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# Peer Tutoring in College Learning Assistance Centers: A Qualitative Study of Sociotransformative Theory in Action

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PEER TUTORING IN COLLEGE LEARNING ASSISTANCE CENTERS:  A QUALITATIVE

STUDY OF SOCIOTRANSFORMATIVE THEORY IN ACTION

A Dissertation

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Doctor of Education

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Title: Peer Tutoring in College Learning Assistance Centers: A Qualitative Study of Sociotransformative Theory in Action

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The purpose of this study was to examine how tutor/tutee interactions affect the dynamics of the teaching/learning experience in a university-based learning assistance center. A study of exemplary tutoring centers in higher education can provide direction in the process of tutor selection and training to meet the academic needs of today's college students. Consequently, information can be used to provide a guide for designing and refining tutoring programs, to identify academic skill development trends in higher education, and to examine the influences of teaching and learning in a peer tutor relationship.

This study provides a qualitative study of six exemplary higher education learning assistance centers. Focus groups were conducted in each of the six universities with peer tutors to ascertain if the four elements of the sociotransformative constructivist theory were included in the sessions. The four elements are: (1) dialogic conversation; (2) authenticity; (3) metacognition; and, (4) reflexivity. The focus group sessions were supported with document analysis of each learning assistance center.

In all of the learning assistance centers that were visited in the higher education institutions, there were many commonalities shared by all. Moreover, the programs realized the importance of peer tutor training and its implications for success.

It is important to note that each of the universities involved in this study had its own culture.  However, the similarities between them provide insight to what they consider important in the learning process between the tutor and tutee.  Future studies might look at the training of the directors/coordinators of these programs to see if they include the elements of the sociotransformative constructivist theory (STC) when they train the tutors.  Studies could look at the type of tutors being hired and whether they include an ethnically diverse group and are gender inclusive.

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THE PROBLEM

**Introduction**

With an economy that increasingly is outsourcing skilled labor, there has been much interest in the transition of students from high school to postsecondary education and how prepared they are to make this transition (Fussell & Furstenburg, 2005). "In fall 2011, Title IV institutions enrolled 18.6 million undergraduate and 2.9 million graduate students. Of the 18.6 million undergraduates, 57 percent were enrolled in 4-year institutions, 41 percent in 2-year institutions, and 2 percent in less-than-2-year institutions" (National Center for Education Statistics, 2012, p. 3). There is a projected increase in traditional college-aged students (18 to 24-year olds). However, there is also a projected decrease in the older population students. The younger population enrollment increase should offset the older population decrease (National Center for Education Statistics, 2013, p. 26). In addition, the unprecedented increase in the female enrollment in these higher education institutions has led to an increase in degrees conferred (National Center for Education Statistics, 2013, p. 63). According to Bozick and Lauff, (2007), about 60% of youth immediately enroll in college following high school. Beattie (2002) found that the decision of disadvantaged youth to attend school or work often depended on the economic climate. In addition, both low and high-income youth turned to four-year institutions when unemployment was high and job opportunities limited (Bozick, 2009).

Oftentimes adults returning to school have been away from education for some time. Many have obligations such as families, community obligations, elderly parents that need assistance, and jobs that require much of their time. Balancing these responsibilities and committing to a degree program can be very challenging.

As a result, higher education institutions are experiencing an increased demand for academic support. In a democratic society where a college education is expected and where unskilled labor has been outsourced, we need to provide not only opportunities to students whose prior educational experiences have been inadequate, but also individualized support in a postsecondary context where resources are limited (Alamprese, 2012). Whether students are just beginning a degree program, seeking to further their education with another degree, or returning for occupational or personal reasons, universities need to address their institutions' academic support services. Students that question whether an institution cares about their success, have difficulty in committing and remaining loyal to an institution (Kaufman, 2011). In order to alleviate student concerns and address academic need, colleges must provide services to these students who will become our future leaders in a very challenging environment.

