encompasses connecting students to



resources and skills. This study is designed to explore how peer mentors placed in gateway courses facilitate student success and learning.

In 2006, Southwest State University was awarded a five-year Title V grant in the amount of 2.8 million dollars from the U.S. Department of Education. To receive a Title V grant, a university must be designated as a Hispanic Serving Institution. This designation is given to post-secondary institutions whose student population is comprised of twenty five percent or more Hispanic enrollment (HACU, 2010). Title V grants are specifically designed to increase graduation and retention rates among Hispanics and low-income students at Hispanic serving institutions. Southwest State University's Title V grant was comprised of three major components to address faculty development, student development, and a web navigation tool. The student piece included a student development and engagement initiative which outlined peer-to-peer mentoring in high failing gateway courses. The peer-to-peer mentor model placed upper class undergraduate students as peer mentors in large lecture gateway courses identified as high failing. It was hoped that peer mentors would serve as a valued link to important information and resources providing students with academic and social support to succeed in and outside of the classroom. Over the course of the five year grant, the peer mentor model transitioned through several phases with the guidance of annual program evaluations. Because program assessment data collected is solely quantitative in nature from course average GPAs, I am inspired to take a deeper look at how peer-to-peer mentoring makes a difference on a large university campus, particularly in large lecture courses. Demonstrated success of a specific peer-mentoring model and deeper understanding of mentoring processes and outcomes could aid in the increase of

undergraduate graduation rates in the United States. At Southwest State University peer mentoring underwent three phases, which are described later in this chapter.

### **Why Peer Mentoring Matters in Large Gateway Courses**

#### **Large Lecture Courses**

Courses identified at Southwest State University as high failing gateway courses include: Math 120 and 121, English 101 and 102, Chemistry 121, Biology 110, Political Science 200, and Earth and Planetary Science 101. Under this definition, large lecture classes, and courses commonly difficult for students are considered to be gateway (Eagan & Jaeger, 2008). Others define gateway courses as those students must pass in order to proceed from general to major requirements. For the purpose of this research, I used both definitions throughout. Nationally these courses have a high failing and high drop rate among undergraduate students within large academic institutions. Although often identified as the most challenging courses, many students must complete these classes to enroll in degree seeking courses. Because these courses often prevent students from progressing academically, Southwest State University remains devoted to re-designing gateway courses by introducing peer mentoring and implementing intensive faculty development of teaching strategies. First year students enter the college environment with many uncertainties, and adjusting to large lecture style courses are one of the biggest learning adjustments for new students (Glenn, 2008; Salinitri, 2005). This size of courses often prevents students from completing their degrees due largely to widespread application of traditional lecture style instruction (McLaughlin, Knoop, & Holiday, 2005; Gainen, 1995). This raises concern for addressing higher education graduation rates, as these courses may deter students from continuing to enroll in college classes (Eagan &

Jeager, 2008). Peer mentors in large lecture courses may ease student's transition while keeping them engaged in class materials.

Vincente Tinto (2003) proposed the idea that college student success begins in the classroom. He and other academic scholars discuss the evolution of college students from regular participation in out-of-classroom campus activities to limited time on campus due to work and family obligations. According to Tinto, the classroom environment becomes a sacred place not only to learn but also to connect students to college success and completion. Universities allocate large amounts of funding to design and implement student programs yet most campuses see little impact of these initiatives on completion rates. With a growing "non-traditional" student population living off-campus, holding part- to full-time jobs, and/or enrolling as part-time students, college student success is redefined representing one of the on-going efforts emphasized to understand the classroom learning environment (Grayson, & Grayson, 2003; Light, 2001).

With the latest movements to enhance learning in the classroom, it becomes more significant to identify model programs that offer in-classroom learning strategies with the sole purpose of increasing student learning and success. For this reason, as Southwest State University's peer-to-peer mentoring program evolved through three different phases, and its institutionalization became more secure; it is critical to assess this model to understand strategies that impact student engagement, persistence, and graduation. Presently, the model continues to exist with the financial support of another source of funding. Although the goal was to sustain the program at the ending of the grant, it is difficult to find institutional and administrative resources to fully maintain the initiative.

However, with another Title V grant, the program continues to progress and gain visibility that could lead to final buy-in and appropriate budget.

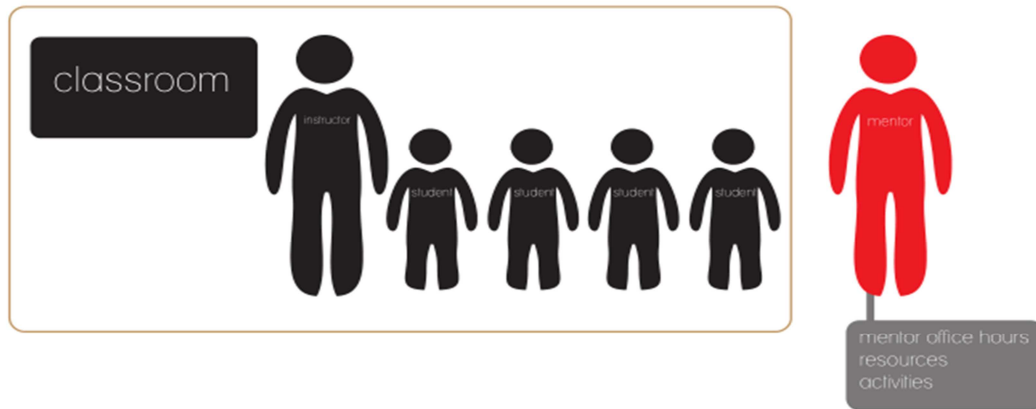
### **Southwest State University Peer Mentoring Phases**

#### **Phase I - Peer Mentor Model**

English and Math courses were first selected for the placement of upper class student peer mentors (Southwest State University Title V APR, 2006). Both of these courses were selected because of their high student failure and withdrawal rates. According to a 2006 *National Survey on Student Engagement* administered at the university, student's expressed their need to be more aware of programs and services. The first peer mentoring model was created based on student's response to the survey, and made peer mentors available in classroom environments to present important campus announcements, guide them to services, and engage students with informal mentoring. Mentors held office hours outside of class time offering students another point of contact. This model gave students two options for meeting and connecting with mentors both in and outside of the classroom. Course instructors did not mandate interaction, but incentives such as extra credit encouraged students to engage with peer mentors. This approach involved students helping students by referring them to programs and services rather than providing direct services to students in the classroom. Peer mentors worked with instructors to identify students who were in need of academic tutoring and referred students to attend tutoring or study sessions. The intent of this first phase was to direct students to such programs like tutoring, advising, mental health counseling, career services, etc. to facilitate their awareness of services. Below is an illustration of the first phase of the mentoring model [see Figure 1].

# phase I

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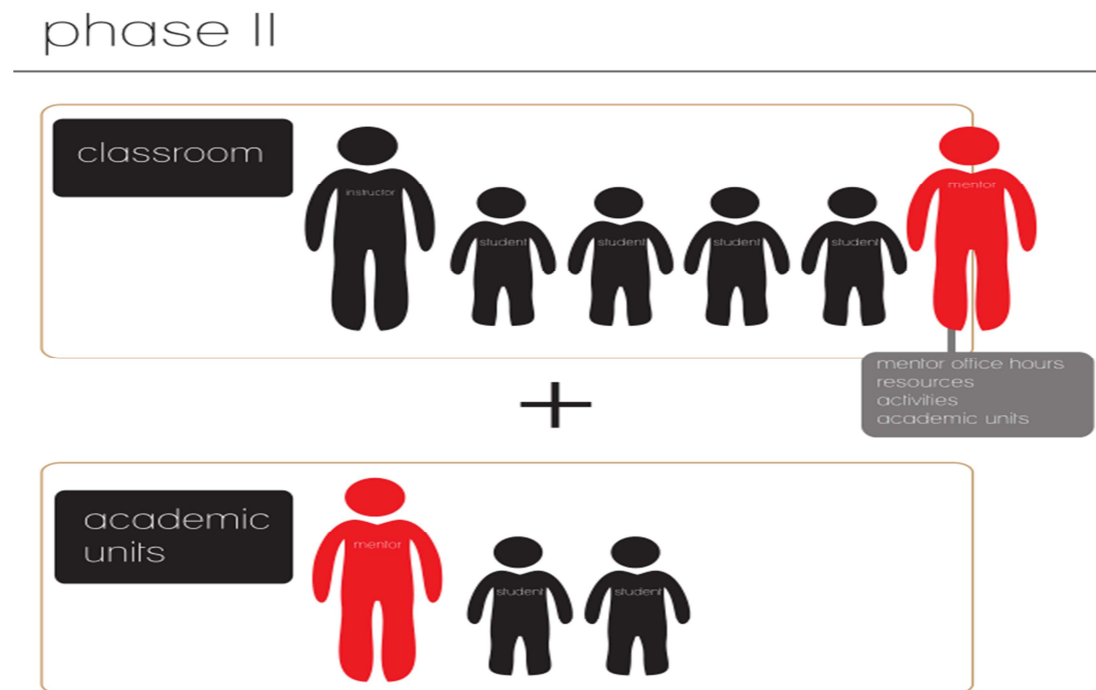
**Figure 1.** First peer-to-peer mentor model, 2006-07.

Requirements of Peer Mentors during the first phase included: attending class regularly, sitting at the back of the class, and making announcements at the beginning or end of class. Outside of classroom, mentors held office hours to mentor and refer students to activities and resources. During this phase, peer mentors served primarily as information agents, rather than as academic peer tutors.

## **Phase II -Peer Mentor Model.**

As the grant moved into the second year, the mentoring program evolved into a different model because students receiving mentoring voiced their preference for mentors to serve as academic tutors. This recommendation is documented in programmatic evaluations. Through extensive program assessments and discussions, the decision was made to incorporate an academic tutoring component where students could receive both personal and academic support from peer mentors. Peer mentors were trained to serve as academic tutors by the tutoring department on campus (Southwest State University Title V APR, 2007). This second phase included peer mentors serving as academic tutors

inside and outside of each classroom. During class sessions, instructors endorsed peer mentors' tutoring role and encouraged students to take advantage of this benefit. Students attending out of class sessions with mentors increased. Figure 2 provides a graphic representation of this second phase of peer mentoring. The model represents how mentoring occurred with the mentor providing half of their allocated time inside the classroom and the other half dedicated to outside office hours in academic units. [see Figure 2].



**Figure 2.** Second peer-to-peer mentor model, 2007-08.

Peer Mentors in the second phase were required to: attend class regularly, serve as academic tutors in class and outside of class time, and provide students with information on resources and activities. Faculty communicated more closely with peer mentors to

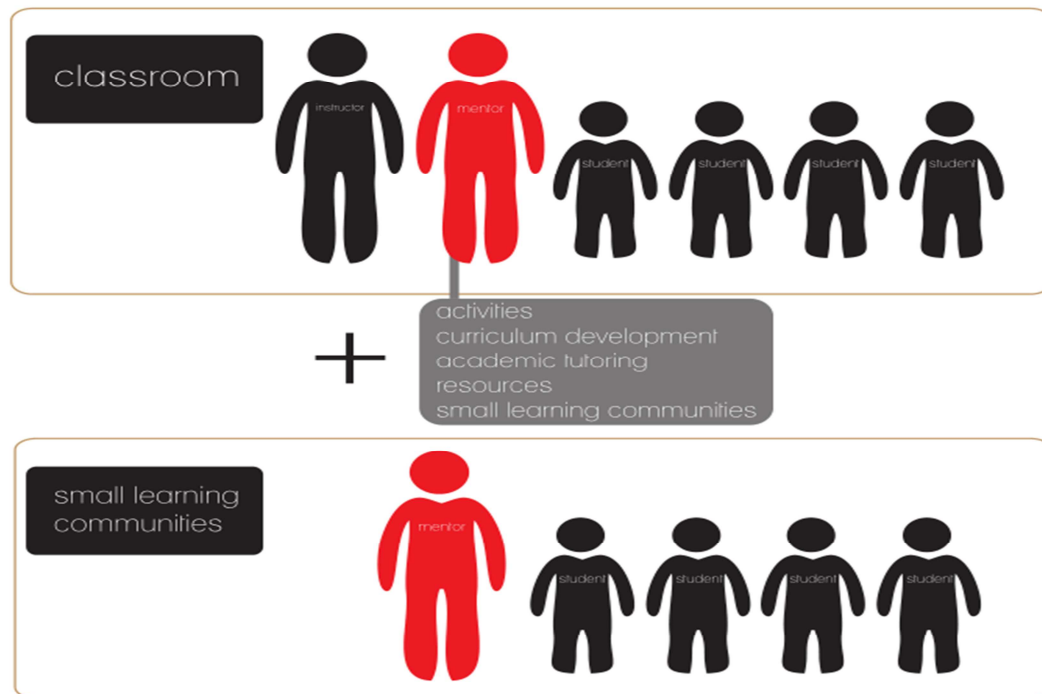
refer students to tutoring. Peer Mentors were assigned to academic departments where they held office hours, and connected with other students beyond their assigned classes.

### **Phase III-Peer Mentor Model.**

In the third year of the grant, the peer mentor model transformed into a final phase. Peer mentors took on an entirely new role and their title was changed to Peer Learning Facilitators (PLFs). Peer mentors as peer learning facilitators represent a new strategy to facilitate student success in gateway courses. The emphasis is now on peer learning facilitators working hand in hand with classroom faculty to provide instruction in the classroom by using small group active learning classroom assignments (Southwest State University Title V APR, 2009). Peer learning facilitators remain academic tutors both inside and outside of the classroom while fostering small learning communities within their assigned classes. They play a greater role in course curriculum development to offer instructors a better student perspective based on their lay understanding of how current students learn. Additionally, students are given an end of the semester questionnaire to identify learning outcomes and gaps that could improve this new peer mentoring phase.

In phase III, peer learning facilitators are required to: develop and plan course curriculum with course instructors, provide in class instruction during class time, deliver instruction in a small learning communities format, serve as academic tutors in class and outside of class time, hold office hours, and provide students with information on resources and activities [see Figure 3].

## phase III



**Figure 3.** Peer Learning Facilitator model, 2009-2012.

The Peer Learning Facilitator model exemplifies a team approach to creating small learning communities within a large classroom providing each student the opportunity to participate. Small learning communities offer a deliberate strategy to reform and reconstruct learning environments to promote links between curriculum, students, and faculty, while encouraging a personalized experience (Gabelnick, MacGregor, Matthews, & Smith, 1990). This learning structure breaks down a large environment by placing students at the core of learning while being surrounded by instruction and peer support. The model also promotes peer-to-peer learning inside and



outside of the classroom, and connects students with another seasoned student who can facilitate their academic, social, and personal roadblocks.

Each peer mentoring phase contributes to improved course completion, increased access to resources and services by students, and more students exposed to academic tutoring. All three peer mentoring phases helped to influence the creation of a model that describes the role of peer mentors and their interactions. However, the greatest challenge of any mentoring program is designing a mentor model that best fits the needs of both students and instructors. Southwest State University's peer-to-peer mentoring program offers formal and informal approaches to mentoring. The formal aspect involves mentors assigned to gateway courses. Peer learning facilitators are hired through instructor's recommendations. Students are not required to take part in program activities outside of the classroom; rather, peer learning facilitators provide academic support, social, and personal support based on their presence in class and sessions held outside of class time. Trying to determine effectiveness of this current mentoring model is complex. Existing program evaluation processes are conducted through a series of surveys administered in the classroom and overall course GPA averages. Classes that are included in this peer-to-peer mentoring model include: English 101 and 102, Math 120 and 121, Political Science 200, Earth and Planetary Science 101, Biology 110, and Chemistry 201.

### **Purpose of the Study**

The primary purpose of this study is to gain a deeper understanding of how a peer-mentoring model influences student success. Peer mentoring could be a key to

success in large lecture courses especially for students from low-income backgrounds, those who are first generation college students, and ethnic minority students.

**Need for the Study.**

Identifying peer-to-peer mentoring approaches that increase student success would be of great value. In particular for those institutions faced with outcomes based funding formulas, strategies to maintain students on a path to complete academic courses leading eventually to a college degree is imperative. Demonstrated success of a peer-mentoring model could aid in raising graduation rates for undergraduates in the United States. This research will identify best practices that can be shared with other large public universities, providing findings and rationale for replicating this model in other institutions.

The following are the research questions posed for my study:

**Research questions**

How do peer mentors impact the college classroom in undergraduate gateway courses at a large public university?

Sub question 1: What influence does peer mentoring have on student learning from student, peer mentor, and faculty perspectives?

Sub question 2: What influence does peer mentoring have on student success from student, peer mentor, and faculty perspectives?

## **Chapter 2**

### **Literature Review**

Peer mentoring programs across college campuses and organizations are increasingly popular. To address needs of the nation's growing minority student population; it is essential to understand best practices for students from underrepresented backgrounds.

Sometimes our light goes out but is blown again into flame  
by an encounter with another human being. Each of us owes  
the deepest thanks to those who have rekindled this inner light.  
(Albert Schweitzer)

The quote above symbolizes the mentoring relationship and experience. Mentoring can have a positive impact on both mentor and mentee. A mentoring experience is often long lasting in a person's memory (Allen, Russell, & Maetzke, 1997). Today, mentoring is characterized in a variety of ways. This literature review provides an overview of different types of mentoring and best practices in introductory college courses. Best practices for peer-mentoring students from underrepresented backgrounds is included to help address issues specific to Southwest State University's minority student population.

#### **Defining Mentoring**

Peer mentoring programs across college campuses and organizations are increasingly popular. Mentoring as defined by Hamilton and Hamilton (1992, pg. 1) is "one person helping another in making significant transitions in knowledge, work, or thinking." Most mentor models match mentors who have more knowledge or experience with those who have less. The goal of mentor relationships is to empower individuals to overcome challenges and achieve their overall goals. Peer mentoring programs can either

be formal or informal. In formal peer mentoring programs, mentee to mentors are assigned and matched. A formal mentoring program offers guidelines and expectations for the relationship, whereas informal mentoring does not require participation and is based on individual choice. Mentoring happens in a variety of formats such as one-on-one mentoring or in groups (Jacobi, 1991). The question still to be determined is what type of mentoring is effective for a purpose such as mentoring toward student success in a specific course?

### **Peer-to-Peer Mentoring**

Peer-to-peer mentoring typically involves individuals who are within the same age range paired informally or formally to help a person achieve a specific goal or fulfill a need (Jacobi, 1991; Johnson, 2002). Peer-to-peer mentoring at most universities is a cost effective method to provide emotional and academic support students need to navigate through a university setting (Jacobi, 1991; Magrath, 2008). Faculty and staff often do not have the time to mentor students because of their job responsibilities. There is also research on how students prefer to be guided by their own peers because they can relate to generational challenges (Lang, 2001; Magrath, 2008). Peer mentoring may also be used as a retention mechanism, especially for students from first generation and low-income backgrounds (Pots, Glen, Schultz & Brian, 2008). These students are often labeled “at risk” for being academically underprepared or having challenges other students don’t face. Mentors create a sense of belonging throughout college campuses, which is an effective support strategy for shaping a student’s academic performance and attitudes toward their college education (Potts, Glen, Schultz, & Brian, 2008).

Mentoring programs were established based on a premise that mentors can increase a student's ability to succeed academically (Allen, Russell, & Maetzke, 1997). Mentors serve as role models and provide encouragement for learning and a familiar face along their college experience. Minority students in particular represent different cultural values than those presented on most college campuses (Tinto, 1999). Minority students often feel disconnected because of pressure to assimilate into unfamiliar campus, learning, and social cultures. Students may feel isolated, lack confidence, and have a decreased sense of belonging. It is important to incorporate culturally relevant programs for students from diverse backgrounds (Gardner, 2005).

In research on pre-college awareness programs, peer-to-peer mentoring is a method suggested to assist and support diverse student populations (Cooper, Chavira, & Mena, 2005). For ethnically underrepresented students, "peers may offer emotional and practical resources for doing homework, staying in school, and going to college" (Cooper, Chavira, & Mena, 2005, p. 420). In 1997, the Kellogg Foundation started ENLACE to address the needs of a growing Latino population in higher education. ENLACE is a community model that bridges families, students, and community toward a common goal of student persistence and academic success. ENLACE offers a peer-to-peer mentoring model that includes hiring mentors from similar backgrounds. Mentors serve as a support system to help mentees navigate (Cooper, Chavira, & Mena, 2005) K-12 and college systems. Exposing students to educational opportunities is the driving factor that fosters a sense of confidence in mentees to achieve in college.

## **Peer-to-Peer Mentoring in Gateway Courses**

### **Gateway courses and student success.**

As previously noted, some define a gateway course as one that has high failure rates among students. Under this definition, most large lecture classes, and difficult courses are considered to be gateway (Eagan & Jaeger, 2008). Others define gateway courses as those students must pass to proceed into their major requirements. As indicated above, I will use the first definition.