At the U.S. Senate hearing examining the outcomes for postsecondary students, Senator Harkin (D-IA) (2010) requested data from 30 for-profit colleges. These data revealed that students graduating from for-profit institutions often do so with significant loan debt. In 2010, Senator Harkin stated:

> For millions of students at for-profits, the gamble has not paid off. This new report examines the rate at which students withdraw from 16 institutions. Of students who enrolled during the 2008-09 school year, 57% had withdrawn by this past summer. That is 57% of students withdrawing within the first two years, based on self-supported numbers by the institutions themselves. These students take with them thousands of dollars in student loan debt and none of the earning potential that comes with a college degree. (p. 1)

Dr. Arnold Mitchem, President of the Council for Opportunity in Education, with forty years of experience, is involved with issues and programs designed to increase college opportunity for low-income youth and adults. He posits that it is unrealistic to assume that students who are first generation college attendees from low-income backgrounds, tackling higher education on their own, will be able to gather the information needed or network with advisors to guide them in their choices. As a result, some of these students are not making the best educational and career decisions. He claims that what we are seeing is that these students are not achieving success despite participation in college programs. Consequently, students are emerging from college study deeply in debt, without completion of a program of study, unable to transfer previously earned credits to accredited institutions, and without the ability to improve their employment status. "There is a moral imperative and responsibility to ensure that all students, regardless of background, race or income level, are fairly represented in higher education" (The Federal Investment, 2010, p. 4). The emphasis needs to be on how to offer opportunities to students whose prior educational experiences have been inadequate and how to provide individualized support in a post-secondary context where financial resources are limited.

In 2011, the Obama administration released proposed regulations requiring colleges to better prepare students for "gainful employment." If these institutions fail to do so, they risk losing Federal student aid. Too many students are graduating with unsustainable debt and no jobs to compensate for the previous commitment to a four-year program.

A program considered to lead to gainful employment meets at least one of the following three criteria:

1. At least 35% of former students are repaying their loans (defined as reducing the loan balance by at least $1);

2. The estimated annual loan payment of a typical graduate does not exceed 12% of his or her discretionary income; or

3. The estimated annual loan payment of a typical graduate does not exceed 12% of his or her total earnings (U.S. Department of Education, 2011 p. 1).

The first time a program fails to meet the debt measure "it must disclose to the student why the measurement was missed and how he or she plans to address the issue. After missing the debt measure a second time in three years, programs must inform students that their debts may be unaffordable after graduation; such programs also are at risk of losing Federal student aid. In addition, the higher education institutions must inform students of transfer options. After failing a third year within four years, the student's program loses its eligibility to participate in Federal student aid programs and cannot reapply for three years" (U.S. Department of Education, 2011, p. 1). If some colleges lose their federal loan eligibility, many students that cannot travel elsewhere will be "denied a choice" according to Miller (2011), president of the Association of Private Sector Colleges and Universities (unpaged).

The gainful employment regulations that were to go into effect on July 1, 2012 were vacated by the U.S Judge for the District of Columbia, Rudolph Contreras. He claimed that there was not an adequate rationale to support the 35 percent repayment threshold. Only if a program failed all three measures –and did so for the three consecutive years- would its eligibility be revoked (Equal Justice Works, 2012).

Often students have difficulty in selecting an appropriate school to meet their needs. Vice President Abernathy from the Institute for College Access and Success (2011) voiced her concern about the ability of students to discern whether colleges were accredited. As an advocate for low-income and first-generation students, she feels that students do not know the questions to ask in order to obtain information needed to succeed at the college level. With all of

the certificates and degree programs that are being offered, the correct selection is crucial to their success. After students are accepted, it is the responsibility of that institution to provide them with academic support so that they can pass exams for certification, and enter the workplace confident in their area of expertise and able to meet the criteria of their prospective employment.

## Statement of the Problem

Colleges and universities operate on the assumption that students have previously learned basic study skills and, if not, then students must master these skills immediately. There are students who have not yet developed the basic study skills needed to master content and succeed at the college level. Educators, in turn, must critically review approaches they employ for the support of teaching and learning activities (Barker, 2002). Usually these services are situated outside the classroom within the university setting.

In higher education, one of the key resources offered to support the academic needs of students is a college learning assistance center. This is an educational support facility involving peer-created opportunities to increase skill acquisition. Students may or may not be of the same age or educational level (Colvin, 2007). Learning assistance centers in postsecondary institutions are: "(a) organized, multifaceted programs providing comprehensive academic enhancement activities outside of the traditional classroom setting to the entire college community; (b) centralized areas wherein tutorial and study skills assistance is provided; and (c) programs which offer help to any student experiencing academic difficulties" (Rubin, 1991, p. 6). Often universities do not have extensive peer tutoring programs that aid students with the help they need in a learning community (University of Utah, 2006).

Although studies have demonstrated the efficacy of tutoring programs in higher education, the focus has not been on the social dynamics within the peer interaction (Colvin, 2007). This research seeks to examine how tutor/tutee interactions affect the dynamics of the

teaching/learning experience in a university-based learning assistance center. Whereas instructors often do not have time to engage in sustained dialogue with each student, tutors start where the learner is, listen to the tutees' perspectives, monitor understanding, and continually adjust teaching strategies for learning (Thomas, 1994). The informal conversation that occurs in learning assistance centers appears to be crucial for the academic success of many college students. The language should be respected and used to build a rapport that encourages learning in a comfortable setting (Anderson, 2008). In addition, peer interaction allows the learner to not only develop interpersonal skills but to also understand the perspective of others while building on their academic studies (Seely & Hagel, 2005).

This research will explore peer and professional tutoring programs in exemplary learning assistance centers housed in higher education institutions. Optimistically, faculty, support staff, and administration recognize peer tutoring programs' potential as a support for college students' learning, particularly for those populations that traditionally have been underrepresented in the college population. A study of exemplary tutoring centers in higher education can provide direction in the process of tutor selection and training to meet the academic needs of today's college students. Consequently, information can be used to provide a guide for designing, implementing, and refining tutoring programs, to identify academic skill development trends in higher education, and to examine the influences of teaching and learning in a peer/tutor relationship.

"The simple fact is "that universities are beginning to feel the same accountability demands that have been placed on other state agencies throughout the 1990s" (Mahtesian, 1995, p. 22). Failure to recognize and address these demands could lead to students not graduating on a timely basis. With accountability comes responsibility and commitment to accommodating all students. Universities must recognize that student performances may not be so dependent on the

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kind of students who enroll, but on what institutions provide for them once enrolled (Pascarella & Terenzini, 2005). With budget cuts and new regulations that require universities to better prepare students for employment, higher education institutions need to provide the support systems to assure students that they will be prepared to join the job market upon graduation. If the number of college graduates is threatened, employers will be left without workers they need to survive in a fiercely competitive economy (Carnevale, 2011).

## Theoretical Framework

The intention of this study is to apply the sociotransformative constructivism theory (STC) and look at shared dialogue to see how tutors/tutees are making sense of the session. The sociotranformative constructivism theory (STC) contains four key elements: "(a) dialogic conversation; (b) authentic activity; (c) metacognition; and (d) reflexivity" (Rodriguez & Berryman, 2002, p. 1020). For decades, the constructivist theory has been used to inform studies on teaching and learning and focused on the individual's mental processes as the locus of knowledge (Fosnot, 1993). However, this theory has been challenged recently by the proponents of social constructivism, a theoretical framework that draws on the works of the Russian psychologist Lev Vygotsky (1978) and the Russian literary critic and philosopher Mikhail Bakhtin (1981, 1986a). Social constructivism suggests knowledge is "socially constructed and mediated by sociocultural, historical, and institutional contexts and that language serves as the locus of knowledge" (Gergen, 1995, p. 17). The sociotransformative constructivisist theory claims that both of these theories ignore the concept of *agency*. Agency is defined as "the conscious role individuals choose to play in helping others" (Rodriguez & Berryman, 2002, p. 1020). When agency is put to good use, it is capable of bringing about positive changes, particularly as they benefit those who occupy under-represented positions in society. In the peer/tutor dyad, the tutor often is more knowledgeable in areas of a subject matter that needs

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clarification and can explain a concept in understandable terms.  In SCT terms, this would mean that students' curricula must include "socially relevant and challenging new knowledge so that they may engage in meaningful dialogue and become active members of their communities" (Rodriguez & Berryman, 2002, p. 1020).

This research will explore the interaction between peer tutors and college students who are confronting academic challenges in the college context.  No one is more capable of offering insight into the areas of tutoring, students' needs, and successful models to follow than the students themselves.  Therefore, this research will focus on data provided by students.