First year students enter the college environment with many uncertainties, and adjusting to large lecture style courses has been noted as one of the biggest learning adjustments for new students (Glenn, 2008; Salinitri, 2005). Students often fail to complete college degrees because they are unable to make it through one or more math courses, usually a part of their general education requirements (McGlaughlin, Knoop, & Holiday, 2005; Gainen, 1995). Gatekeeper courses, which students may take more than once, can influence students' decision on whether to continue enrolling in college classes beyond the number of credits required for a degree (Eagan & Jeager, 2008). The idea that peer mentors can aid students to become independent learners within a large community is a good one.

### **In-class mentor models.**

Peer mentor programs in higher education are not new on college campuses. However, the influence of peer mentors in college classrooms is severely understudied thus, it was difficult to find research on this specific topic. Classroom peer mentoring is becoming more popular across institutions of higher learning as administrators begin to understand student's time limitations due to personal, cultural, and work responsibilities

(Pascarella, Edison, Nora, Hagedorn, & Terenzini, 1998). Because of student time constraints, it is imperative to make the best use of class time to engage and connect with them. Mentors placed in introductory courses increase class discussion and learning, communicate assignments clearly to students, established a safe environment for students to ask questions, and provide academic tutoring both inside and outside of the classroom setting (Lang, 2001).

Several studies examined the implementation and effectiveness of peer-led team learning instructional approaches in undergraduate courses (Tien, Roth, & Kampmeir, 2002). The findings suggest students who are led by peer leaders improve academically, and reach a higher level of educational learning (Smith, 2008; Burnett & Pettijoh, 1999).

A common form of peer-to-peer in-class learning is called Supplemental Instruction and is offered mainly in gateway courses. This form of classroom support is increasingly popular because upper classmen are trained to guide other students to build academic learning communities in difficult classes. Supplemental Instruction leaders attend class with students to model good student behaviors and learn class material. Outside of class, Supplemental Instruction leaders offer sessions to coach students on how to learn class material, connect with course instructors, and bring students together to study. Supplemental Instruction research documents how students who participate have a greater pass rate in gateway courses than students who do not participate (Blanc & Martin, 1994). These programs contribute significantly to quality of campus life experiences by assisting students in becoming engaged with the university community and promoting lifelong learning (Bailey, Carnicorn, & Unite, 2008). One study of Supplemental Instruction programs linked to freshman composition courses documents

an increase in student retention with the guidance of peer leaders (Hafer, 2001). Leaders in this program play an integral part in helping students build writing skills and understand what composition entails.

**Peer mentor program effectiveness.**

The majority of research on peer-to-peer mentoring indicates the importance and effectiveness of peer mentor programs. Each peer mentor program faces different challenges based on student population, learning environment, and institutional support. First year students tend to seek out one mentor usually a parent, family member, or past high school teacher. Fourth year students tend instead to choose several mentors who offer different resources related to present and future goals such as business professionals, a college professor, or peers. The importance of creating individualized programs flexible to the needs of individuals versus one size fits all is key in creating an effective program (Packard, Walsh, & Seidnberg, 2004).

Some research also suggests that student attitudes impact academic outcomes in gateway courses. For instance, student attitudes predict success in college math (House, 2001) While, my research is focused on the mentor relationship, it is crucial to identify other factors that may contribute to low Math GPA or dropout rates. Perhaps, the mentor / mentee relationship effectiveness is influenced by student attitudes.

The relationship established between mentor and course instructor might dictate the peer mentor-student relationship. Instructors often recommend students that are hired and the instructor-to-mentor relationship might also influence the impact mentors have on student success. Instructors and mentors may have different expectations of the mentor role in the classroom (Edwards & Gordon, 2006). Outlined in the research are seven



factors important to consider when providing mentoring programs including context, need, participants, facilitators, learning process, setting, and timing (Zachary, 2005). Most instructors are not required to attend professional development opportunities. Providing teacher coaches for instructors, who are matched with mentors, may be beneficial in learning how to maximize the use of the mentor. However, this is unlikely as most institutions cannot require an instructor to take on other responsibilities not outlined in their teaching contracts. One challenge is how to keep faculty motivated and engaged to learn skills that may contribute to overall student success and learning in the classroom environment.

### **Related In-Class Influences on Student Learning and Success**

#### **Class Size**

Large lecture courses are usually defined as courses with more than 60 students enrolled (Arias & Walker, 2004). Much thought has been given to the idea that student achievement is associated with class size. This assumption is based on the notion of large class sizes equating to lower persistence and academic performance, which is commonly voiced by faculty, students, and administrators on college campuses (Kokkelenberg, Dillon, & Christy, 2005). Large class sizes tend to negatively affect student learning, interaction, and quality instruction (Arias & Walker, 2004; Kokkelenberg, , Dillon & Christy, , 2005).

Class size can promote fear among students about participating in class discussions (Weaver & Qi, 2005). However, involving peer-to-peer interaction within the classroom can increase class participation, and increase student understanding of class material presented. Fritschner (2000) identifies how faculty and students usually share a

different meaning of class participation within introductory level courses. Some instructors grade students on participation based on attendance, keeping up with reading assignments, and being alert in class. Students on the other hand, often view class participation as attendance and turning homework assignments in on time. Students want to be part of determining class rules including participation grades. (Peterson, 2001).

Student learning is a critical component of a college experience and education, however, in large classes the quality of learning seems to be diminished. Unless students are sitting at the front of the classroom, they are often distracted by other students talking. There may also be a poor public announcement system to hear the professor. Not being able to fully listen or engage in class instruction impacts a student's ability to comprehend course material. In addition, college faculty are not required to take class attendance, allowing students the option to be present at every class (Binghamton University OIR, 1997; Hancock, 1996; Carbone, 1999; Sorcinelli, 2002).

Times before and after class are popular for student interaction with faculty or peers on course content (Cuseo, 2007). Access to faculty members before or after class is limited in large classes because of the numbers of students needing attention from one instructor. Most students do not visit professors during their office hours because of various factors (Carbone & Greenberg, 1998). Today's college students typically work full or part-time narrowing times they are available to visit with faculty.

Large class sizes are mainly taught in a traditional lecture format, which influences a student's ability to grasp information because of its one-dimensional format. Class formats using traditional lectures promote the expectation of students listening passively to an instructor providing course information. This interaction is one-way

dissemination of course material and learning, and students are graded on individual work (Becker & Powers, 2001; Bligh, 2000). Some researchers believe that class size does not impact a student's learning; that instead learning is based on an instructor's quality of teaching (Toth & Magnana, 2002).

### **Cooperative learning**

Within college teaching, there are various teaching strategies to include: active learning, cooperative learning, learner centered, mastery learning, and problem based. Cooperative learning is the least used style of teaching, but is shown to be highly effective and increases students' academic performance while teaching teamwork skills (Baer, 2003; Slavin, 1990; Joyce, Calhoun, & Weil, 2003). Cooperative learning is defined as three or more individuals working together on a shared goal. Placing students in small groups to work on course materials and projects is an opportunity to capitalize on class time while encouraging students to learn from one another (Johnson & Johnson, 1999; Watson, & Marshall, 1995). Cooperative learning helps bring a small classroom feel to larger courses (Cooper, & Robinson, 2000). Peer to peer relationships established within cooperative learning environments have a powerful impact on a student's college experience. Factors such as loneliness, isolation, and a sense of not belonging decrease for students who are taught in cooperative learning environments. Peer to peer interactions allow students to connect on various levels promoting higher academic achievement, a more supportive environment, ability to establish social networking opportunities, and the building of self-esteem skills (Tinto, 1999). Cooperative teaching takes time, energy, and commitment from instructors resulting in most choosing the easier option to lecture in a traditional manner (Winston, 1994). Mentors can contribute

to cooperative learning by helping with facilitation, organizing, and answering student questions.

### **Active Learning.**

Active learning provides (Meyers & Jones, 1993. P.6) “opportunities for students to meaningfully talk and listen, write, read, and reflect on the content, ideas, issues, and concerns of an academic subject.” Instead of students as passive participants in a classroom, instructors develop a series of activities to engage students in learning. Active strategies are designed to help students learn the material in many different ways (Bean, 2001; Brookfield, & Preskill,, 1999; Stanley, & Porter, 2002). Students who actively participate in their learning tend to remember information, and understand it at a higher level (Adams& Hamm, 1994). Short writing exercises allow students to offer reflection on class material or to present information in other forms that keep the learner active and engaged e.g.: videos, clickers, computers, etc. (Abrami, 2001).

Peer to peer mentoring can be complex in nature because it can be defined and delivered in many ways. Even though there is no standard way of conducting peer mentoring, it still is considered as an effective way to connect and support students in developing valuable academic and life skills. At Southwest State University, peer mentors are strategically placed in large gateway courses to raise a student’s chance of succeeding in the course. Through my research, I attempt to glean on the various ways peer mentors are making an impact on students both inside and outside of the classroom.

## **Chapter 3**

### **Research Design**

This constructivist qualitative research study explored how peer mentors impacted the college classroom in undergraduate gateway courses at a large public university. A phenomenological methodology with four methods of data collection was applied to study peer mentoring in a public southwestern research university. Methods included interviews, focus groups, document analysis, and observations, to provide a rich understanding and description of this phenomenon. My research design helped me explore the research question and sub questions to understand influences of peer mentors and mentoring on student learning, student success, as well as instructor teaching and interactions with students. A special emphasis was given to first generation, low-income, and minority students since they are the growing student populations across campuses. Details of my proposed research design are provided in this chapter.

### **Research Questions**

My research question and sub questions are as follows:

Research Question:

How do peer mentors impact the college classroom in undergraduate gateway courses at a large public university?

Sub question 1: What influence does peer mentoring have on student learning from student, peer mentor, and faculty perspectives?

Sub question 2: What influence does peer mentoring have on student success from student, peer mentor, and faculty perspectives?

## **The Peer Mentoring Program at Southwest State University**

As noted above, Southwest State University was awarded a five-year Title V grant that allocated approximately \$105,000 dollars per year to peer mentoring. Title V grants are geared to improving retention and graduation rates at Hispanic Serving Institutions. The University completed their first Title V grant with the expectation to raise graduation rates. A portion of the University's grant funds were used to hire undergraduate students who earned a B or better in targeted gateway courses to serve as peer mentors. Southwest State University outlines in a report a list of courses of “killer classes” that are the highest failing courses among all university students. Most of these courses are 100 level classes with high freshmen enrollments. The University’s peer-to-peer mentoring model can be defined as a non-traditional approach to student learning. Unlike a traditional peer-mentoring program where students meet with mentors outside the classroom to gain academic or personal assistance, this model integrates peer mentoring into classroom learning. This exposes and connects students to peers who directly support their academic learning in the classroom and college experiences in general. This type of mentoring provides peer support to students without them having to search for it on their own. The uniqueness of this approach nationally makes this an important peer mentoring program for research study.

### **Philosophical Research Framework – Hope and Constructivism**

When people hope, their stance is not only that reality is open, but also that it is continually becoming. Rather than trying to concretize and force the realization of a preconceived future, hoping people prepare the way for possible futures to emerge. In this sense, hoping can be seen as a deeply creative process, one that requires steadfast patience and the willingness to accept uncertainty as the open future is explored and molded into a compelling image of possibility” (Helland & Winston, 2005, p. 45)

I chose to design and conduct my research from paradigms of hope and constructivism. I became interested in the theory of Hope when I often observed college students who were identified as high achieving yet failed in their courses leading some to drop out. I also wanted to understand how low achieving students progressed in many instances at higher rates than those students who were predicted to succeed. What is now obvious to me is that individual intelligence or histories of getting good grades are not sole predictors for student success in the college classroom. As a college administrator, it is important for me to remain hopeful. Even though Southwest State University and other institutions across the nation faced low graduation rates for a decade, I still remain hopeful. As a scholar working from a paradigm of hope, it helped me comprehend how hope can help facilitate student success, while guiding me to uncover solutions that increase student success. Working from a paradigm of hope helped me plan for the future by setting specific goals and recommendations based on findings from this study that can now be disseminated to colleagues in higher education.

Snyder, Irving, and Anderson (1991) define hope as having “a positive motivational state that is based on an interactively derived sense of successful (a) agency (goal directed energy), and (b) pathways (planning to meet goals)”, (p.287). The terms agency and pathways in later years transformed into the now commonly used terms of willpower. Based on a theory of hope, individuals with strong willpower have a greater sense of accomplishing their goals. The ability to be resourceful in finding a variety of options when faced with barriers is one of the main characteristics of people who are identified with high levels of hope. Dr. Robert Snyder (2002) discusses hope in terms of directed thinking, which involves setting specific goals for the future. People with high

levels of hope also form positive relationships, and work as valuable team members on common goals. Maintaining a high level of hope as I conducted this research offered me the chance to establish optimistic relationships that will add value to this research.

Because there is not one specific way to explore my research question, I also chose to ground this study in a constructivist philosophy. Constructivism relies on gaining information from individuals who are engaged in or impacted by a certain experience (Jones, Torres, & Arminio, 2006). Constructivism is based on the perceptions of humans creating their own knowledge from lived experiences (Jones, Torres, & Arminio, 2006; Schwartz, & Ogilvy, 1979; Varela, 1996). I selected three main principles from constructivist theory to develop an in-depth understanding of my research question including: multiple realities, social and historical construction, and theory generation of cause-effect linkages.

Constructivism promotes a belief that each person develops multiple realities based on their own experiences. Based on this premise, the human experience is said to be holistic involving the physical, emotional, and social experiences working together in a synchronized manner that creates multiple interpretations. The principle of multiple realities will allow me to capture different experiences and realities represented by mentors, faculty, and students who participate in the mentoring program. Understanding that there is no one solution or answer, I drew upon research participants' views as they construct their own meaning of the peer mentor program (Akyalcin, 1997; Crowther, 1997; Geary, 1995; von Glaserfeld, 1995; Hein, 1991; Heylighen, 1997; Mahoney, 1995; Murphy, 1997; Piaget, 1926; Piaget & Inhelder, 1969; Sexton & Griffin, 1997; Vygotsky, 1978).



Social and historical construction suggests that subjective meanings are formed through interaction with the environment. Learning is considered an individual process, yet knowledge is also created by interactions with others, and environments in which we work and live. Historical construction unfolds in the learning processes as concepts presented earlier in an individual's life, but doesn't fully make sense of the idea until later in life with the help of someone else who has already developed those skills (Airasian & Walsh, 1997; Bandura, 1986; Ertl & Kraan, 1997; Mahoney, 1995; Piaget, 1926; Piaget & Inhelder, 1969; von Glaserfeld & Steffe, 1991; Vygotsky, 1978). In my study, I listened and learned how previous and current social and historical interactions influenced learning between peer mentors, course instructors, and students. Particularly, how peer mentors felt they contributed to student success in a large classroom setting based on their own personal experiences.

Theory generation is the process of inductive inquiry to understand meaning from information and data collected (Creswell, 2007). Theory is formed from information gathered, and patterns identified from this data. The generation of ideas, thoughts, and discovery can be an endless process because there is much information that leads to other inquiries. Generating information retrieved from my data collection methods led me to make sense of my question in many different ways. It provided me with the ability to view experiences and perspectives in various ways, while formulating a series of questions for future research.

Overall, through my constructivism lens, I was able to remain open to learning how mentors, students, and instructors felt peer mentors contribute to the good of creating improved opportunities for student success. Constructivism allowed me to bring

their experiences to life, and identify common themes and characteristics that may be beneficial to other institutions.

### **Positionality**

For the past 23 years of my professional career, I served as an academic advisor, mentor coordinator, and retention administrator offering educational opportunities and resources for students from K-20. As a college instructor in the classroom for eleven years, I observed challenges students bring into the college setting and academic barriers they encounter. I consider myself a retention specialist seeking to understand methods to retain college students across cultures. Presently, as a college administrator, at a large public university, my ambition is to bring forth best practices in the field of student college success.

Higher education desperately needs progressive ideas for increasing retention and graduation rates at a national level. Of particular interest is to help students from rural communities, low-income backgrounds, and historically underrepresented groups achieve in a college environment since there are many disparities among these groups in obtaining a college degree (ENLACE Report, 2007). My role is to ensure that our students are given the greatest opportunity to succeed. With this study, I believe I can influence my institution and others to reconsider how we work and provide services to our students.

My professional and student experience is both an asset and limitation for this study. My familiarity with college environments including knowledge of institutional language, systems, and overall student challenges allows me the ability to quickly work through the steps and process needed to gain access to students, faculty, and mentors.

I am aware however, that my current position as Director of Student Academic Success, with a direct reporting line to the Office of the Provost, may be intimidating and possibly feel like a potential threat to participants. My years of experience in the profession might make it more difficult for me to remain open to all possibilities discovered through the study. Having worked so long with retention issues I may have formulated bias in the way I collect and analyze data. During this study I worked diligently to remain neutral and kept extensive field notes and memos to assist myself in remaining true to the voices of participants and patterns that emerged from data collection and analysis.

### **Site of Study**

The peer-to-peer mentoring program I studied is located at Southwest State University (pseudonym) in the Southwestern region of the United States. Southwest State University is a public four-year university with a current enrollment of approximately 26,000 students. I chose Southwest State University as the site of this study for two reasons: First, this University is considered a diverse campus, with more than 50% of first year freshman from ethnically and culturally, underrepresented backgrounds. Second, as one of the largest and most ethnically diverse research Hispanic Serving Institutions, Southwest State University has the opportunity to become the leading university to develop national models on how to work with students from diverse and low-income backgrounds.

Within Southwest State University, through its Title V grant, partnerships were formed to pilot peer mentoring in various gateway courses. Peer mentors are assigned to courses in math, English, political science, earth and planetary science, biology, and

chemistry. All classes are identified on the University's "killer course" list. A total of 40 undergraduate students were recruited, hired, and placed in courses to serve as peer mentors with the intent to facilitate increased learning in the classroom and connect students with academic, social, and personal resources outside of the classroom.

The site of the study was based solely on gateway classrooms to document student learning and interaction with peer mentors and instructors. Southwest State University is a relatively large research institution that requires faculty to make research their priority and remand teaching to secondary priority. Because of this academic expectation from many research institutions, faculty may struggle to manage their roles as teacher, researcher, and service provider. To support faculty research expectations, graduate students are tasked with the role of serving as instructors in some entry level gateway courses freeing faculty to engage in research and writing academic papers. The majority of entry level math and English courses are taught by graduate students, while others are taught by lecturers, untenured, or tenured faculty. Gateway classes have high enrollments ranging from 50 students in beginning math courses to 200 students registered in earth and planetary sciences. Instruction and learning in these classrooms are crucial to understand how student success occurs especially with the assistance of peer-to-peer learning.

### **Mode of Inquiry - Qualitative**

Modes of inquiry are defined as whole series of steps or rules for gathering, testing, validating, accumulating, and distributing information or knowledge that help to answer a research question (Groth, 2010). The use of qualitative research methods was a helpful mode of inquiry to understand how peer mentors are making an impact.

Qualitative research allows the researcher to gain insight into people's attitudes, behaviors, value systems, concerns, motivations, aspirations, culture, or lifestyles. It seeks answers to a question by using a variety of research processes and techniques to respond to research questions while remaining open as information evolves. The process provides a researcher with capacity to gain a sense of meaning others give to their own situation and how they view their world (Lincoln, 2000; Kuh & Andreas, 1991). The advantages of conducting qualitative research include the flexibility to follow unexpected ideas and explore process effectively, sensitivity to contextual factors, ability to study symbolic dimensions and social meaning, and capability to develop new ideas and theories (Conger, 1998; Bryman, Bresnen, Beardsworth, & Keil, 1988; Alvesson, 1996). With this research study, I strove to add new understandings to the contributions of peer mentoring. I chose to do this through the collected narrative of experiences from research participants involved in the program by “seeing the situation as it is seen by the actor” (Blumer, 1969, p.20). Incorporating a qualitative phenomenological approach provided further insight on how the program is perceived by all involved and enabled me to find common as well as multiple perspectives, outliers, and divergent patterns.

### **Methodology - Phenomenology**

I chose a phenomenological methodology to explore my research question and acquired a rich and complex understanding of how peer mentors are making a difference in large gateway courses. Phenomenological research is used to describe the outcomes of given information, enabling researchers to explain the phenomena of interest in great detail and by using original language of the research participants (Welman & Kruger, 1999; Creswell, 2007).

The phenomenological approach integrates interpretive and hermeneutic methods to observe the lived experience of individuals or groups (Van Manen, 1997; Husserl, 1970). It seeks to understand meaning in events and in human interactions, and helped me to identify common characteristics among peer mentors that increase student engagement, which may contribute to overall student academic success, specifically in large gateway courses. I used phenomenological methodology to explore mentoring factors that contribute to overall student learning, retention and success by giving mentors, instructors, and mentees an opportunity to discuss their “lived experiences” with peer mentoring (Van Manen, 1997, Husserl, 1970, Creswell, 2007). Each participant had a unique perspective on the role and meaning of peer mentoring on student success. With this in mind, identified common phenomena can highlight the positive outcomes from these peer-to-peer interactions with course instructors, peer mentors, and students as well as offer insights on improvements that could be made to peer mentoring processes.