<div align="center">Research Questions</div>

This dissertation will examine the role of the peer tutor from the STC perspective.  The study will address framing questions along with the sub-questions that follow as they apply to the sociotransformative constructivist theory (STC).

1. How do peer tutors in a learning resource center encourage dialogue and facilitate trust with the tutees during a tutoring session?

2. How do peer tutors in a learning resource center help tutees apply what they have learned in a session to other courses and real-life experiences?

3. How do peer tutors in a learning resource center collaborate with the tutees to demonstrate concept attainment and control over learning?

4. How do peer tutors in a learning resource center conceptualize their roles?

To answer these questions, the researcher will examine the factors that influence teaching and learning through focus group sessions.  In addition, data will be collected from tutor/tutee evaluation forms and tutor training manuals, and then analyzed to find emergent themes.

Student retention is of paramount importance to higher education institutions.  As student enrollment increases and the methods of disseminating information to these students change, the

need for learning assistance centers has never been greater. Faculty members in higher education are being asked to do more with less. There are less faculty being hired while class sizes are continuing to increase. As a result, peers are providing the additional support needed by these large classes (Goodlad & Hirst, 1989; Miller, Groccia, & Miller, 2001; Miller & MacGilchrist, 1996; Parkin & McKegany, 2000). Therefore, it is important that educational research focus on means of retaining college students through the use of these support services.

## Definition of Terms

- Individualized Instruction – Tutorial instruction that involves one instructor and one student (one-on-one instruction).

- Learning Assistance Centers; Learning Centers; Learning Support Centers; Resource Centers; Academic Success Centers; Learning Skills Centers; Tutoring Centers - Although there are various names used to define these centers; they all provide much needed services to help students meet their potential (Maxwell, 1997).

- Peer Tutoring – "People from similar social groupings who are not professional teachers helping each other to learn and learning themselves by teaching" (Topping, 1996b, p. 6). Forman and Cazden (1985) claim that for peer tutoring to occur there needs to be a difference in knowledge between two individuals so that the more knowledgeable individual can act as tutor to the less knowledgeable.

- Supplemental Instruction – Developed at the University of Missouri at Kansas City (Martin et al., 1983), supplemental Instruction is "an academic assistance program that increases student performance and retention. SI targets traditionally difficult academic courses and provides regularly scheduled out-of-class, peer facilitated group sessions. Assistance begins the first week of the term. Sessions are open to all students in the course and are attended on a voluntary basis" (p. 10). SI leaders attend the classes and

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take notes and then meet with students at predetermined times and locations to review content material utilizing various study strategies. The SI leader gains faculty support.

- Tutoring Center – A resource center which offers instruction and guidance to students who have difficulty understanding content area material in college classes or basic study skill strategies.

- Exemplary Learning Assistance Centers – Learning assistance centers that have been certified through the College Reading and Learning Association's International Tutor Program Certification (ITPC), the National Tutoring Association (NTA), or belong to the National Association for Developmental Education (NADE). These centers: "(a) significantly increase learning and promote program consistency; (b) evaluate research for effectiveness and disseminate information accordingly; (c) provide a powerful learning environment; and (d) consist of a dissemination team that extends and integrates support into the university" (Pogrow, 1998, p. 22).

## Assumptions

This study assumes that because the tutoring programs have been certified through the College Reading and Learning Association's International Tutor Program Certification (ITPC), the National Tutoring Association (NTA), or belong to the National Association for Developmental Education (NADE), that they are qualified as having exemplary learning assistance centers.

The four criteria used to help clarify exemplary were: "(a) significantly increased learning and promoted program consistency; (b) evaluated research for effectiveness and disseminated information accordingly; (c) provided a more powerful leaning environment including materials and techniques than what is conventionally available; and (d) consisted of a dissemination team that provided outstanding support" (Pogrow, 1998, p. 22). This support was

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extended and integrated into the university.  An exemplary program "shares its successful

experience with others and learns from others' critical research so efforts will not be duplicated.

Best practices are based on national studies' most effective developmental programs and

emphasize actions, services, and concepts that could be applied to any college campus with a

serious interest in improving developmental education" (Boylan, 2002, p. 1).

## Limitations of the Study

There are limitations inherent to this type of on-site visitation (Borg & Gall, 1983).

Those limitations are:

1.  Social desirability of responses could be a factor.  Respondents may wish to portray
    their institutions in a more favorable light or be reluctant to share problematic
    experiences.

2.  There may be limitations with the researcher collecting and analyzing the data.
    Although a participant observer is recognized as a valid qualitative researcher, as a
    participant observer, the researcher may bring biases to the study (Van Maanen,
    Dabbs, & Faulkner, 1982).

3.  The volume of data makes analysis and interpretation time consuming (Anderson,
    2010).

Qualitative studies want to describe the particular data in great detail, thereby illuminating issues

of interest or concern.  According to Merriam (2009), subjectivity does not need to affect

reliability.  Emergent themes will be examined rather than preconceived ideas.

## Significance of the Study

All students deserve the opportunity to succeed in a postsecondary institution.  It is the

responsibility of these institutions to provide opportunities for students whose previous

educational experiences have been inadequate.  Power shifts away from the authority figure of

instructor to students may present problems (Millis & Cottell, 1998). This opposition may be reduced if the role of the peer tutor and the tutor/tutee interaction is defined more clearly as well as how peer tutoring relates to the institution's goals and objectives (Whitman, 1988). Svinicki (1991) argued, "The weight of the world of learning does not rest on our shoulders alone; that responsibility is shared with students. They are the ones who must do the learning" (p. 29). Rabow, Chin, and Fahimian (1999) posited that "Tutors can do what teachers and parents cannot manage: they can be patient, taking time to observe, question, support, challenge, and applaud. They can move toward the true and total intelligence of their tutees" (p. xxii).

Whether colleges have the responsibility of providing tutoring services for students is seldom questioned; however, the effectiveness and cost effectiveness of those services needs to be investigated. This study's findings could provide information on peer tutors' perspectives when providing support to other students. In addition, it could offer insight into the dynamics of the peer tutoring connection. Information discerning how peer tutoring relates to the institution's goals and objectives should be provided to staff (Whitman, 1988).

This study aims to address some of the issues mentioned by examining the complex interaction in peer/tutor sessions in higher education. Evidence needs to be collected on the social changes that occur, how the tutors/tutees are making sense of the session, how understanding is developed, dialogue shared, and what changes are occurring in the dynamics of power and control (Parkin & McKegany, 2000). As the enrollment of under-represented students and nontraditional college students increases, the demand for academic support increases as well. By studying exemplary learning assistance centers in postsecondary institutions and the roles of their tutors, the findings will be used to assist other learning assistance centers in their improvement of current practices.

## Chapter Summary

The purpose of this study is to examine data collected from exemplary college learning assistance centers in order to investigate the social dynamics of the peer tutor relationship and dialogue. A qualitative study of this type also could suggest ways of designing and refining existing tutoring programs. Chapter II will provide a historical overview, as well as theoretical frameworks, of learning assistance centers in higher education institutions. Aspects of the sociotransformative constructivist theory (STC) that includes *dialogic conversation, metacognition, authentic activity, reflexivity*, and *question asking* will be used as a way to examine the qualitative data collected. The increased need for learning assistance centers in higher education will be investigated. Finally, the researcher will analyze the data from the perspective of the research-based characteristics of effective peer tutor programs.

CHAPTER 2

REVIEW OF RELATED LITERATURE

**Introduction**

This chapter is a review of the literature related to the topic of peer interactions during tutoring in higher education. Although it is widely assumed that tutoring offers benefits to students, there is surprisingly little research and empirical evidence of the effectiveness of these programs. Sheets (1994) found that lack of theoretical foundations, lack of training and expertise in research design or methods, and lack of time were factors affecting support of tutoring centers nationwide. The research examines how the tutee/tutor interactions affect the dynamics of the teaching/learning experience in a university-based learning assistance center. The review begins with a historical overview of tutoring in higher education and continues with the increased need for tutoring programs in higher education. The study's theoretical base, the sociotransformative constructivism theory (STC) including its components: dialogic conversation; question asking; metacognition; authentic activity; and, reflexivity and the relationship between language and peer interaction is explored, and finally, effective peer tutoring programs are addressed.