### **Study Participants**

I identified three instructors who taught gateway courses and were assigned a mentor, three mentors assigned to gateway courses being studied, and five to seven students enrolled in each course for a total of 15 students. Gaining layered perspectives from instructors, peers, and students in the same courses, provided a deep understanding of peer mentoring from various views of the same phenomenon. Gateway courses selected for this study included: Chemistry 121, Earth and Planetary Science 101, and Math 121. These gateway courses were selected based on an annual listing of high failing courses. These courses often play a deterring role among students progressing toward degree completion. This study was focused on these three courses in conjunction with

mentors, students, and instructor participation about overall influence peer mentors have in the classroom.

### **Peer Mentors**

I selected three peer mentors who were assigned to each of the large gateway courses for my research study. Undergraduate students hired as peer mentors play a vital role in gateway classes. These peer mentors were hired to work with instructors to increase student learning in the classroom, and serve as information agents to connect students to campus resources.

I followed the same steps to recruit peer mentors as I had for faculty. The number of peer mentors assigned to these courses outnumbered the instructors by far. A total of thirty four peer mentors were assigned to course sections, although the Math 121 had the most because they had the majority of sections. I first began with contacting the peer mentors from the two courses with the least amount of sections which included Chemistry 121 and E& PS 101. Initially, the peer mentors were not immediately responding, but with the assistance of the course faculty instructor and the program coordinator, I began to receive feedback. As I confirmed the peer mentors for one on one interviews, I once again followed the protocol of recruiting a diverse group of peer mentors. My minimum goal was to interview three peer mentors, however; I interviewed four. see Figure [4].

### **Gateway Course Instructors Who Partner with Peer Mentors**

I invited three instructors who taught in the selected courses to participate in the study. The purpose of selecting instructors that belong to the same courses as mentor participants was to learn how instructors integrate peer-mentors in classroom instruction

and learning. Instructors in both Chemistry and Earth and Planetary Science courses are full time faculty who taught the same course for several years. The math instructor had been teaching both upper level and lower level math courses.

The courses for Earth and Planetary Sciences (E&PS) 101, and Chemistry 121 had a limited number of sections with assigned peer mentors. E&PS 101 only had one professor that taught three sections, while Chemistry 121 had four faculty teaching three different sections. Although there were limited sections for both courses, recruiting faculty to participate in my research project was relatively easy. For Math 121 there were fourteen different sections with assigned peer mentors, which was a bit more difficult to decide who I was going to interview. Every course instructor for Chemistry 121, E&PS 101, and Math 121 with assigned peer mentors were invited via email to participate in my research study. Automatically, I received emails from those faculty members that were not available to participate. The process was based on a first come first serve basis because I wanted to ensure I would not lose the interest of those that immediately responded. I also remained committed to collect a gender and ethnically balanced group of participants which served as my final protocol. See figure [4]

### **Students Enrolled in Gateway Courses with Peer Mentors**

Students were selected across all three courses to take part in one of the focus groups to gain information on the peer mentoring relationship and not on course specific material. I purposefully selected five to seven students from each of the three gateway courses for a total of fifteen students to participate in the study to represent five from Math 121, five from Earth and Planetary Science 101, and Chemistry 121. Students were



invited initially to participate in one of three focus groups. However, due to low participation, I offered five focus groups to reach total number of students.

The focus groups consisted of three to five students. Small groups were created to ensure student voices were heard as they shared their perspectives and experiences working with peer mentors (Creswell, 2007). Since gateway courses I selected have large enrollments averaging 50 to 100 enrolled students, five students per class allowed me the ability to gain multiple student perspectives without working with an unmanageable number. Gaining their perspective on how they utilize a peer mentor inside and outside of the classroom setting was central to understanding the contributions peer mentors make to student success.

I chose a research participant sample to ensure that a balance of gender and diversity of ethnic backgrounds were included. As noted in figure [4] focus group representation of students included eight females and seven males. In terms of ethnicity focus groups comprised six Caucasian, five Hispanic, two African American, and two East Indian. It was important to include perspectives based in a diversity of gender and ethnic backgrounds that mirrors the diverse make up of this university. One ethnic group that I was unable to include were Native American students. It would have been important to have gained their perspectives.

# of Research Participant	Gender	Course	Ethnicity
3 Instructors	2 FM 1 M	1 Math 121 1 E&PS 101 1 Chem 121	1 Caucasian 1 Hispanic 1 Asian Pacific Islander
4 Peer mentors	1 FM 3 M	1 Math 121 2 E&PS 101 1 Chem 121	2 Caucasian 2 Hispanic
15 Students	8 FM 7 M	5 Math 121 5 E&PS 101 5 Chem 121	6 Caucasian 5 Hispanic 2 African American

			2 East Indian
22 Total Participants	11 FM 11 M	3 Instructors 4 Peer mentors 15 Participants	9 Caucasian 8 Hispanic 2 African American 2 East Indian 1 Pacific Islander

**Figure 4.** Peer mentoring research participant demographics.

## Sampling

The unit of analysis in phenomenological research is experience, not individuals or groups. Therefore, sampling plays a crucial role to capture a blend of experiences across the populations under study. Sampling is defined as a process in which a predetermined number of participants are selected from a larger population (Henry, 1990, De Wever, Schellens, Valcke, & Van Keer, 2006). For the purpose of this research I used purposeful and random sampling.

*Purposeful sampling* involves selecting individuals or documents where the researcher can learn and gather extensive information about the experience being studied (Merriam, 2002). Selections are purposeful and not left to chance, and with a specific intention to target sources from which substantial knowledge can be retrieved. In the case of my research, I selected three gateway courses that had assigned mentors, along with instructors who integrated the peer mentor program into their course curriculum, rather than including sections that are not a part of the program. The intention was to highlight the advantages of peer mentoring in classes where students traditionally are unsuccessful (Merriam, 2002).

Purposeful sampling was applied when selecting research participants for three focus groups. I was deliberate to ensure that I chose a balance of male versus female participants, and students from diverse ethnic populations. As demonstrated in figure 4,

eight females and seven males took part in the study. Each focus group comprised a minimum of three to five participants with the aim to select a total of eight females and seven males to strive for gender equity. In terms of ethnicity balance, target numbers included five Hispanic, four Anglo, two East Indian, two African American, and two Asian. By using this sampling method, I was able to replicate the current student body demographics at Southwest State University within the focus groups. I strove for gender and ethnic balance in each of the three focus groups.

Although purposeful sampling was my primary process, I was hoping to use random sampling as well. I believe it is imperative to select student participants randomly, as this provides the most neutrality to the study. A random sample is giving each item or element of the population an equal chance of being chosen at each draw (Henry, 1990). However, instructors encouraged me to use voluntary recruitment method where students could self-select to participate. Instructors felt I would receive better results based on their own research experience. This selection process worked, as I was intentional about recruiting students from diverse genders, and ethnic backgrounds. In order to recruit students I predetermined meeting times, dates, and locations for focus groups. The recruitment of students was based on instructor in-class announcements and emails sent to the students. I also made classroom announcements, took research study recruitment fliers, and a sign-up sheet that instructors circulated at the beginning and end of class times. Even with announcements via the faculty and peer mentors, it was challenging to get students to attend the focus groups. This method of participant selection was continued until the necessary number of research participants was reached. Fifteen students were selected in total, five students from each of the three courses in the

study. Gaining knowledge from this group of students provided refinement and clarity to understanding their experience with the peer mentor program, and afforded others the chance to give feedback-

### **Sampling documents for analysis.**

My research study incorporated document analysis related to the peer mentor role. Document analysis is considered one of the most unobtrusive ways to gather pertinent information for a study (Marshall & Rossman, 2006). Documents represent thoughts and ideas that are preserved (Potter, 1996), making the examination of documents important to identify patterns and trends confirming information or making new discoveries based on interviews and observations (Patton, 2002). A thorough review of all past and current materials related to the peer mentoring program were used to analyze overall information presented to mentors, instructors, and students.

Documents analyzed included the following:

- Course Syllabi of classes that have been identified for the study.
- Peer Mentor Survey
- Student Survey

### **Data Collection Methods**

Data collection involved collecting information through a series of methods. The purpose of data collection in qualitative phenomenological research is primarily to explore insights people share based on their personal experiences (Denzin & Lincoln, 1994). I used four methods of data collection including: class observations, interviews, focus groups, and document analysis. Using several data collection methods allows for triangulation of that data. Triangulation increases a research study's credibility resulting

in a stronger research design and findings. Triangulation confirms information and findings across a variety of types of data and methods of data collection (Denzin & Lincoln, 1994; Potter, 1996).

### **Classroom Observations**

I began my study with three class observations, one observation per class in identified courses. All three course instructors felt that I would capture the essence of the peer mentoring model in one class observation. Classroom observations allowed recording of peer mentoring events, activities, behaviors, and interactions within a classroom setting (Marshall & Rossman, 2006, Jorgensen, 1989). This method allowed me to understand how peer mentors interacted with students in the classroom setting. Although I aimed to follow an unobtrusive observation process to permit peer mentors to interact in their normal mentor role, it was difficult. The Institutional Research Board requested that I have each individual student sign a permission form. Therefore, the students were informed at the beginning of class that I would be conducting a class observation. On the form, students were given the option to opt out. Instructors worked to create a plan if students decided to not participate. In the end, all students took part in the observation.

Blending into the classroom was an important strategy for this study, and although students knew that I would be conducting observations, I still tried my best to not influence classroom interactions. . Some unobtrusive strategies I used included: dressing like a student, finding a place in the back of the classroom, taking notes, and integrating myself as much as possible so as not to attract attention from on-going activities.

To guide my observations, I developed a classroom rubric which help me observe the same types of topic areas and behaviors of students, peer mentors, and faculty. I was able to see patterns of interaction and engagement between peer mentors and students. Additionally, observation of how each instructor utilizes the peer mentor in the classroom was another important aspect to observe. The areas I observed included: peer mentor to student interaction, peer mentor visibility, in class instructor and peer mentor interactions, peer mentor activities presented, levels of student engagement, peer mentors overall role, and how students responded to peer mentor.

Peer mentors facilitating small group discussions, walking around the class answering individual student questions, and asking student questions on course materials were specific observations that provided me some insight on how peer mentors are making an impact.

## **Interviews**

Qualitative interviews are particularly useful for getting the story behind a participant's experiences by getting them to react verbally (Creswell, 2007). The interviewer can pursue in-depth information around the topic and probe for examples, clarity, and depth (McNamara, 1999; Rubin & Rubin, 1995). Interviews can be conducted in a structured, semi-structured, or unstructured format (Denzin, N. K., & Lincoln, Y. S., 1998). The most commonly used interview design in qualitative research is either semi structured or unstructured formats. Semi-structured interviews are comprised primarily of a list of open ended questions (Creswell, 2007) allowing both the researcher and interviewee an opportunity to discuss information in greater detail. Probing techniques can also be used during a semi-structured interview (McNamara, 1999) to help the

interviewee recall or share information more clearly. There are three types of probes (Rubin & Rubin 1995) detail-oriented that asks a specific question such as date or person, elaboration probe focused on asking the interviewee to provide examples or discuss information more, and clarification probe to help interviewer gain a better understanding on specific answers that might need further explanation. The following are discussions of how I applied interviews with three different participant populations in the study, instructors, peer mentors, and students enrolled in the courses. I tape recorded interviews with participant permission, and later transcribed for data analysis. I took notes on non-verbal cues and my own observations throughout each interview.

#### **Instructor interviews.**

Face-to-face interviews are time consuming and lengthy (Mathers, Fox, & Hunn, 2002), yet they can be the best way to collect quality data. I included face-to-face semi-structured interviews with three instructors that included one from each course Math 121, Earth and Planetary Science 101, and Chemistry 121. Interviewing instructors offered me a better understanding of how the peer to peer mentor role is developed and integrated with teaching, learning, and connecting to students. One-on-one interviews also allowed me to ask a series of questions that provided critical understanding of how mentoring is defined and experienced by faculty involved. Interviewing is a key source of obtaining information because it allows the researcher to find topics and common themes from the information gathered (Marshall & Rossman, 2006). Semi-structured interview questions (see appendix I) were conducted individually with all instructor interviewees. Unlike a structured interview that is more formalized, a semi-structured interview approach is flexible allowing unexpected new information or questions during the interview (Lindlof

and Taylor, 2002). I collected the same general information from each interviewee to identify common patterns, yet probed for unique meaning, insights, suggestions, and experiences of each individual participant. Throughout the interview process, I strove to provide an open and comfortable setting for all who were interviewed. Instructor interviews were coordinated with them at their most convenient times.

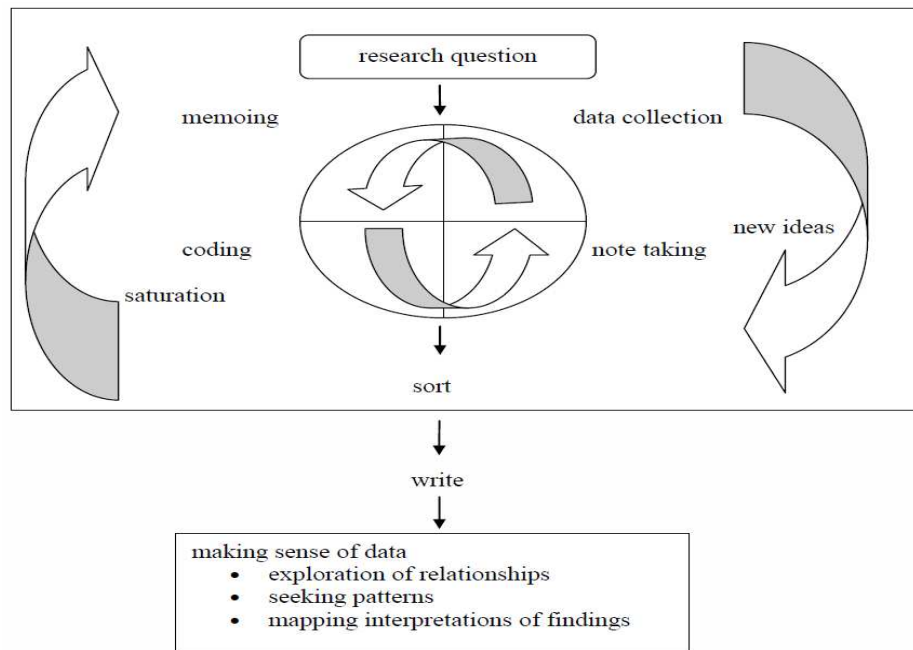
### **Student focus groups.**

My study involved conducting a total of five focus groups. All focus groups consisted of students enrolled in the courses studied. The student focus group was comprised of three to five student participants, a recommended ideal number for maximum individual input and collective interaction (Krueger & Casey, 2000). Overall, focus group participants were diverse in terms of ethnicity and gender to include: five Hispanic, six Caucasian, two East Indian, two African American, and two East Indian. A focus group is a set of individuals selected and assembled by researchers to discuss and comment on a subject from personal experience (Powell, Single, & Lloyd, 1996; Goss & Leinbach, 1996). Focus groups rely on interaction within the group based on specific topics given by the researcher (Morgan, 1997). Through the use of focus groups, I drew upon the attitudes, feelings, beliefs, and experiences of the participants. I was able to reveal peer mentor and student contributions to learning and success. An advantage to this method was that it provided the opportunity for me to gain a large amount of information from many individual perspectives within a shorter time frame than additional individual interviews (Morgan & Kreuger 1993). I used semi-structured questions for all focus group discussions. (see Appendix J and K). The overall purpose of the focus groups was to gain a range of perspectives within a group on how they feel



the mentor role enhances their experience in a gateway course and on how this role might be improved. Another benefit of focus groups is that individuals trigger memories, compare and contrast experiences leading to deeper understanding, and collectively offer suggestions for improvement. I worked to facilitate a safe and comfortable environment.

### Data Analysis



**Figure 5.** Data analysis model guide to analyze research data on peer mentoring.

After collecting data, I began to analyze my research data using a step by step guide based on the data analysis design I developed to organize the process.

### Data Collection, Organizing and Understanding the Data

"Valid analysis is immensely aided by data displays that are focused enough to permit viewing of a full data set in one location and are systematically arranged to answer the research question at hand." (Huberman & Miles, 1994, p. 432)

The amount of data gathered over the course of the study can be overwhelming.

With this in mind, it is important to begin to reduce and reconfigure data to make it manageable and meaningful to the researcher (Denzin & Lincoln, 1994). Data reduction helped me focus on data that assisted me most effectively to explore my research question. This meant I had to make some choices about what I described in full; what I included in part, and what data was not noted in the end. The way I organized data was critical to capturing the information in a way that was easy to comprehend. For this reason, I created grids to display, organize, and analyze data collected (Denzin & Lincoln, 1994). Because I am a visual learner, developing a table and mapping process facilitated my ability to read through the data in an easier and less stressful way, while helping me to summarize key findings. [See figure 5].

#### **Memoing and note taking.**

A review of memos and notes taken was a significant part of the analysis process. Memoing and note taking are strategies used to write or record thoughts on what one is learning from the data (Creswell, 2007). Themes emerged during the data collection process, and I kept track of these observations, key words, and thoughts through memoing and note taking. I also coded and analyzed memos and notes for additional insights. Inductive coding is usually used to analyze memoing notes in the early stages since most researchers have not developed larger themes or findings at this point (Creswell, 2007). I recorded my memos and field notes in a hard bound notebook to protect them from being lost or damaged.

#### **Coding.**

Any good research plan can be changed, and that is what I chose to do as I began to sort and code my data. Initially I had planned to use a sophisticated on-line qualitative

application called Atlas, but after having difficulty learning how to navigate the program, I decided to use Excel. This method allowed me to be hands on with analyzing and coding the data. Excel provided me the chance to be up close and personal with the data, allowing me to review each interview to find the most common words and themes. For each interview and focus group, I created it's on excel spreadsheet page to capture responses to questions. From there, I was able to determine most common words used which help me develop larger categories and themes. This process also allowed me to identify specific quotes to represent each one of the categories.

With the use of Excel, I utilized a coding system to group and make sense of data with the goal of finding common and outlying patterns. These codes served to summarize, synthesize, and sort many observations made, while providing me with the means to categorize events, statements, and observations to identify commonalities (Charmaz, 1983). The coding processes I used included: thematic and hierarchical category systems.

The primary approach I used to analyze my data is thematic analysis. Theme as described by Jones, Torres, and Arminio (2006) is “an element that occurs frequently in a text or describes a unique experience that gets at the essence of the phenomenon under inquiry.” By taking detailed notes of class observations, accurately transcribing interviews and focus groups, and giving detailed attention to all documents analyzed, I examined the data for recurring ideas, patterns, and salient themes (Marshall & Rossman, 2006, Bradley, 1993). This process allowed me to identify recurring themes, as well as discover phenomena within the mentoring program that fosters effective mentoring in gateway courses. I payed attention during the analysis for important outlying themes,

those that seemed very important to participants or to classroom learning/student success even if not a common or highly recurring pattern.

### **Sorting.**

After data was coded, I grouped and sorted data into categories based on common words, and frequent themes. Using an Excel spreadsheet, I was able to replicate card sorting electronically rather than using paper and pencil. I used an Excel word sorting technique to help me group the data by first creating general themes (Creswell, 1998). Under each theme, I placed quotes or phrases that relate to that specific theme. I merged common categories and placed them under larger themes to reduce the amount of information. Using a sorting technique, I made connections between responses from all forms of data. When selecting quotes, I remained mindful of specific comments that could identify a particular research participant and removed as needed.

### **Writing and making sense of data.**

Once common themes are identified, overall research findings can be interpreted (Marshall & Rossman, 1995). Interpreted data can be presented in many forms that include a listing of key findings, lessons learned, research limitations, and recommendations for future research. I incorporated each of these in my final dissertation. I also returned to the literature and compared findings to see if there were any significant differences or similarities with past research that further contributed to understanding my research question and results. As I wrote and made sense of the data, while aiming for credibility and validity of my study, I used several data sources that offered the same results, kept track of how and why I determined thematic choices, and avoided generalizing the findings (Krueger & Casey 2000).

## **Quality & Rigor**

Within any field of research a natural and thus common question is ‘what constitutes good research? As I conduct my research, I am committed to preparing and presenting a research design based on quality. To ensure that I accomplished this goal, I followed the six steps of goodness (Tobin & Begley, 2004). Step one reminds the researcher of the importance of having consistency between the epistemology, research question, collection of data, and analysis process (Jones, Torres, & Arminio, 2006, Tobin & Begley, 2004). This guided me to maintain the research question as the leading force during the research cycle. The second step was to pay close attention to the methodology. The process of selecting and recruiting participants for the study was clearly connected to the methodology (Tobin & Begley, 2004). I used semi-structured open-ended questions when interviewing participants and facilitating focus groups in order to create a logical argument associated with the methodology presented. The third step was to ensure that the collection and analysis of data was accurate. My IRB proposal was approved by giving me the permission to collect data from students and instructors within the university setting. I also recorded interviews and focus groups as well as took notes throughout the data collection process for greater accuracy. Taking these factors into account contributes to a more congruent research study (Marshall & Rossman, 2006). The fourth step was to contemplate the representation of voice. For this step, I will reflected on my reasoning for studying peer mentoring while taking my personal and professional experience into account. From this reflection, I endeavored to acknowledge bias I brought to the study (Jones, Torres, & Arminio, 2006; Tobin & Begley, 2004), and did my best to avoid manipulating any factor and to strive for

neutrality. The fifth step included interpreting and making meaning of the findings. As I interpreted data and findings, I kept in mind the difference between reporting and interpreting. The art of interpretation is a process that broadens and deepens meaning of “what was said, what it means, and its implications” (Marshall & Rossman, 2006, p. 129). The sixth step was to provide recommendations for professional practice (Tobin & Begley, 2004). The study of placing mentors in the classroom will benefit from further research yet through my study, professionals in higher education will be able to implement new strategies in order to better serve students in academic success.

### **Limitations**

“All proposed research projects have limitations; none is perfectly designed” (Marshall & Rossman, 2006, p. 42). The study of peer mentoring is a complicated topic in that many variables may limit the accuracy of research findings. I identified three factors that may impede the overall value of the study. First, my own participation may have influenced responses from all parties involved. As a college administrator, participants might have viewed me in a position of power. Mentors, mentees, and instructors may not have been honest in answering and sharing their perspectives due to my position as director for Student Academic Success. Second, examination of the impact of peer mentoring was over the course of only one semester which limited the ability to understand peer mentoring to a constrained period of time. Third, the type of sampling process that I used to recruit research participants might only include the voices of students who’ve had positive experiences. Finally, participants were chosen from only three courses, and therefore, mentors and instructors assigned to courses may not reflect various perspectives, limiting the amount of representation in mentors and instructors.

As institutions are pushed to think about innovative ways to increase graduation rates, Southwest State University's peer mentoring program provides a model of how to use peers in large gateway courses to increase student success and learning. As the researcher, I was able to remain open to listen, observe, learn, and share the process of peer mentoring and its contributions to enhance student success.

## Chapter 4: Findings

“Institutions that focus on student success and create a student-centered culture are better positioned to help their students attain their educational objectives.”

(Kuh, Kinzie, & Buckley, 2006).

As I began my research, I was open to learn, listen, and discover how mentoring is playing a role in student success. Is mentoring a best practice that keeps students on track toward earning an undergraduate degree? This is where I was excited to delve into my research study to determine how peer mentors are having an impact on students in gateway courses. Perhaps this could be the answer to solving the high failure, high dropout rate in these courses; or better yet to help recover negative thoughts shared by students when they hear the word “gateway” which automatically is thought of as a large and overwhelming classroom. What is most important to note is that all undergraduate students will be required to enroll in a large gateway course during their college careers no matter what institution they attend.

I find college graduation rates to be of great interest to educators, policy makers, and the general public. What intrigues me the most is how graduation rates at public universities continue to be low? For example at Southwest State University the six year graduation rate has yet to reach fifty percent. This means that more than half of students who started their college journey either dropped out, stopped out, or withdrew from the university due to extenuating circumstances. Many academic studies focus on why students are not completing their degrees. Therefore my findings provide insight on how peer mentoring in large gateway courses impact students at a large public institution.



## Themes

The findings from my study suggest that peer mentors have a positive influence on students enrolled in undergraduate gateway courses. Four major themes emerged from my analysis of the data. These themes reveal, from the perspectives of peer mentors, instructors, and mentees some of the influences of peer mentoring on undergraduate students in gateway courses. The four themes include: (1) peer mentors help facilitate active learning (2) peer mentors provide academic support (3) peer mentors promote increased communication, and (4) peer mentors offer transitional support. As they spoke, participants highlighted their experiences working with peer mentors. The word **HELP** was actually the most common term mentioned. I discussed it as a main influence threading throughout each of the four themes. Figure 6 (below) is a visual I developed to reflect the four themes.

<b>Helping = student learn learning and success inside and outside of the classroom</b>			
<b>Active Learning</b> -In class participation -Peer to Peer participation -Faculty Engagement -Building a Community	<b>Academic Support</b> -Inside Classroom (tutoring, review sessions, office hours) -Outside Classroom	<b>Increased Communication</b> -Communication to students -Communication to faculty -Communication on course content	<b>Transitional Support</b> -Class Experience -General University Experience -Bridge to university studies and majors

**Figure 6.** Themes and subset topics.

## **Peer Mentors Help Facilitate Active Learning**

The goal of part of the peer mentoring program is so that in order to produce more active learning, more engagement for student to make things more interesting, more motivating, more wanting to learn.

- Chemistry 121 instructor

Active learning was identified as a common beneficial factor influenced by having peer mentors in the classroom. For institutions with high student enrollment, this is common practice. One reported drawback of this teaching format is students don't have the opportunity to fully grasp course material since faculty are not available to answer questions because of numbers of students and time constraints of class sessions.

Peer mentors tend to keep you on a narrow track as compared to getting lost in the instruction and catching you before you get to that point. They lend a proper direction by telling us "this is what you need to do to figure it out" instead of "Oh, well here let me give you the answer"

-E&PS 101 student

The outcomes of this lecture style of teaching include higher failure and drop rates, students repeating the course, and faculty unable to work with students individually. Providing an active environment increases class participation, peer to peer engagement, faculty engagement and building a community. Placing peer mentors in these courses impacts student learning experiences by making it more possible for students to ask questions

I like the interaction, having the ability to have a person in between you and the instructor due to the fact the amount of students and really not having any capability to answer without questions. Having a median in between who can run back and forth, has a rapport with the teacher, knows what her teaching structure is and can relay that to the students.

-Math 121 student

### **Peer mentors help facilitate student to student participation.**

Peer mentors assist students to learn from each other. The peer mentoring program includes formalized student to student learning which is valued by research participants and is an important influence in active learning.

This Chemistry class seems to have more activities, and peer mentors add more to the learning environment because you can ask and they help you out and they go around and you are not always glued to the screen just looking at how to do a problem or trying to figure it out by yourself. It's more like group days and also someone who is a little older than you can also help you out.

-Chemistry 121 student

The program encourages instructors to lecture less and provide in-class activities facilitating students to learn from one another. Instructors who partner in this program with peer mentors participate in an intensive workshop to help them rethink and reorganize large lecture classes to deliver this student to student learning format. According to faculty participants, lecturing less allows them to break down course material into smaller concepts. Instructors believe when they incorporate peer mentors in the class, students are able to discuss and learn course material from other peers. What faculty found most powerful is how peer mentors are able to teach class material to students in a basic and simple manner where it is understandable. This change in behavior of the instructors is a great by-product of this type of program as noted earlier, the instructors are not required to attend workshops that might have taught them to do smaller group activities in these large classes.

The idea is that we want students to help engage other students instead of the instructor student relationship we're looking for peer to peer. They speak the same language. They understand each other's personalities; they also can explain

it in a way that is more in tune with the same age bracket so to speak. It's low stakes and it's not the kind of fear you have with an instructor.

-E&PS 101 instructor

Students also value peer mentors' ability to teach them course material. They describe working with peer mentors as a more effective learning approach simply because they share a common language and are more available to provide one on one instruction. Based on a mid-semester peer mentoring survey, 95.1% (951 student responses) reported that peer mentors assisted with in-class assignments which indicate the majority of students make use of student to student activities. The responses are indicative of the type of partnership faculty and peer mentors establish together with students to create an engaged learning environment.

Learning is not just sitting in class and taking in the lecture and what the teacher said, but it's also about asking questions and also looking at different perspectives and how people. Also, you can learn not just from the teachers but also everyone around you, especially the students who have already been through this and they have different kinds of wisdom, not just the professors.

-E&PS 101 student

Peer mentors view their role as helping students identify learning gaps, and fulfill any uncertainties they may have with course information. Watching peer mentors in action was refreshing to observe, especially in how determined they are to assist students. Peer mentors constantly making their presence known by circulating around the classroom student to student to reach out and support student learning.

My primary role is to be sort of supplementary to the regular class. The teacher comes in, they give their lecture, the students do something in class assignments and then I help clarify muddy points. If they have questions, I come in and answer. After they've already been introduced to material, I help clarify things if it looks like they're having trouble.

-Chemistry 121 peer mentor

The student to student learning framework has been studied by administrators directing the peer mentor program. One of the documents I analyzed was a report about their findings. These suggest that students are able to learn the information at a higher level when they explain concepts and ideas to other peers.

You take a generalized question from a large lecture, from one of the student to a faculty member and it's just a real direct "Okay that is what it is. It's in the book figure it out" as compared to its build up information that you gain a better understanding from working with peer mentors.

-E&PS 101 peer mentor

Students also say they are able to learn how to ask for feedback in a respectful manner, as well as listening to peer mentors suggestions on how to improve their learning. Peer mentors also help them develop skills like organizing and planning learning strategies that can be transferred to other courses. Student to student learning also allows students to ask and accept feedback on course projects or activities giving them a variety of perspectives to improve their course completion. Learning to work in groups with diverse individuals is a benefit of this type of learning which is an essential ability as student's transition into the professional arena.

There's a higher interaction with the students. You see a lot more activity going on. You see a lot more hands on for a lack of better words. It's more involved learning. It's interaction. It's listening to lecture and hoping for the best. Peer mentors are helping us with learning skills to keep us on the right track.

-Math 121 student

### **Peer mentors facilitate increased in class participation.**

During classroom observations, I observed peer mentors playing key roles in facilitating an active learning environment by responding to student questions and needs. One example included faculty lecturing at the beginning of the course for ten minutes,

then assigning one to three short in-class learning activities. For instance, in Math 121 the instructor wrote a math problem on the board and then asked students to work in groups to solve the answer. Immediately, the peer mentor was engaged with the students by answering their questions or simply being available to provide guidance or reassurance. All course instructors created active learning by allowing students to work in groups to solve an assignment, promoting peer mentors to assist students, and discussing as an entire class to solve the problem. Faculty placed students in small learning communities within the classroom making a large lecture class, with approximately 160 students, less intimidating for students. This mixture of techniques facilitated class participation between faculty, peer mentors and students. Peer mentors played an integral role especially during small group activities as highlighted in the following classroom observation.

There are close to 100 students in the classroom but it seems smaller as students are sitting in groups. After the instructor lectured for a few minutes, students were given their first in-class assignment. Peer mentors roamed around the class answering student questions specific to the assignment. Students worked in groups to solve the problem on the assignment.

-E&PS 101 classroom observation

During classroom observations, peer mentors constantly engaged with students to keep them on task and involved in class time activities. Students regularly raised their hands to ask questions. What was apparent in all three class observations was how helpful peer mentors were with students. It seemed that as though instructors developed a peer mentoring culture which eased students to ask any type of inquiries, and offer a format where students can easily participate.

Peer mentors go around the room to see if someone is struggling or if hands are raised. They go direct that situation and get them up to speed to where the

instructor is already on the power point. It's not just "Oh this is how you do it" and then now they're behind for having interactions with other students. They catch them up and put them up to pace so they can continue to participate.

-Chemistry 121 peer mentor

According to instructor perspectives, traditionally class participation has been deemed as an integral part of student learning. Instructors often incorporate student participation as part of a student's grade as a means to incentivize them to engage in the class. Students may be provided a list of ways they can participate such as asking questions, attending faculty office hours, interacting during group work, and raising their hands during class time. Peer mentors help build student's confidence to participate.

I think they're really a great confidence builder. Some students are hesitant to ask questions because they don't want to feel dumb. They feel like these things are simple enough even though they don't understand the material. Peer mentors show us that asking for help is okay and give us confidence to do so which get us to be more involved in class.

-Math 121 student

In reviewing all three course syllabi, only one course outlined participation to be of value. The course that assigned participation points used several forms of electronic devices to involve students which included I-clickers and an on-line web support system.

I think using I-clickers really helps break the barrier with approaching a situation, solving a problem. There's really nothing to be afraid of when you're learning at an intro level class. I think that is really something that's opened up for me is how this is a good team building aspect to help students get involved in their learning.

-E&PS 101 peer mentor

The other two courses outlined ways for students to get help both inside and outside class time, but did not offer participation points. So, although participation is viewed as an important action to boost peer to peer learning, each course instructor has

discretion to determine how to engage students, and the use of peer mentors in the classroom can increase participation amongst students.

Peer mentors also assist faculty to gain a sense of student's level of understanding about course content. They keep students engaged by checking to see if students understand what they are learning.

Peer mentors actually take the initiative to walk around and ask people. They could just stand on the side and just stand there the whole time. They actually go through the rows and say, "Do you understand this?" "Do you get this?" They take the initiative to actually help students learn.

-Chemistry 121 student

Muddy points are an example of how instructors motivate student participation. A muddy point is defined as an exercise such as a quiz to allow students to reflect on what they understand versus areas that might be confusing. This form of assessment pushes students to take responsibility of their own learning while getting them to participate. One course instructor defined and described muddy points.

Muddy points are a piece of formative learning, a formative assessment that basically every night before class the students have a reading quiz and a muddy point due. The reading quiz is intended, if they are given a reading assignment in advance which they are, then the reading quiz is intended to test them on what they know. A muddy point is exactly that idea, so if knowledge is clear what's the muddiest point for you? What is the thing that was most confusing? It's the same question every single night before a lecture. Well, what's most confusing and if everything was absolutely clear then what was most interesting? Then the peer mentor leave those muddy points, they put them into bins of topics and tell me they give me basically a report, the morning before class that says, "This is what was most confusing to the most people." That I can structure the class around that and I do because I'm already a jazz artist it's not that hard to say, "Okay, you guys don't give me anything, let's do a whole bunch of questions on that." That's what happens.

-Chemistry 121 instructor



Muddy points for all three course instructors help to increase student participation by identifying the top most challenging learning areas. Peer mentors communicate what students do and do not understand. In turn, students are able to participate with discussions during class time to better acquire the material.

**Peer mentors enhance faculty engagement with students.**

The presence of peer mentors allows instructors to be more involved with students' learning. Instructors and peer mentors work together to identify students who are in most need of one-on-one assistance, and strategically find ways to have faculty work more with those students. Large gateway courses have a high enrollment making it difficult for instructors to leave the front of the classroom. Using peer mentors, provides a unique teaching opportunity where instructors can spend time with students, especially those who need more individual attention. This student describes how this peer mentor instructor partnership assists a variety of learners.

I think it's very important, because there are no kids there that are as fastest learners as there as other kids. Sure, we're in college, but we all work at our own speed and our own pace and they've been really helpful into breaking it down for those who really need to slow it down and they're okay with those who are really fast learners, because I know there's been a couple times where they will take or they will sit with a student and they will just break it down one-by-one while the professor teaches the other kids. Then, they'll just take their time and help them catch up with everybody else, than like holding back and just watching.

-Math 121 student

Peer mentors and students recognize that instructors' time is limited especially in large lecture classes and that there is an intimidation factor because of this size. Peer mentors act as an extra person to pay attention to student needs.

Yeah, I think actually we help in more ways than just the in-class stuff because, again, in a large classroom, students can feel very lost and very invisible. It's

even hard to ask questions of the instructor in those large settings, because you know, you're going to have to speak really loudly, so that you can be heard and stuff like that. I feel like we help by being an extension of like those eyes and ears.

-Math 121 peer mentor

**Peer mentors help build a learning community.**

*Community in itself is more important to learning than any method or technique....the way human beings learn has nothing to do with being kept quiet. It has to do with our desire to make sense of our experience, to join with others, to become a part of a community. (Peterson, 1992, p. 23)*

Peer mentors partner with faculty to build a strong learning community in these gateway courses. Building a safe and welcoming learning community was another strong component related to creating an active learning environment. A safe and welcoming classroom atmosphere allows students to feel comfortable to learn, ask questions while valuing their perspectives. Peer mentors were deeply committed to fostering and promoting this type of environment.

We as peer mentors help students while also walking the fine line of not trying to appear above them. Being a helpful friend, I think is how we want to make students feel comfortable with us and the class.

-E&PS 101 peer mentor

Some of them spoke of how it was important to personalize the students experience in the classroom by getting to know them by name, offering positive feedback, and encouraging students to talk to each other about class material or other important information. One student describes feeling comfortable to ask for help after interacting with peer mentors several times, a key sign of a welcoming learning environment.

It has made me more confident for asking help. I know before I did not use to ask for help. I would shrug it off and maybe I will learn it later, but actually going to

them, I felt more comfortable and like, “Oh, I can just go the next one,” and I felt comfortable going to the next one. Then you build a connection with some of the peer mentors if you do see them before. “Hey, I saw you last session; do you mind helping me out again? I feel comfortable asking for help and not shying away if I have a question because I need to get an answer and I can’t just brush it off and think about it later.

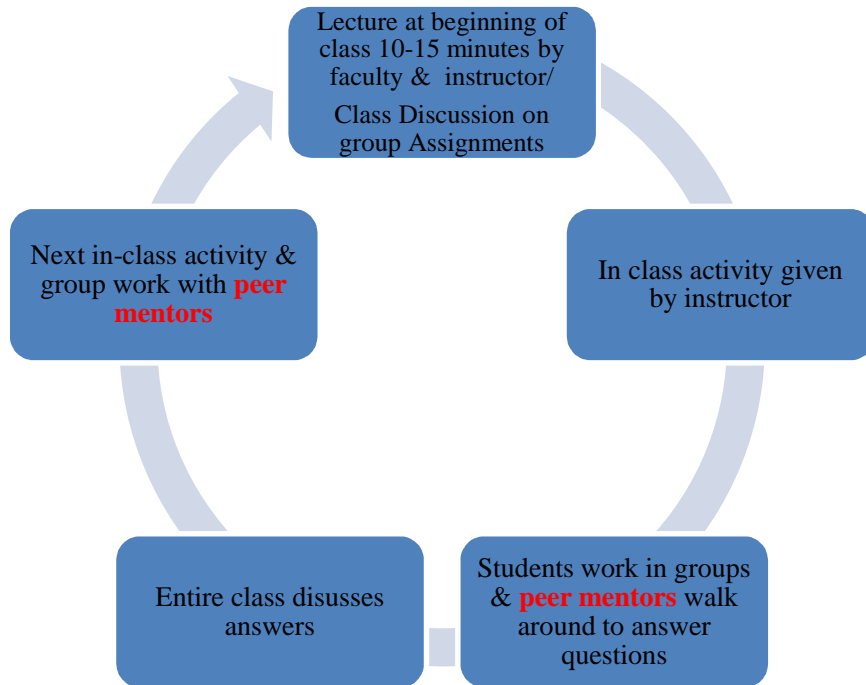
-E&PS 101 student

Peer mentors assist in creating learning communities in gateway courses. At Southwest State University, peer mentors may create a sense of belonging for students both inside and outside of the classroom. This instructor contrasts classes with and without the presence of peer mentors.

I get to know the students’ names way quicker, because they’re engaged. The students get to know each other. I feel like just the vibe in the class is different. I think in a really big class without any PLFs, [peer mentors] everyone is kind of on their own. Everyone’s quiet. People are afraid to ask questions and in the PLF classrooms, people are used to talking to each other, so they feel more comfortable at being able to ask questions during the lecture part of the course, I think.

-Chemistry 121 instructor

Below is a model which I developed to represent my thoughts on how peer mentors influence active learning in the classroom. It is best described as a circular process where lecturing is the first thing that happens in the classroom followed by many in-class assignments, check-ins, and peer to peer learning. The peer mentor is always moving around the classroom to offer group or one-on-one assistance. See Figure [7].



**Figure 7.** Peer mentor active learning process.

Peer mentors can be utilized especially well in classrooms designed specifically for community learning. One type of classroom promotes smaller learning communities based on the way the space is physically set up. This particular classroom automatically places students at small round tables where learning occurs. The instructor teaches from the center of the classroom as the space is circular. This particular classroom is a new approach that Southwest State University is seeking to adopt as a collaborative learning module. The physical space stimulates a community learning climate making engagement more interactive. Each table is also equipped with computers, i-clickers, dry erase board, and other materials that are used for small group activities.

Classroom has a circular feel as students are sitting at round tables. There are no traditional desks within the room. Instructor lectures from the center of the classroom. TV screens and monitors surround the classroom. Course materials at each table include visuals, dry boards, computer, and student clickers.

-E&PS 101 classroom observation

In observing this type of format, instructors utilize peer mentors to keep students focused on learning. Students also seem to feel a sense of belonging with peer mentors in the classroom. Many compared their experience with other courses that did not have peer mentors. Each student interviewed expressed how they would much rather have a peer mentor in their large lecture classes because the classroom dynamics change for the better. Students feel like they can count on someone else for assistance in addition to the instructor.

I can say that the learning environment definitely changes when it comes to a peer mentor. For example, I was taking a psychology class last semester and we did not have any peer mentors, like nobody. It was just the teacher, the professor. It was more like a lecture, very dry, very boring, I would say. It was like listening for like 50 minutes straight. This class, I know that there is more activities, too, that also helps, but definitely the peer mentors add more to the learning environment because you can ask and they you out and they go around and you are not always glued to the screen just looking at how to do a problem or trying to figure it out by yourself. It's more like group days and also someone who is a little older than you can also help you out.

-Math 121 student

### **Peer Mentors Provide Academic Support**

Supporting students in their academic pursuits is of great value to Southwest State University's peer mentoring program. Academic support programs provide services to help students succeed in courses which can include: tutoring, one on one assistance, review sessions, study groups, and one on one meetings. In large part, professionals at institutions of higher education realize that students must be given the opportunity to

build skills and knowledge to help them be successful in college. Some institutions mandate student participation based on their academic performance, while others leave it up to the student to self-enroll. Southwest State University's peer mentoring program is a unique model, because it directly brings key academic services to students within a classroom. In this Peer mentoring program academic support falls into two major areas: in class support and out of class support.

**In class support.**

We want to make the classroom active, but one of the ways we can help make things active is to have them do and participate in assignments and quicker questions or discussion. The peer mentors help lead discussion, help encourage talking among peers, helps them answer questions, helps complete assignments and provides mostly feedback. That's how they're used in my classroom.

-E&PS 101 instructor

Peer mentors are integrated into the class curriculum as a way to aid students with in-class assignments, discussions, and problem solving. At the beginning of the semester, the instructors develop a culture of in-class assistance. Because instructors value this approach, students are quickly required to be a part of this learning environment. Peer mentors in the classroom provide the following as important in class support: keeping students engaged, answering student questions, and facilitating a safe and welcoming environment.

***Keeping students engaged.***

Large lecture courses are often difficult to manage. In one of the courses I observed, there were close to 200 students. This particular classroom can be described as a large auditorium where students are seated theater style. The course instructor was at the bottom front of the classroom teaching by microphone and placing notes on a large

screen. Although, this type of classroom conditions can complicate the learning setting, I viewed how peer mentors influence the learning environment in a positive way. Peer mentors in this course kept students engaged.

Peer mentor is sitting among students in large lecture class. Peer mentor is constantly moving around except when faculty stops to provide another in-class assignment. Peer mentors listen in on student discussions to check and they ask students if they need help or understand the material. They don't wait for students to come to them, they engage with the students whether they need help or not.

-Chemistry 121 class observation

Class observations reveal how mentors influenced students to pay attention. It was actually impressive to see peer mentors able to redirect student's behaviors and actions back to class discussions and course content. For instance, one of the exercises was to use a white board to write out and answer the in-class assignment. Peer mentors were going around and asking students to share what they had written on their board. Also, the expectation for students to stay actively involved seemed to be communicated to students in several ways. One way was in the course syllabus. Peer mentors are defined as a "learning support team", and included are the various ways peer mentors can be utilized by the students. Offering additional resources to learn course material is not only provided by the peer mentoring program, but highly promoted by instructors. This example was one way that instructors defined the role of the peer mentor in class. Below is an excerpt from a course syllabus outlining the opportunities for students to seek help.

**Where to get help:**

- Ask questions in class in class at any time, of your classmates, me or the learning support team.

- Attend office hours and help sessions held by me and the learning support team: a help session calendar will be available with times and locations
- Get to know your learning support team contact. You will be assigned a “peer mentor” who will work with you during class time and will hold office hours weekly. You may attend the office hours of any of the peer mentors – including the ones that do not work with you in class.
- Consider forming a study group
- Attend tutoring at the campus tutoring center.

Faculty advertising peer mentor roles during class time and in the course syllabus facilitated student understanding of how peer mentors are part of their learning.

***Answering student questions.***

One of the things that happens, and this has been really a modeling of the behavior by my older peer mentors, but if they aren't helping someone directly who has raised their hand to say I don't understand that, they're walking around going Do you have any questions? Do you have any thoughts? What are you thinking here? What is your process for understanding this? It's wonderful. They're never still unless I'm talking for an extended period of time. Then they tend to sit down.

-E&PS 101 instructor

Based on peer mentor program evaluations, the majority of students interacted with peer mentors in the classroom. They also felt that peer mentors were available to answer their questions during class time instead of having to meet with faculty on their own personal time. At times, instructor office hours do not match a student's availability, which makes the use of peer mentors more attractive and accessible. The faculty consistently reminded students of peer mentors presence in the classroom, and how they are walking around making themselves available to answer any questions. No matter



what is going on in the classroom, peer mentors are always open to assist. Instructors train mentors on questions to ask, body language, and how to be present in the classroom.

As students provide in class support by answering questions and encouraging engagement, they tend to use positive language to reinforce student learning. Instructors work with mentors to provide feedback to students in a constructive manner.

The peer mentor is walking around and says to a group of students “Are you guys okay? One students say “NO.” The peer mentor stops by the student and begins to ask the student what he needs help with. Provides individual attention. Another peer mentor asks a group of students, “Did you come up with the right answer? Students respond: “we think so .” Peer mentor confirms that they answered correctly by saying “you got it.”

-Math 121 class observation

One important aspect to note is how knowledgeable the peer mentors are about course content. They are confident in the answers they share with students. However, when they are unsure about an answer, they find another peer mentor to check the information before giving students a final response. This demonstrates how peer mentors themselves are modeling the importance of seeking out assistance from others when they are in doubt. The skills of asking questions, searching for help, and admitting to not knowing everything are being taught by peer mentors as they assist in the classroom.

They go around the class and they assist the professor also, like when we’re doing in- class assignments, they walk around and they’re very knowledgeable and just as if it was the professor. They answer questions and they guide us along. They don’t necessarily give us the answers, but they move us along so that we can get the answers on our own.

-Chemistry 121Student

*Facilitating a safe and welcoming environment.*

They make the students feel like we want them to succeed. The students can see that we've got this support group set up just for them and I think it makes them want to perform better and they feel maybe less nervous. They know that we aren't trying to weed them out. I think the peer mentors give that impression on the students. I think that's really important.

-Math 121instructor

Peer mentors work with faculty to establish classroom climate that is safe and welcoming for all students. In speaking to students, some took one of these courses twice, and were in fear of failing again. However, they indicated that they have already seen the difference in their grades because the teaching was more enriching. The students stated that in-class assistance made a significant impact on their learning and grades.

I think I'm doing better compared to all the other math classes before, because they've been really helpful and taking the time to just say hey, slow down. I think you need to look at this differently

-Math 121student

The peer mentor program is based on a team method framework. Students in the course recognize and appreciate this approach. Especially, for students who were retaking the course for a second time; the difference was more apparent. Below is a quote from a student who took a math 121 class that required them to take exams on-line.

I was in honors math classes for 4 years in high school and so I thought I'd be fine going into a 121 class. Last semester, I thought I would do okay on the online math class test, I wouldn't understand it to a point where I could do it on my own. I'd always be relying on the examples, so I ended up failing every single test and ended up getting a D+ in the class. This semester, I got an A on the first test. I have a 97 on all of the online stuff and I actually understand what's going on, so it's like a completely opposite side of the spectrum when

you can understand your professor and when you have other people like the peer mentors there to help you.

-Math 121 student

It is difficult for students to ask questions in a large classroom and admit they do not understand class material. By having a peer mentor facilitate group discussions, students can be open and honest about things they comprehend versus those areas where they feel most challenged.

The way they influence learning is by helping their peers. They're not intimidating. They don't have to ask the professor questions, right. They're intimidated by that professor student relationship. It makes them nervous, but when you know there's someone the same age as you are walking around like "Hey what do you need help with?" It's much easier to get engaged. It also provides this kind of comfort level where students feel like they can ask questions and not be given negative consequences. Some of the things that the peer mentors learn from me and from their training is how to go about interacting with other students.

-Chemistry 121 Instructor

It was most remarkable to see peer mentors remain active after class answering student inquiries. This alleviates the long lines to speak to the instructor. Peer mentors are able to provide on the spot feedback or reassurance on questions regarding the class material covered, an upcoming exam, or other inquiries. During my observations, peer mentors interacted with students in a professional manner.

**Out of class support.** Along with in-class support, the peer mentoring program provides out of class activities that augment a student's learning experience. Students can take part in academic tutoring, review sessions, and office hours. Course instructors are asked to advertise these programs during class time, and peer mentors are asked to remind students of tutoring times and locations.

At the beginning of class, peer mentor immediately writes tutoring hours on board, and then takes the time to announce it to the class.

-Math 121Class Observation

### ***Tutoring.***

Because tutoring seems to be a helpful strategy with a positive correlation to student academic performance (House & Wohlt, 1990), peer mentors at Southwest State University receive tutor training to try and increase their ability to provide quality tutoring services. Scholars discuss the importance of providing students with tutoring services to increase their ability to pass a course (Cohen, Kulik, & Kulik, 1982). On the contrary, there are mixed reviews on the effectiveness of tutoring on student learning and academic performance (House & Wohlt, 1990).

In class learning is limited by time and structure, so out of class support is important to build a student's academic abilities and skills. Tutoring as defined by a peer mentor in this study is "a person who teaches another person how to help themselves, or to assist or guide them to the point at which they become an independent learner, and thus no longer needs a tutor." The benefits of students receiving tutoring include structured assistance, improved academic performance, confidence building with course content, and dispelling of negative beliefs about tutoring, especially for underprepared students (Hock, Michael F.; Deshler, Donald D.; Schumaker, Jean B, 1999).

Peer mentors are expected to provide tutoring outside the classroom on a weekly basis either individually, or by group. Based on Southwest States's peer mentoring program annual surveys, students utilize peer mentors more during class time, while the second highest way was through tutoring.

They're a lot of help. They had time from 6pm to 9pm and I was still on-campus so I looked and thought I could go at this time for help. That's the best. Whenever I need tutoring, I could just go, which is good.

-E&PS 101 student

Providing outside academic support is one of multiple ways to aid students in their academic achievements. At Southwest State University, peer mentors offer a "one stop" assistance model in providing tutoring inside and outside of the classroom. This model is unique compared to other campuses where tutoring is a separate program. Tutoring is available to students during non-traditional a time which assists those who have work or family conflicts during day time hours. The biggest challenge for peer mentors is getting students to take advantage of the outside academic support they provide.

***Review sessions.***

It is an expectation for peer mentors to offer review sessions outside of class time. Primarily sessions are held before exams. Often, instructors create a review sheet that is given to students outlining information that will be covered. Peer mentors use review sessions to go over the review sheet with students. The goals for review sessions are to prepare students for the exam and lessen their anxiety. Peer mentors also provide test taking tips along with other strategies that set students up for success.

Peer mentors run reference sheet sessions. They also run night time chat, exam reviews the night before the exam for students who could not make it to a face to face session.

-E&PS 101 instructor

After review sessions, peer mentors are available to chat with students on-line for further questions. This demonstrates another way peer mentors are available to students. In person, on-line, email, and text are the most popular methods

students use to continue answering questions. Outside of class, they do review sessions before a test, before the final exam.

-E&PS student

Review sessions are flexible in format. They allow peer mentors to spend more time with students to expand on specific subject areas that might be confusing. Peer mentors are also able to dedicate individual time to those students who need further explanation or reassurance. Students who participated in a review session found it very useful. It allows students to slow down their thought process and think through the areas in which they are having difficulty.

Yes, the review sessions have been helpful because sometimes when you leave the classroom, you might have a few questions. Say you leave the classroom and you look at your assignment and you probably don't get it. You can check to see what times they have available and then pop in to one of those times to ask for help., You can't always go to your teachers because they're busy teaching other classes.

-Math 121 student

### ***Office hours.***

Like instructors, peer mentors arrange office hours which make them available to answer questions outside of the classroom. These set hours give students the opportunity to ask a peer for more individualized guidance. Some office hours are used by peer mentors as tutoring sessions; others to answer general university questions. For the most part, students view office hours as a chance to get more one-on-one assistance. The peer mentoring program does not require peer mentors to hold office hours in a specific location. Instead, they ask peer mentors for their opinion on where they believe students are more likely to go. Some peer mentors have office hours in the library, while others use common areas. Whatever the case may be, peer mentors offer individualized

attention to students during this time. In listening to peer mentors, it was inspiring to hear the dedication and commitment they have toward assisting students.

I hold office hours. I always make myself available for one on one appointment, and I give out my email address at least, at least once a class. If someone is really struggling, and usually, the ones who are really, really struggling are not the ones raising their hands. I arrange to meet with them one on one. I offer, for them, like if they have trouble doing a homework problem, to get their setup, take a picture of it and email me, so they can show me where they're starting, so I can see where they are. My approach is to meet them where they are, not to assume anything about their understanding. I feel like I engage with students in my office hours, but then individually as well, with you know, either via email or one on one sessions that I set up with them.

-Chemistry peer mentor 121

Peer mentors give mixed reviews of office hour attendance. Depending on the semester and the location of office hours, student turnout varies. For example, one peer mentor stated that "this semester my office hours are less attended than in the past where I had many student come regularly." Instructors encourage students to attend these extra services, but never making it mandatory.

Students felt that peer mentors adjust their time to accommodate schedules based on individual needs. Even though peer mentors have office hours set, they frequently meet outside of this time to tutor students.

They hold office hours like 5 to 6 office hours per week and then they hold review sessions and they'll meet with students. If they send them a text, they can arrange to meet with them outside the class.

-Math 121 Instructor

Feedback received from research participants reflected how flexible and willing peer mentors are to serve students. This is an advantage of Southwest State's University peer mentoring model. It is somewhat formal the way peer mentors are trained yet

informal in the many different ways peer mentors reach out and help students. One course instructor called this approach “learning on demand.”

If the students can't make those times, because they're generally later and a couple times a week, and they need other resources to go to you, we are flexible. So if we decide to meet with a student late at night because that's the only time they can do it, we can do that to meet the student's needs.

-E&PS peer mentor

### **Peer Mentors Promote Increased Communication**

A theme I did not expect to surface in my research was the importance of communication. Peer mentors in large gateway courses impact the way students and faculty communicate with one another. Research participants viewed this as one area that improved communication students to students and students to faculty. Even though the gateway courses I studied are relatively large, participants spoke about how it was easier for them to connect with course instructors, as well as receive immediate feedback on quizzes and exams.

They have access to the grade book. The peer mentors in my blackboard learn class have access to the grade books, so they can see all of the grades. They can help a student calculate their grade and then say here's what the pieces that are missing. They tend to know that soon than I do. They're almost their own early alert system.

-E&PS 101 instructor

Participants also mentioned their experiences in other large gateway courses and expressed how they felt removed from course instructors. This distance often makes it difficult to obtain course instructors input on their learning. With peer mentors lines of communication are kept open for students even during class time instead of having to wait until class ends.

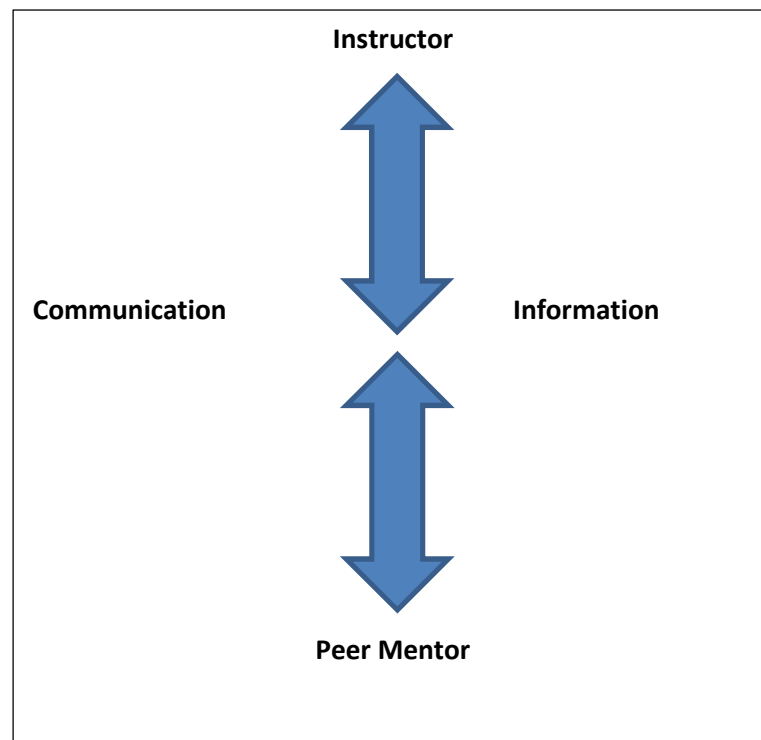


Helping students when the teacher isn't available. Even if the teacher's lecturing and you have questions about the slide. Or quicker questions where you raise your hand and they come over to help you.

-Chemistry 121 student

As I continued to investigate this theme more deeply, I recognized the peer mentors' role as a central force responsible for increasing communication. Each participant spoke about how critical peer mentors are to close the communication gap. No longer do students have to be concerned about communicating with faculty on their own, now they have a peer mentor who can speak on their behalf. Student to faculty, student to student, and immediate feedback both inside and outside of the classroom are the three main areas where communication are most effective and appreciated.

The following is visual model that outlines how communication happens in peer mentor supported classes. The model shows communication flowing from students through peer mentors to course instructors and vice versa. Peer mentors serve as an information conduit that keeps the communication ongoing. see Figure [8].



**Figure 8.** Peer mentor communication model.

*Communication of course content.*

On a weekly basis, peer mentors spend time with course instructors to design curriculum for upcoming class time. According to faculty, peer mentors provide insight to course content based on student's progress in understanding course material. Peer mentors recognize when students are confused or are not acquiring the knowledge. They are able to quickly help change the sequence of in class curriculum to bring it more in line with student progress.

“We have weekly meetings where we discuss the upcoming materials, or we discuss a particular lecture where everyone was really, really, lost, we may need to approach this again. We can provide that feedback to the instructor to just, you know, maybe refine something, or something was really unclear, or if there was an error on the slide, because, you know, all of these things happen. Again, it's kind of like eyes and ears again. Then also I think most of the peer mentors have taken this course more recently than the instructor has, so we are kind of closer to the student end of it. When we're listening to an explanation, we kind of say, like “that was kind of high level”, or “the explanation was a little outside of their understanding right now”. Whether a correction or an improvement gets made in the next class or not, I feel like that feedback is taken for subsequent classes, to maybe approach it a little differently.

-Chemistry peer mentor

Peer mentors also inform students of the realities of the course which often is not addressed by the instructor. Peer mentors play a strategic role to prepare students for course expectations, requirements, and pitfalls. This can impact student's ultimate way to equip themselves with information and services needed to succeed.

I think that peer mentors help to one, give students a heads up. “Hey. It's not going to be a free ride forever. It does get harder.” You can stress that at the beginning of a class so they don't come in there thinking, “Hey. I've got this.” Then you can be really helpful by giving them specifics. Say how it's harder, say why it's harder and then give them the tools to be able to succeed in a class that they might not be used to taking as far as the level of difficulty.

-Math 121 Peer Mentor

Communication is an important factor to keep students connected to the class, and engaging with the course and with faculty. Educational institutions share a common language that is often only understood by individuals who work within an academic setting. Peer mentors help to close this language gap and maintain the lines of communication between students and faculty.

Translator, when the instructor's talking above your level they can fill in those blanks that you have and supplement the information that you're getting from the instructor or from the reading that you may or may not have understood correctly.

-Chemistry 121 student

*Communication to students.*

Faculty reported that finding ways to communicate to students can be challenging. Not only is there a generational gap, but the methods through which students access information is very different to what instructors are accustomed to in their own lives and schooling. Additionally, most of current students grew up in a digital age and expect to receive instant feedback through emails, text, etc. The peer mentor program developed strategies to help faculty give student's immediate feedback through the grading of assignments, and use of muddy points.

Peer mentors grade most assignments which is viewed as a distinctive role compared to other peer mentoring programs. Course instructors train peer mentors on grading in-class and outside of course assignments. Faculty acknowledge that grading can be cumbersome, and might delay their feedback to students. Peer mentors are able to communicate to students more efficiently and quickly to notify students of their academic progress.

The peer mentors outside of class give low stakes grading feedback. What they're doing is for me, for in class assignments they're grading them very quickly and providing feedback because one of the ways students learn to form an assessment is how do you know if you got it if you don't get any feedback?

-Chemistry 121 instructor

The issue of providing students with feedback on their grade was mentioned earlier under the section inside classroom support. I am restating this again under communication because it also related to how efficient and effective information flows back and forth regarding a student's grade. Not only do peer mentors grade quizzes, they help students calculate their class grades. While other students in large courses usually wait to hear back from the instructor on their class progress, peer mentors work directly to show them how to compute their own grade.

#### *Communication to faculty.*

The three research participant instructors were quick to comment about how peer mentors are able to balance communication between students and themselves. Faculty realize they can be intimidating to students which is likely to limit open dialogue. During interviews, students spoke about how faculty were required to be available to many students, therefore, it was difficult to capture their attention. Research participant discussed the importance of peer mentors serving as the main facilitator for maintaining these open lines of communication.

If there's something that comes up, where we're really concerned about a students, if they're feeling overwhelmed, not just academically, but emotionally overwhelmed by all this, we engage the instructor and have them reach out to them I think it would be harder for the instructor to identify the students who are really struggling and really need the instructors input. We're definitely like an eyes and ears extension as well.

-E&PS 101 peer mentor

## **Peer Mentors offer Transitional Support**

Through the training we get as peer mentors every week we're exposed to different resources that we can pass onto the students. Many of them are academic but there are some non-academic ones as well like we learn about the student help center and things like that. If a student approaches us with more personal type issues, we do have directions that we can point them for that.

-Math 121 peer mentor

Why is it important to place peer mentors in gateway courses? This was a follow up question that I asked all research participants, because I wanted to find out their opinion regarding this model. Besides agreeing that peer mentors assist with academic support, many of the participants felt that peer mentors are instrumental in providing assistance with other issues related to their educational journey. Academic advising, major exploration, personal support, and student life were the main topics participants felt peer mentors offered in relation to their personal experiences. I labeled this theme transitional support to represent the key moments where students are confronted with specific issues related to their undergraduate education yet outside course content. It is during these times where students begin to seek information to make important decisions, or learn how to navigate an unfamiliar area or system. For instance, students talked about not understanding certain major requirements. A major is a field of study that outlines courses needed to fulfill a degree in that specialized area. Entering college students, as well as those who change their major, are unsure about what major to study. Peer mentors can provide insights into the different majors, while connecting students to resources. With the guidance of peer mentors, students receive perspectives on careers that are related to majors.

Students also talked about peer mentors being their role models as they strive to reach academic goals. Because peer mentors are upper class undergraduates, students

look up to them as individuals who traveled similar educational path giving them hope and inspiration to keep striving despite challenges they may encounter.

I think peer mentors as kind of like modeling what a student at UNM should be so that when you see peer mentor you should think of yourself this is where I want to be a year from now, a semester from now. To the point where I know the information enough where I can help other people understand it as well especially if you're majoring in that particular department.

-Math 121 Student

***Class experience.***

Peer mentors are students who received a B or better in one of the gateway courses. Course instructors recruit students to apply for peer mentor positions because of previous experience in their course. Having previous experience with the class, gives peer mentors prior knowledge about expectations from students. They can also make suggestions to students on how to better understand information, or even more important, what aided them in their success.

At least based on student feedback, giving them stories about my experience in the specific class really helps a lot. When I bring up what issues I had talking about fractional crystallization or whatever, what I did for my reference sheet for my exam, and it's really helpful that I took class with the professor that I work with now. The students tell me that that's the biggest help because I have direct experience as a student in that same class.

-E&PS 101 peer mentor

Peer mentors view themselves as critical to gateway courses "because they help ease the transition." (peer mentor). It is clear that they understand their role is not only focused on the course content, but other factors that are associated with the course experience. Peer mentors also spoke about prior learning in high school and how the transition from high school to college was a big learning curve. This is an ongoing issue that has gained national attention, but still seems be difficult to address. However peer mentors are examples of student success to showcase with other students.

Sometimes it may seem like it's so far away, it's so difficult, but we've done it, we've been there, and we're still moving forward and they can see that in us, so were there to give them information, but were also there as not only peers but I guess, I don't know how to even say it, examples of success, because we try to maintain a presence of "we are good students," we've worked hard to get where we're at and we've been successful. Seeing students the, the younger classmen seeing the successful student, this shows them that it's possible. We're kind of; I don't know how to, I'm thinking of the word, role models, maybe? Someone that they can see, they can either strive to be or just the possibility of getting past some of the difficult part school like this course.

-Chemistry 121 peer mentor

*General university experience.*

Peer mentors are upper class undergraduate students who have some experience under their belt. They learned to navigate the university system which encompasses many different processes. Students understand that peer mentors traveled a similar journey and rely on them to provide insight about how things work at the university. Because peer mentors are close in age or within the same undergraduate level, students tend to lean on peer mentors for advice more so than instructors.

We have a huge population of students who do not know how to play the game of college. They don't understand how to do it, they are not privy or they don't have people in their family who help them. They don't have or even if they do they have never asked and it's never been information that was offered, a lot of people in that space and one of the things that is true about the PLFs especially these grads that I have now. I have spent a lot of time with these guys and we've talked a lot about what ... there are some that just inherently know how to play the game of college.

-Math 121 instructor

Navigating college can be challenging, and many students explained how peer mentors pointed them in the right direction to find places, programs, and services.

Southwest State University is a relatively large campus. Peer mentors are trained and

well versed on how to connect students appropriately. Students discussed the ways peer mentors guided them.

I asked my peer mentor “Where’s this at, where’s that at? Where can I get this done?” “Simple things just like “Where’s the computer labs?” If your class is on the second floor; you don’t know where the computer lab is. “Where’s the lost and found?” Things like that.

-E&PS 101 student

***Bridge to university studies and majors.***

“Peer mentors might have the inside track for your major and what you need to take whereas some advisors might not tell you.”

–math 121 student

As mentioned earlier, providing information on program studies or academic majors was viewed as an added benefit provided by peer mentors. Some of the peer mentors are majoring in the area where they are mentoring. For example, one peer mentor is majoring in math and earth science, and is a peer mentor in an Earth and Planetary Science course. Therefore, many of the peer mentors share common academic goals and can offer practical recommendations from a student perspective.

You don’t want to go two years into a major realizing that it’s not really where you want to be. It’s ideal. You get the hands on for instance the collaborative learning with peer faculty who’s been in the field, and a peer mentor that is majoring in that field.

-Chemistry 121 peer mentor

Throughout each semester, instructors begin to identify students who might consider serving as a peer mentor in the future. What is intriguing about the program is how they try to find students who might be interested in either a specific field, or those students who are majoring in teaching. The peer mentoring program strategically seeks out students who could gain hands on experience directly related to their field of study.



This is probably one of the best jobs I can have considering I'm going into education. I'm getting a lot of experience interacting with students. It helps that I'm going into secondary education because I'm pretty close to the age group and some cases right on because we've had dual-enrollment students. I've actually worked with high school a student already which is really nice. In addition to that, my concentrations are math and earth science. I'm in an earth science classroom. That gives me a lot of experience with pretty much exactly what I'm going into.

-E&PS 101 peer mentor

The peer mentoring program also helps the mentors themselves succeed. Keeping in mind that they too are undergraduate students who have already or may still enroll in a gateway course; they too are in need of support. So, the peer mentoring program impacts students involved including peer mentors. Peer mentors, like students are determining their own professional path. Course instructors invest their time not only with students enrolled but also mentor with peer mentors.

Then there is a peer mentor who is in my class and was a former student of mine. We spent a lot of time talking about, so what happens if you dream of pharmacy school falls through? What is going to happen, you have lots of options you are very smart; you are very talented you have all of these things and you have taken the higher levels of these classes. You could go any of these directions, just those pieces to me a peer mentor is not just someone to help me out in class. They are someone I've decided that I will mentor in many ways with what's going on in their lives. For me it's a multifold kind of deal, so more of like having a class on top of a class.

-Chemistry 121 instructor

Listening to the various perspectives and experiences of students, peer mentors, and faculty about the peer mentoring program gave me a sense of hope. Because of peer mentors, students who were alone in large gateway classes are now provided with the attention they need to succeed. What is most enlightening to me is how communication is so vital. Students want to feel valued and respected as a member of a large institution

and peer mentors now play an important role in making this more of a reality. Peer mentors make students feel cared about and are here to help facilitate student success.

Other similar in class support programs are not cordial. They have the pretentious “I’m better than you. Figure it out. Peer mentors are cordial, informative, and communicate. They care about our success.

-Math 121 student

## Chapter 5

### Discussion & Recommendations

That light bulb goes off and there's just 'uh,' that smile and the look in their eyes and they like say, 'Oh, I finally get this concept,' you know, this is fantastic," because they'd been struggling. They'd be so upset because they can read it and they would be talking, listening to the professor lecture about it, but then when a PLF [peer learning facilitator] can sit down with them and really analyze how they're viewing the subject and how they're thinking about the subject and cater to the way they're thinking and steer them in the right direction so that they understand it. Yeah, that's fantastic. I love doing that.

-E&PS 101 peer mentor

Through the use of peer mentors working directly in college classrooms to support student learning, Southwest State University is setting a new wave of teaching and engaging with students in undergraduate college classrooms. The program has been in existence for approximately seven years. The quote above provides a small glimpse of how passionate and committed the peer mentors from Southwest State University are about helping students succeed in large gateway courses. Throughout those years, the program transformed from peer mentors providing general announcements at the beginning of each class time to being fully incorporated into gateway courses through a more robust role that includes assisting students with their learning and success inside and outside of the classroom. Southwest State University developed this model based on two factors:

- Historical pattern of high failing rates in gateway courses
- Low six year undergraduate graduation rate

At Southwest State University and among other post-secondary schools across the country, peer mentoring programs are an approach to increase retention rates in the classroom and overall six year graduation rates (Quinn, Muldoon, and Hollingworth, 2002). Undergraduate students enrolled in college are often viewed as underprepared and

needing extra support systems to help them persist and to increase institutional student success (Mee-lee & Bush, 2003). In addition, traditional large lecture courses are primarily taught by one faculty member who is responsible for facilitating student learning which may make it more challenging to engage students in classroom learning than with additional facilitators (Adler, 1982). High failing rates and lower graduation rates are common among large lecture courses deemed gateway classes (Eagan & Jaeger, 2008). However, using peer mentors to partner with faculty to spread learning, keep students engaged, and provide a variety of services both inside and outside of the classroom can increase students' engagement in the classroom. As mentioned before, this model is unique but powerful in the way peer mentors are teaching and reaching students. In this chapter I will discuss each research question related to my study findings and other current research, recommendations for practice and institutions, and implications for university leaders, educators, and policy makers.

### **Exploring Research Question**

The main research question I set forth to explore was “How do peer mentors impact college students in undergraduate gateway courses at a large public university? As mentioned in my findings, there are four major themes highlighting areas peer mentors impact students to include: (1) peer mentors help facilitate active learning (2) peer mentors provide academic support (3) peer mentors promote increased communication (4) peer mentors offer transitional support. Each of these areas emerged from participant voices as critical in helping and aiding students to meet individual and academic goals during their college experience.

### **Active Learning.**

Establishing an active learning environment was viewed by research participants as being the single most important outcome and impact peer mentors have in gateway courses. An active learning environment involves less lecturing by instructors, and more peer to peer learning. Instructor to student ratios are lessened considerably especially in high enrollment courses which allows students to receive increased explanation and instruction in classes with this peer mentor model (Magrath, 2008; Dietz, 2002; Astin, 1984). There are several benefits from building an active learning environment in gateway courses. I will discuss enhanced learning, increased participation, and improved grades.

### **Enhanced learning.**

My research findings strongly suggest that peer mentors in the classroom enhance a student's learning by creating and facilitating small in-class communities. Course instructors set up learning environments that incorporate learning on a more intimate level with group assignments and discussions. This classroom format is based on significant studies of active learning and the idea that students who actively engage in classroom material are more likely to understand, remember, and restate the information acquired (Cohen, 1991). Peer mentors play an important role as coordinators and facilitators of this active learning. They ensure that students understand in-class assignments and keep students on task to discuss and complete academic work. Students and peer mentors are not passive in gateway courses, rather learning is increased with small group exercises, cooperative learning activities, and the use of other forms of interactive tools such as i-clickers. These techniques produce greater opportunities to

absorb course material in a variety of ways facilitated by peer mentors. It was also noticeable through the data that peer mentors offer an additional kind of understanding for learning needs of this generation of students which is known as the millennial generation (Allred & Swenson, 2006). It has been recognized that this generation of students have grown up in an interactive world where technology and forms of entertainment are built into everyday life. Peer mentors are able to relate to students, in a different way from faculty, and recommend learning assignments and tools to keep students active in the classroom (Howe & Strauss, 2000).

The peer mentoring program at Southwest State University was developed to promote a higher level of learning. Learning is achieved when students feel a connection between course instructor and class materials (Fritschner, 2000). Peer mentors have the ability to connect or disconnect students from classroom learning. It was evident that the peer mentoring program spends much time and resources to guide course instructors about how to turn a large lecture gateway class into an active learning environment with the use of peer mentors. Even though three different gateway courses were studied, all three modeled similar classroom management and active learning environments. An active learning framework was seen as the priority among faculty and peer mentors which effectively generated a high level of active learning activities. It was clear that peer mentors were the hub of students interacting and engaging in the classroom. In many current models the course instructor serves as the main initiator to stimulate an active learning environment Southwest State University places this role on peer mentors which has shown positive results.

Interactive learning is not a new approach, and is noted for contributing to increased student success (Lang, 2001). Small group instruction raises participation with students who feel intimidated to speak in front of large groups (Weaver & Qi, 2005). Peer mentors often visit each group to facilitate conversations. Instructors can minimize student to instructor ratios by breaking students into groups, establishing a network for student engagement and instruction (Lang, 2001). I must recognize that instructors may not have the training, knowledge, or comfort to conduct interactive learning. Since most instructors who teach introductory gateway courses are graduate students, proper training in how to teach college students is central to promoting teaching strategies that allow for peer to peer learning. However, peer mentors receive intensive on-going training on how to actively engage with students in large courses. They have the training to sustain this form of learning on a consistent basis.

**Increased participation.**

Due to interactive in-class exercises peer mentors led during my observations, students were likely to participate. Gaining student participation in classrooms can be challenging especially in large lecture courses (Myers et al., 2009). Class size establishes the process of participation, so the smaller the class the more likely students will be required to engage, while the larger the class the less likely students will be expected to participate (Hyde & Ruth, 2002). Some researchers argue that student participation is merely an exercise with no real benefits (Dallimore et al., 2004). However, others attest to it being a meaningful way to keep students engaged during class (Fritschner, 2000).

One important observation throughout the study was that positive mentor and instructor relationships improved mentors interacting with students. Peer mentors at

Southwest State University increases student participation because it's an established expectation of the class format. Defining the peer mentor role to students seems to have an impact on students participating in the class. Course instructors validate peer mentors' role by introducing them as part of their teaching team at the beginning of the semester which supports and legitimizes their instructional role with students. Both instructors and mentors agreed that supporting mentors in their role was vital in providing valuable peer mentoring in the classroom. Instructors can highlight mentors from the first day of class. This is done by introducing the mentor, defining their mentoring role to students, and promoting the mentor as part of the teaching team. Instructors clearly set the tone for how mentors assist students in learning and engaging in the class. Instructors who do not form a partnership with the mentor may create instability for a peer to peer mentoring environment.

Peer mentors, who worked together with instructors by outlining their connection to student learning, found it to be useful in helping students. Instructors, who clearly understood how they could utilize mentors in the classroom, were confident in incorporating them in weekly in-class activities. Overall, mentors interviewed believed that both mentor and instructor were responsible for establishing a constructive and meaningful partnership.

Peer mentors are placed intentionally within gateway courses to assist students despite students' perceptions on peer mentoring. For example, peer mentors placed in the classroom have direct contact with students who might not know where to find mentors, tutors, or who may not view themselves as needing assistance. Studies indicate that males are less likely to receive support from peer mentoring because they do not like



to ask for help (Scandura and Williams, 2001). In this study, more males than I expected provided their stories about being assisted by a peer mentor than females; this is an area that would benefit from additional research. This struck me as fascinating, and made me reflect on how peer mentors are able to impact a student's learning experience. What might be interesting to follow are students who have interacted with peer mentors in the classroom and compare their participation within other university courses. Students in this study discussed how peer mentors built a culture of asking for help. This was characterized as a normal aspect of all three courses, because everyone is participating no matter where they are in terms of understanding the material. Participation also engages students who would not typically ask questions or seek assistance (Hyde and Ruth, 2002). Peer mentors were able to engage students and work with shy or introverted students on strategies to keep them involved in classroom learning.

Because peer mentors encourage student participation, most instructors from this study did not include a participation grade as a class requirement. Often a participation grade is outlined to ensure students partake in classroom discussion and activities (Boniecki and Moore, 2003). However, peer mentors at Southwest State University hold students accountable to join in all class activities by circulating in the classroom to reengage students.

Student participation occurs not only during class time, but even more importantly how students connect to class learning beyond these hours. What was striking is how peer mentors motivate students to participate in outside class review and tutoring sessions. Research on student persistence reminds us that engagement outside of the

classroom is crucial (Kuh, 2002). Peer mentors are impacting students by exposing them to ways of heightening their learning experiences.

### **Sub Question 1**

Sub question 1: What influence does peer mentoring have on student learning from student, peer mentor, and faculty perspectives?

As I sought to answer sub question 1, I was able to gather more in-depth knowledge on how participant perspectives of peer mentors contribute to student learning. Peer learning is defined as “mutually beneficial and involve the sharing of knowledge, ideas and experience between the participants. It can be described as a way of moving beyond independent to interdependent or mutual learning.” (Boud, 1988).

Fostering peer to peer learning in this study came to the forefront as a vital factor that increased peer mentor impact on students. Both mentors and students felt that class structures which allow for more interactive learning with peers facilitate a more positive experience. Instructors, who strictly lecture, do not provide opportunities for peer to peer learning (Brookfield and Preskill, 1999). Peer learning encompasses many ways students learn from one another. Peer learning can be presented formally through strategies that range from providing assignments to informal tutoring sessions (Jacobi, 1991). And, this is what is being delivered at Southwest State University. Peer mentors in partnership with instructors provide a variety of peer to peer learning opportunities to reinforce course material.

Peer mentors teach students basic learning skills beyond course material. They model good listening during class time and within group activities. Listening seems like a basic skill but it guides students to formulate critical thinking for problem solving that

could lead to the correct answer (McLean, 2004). It helps students to pay attention for key messages that course instructors are presenting. Students learn to receive multiple perspectives about how their peers view specific group assignments or what is aiding them to be successful in the course (Tinto 1985; Terenzini and Pascarella 1977).

Peer mentors teach students how to work together in a diverse group (Meyers & Jones, 1993). As the world is becoming more global, this is a much needed skill. Peer mentors display respectful behaviors to students who might have differing opinions based on religious traditions, or personal backgrounds. They are trained to refrain from imposing their own values on students and to keep the group focused on course materials (Bean, J. C., 2001; Brookfield, S. D., & Preskill, S., 1999; Stanley, & Porter, 2002). Peer to peer learning continues amongst many diverse viewpoints.

A key skill that peer mentors teach students in gateway courses is how to develop their own learning community. They form learning communities within large gateway courses to show students the power of peer to peer learning. Peer mentors encourage students to take responsibility for their own learning, and demonstrate how beneficial learning communities can aid in their learning. Learning communities provide students with peer to peer support, resources, and information (Pascarella, Edison, Nora, Hagedorn, & Terenzini, 1998).

The art of communicating at the college level is a much needed ability. However, in large lecture classes it is difficult to find a means to effectively communicate with peers and course instructors. Peer mentors bridge the communication gap between students and faculty. Students who communicate with faculty and receive immediate feedback on their academic progress tend to receive better grades (Kuh, 2007). Feedback

on homework assignments, in-class quizzes, and class projects are important for students to gauge their learning. Peer mentors in gateway courses provide immediate responses and guidance to students. Peer mentors impact student connection to appropriate resources or services that help them flourish academically and personally.

Faculty in this study who taught prior courses without peer mentors in the classroom are amazed at how their teaching has advanced. Peer mentors who partner with faculty enable more creativity with course material, more time dedicated to teaching, and co-construct of an engaging learning environment. They also witness the many tactics peer mentors provide to students that enhances their learning which may inspire more similar developments.

## **Sub question 2**

Sub question 2: What influence does peer mentoring have on student success from student, peer mentor, and faculty perspectives?

For me is that they are able to take the class, of course, pass the class, but are able to be successful in the next class that they need to take. If they're going to be an engineering student, it's not a matter of them just passing my class, but they should have developed the skills to learn the work ethic, what they need to do to be successful in the next class, so to me it would be success if they're okay at least in the next level, if not to see them finish their intended degree

-Chemistry 101 peer mentor

The second research question I was seeking to explore was discussed by research participants in similar ways. Passing the gateway course equated to accomplishing success for students. Gateway courses, are characterized as high failing courses in many studies because of the low pass rates (Eagan & Jaeger, 2008). Currently, there is a huge undertaking by post-secondary institutions to solve the problem of students not passing these courses.

Scholars from the John Gardner Institute outlined reasons why gateway courses continue to have high failure rates:

- Lack of institutional identification of courses
- Students lack of academic preparation (especially in mathematics)
- Inadequate or nonexistent placement procedures
- Late enrollment; missed classes
- Faculty grading pattern; lack of early feedback
- Lack of institutional action/plan

John Gardner and colleagues also have set out to provide colleges and universities some direction on how to eliminate the gateway problem. And, at the top of their list is Supplemental Instruction which is a form of the peer mentoring at Southwest State University. The peer mentoring program, unlike the SI, can more rapidly identify students who are in need of assistance, and provide referrals as an “early warning” for students who are in danger of not passing the course. Peer mentors having direct contact with students in the classroom can directly impact a student’s academic progress (Mee-lee & Bush, 2003). Below in Figure 9 provides an illustration of the differences between the peer mentoring program and supplemental instruction.

<b>Peer Mentoring (PM) vs. Supplemental Instruction (SI)</b>		
<b>X= Required duty/responsibility</b>		
<b>Duties and Responsibilities</b>	<b>SI</b>	<b>PM</b>
Assigned to high failing gateway courses	X	X
Hold review sessions outside of class	X	X
Lead in-class small group discussions		X
Attend all scheduled class times, take notes, model good student behavior	X	X
Assist instructors with course curriculum development		X
Engage students with course material	X	X
Engage students in active learning strategies	X	X
Trained by SI model		X
Trained in tutoring	X	X
Trained in peer mentoring		X
Hold office hours outside of class times		X
Assist with grading class assignments		X
Maintain a 3.0 cumulative GPA	X	X

Earned a B or better in course providing SI or PM	X	X
Attends mandatory meetings	X	X
Collects student attendance to review or tutoring sessions	X	X

**Figure 9.** A comparison between peer mentoring and supplemental instruction.

By developing a relationship with students and creating a learning community, peer mentors help hold students accountable for missed group projects and deter missing class. Peer mentors also provide learning tools and services such as individual tutoring to raise a student’s level of understanding and knowledge of course material. Peer mentors serve in many capacities to retain student’s attention, participation, and retention in gateway classes. This was the case especially for student participants who retook the course a second or third time. Having a peer mentor available in the class made the difference for these students in passing the class.

**Success beyond the classroom.**

“I think the big ones are students, there’s a lot of freshmen that come in. They don’t know how to study, so they don’t have the correct study habits. A lot of them are first-generation students. I was a first generation student. They come into college, they have no idea what they’re doing here and they don’t really have anybody at home who’s really giving them advice on what they should be doing to be successful. I think those are big ones. Students work a lot, which they have to and it’s a drag, but I think that really, they don’t have the best time management skills to begin with and then they start working 30 hours a week. It’s really hard for them to focus.

-Math 121 instructor

The quote above captures a student’s perspective on how peer mentors assist students with a variety of skills. In their opinion, incoming students might not enter college with the academic or personal skills to be successful in college. Students who are the first in their families to attend a post-secondary institution may not understand their role as a student. And, students who have to work while attending school may not have learned time management skills. In all cases listed above, peer mentors teach students

basic skills. Peer mentors are aware that students might not have acquired all the skills needed to be successful students.

Success on the other hand can mean more than just passing a class. Some participants voiced success as students deciding on a major, graduating on time, or obtaining a job after college. These are important processes and skills that allow students to further grow their academic and personal abilities.

Peer mentors have some personality traits that are more desirable than others which can influence the peer to peer relationship. From the perspective of the participating instructors, it is important for mentors to help students transition from high school to a college learning environment. They expect mentors to share personal experiences on how to manage school, work, and personal time. Also, instructors expect mentors to set the example for good student behaviors in class such as promptness, participation, note taking, and asking for help. From participating student perspectives, the most important characteristic is that mentors be approachable. Students want to feel that they are truly on equal ground with their peer mentor, and not being judged. Student participants advocated for mentors who are encouraging and always helping them overcome academic and social barriers they may encounter (Ferrari, 2004). Participating peer mentors discussed really wanting to make a difference. One mentor shared that being a mentor should not just be seen as a job, but as work that is rewarding to the mentor and student. The data also suggested that mentors who take the initiative to help students by displaying a welcoming personality have more student to student engagement.

According to participants interviewed, mentors must be versatile in many aspects. Not only gaining support in the classroom was important, but being able to have guidance with financial aid issues, job opportunities, and family matters. In other words, students need mentors to serve as resource agents both inside and outside of the classroom. Students bring to campus their personal and social situations, which at times, interfere with class concentration (Glenn, 2008; Salinitri, 2005). Mentors can re-direct students towards balancing these challenges. Course instructors discussed how they did not have the time or the knowledge to help students with outside of classroom dilemmas. More importantly, they felt that peer to peer assistance would be more successful. Mentors shared that their role is to help students in every facet, by informing and connecting them to crucial services.

#### **Peer mentoring changing the look and feel of classrooms.**

Peer mentoring in gateway courses is changing the way these courses are taught and the methods used to teach. Peer mentors are an asset to such courses at large public institutions. In fact, they are changing the way these courses look and feel to both students and faculty. Based on my research findings gateway courses continue to be a challenge for students at four year public institutions. A gateway course defined by most research participants is “an introductory studies course into the respective field”. Gateway courses can either make or break a student’s ability to move from lower level courses to upper. Yet, they can also expose students to an academic major which lays the foundational knowledge to the specific study. Gateways are inevitable because they are required courses whether students are majoring in that particular subject, or taking it to complete graduation requirements. Introductory gateway courses are offered to give



students the opportunity to learn what encompasses a field of study. Some students are certain of their intended major, while others are not and use gateway courses to expand their major and career options. However, gateway courses are very large lecture courses, which can be discouraging to students who have never taken a large lecture course.

### **Recommendations for Practice**

I think the more the better, if we had the resources to put them in every gateway course that would be great.

-E&PS instructor

As gateway courses continue to stifle student progress on college campuses, I would offer the following recommendations based on this study:

#### **1. Advertise gateway courses that provide mentoring.**

It would be helpful to publicize gateway courses that offer peer mentors within the on-line course registration. When students register for one of these courses, a pop up window could appear explaining the mentor's role and support in such courses. Providing this information early on can begin to set classroom expectations for students. It can also be a way to communicate the support systems that will be provided. According to research participants, students are hesitant to enroll in large lecture classes. Students may be more apt to utilize peer mentors due to clear communication about the assistance they provide with in-class learning.

#### **2. Produce and present a campus-wide peer mentoring report.**

Develop a report on peer mentors placed in gateway courses and how they are impacting pass and failure rates. Demonstrate the effect both quantitatively and qualitatively to share the data on progress made. It was clear that peer

mentors are influencing students' academic and personal experiences through their undergraduate education. The voices of students, faculty, and instructor need to be presented to gain more visibility and greater buy in from campus community.

**3. Design models of instruction for using peer mentors.**

One strength that I observed in my study, was how Southwest State University had developed a structured agenda on how to embedded peer mentoring in large gateway courses. It would be beneficial to further create models for other high failing courses to provide examples to course instructors.

**4. Have review sessions that are topic specific rather than general.**

Students felt that peer mentors could provide more focused information on specific topics rather than general information. One suggestion was to keep a log of student questions and concerns, and then chunk questions into topic relevant review sessions. This would allow students to pick and choose areas where they need the most assistance. It could also make better use of peer mentors' and students' time.

**5. Sustain the peer mentoring program.**

The current peer mentoring program is sustained by a federal grant. This study suggests many beneficial aspects of peer mentoring in partnership with faculty. Colleges and universities would benefit from building student academic success programs such as this type of peer mentoring into institutional budgets.

**6. Identify quality peer mentors**

Peer mentors knowledgeable in the course content were respected by students and instructors. Therefore, recruitment of quality upper-class students who understand the class content would be important for the program and students.

**7. Enlist Faculty peer mentor champions**

Recruit faculty who have used peer mentors in gateway courses to encourage other faculty to join in this movement. A benefit that faculty shared in the study pointed to the partnership they established with peer mentors. Faculty understand how valuable peer mentors can be in a large classrooms to create smaller learning communities.

**8. Tell the success stories**

Use various promotional mediums to tell success stories about how peer mentors impact student learning and success. Pass rates alone are not enough information to deliver the many compelling stories of how peer mentors have assisted to increase student success. In addition, write an academic journal about peer mentor models that are working. Not enough research is available in the area of effective peer mentoring models.

**9. Develop a campus wide culture of peer to peer learning.**

Establish a campus wide campaign to promote peer to peer learning as a high institutional priority. This will heighten people's awareness of peer mentors and their work. It will also validate and solidify their role in working with faculty.

**10. Provide continuous learning opportunities**

Academic departments and programs need to include an introduction to peer mentoring programs within their institutions. This helps to identify students that could benefit from taking a course with peer mentors.

**11. Outline clear peer mentor roles and expectations.**

Instructors who better understand how to utilize peer mentors are more likely to incorporate peer to peer activities in the classroom. This not only provides clarity, but would allow instructors to plan innovatively. Faculty in the study have been working with peer mentors for several years. They have identified activities that work and do not work with peer mentors. More importantly, they have found ways to connect students to peer mentors during in-class and outside of class learning activities.

**12. Develop a peer mentoring in gateway courses certification.**

In my research, it became apparent that peer mentors provide a series of services to students. It is necessary to develop mentors with strong knowledge and skills in academic and social resources. The skills required for peer mentors in gateway courses are typically not common for other peer mentoring programs. It would be ideal to establish a certification program specific to peer mentors. This could be a way of establishing credibility for the peer mentors and the program.

**13. Exposing peer mentors to the many student programs, resources, and services.**

Working with peer mentors to be knowledgeable of all the resources to connect students is an important and ongoing need. Peer mentors in this study

received some training and more would be helpful. Services include on-campus and off campus programs.

### **Recommendations for future research**

My research study only provides an initial understanding of peer mentoring in large gateway courses. I provide a number of perspectives and insight on how peer mentoring is impacting students in their learning and success. However, I began to identify other questions that I was unable to answer. Below are listings of topics for future research based on findings from this study:

1. A comparative research study of large gateway courses.

A comparison between courses that have embedded peer mentoring and those who do not as there continues to be a need to further qualitative research. As I mention in my study, the peer mentoring program provides consistent quantitative data. However, qualitative data might be beneficial in gateway courses where peer mentors are not assigned. This would offer another angle to compare differences and similarities from peer mentors, instructors, and students.

2. How does instructor training impact how they incorporate mentors in the classroom? It was evident in my study that instructors had been provided a specific training on how to best utilize peer mentors in gateway courses.

Research in this area may help discover the strategies that do work and those that do not in working with peer mentors. Currently, there are very few studies that provide research in this area. This research can continue to provide instructors with further knowledge on best practices.

3. How do peer mentors feel about their own experience and how has this helped them to succeed as students?

Research that engages peer mentors' perspectives on how this peer mentoring role and position has helped them evolve as a person and student. Peer mentors voiced how being a peer mentor has given them hands on opportunity to learn how to work with students. Especially peer mentors, who were majoring in education, felt that this position further developed their teaching and professional skills. With additional research on this topic, we could learn more on how peer mentors benefit from this experience.

4. Why institutions do not provide peer mentoring in all gateway courses? What are the barriers?

My study outlines the various ways peer mentors are impacting students in large gateway courses. A qualitative study as to why institutions elect not to provide this type of model would be beneficial. This might provide some understanding for administrators or staff that direct peer mentoring programs why peer mentoring programs are less sustainable or fully implemented.

5. How different identity populations respond to peer mentoring?
6. Unfortunately, I was unable to delve deeper on how students from diverse populations, include gender respond to peer mentoring. Since students do not have a choice to participate, but rather there is an expectation to interact with peer mentors, it would be interesting to gain the perspectives on how they feel about this model. In what ways are they more likely to interact with this type of peer mentoring model, or is they another type that they prefer?

## **Implications**

This study led me to think about expanding on other questions that were not answered during this research specific to institutions, practitioners, and policy makers:

### **Institutions**

- Why are institutions not investing in embedded peer mentoring? Based on my research, peer mentoring in gateway courses has a positive impact on students which leads to higher retention and pass rates in these courses. Advancing in this type of initiative would save students time and money as they would be able to progress quickly to degree completion.

### **Practitioners**

Educators who are seeking to implement a peer mentoring model in gateway courses might consider the following questions:

- Does information from research better inform classroom instructors and improve the quality of the program?
- How is data being gathered and disseminated to share the impact of peer mentors on gateway courses?
- What are some of the obstacles to placing a peer mentor in gateway courses?

### **Policy**

It appears that college and universities may not have funding or do not value the role peer mentors can play in large gateway courses. With further data, perhaps policy makers can push institutions to consider this strategy.

- How can policy makers and leaders incentivize institutions to use peer mentors in gateway courses as a strategy to raise graduation rates and reduce high failing rates of these course?

## **Conclusion**

Quantitative findings have been used to demonstrate the effectiveness of embedding peer mentors in large gateway courses. Earlier data showed the impact of the peer mentoring program at Southwest State University among various courses to be inconsistent, and so program administrators turned to qualitative research to provide a more accurate picture. By shifting the approach to a combination of quantitative and qualitative research, the peer mentoring program can continue to investigate other factors that contribute to the many ways peer mentors impact students inside and outside of the classroom. Impact on student learning and success is clearly dependent on how each of the themes identified emerge within the classroom setting. Instructors who integrate peer mentors in the classroom can greatly influence the impact peer mentors have to improve a traditional classroom setting into a more active environment where peer to peer learning and support is available to students. Increasing communication between students and faculty, and providing transitional types of resources are additionally important factors.

Without a doubt, competencies displayed by mentor's plays a critical role in mentors having a positive impact. Students and instructors greatly depend on mentors to provide accurate and concise assistance and this translates to a need for mentors to develop specific knowledge and skills over time. Overall, peer mentoring in gateway courses is highly valued, and could be a useful way at large public institution to increase student success.



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## Appendix A

### Letter of invitation to Instructors for Classroom Observations

Dear — (Faculty)

My name is Jennifer Gomez-Chavez, and I am a doctoral candidate in the College of Education - Department of Educational Leadership at the University of New Mexico. I am pursuing my dissertation topic on How do peer mentors impact college students in undergraduate gateway courses at a large public university?

My research study will include the following three courses: Chemistry 121, Earth & Planetary Science 101, and Math 121. These courses have been chosen because they have agreed to take part in classroom peer mentoring. I will be conducting one-on-one interviews, classroom observations, focus groups, and document analysis.

The purpose of the study is to answer the following research questions based on faculty, peer mentors, and student perspective who participate in the mentoring program:

**Subquestion 1:** What influence does peer mentoring have on student learning from student, peer mentor, and faculty perspectives?

**Subquestion 2:** What influence does peer mentoring have on student success from student, peer mentor, and faculty perspectives?

With your permission, I would like to observe your classroom. The observation will NOT be an evaluation of course content or teaching style, instead it will focus on how peer mentoring in the classroom supports student learning and success. Your voluntary participation is requested.

Participation in the study will require the following:

1. One Class Observation
2. Researcher taking notes on observations.

I appreciate your consideration to participate in my research study. I look forward to your perspective; along with sharing my research findings.

Sincerely,

Jennifer Gomez-Chavez

IRB # 13-840

jengomez@unm.edu Approved (1-27-2014)

## Appendix B

### Letter of invitation to Faculty/Instructors to participate in Interviews

Dear — (Course Faculty/Instructor)

My name is Jennifer Gomez-Chavez, and I am a doctoral candidate in the College of Education - Department of Educational Leadership at the University of New Mexico. I am pursuing my dissertation topic on How do peer mentors impact college students in undergraduate gateway courses at a large public university?

My research study will include the following three courses: Chemistry 121, Earth & Planetary Science 101, and Math 121. These courses have been chosen because they have agreed to take part in classroom peer mentoring. I will be conducting one on one interviews, classroom observations, focus groups, and document analysis.

The purpose of the study is to answer the following research questions based on faculty, mentors, and student perspective who participate in the mentoring program:

**Subquestion 1:** What influence does peer mentoring have on student learning from student, peer mentor, and faculty perspectives?

**Subquestion 2:** What influence does peer mentoring have on student success from student, peer mentor, and faculty perspectives?

Your voluntary participation is requested to meet with me for a one-on-one interview. You have been selected because you teach in one of the courses listed above. Participation in the study will require the following:

1. Approximately one-on-one in person interview for one-hour
2. Interviews will be arranged at the university based on your convenience.
3. All information will remain confidential such as your name, the university where you are enrolled, courses, etc. Any information gathered during this study will only be used for educational purposes.
4. The interviews will be taped and transcribed, with permission from all participants.

Transcription protocol will follow:

- To ensure confidentiality, your name will not be given on the tape. I and/or a professional typist will be transcribing the tapes.
- Every research participant and focus group will be given a unique identification number.

- All audio files will be kept under lock and key at my home. Only I, a professional transcriber and the interviewees will have access to audio files, and will be erased once they are transcribed. One master audio file will be kept in my possession for five years.
- Each research participant will be offered a copy of the audio file and copy of the transcriptions.
- The interviewees and I will be the only ones with access to the audio files. Once my research study is complete, I will follow protocol to destroy files.

I appreciate your consideration to participate in my research study. I look forward to hearing your perspective.

Sincerely,

Jennifer Gomez-Chavez

IRB #13-840

jengomez@unm.edu Approved (1-27-2014)

## Appendix C

### Letter of invitation to Peer Mentors to participate in Focus Group

Dear — (Peer Mentors)

My name is Jennifer Gomez-Chavez, and I am a doctoral candidate in the College of Education - Department of Educational Leadership at the University of New Mexico. I am pursuing my dissertation topic on How do peer mentors impact college students in undergraduate gateway courses at a large public university?

My research study will include the following three courses: Chemistry 121, Earth & Planetary Science 101, and Math 121. These courses have been chosen because they have agreed to take part in classroom peer mentoring. I will be conducting one-on-one interviews, classroom observations, focus groups, and document analysis.

The purpose of the study is to answer the following research questions based on faculty, mentors, and student perspective who participate in the mentoring program:

**Subquestion 1:** What influence does peer mentoring have on student learning from student, peer mentor, and faculty perspectives?

**Subquestion 2:** What influence does peer mentoring have on student success from student, peer mentor, and faculty perspectives?

Your voluntary participation is requested to take part in a focus group with other students. You have been selected because you are currently enrolled in one of the courses listed above that has been assigned a peer mentor.. Participation in the study will require the following:

1. Approximately a one and a half hour focus group.
2. Focus groups will be arranged at the university based on your convenience.
3. All information will remain confidential such as your name, the university where you are enrolled, courses, etc. Any information gathered during this study will only be used for educational purposes.
4. The focus group discussion will be taped and transcribed, with permission from all participants.

Transcription protocol will follow:

- To ensure confidentiality, your name will not be given on the tape. I and/or a professional typist will be transcribing the tapes.
- Every research participant and focus group will be given a unique identification number.
- All audio files will be kept under lock and key in my home. Only I, a professional transcriber and the focus group participants will have access to audio files, and will be erased once they are transcribed. One master audio file will be kept in my possession for five years.
- Each research participant will be offered a copy of the audio file and copy of the transcriptions.
- The focus group participants and I will be the only ones with access to the audio files. Once my research study is complete, I will follow protocol to destroy files.

I appreciate your consideration to participate in my research study. I look forward to hearing your perspective.

Sincerely,

Jennifer Gomez-Chavez

IRB #13-840

jengomez@unm.edu Approved (1-27-2014)

## Appendix D

### Letter of invitation to Student participants for Focus Groups

Dear — (students)

My name is Jennifer Gomez-Chavez, and I am a doctoral candidate in the College of Education - Department of Educational Leadership at the University of New Mexico. I am pursuing my dissertation topic on How do peer mentors impact college students in undergraduate gateway courses at a large public university?

My research study will include the following three courses: Chemistry 121, Earth & Planetary Science 101, and Math 121. These courses have been chosen because they have agreed to take part in classroom peer mentoring. I will be conducting one-on-one interviews, classroom observations, focus groups, and document analysis.

The purpose of the study is to answer the following research questions based on faculty, mentors, and student perspective who participate in the mentoring program:

**Subquestion 1:** What influence does peer mentoring have on student learning from student, peer mentor, and faculty perspectives?

**Subquestion 2:** What influence does peer mentoring have on student success from student, peer mentor, and faculty perspectives?

**Subquestion 3:** What influence does peer mentoring have on instructor teaching and interactions with students from student, peer mentor, and faculty perspectives?

Your voluntary participation is requested to take part in a focus group with other students. You have been selected because you are currently enrolled in a course that has been assigned a peer mentor for one of the courses listed above. Participation in the study will require the following:

1. Approximately a one and a half hour focus group.
2. Focus groups will be arranged at the university based on your convenience.
3. All information will remain confidential such as your name, the university where you are enrolled, courses, etc. Any information gathered during this study will only be used for educational purposes.
4. The focus group discussion will be taped and transcribed, with permission from all participants.

Transcription protocol will follow:

- To ensure confidentiality, your name will not be given on the tape. I and/or a professional typist will be transcribing the tapes.
- Every research participant and focus group will be given a unique identification number.
- All audio files will be kept under lock and key in my home. Only I, professional transcriber and the focus group participants will have access to audio files, and will be erased once they are transcribed. One master audio file will be kept in my possession for five years.
- Each research participant will be offered a copy of the audio file and copy of the transcriptions.
- The focus group participants and I will be the only ones with access to the audio files. Once my research study is complete, I will follow protocol to destroy files.

I appreciate your consideration to participate in my research study. I look forward to hearing your perspective.

Sincerely,

Jennifer Gomez-Chavez

IRB #13-840

jengomez@unm.edu Approved (1-27-2014)



## Appendix E

### Data Collection - Scheduling Grid

Data Collection	Mon	Tues	Wed	Thurs	Fri	Location	Completed
1 Class Observation							
1 Class Observation							
1 Class Observation							
1 Focus Group							
1 Focus Group							
1 Focus Group							
1 One on One peer mentor Interview							
1 One on One peer mentor Interview							
1 One on One peer mentor Interview							
1 One-on-One Interview w/ Instructor							
1 One-on-One Interview w/ Instructor							
1 One-on-One Interview w/ Instructor							
10 Total - Data Collection Times							

## Appendix F

### Purposive Sampling Grid

<b>ID Code</b>	<b>Participant Name</b>	<b>Type of Participant: Interview = I Class Observation = CO Focus Group = FG</b>	<b>Completed I, CO, or FG Yes or No</b>	<b>Transcription Completed Yes or No</b>
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## Appendix G

### Research Participant Consent Form

#### Information About My Research Study – Informed Consent

This study involves conducting one-on-one interviews, classroom observations, focus groups, and document analysis.

The purpose of the study is to answer the following research questions based on faculty, mentors, and student perspective who participate in the mentoring program:

**Subquestion 1:** What influence does peer mentoring have on student learning from student, peer mentor, and faculty perspectives?

**Subquestion 2:** What influence does peer mentoring have on student success from student, peer mentor, and faculty perspectives?

Your voluntary participation is requested to take part in a one-on-one interview or focus group. You have been selected because (place a mark next to appropriate)

\_\_\_\_\_you are currently teaching a course that is assigned a mentor

\_\_\_\_\_ you're a peer mentor in a course that has been assigned a peer mentor

\_\_\_\_\_you're a student who is enrolled in a course that has a mentor assigned.

Participation in the study will require the following:

1. Approximately a one and a half hour focus group.
2. Interviews and focus groups will be arranged at the university based on your convenience.
3. All information will remain confidential such as your name, the university where you are enrolled, courses, etc. Any information gathered during this study will only be used for educational purposes.

4. The interviews and focus group discussion will be taped and transcribed, with permission from all participants.

Transcription protocol will follow:

- To ensure confidentiality, your name will not be given on the tape. I and/or a professional typist will be transcribing the tapes.
- Every research participant and focus group will be given a unique identification number.
- All audio files will be kept safe in my home. Only I, a professional transcriber, interviewees and focus group participants will have access to audio files, and will be erased once they are transcribed. One master audio file will be kept in my possession for five years.
- Each research participant will be offered a copy of the audio file and copy of the transcriptions.
- The interviewees and focus group participants and I will be the only ones with access to the audio files. Once my research study is complete, I will follow protocol to destroy files.

I, \_\_\_\_\_,

(Please print your name above.)

Agree to participate in this study with Jennifer Gomez-Chavez. I realize that this information will be used

for educational purposes. I understand I may withdraw from the study at any time. I understand

the intent of the study.

Signed \_\_\_\_\_ Date \_\_\_\_\_

Please return this consent form by XXXX in the envelope provided to: Jennifer Gomez-Chavez

IRB #13-840. All consent forms will be required prior or at the time of scheduled interview, focus group, or classroom observation.

## Appendix H

### Classroom Observation Guide and Data Collection Grid

**Introduction:** (Prior to attending class observation I will meet with Instructor or email them to gain their permission) Thank you for agreeing to participating in my research study. This class observation is being conducted to help me answer the following research questions based on faculty, mentors, and student perspective who participate in the mentoring program:

**Sub question 1:** What influence does peer mentoring have on student learning from student, peer mentor, and faculty perspectives?

**Sub question 2:** What influence does peer mentoring have on student success from student, peer mentor, and faculty perspectives?

**Sub question 3:** What influence does peer mentoring have on instructor teaching and interactions with students from student, peer mentor, and faculty perspectives?

Beforehand, I sent you a consent form that you have signed agreeing to voluntarily participate in the study. I would like to reiterate that I will be taking notes of my observations to help me recollect information. I will only conduct one classroom observation and I will transcribe my notes. You will have full access to all the information gathered from this class observation along with a copy of the transcription. Please know that all information shared will be kept confidential and is only being used for educational purposes. Do you have any questions at this time?

Instructor Initials \_\_\_\_\_ Course \_\_\_\_\_ Date \_\_\_\_\_

Course ID # \_\_\_\_\_ Number of students present \_\_\_\_\_ Class Time \_\_\_\_\_

**Purpose:** The purpose of this classroom observation is (1) to observe peer mentoring in a large gateway course (2) to observe peer mentor interaction with course/instructor and students (3) to observe peer mentoring activity that may contribute to student success and learning.

<b>Research Question</b>	
<b>Sub question 1:</b> What influence does peer mentoring have on student learning from student, peer mentor, and faculty perspectives?	
Research Probes	Comment/Notes
How are students sitting in the classroom?	
What are the interactions with peer mentors and students?	
How many peer mentors are in the classroom?	
How many students are in the classroom?	
What are the types of information peer mentors are giving students?	
What are some questions that students are giving peer mentors on course material or any other areas?	
How is the classroom environment?	
How do peer mentors respond to student questions?	
<b>Research Question</b>	
<b>Sub question 2:</b> What influence does peer mentoring have on student success from student, peer mentor, and faculty perspectives?	
Research Probes	Comments/ Notes
Besides course material and learning, what are some other interactions displayed between mentors and students?	
What are some other areas that students are requesting for assistance?	
What types of announcements are made in class?	
Research Probes	Comments/Notes
What interactions are peer mentors having with instructor?	
How do faculty integrate peer mentors in classroom learning?	
Does faculty introduce or remind students of peer mentors in classroom?	
How do students respond to instruction and peer mentoring?	
How do peer mentors demonstrate command of subject matter?	
How do peer mentors use instructional methods that encourage relevant student participation in the learning process?	

## Appendix I

### Instructor Interview Questions and Data Collection Grid

Introduction: Thank you for agreeing to participate in my research study. This interview is being conducted to help me answer the following research questions based on faculty, mentors, and student perspective who participate in the mentoring program:

**Sub question 1:** What influence does peer mentoring have on student learning from student, peer mentor, and faculty perspectives?

**Sub question 2:** What influence does peer mentoring have on student success from student, peer mentor, and faculty perspectives?

Beforehand, I sent you a consent form that you have signed agreeing to voluntarily participate in the study. I would like to reiterate that I will be recording the interview to help me recollect information being gathered. The interview will also be transcribed by either me or another individual. You will have full access to all the information shared in this session with a copy of the transcription. The interview will take at least one hour. Please know that all information shared will be kept confidential and is only being used for educational purposes. Do you have any questions at this time?

Instructor Initials \_\_\_\_\_ Course \_\_\_\_\_ Date \_\_\_\_\_

Researcher \_\_\_\_\_

<b>Initial Questions</b>	
How long have you been a faculty/instructor?	
How many peer mentors are in the classroom?	
How many students are in the classroom?	
How would you define /describe peer mentoring?	
<b>Research Question</b>	
<b>Sub question 1:</b> What influence does peer mentoring have on student learning from student, peer mentor, and faculty perspectives?	
Research Probes	Comment/Notes
How would you describe your primary roles in relation to student learning and success?	
How do you engage peer mentors in student learning? Can you provide examples?	
In what ways do you think peer mentoring in the classroom influences student learning?	
What are some examples that you can provide as evidence that peer mentoring is contributing to students learning in your classroom?	

<b>Research Question</b>	
<b>Sub question 2:</b> What influence does peer mentoring have on student success from student, peer mentor, and faculty perspectives?	
Research Probes	Comments/ Notes
In your opinion, how would you define/describe student success?	
In what ways are you utilizing peer mentors outside of the classroom?	
Besides course material, what are some other areas that peer mentors are helping students with?	
What are some examples that you can provide as evidence that peer mentoring is contributing to student success?	
In your opinion, how is peer mentoring important specifically in a college gateway course?	
Research Probes	Comments/Notes
How, if at all, has your teaching evolved as a result of having a peer mentor in your class? In what way do these changes influence student learning and success?	
In your opinion, in which ways has peer mentoring influenced your interactions with students in a large gateway course?	
What suggestions would you offer other instructors who work with a peer mentor in their classroom?	



## Appendix J

### Interview Questions and Data Collection Grid

#### Peer Mentors

Introduction: Thank you for agreeing to participate in my research study. This interview is being conducted to help me answer the following research questions based on faculty, mentors, and student perspective who participate in the mentoring program:

**Sub question 1:** What influence does peer mentoring have on student learning from student, peer mentor, and faculty perspectives?

**Sub question 2:** What influence does peer mentoring have on student success from student, peer mentor, and faculty perspectives?

Beforehand, I sent you a consent form that you have signed agreeing to voluntarily participate in the study. I would like to reiterate that I will be recording the focus group discussion to help me recollect information being gathered. The focus group discussion will also be transcribed by either me or another individual. You will have full access to all the information shared in this session with a copy of the transcription. The focus group will take at least one hour and a half. Please know that all information shared will be kept confidential and is only being used for educational purposes. Do you have any questions at this time?

<b>Initial Questions</b>	
How long have you been a peer mentor?	
Have you ever been mentored before? If so, how have they contributed to your student learning?	
How would you define/describe peer mentoring?	
<b>Research Question</b>	
<b>Sub question 1:</b> What influence does peer mentoring have on student learning from student, peer mentor, and faculty perspectives?	
Research Probes	Comment/Notes
How would you describe your primary roles in relation to student learning and success?	
How do you engage with students in student learning? Can you provide examples?	
Describe some of the ways you work with students to positively enhance their learning and success?	
What types of services do you feel peer mentors should provide to students in the class? How are these services important to their success and learning?	
<b>Research Question</b>	
<b>Sub question 2:</b> What influence does peer mentoring have on student success from	

student, peer mentor, and faculty perspectives?	
Research Probes	Comments/ Notes
In your opinion, how would you define/describe student success?	
In what ways do you work and interact with students inside and outside of the classroom? (ie: tutoring, office hours, etc)	
Besides course material, what are some other areas that you as a mentor are helping students with?	
What are some examples that you can provide as evidence that you believe peer mentoring is contributing to student success?	
In your opinion, how is peer mentoring important specifically in a college gateway course?	
Research Probes	Comments/Notes
How, if at all, has your teaching evolved as a result of having a peer mentor in your class? In what way do these changes influence student learning and success?	
How, if at all, has your mentoring evolved as a result of being a peer mentor in this particular class?	
In your opinion, how do you think you influence instructors in areas of teaching and student interaction?	
What beneficial information would you share with instructors who have an assigned peer mentor that could aid them in student learning and success?	

## Appendix K

### Focus Group Questions and Data Collection Grid

#### Students

Introduction: Thank you for agreeing to participate in my research study. This focus group is being conducted to help me answer the following research questions based on faculty, mentors, and student perspective who participate in the mentoring program:

**Sub question 1:** What influence does peer mentoring have on student learning from student, peer mentor, and faculty perspectives?

**Sub question 2:** What influence does peer mentoring have on student success from student, peer mentor, and faculty perspectives?

Beforehand, I sent you a consent form that you have signed agreeing to voluntarily participate in the study. I would like to reiterate that I will be recording the focus group discussion to help me recollect information being gathered. The interview will also be transcribed by either me or another individual. You will have full access to all the information shared in this session with a copy of the transcription. The focus group discussion will take at least one hour and a half. Please know that all information shared will be kept confidential and is only being used for educational purposes. Do you have any questions at this time?

<b>Initial Questions</b>	
How many peer mentors are in the classroom?	
How many students are in the classroom?	
How would you define/describe peer mentoring?	
Have you ever been mentored before? If so how have they contributed to your student learning?	
<b>Research Question</b>	
<b>Sub question 1:</b> What influence does peer mentoring have on student learning from student, peer mentor, and faculty perspectives?	
Research Probes	Comment/Notes
What primary role does the peer mentor have in the classroom? In relation to student learning and success?	
How does the peer mentor influence student learning? Can you provide examples?	
What are some examples on how you work with the peer mentor that contributes to your student learning in your classroom?	
<b>Research Question</b>	
<b>Sub question 2:</b> What influence does peer mentoring have on student success from student, peer mentor, and faculty perspectives?	

Research Probes	Comments/ Notes
In your opinion, how would you define/describe student success?	
In what ways do you work with your peer mentor outside of the classroom?	
Besides course material, what are some other areas that peer mentors are helping you with?	
How does your learning and classroom experience compare between your classes that have and do not have peer mentors?	
How do you think your peer mentor has helped students succeed in this course? How have they helped YOU to succeed in this class? In college?	
Research Probes	Comments/Notes
How would you describe the interaction between the peer mentor and the course faculty/instructor?	
In your opinion, in which ways does the peer mentor influence your interactions with your course faculty/instructor?	
In your opinion, in which ways has peer mentoring influenced your interactions with other students in the classroom?	
What recommendations can you make about additional or different ways peer mentors can work with students in class?	

## Appendix L

### Data Collection for Document Analysis

<b>Documents to be analyzed</b>	
<ul style="list-style-type: none"> <li>• Course Syllabi of classes that have assigned a peer mentor</li> <li>• Peer Mentor Program website</li> <li>• Marketing Materials – programmatic materials used to promote and outline program mission and goals I will conduct content analysis to analyze these documents, for specific references to and/or information about peer mentors</li> </ul>	
<b>Research Question</b>	
<b>Sub question 1:</b> What influence does peer mentoring have on student learning from student, peer mentor, and faculty perspectives?	
Research Probes	Comment/Notes
In what ways do the course syllabi describe the peer mentoring program to students?	
How does the course syllabi promote student learning?	
In what ways does the Peer Mentor Program website describe the peer mentoring program to students?	
How does the Peer Mentor Program website promote student learning?	
In what ways do the Peer Mentor Program marketing materials describe the peer mentoring program to students?	
How do the Peer Mentor Program marketing materials promote student learning?	
<b>Research Question</b>	
<b>Sub question 2:</b> What influence does peer mentoring have on student success from student, peer mentor, and faculty perspectives?	
Research Probes	Comments/ Notes
In what ways do the course syllabi describe how students can be successful in the classroom?	
How do the course syllabi promote students to use peer mentors in the classroom to increase their student success?	
In what ways does the Peer Mentor Program website describe what student success is to students?	
How does the Peer Mentor Program website promote how students can succeed in courses where peer mentors are placed?	
In what ways do the Peer Mentor Program marketing materials describe student success to students, peer mentors, and faculty?	
Research Probes	Comments/Notes
In what ways do the course syllabi describe instructor teaching and interactions with students?	

In what ways do the course syllabi describe instructor teaching and interactions with peer mentors?	
In what ways does the Peer Mentor Program website describe how instructor teaching and interactions with students will be presented?	
In what ways does the Peer Mentor Program website describe how instructor teaching and interactions with peer mentors will be presented?	
In what ways do the Peer Mentor Program marketing materials describe the instructor teaching and interactions that will occur with students in the classroom?	
In what ways do the Peer Mentor Program marketing materials describe the instructor teaching and interactions that will occur with peer mentors in the classroom?	

## Appendix M

### Sample Interview and Focus Group Transcript and Analysis

Original Transcript Meaning Units	Theme of Meaning Units	Emergent Central Theme	Emergent Theme Code
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## Appendix N

### Southwest State University Student Data

2006-2010 Undergraduate Student Demographics						
	2006	2007	2008	2009	2010	2011
Average Age	23.8	23.9	23.8	23.9	***	***
Female	10,446	10,401	10,325	10,832	***	***
Male	7,741	7,848	8,069	8,778	***	***
Non-Hispanic White	8,389	8,355	8,258	8,471	***	***
Hispanic	6,357	6,470	6,687	7,265	***	***
Native American	1,189	1,206	1,231	1,305	***	***
Asian/ Pacific Islander	681	711	732	764	***	***
International	149	159	198	190	***	***
African American	564	583	599	668	***	***
No Response	858	765	689	947	***	***
<b>Total Undergrad Enrollment</b>	<b>18,187</b>	<b>18,249</b>	<b>18,394</b>	<b>19,610</b>	<b>***</b>	<b>***</b>

Table 1. Southwest State University Undergraduate Student Enrollment.  
Source: 2009-2010 Fact Book.



Six Year Graduation Rate of all Full-Time Freshmen	
Year Entering	All Freshmen
1997 (2003)	42.6%
1998 (2004)	40.2%
1999 (2005)	41.0%
2000 (2006)	43.3%
2001 (2007)	44.2%
2002 (2008)	44.3%
2003 (2009)	43.1%

Table 2. Southwest State University Six Year graduation rates. Source: 2009-2010 Fact Book

Retention Rates					
Entering Class of:	1 Yr.	2 Yrs.	3 Yrs.	4 Yrs.	5 Yrs.
2006	76.6	65.3	60.3	***	***
2007	77.3	67.4	***	***	***
2008	79.2	***	***	***	***
2009	***	***	***	***	***
2010	***	***	***	***	***

Table 3. Southwest State University Retention Rates. Source: 2009-2010 Fact Book.

## Appendix O

### Southwest State University 2005 Data on Undergraduate Courses

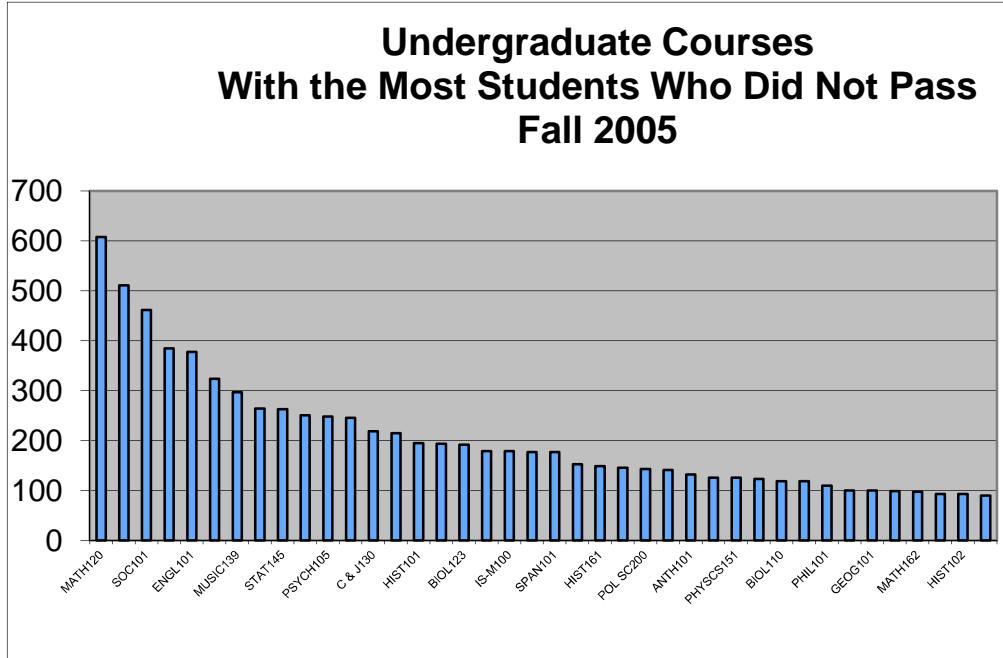


Table 4. Southwest State University Office of University College Courses Students Fail.

Filename: Final manuscript-Jen Gomez-Chavez dissertation.docx  
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Template: C:\Users\jengomez\AppData\Roaming\Microsoft\Templates\Normal.do  
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Title:  
Subject:  
Author: Jennifer Gomez-Chavez  
Keywords:  
Comments:  
Creation Date: 7/15/2014 11:18:00 PM  
Change Number: 3  
Last Saved On: 7/15/2014 11:19:00 PM  
Last Saved By: Jennifer Gomez-Chavez  
Total Editing Time: 3 Minutes  
Last Printed On: 7/15/2014 11:21:00 PM  
As of Last Complete Printing  
Number of Pages: 185  
Number of Words: 44,659 (approx.)  
Number of Characters: 254,557 (approx.)