**Historical Overview of Tutoring Centers in Higher Education**

Historically, tutoring was provided for the elite who could well afford to pay for this private education (Maxwell, 1994a). As far back as the 1630s, tutoring programs existed at Harvard, specifically for students studying Latin. In the 1830s, colleges provided remedial instruction and tutoring for women without adequate secondary educational backgrounds. Increasingly, college students were underprepared and during the Jacksonian Period (1842 to 1848), opportunities to attend college were extended to a wider population, and as a result, many more students needed help to prepare for college. In 1849, the University of Wisconsin-Madison established a college preparatory department for students (Boylan, 1999; Boylan & White, 1994;

Casazza & Silverman, 1996). Eventually, land grant colleges were established by the Morril Act of 1862 to increase access to higher education for the "industrial classes" (Boylan, 1999). With the advent of large amounts of financial aid in the1960s and 1970s, special populations such as the baby-boomers, multicultural students, athletes, and World War II veterans were provided tutoring programs as well as state and federal funding for the economically and educationally disadvantaged students (Baker & Painter, 1983; Maxwell, 1994a). In the 1960s and 1970s, more emphasis was placed on individualized instruction, and although the stigma of remediation was attached to tutoring, most college students needed the academic support (Maxwell, 1994a). Therefore, almost all colleges in the United States offered individual tutoring throughout the 1980s and 1990s (Maxwell, 1994a). These services continue to be in demand. From the 1900s up to the present day, there has been an expectation that institutions accomplish more with fewer resources—another trend that has increased demand for, peer tutoring in higher education because it is a more affordable alternative (Topping, 1996).

Maxwell (1997) found various services provided by learning research centers:

1. "Academic evaluation/diagnostic testing for learning difficulties

2. Programs (workshops, counseling, and courses) to improve study skills and learning strategies

3. Peer tutoring and/or professional tutoring (appointments, drop-in, and online services)

4. Supplemental instruction (course-related, highly structured group tutoring in which one student is trained to be the leader and meets with groups to model successful study strategies; may be offered for extra academic credit)

5. Computer- assisted instruction (interactive software for basic skills courses, study skills, critical thinking, and ESL students)

6. Developmental/remedial courses (ranging from those who need some review to those who need a more intensively structured program; colleges are finding that connecting previously stand-alone developmental courses with a comprehensive tutoring center integrates services and provides more support to students with typically high drop-out rates)

7. Faculty outreach services (engaging faculty in promoting and incorporating services and providing support materials as well as helping faculty incorporate study skills into their classes)

8. Publicity and public relations (ongoing information services; increasing contact with faculty)

9. Contact with college administrators about services and program needs

10. Ongoing staff development and staff/program certification (this can be done under the National Association for Developmental Education guidelines)

11. Referral services (often made even more accessible through web site)

12. Counseling (links to personal, financial, educational, and career counseling)

13. Advising (professional and peer)

14. Evaluation (student questionnaires of services, keeping accurate records, alumni surveys; follow up studies on grade point averages and transfer/graduation rates)." (pp. 3-13)

The main goal of tutoring centers has been and continues to be offering comprehensive learning assistance that enables students to meet the academic rigors of college-level study. Regardless of how they are named (learning assistance centers, learning centers, learning support centers, resource centers, academic success centers, and learning skills centers among other names), these facilities not only provide academic support to students, but are resources used by

faculty and staff as well.  Tutoring centers provide assistance to not only students needing basic skills but also to students wanting to reinforce knowledge (Enright, 1997).

### Increased Need for Tutoring Programs in Higher Education

Past practices indicate a greater need for tutoring programs in higher education institutions.  The needs of students have not changed; however, there are higher standards for academic achievement. First, technology is being used to meet the curriculum standards and learner outcomes in our educational system (Shelly, Cashman, Gunter, & Gunter, 2008).  The National Council for Accreditation of Teacher Education (NCATE) 2000 Standards requires that a teacher-preparation institution's conceptual framework reflect a commitment to technology. As students work towards these goals of achievement, they need to know they will not be penalized for lack of knowledge or their attempts to master the initial skills.  Students need to know that teachers care about the overall college experience, not merely grades (McTighe, & O'Connor, 2005).  Therefore, there is an increased demand for computer and technology tutoring in the higher institutions.  Also, increased demand for online courses results in students seeking services to meet the requirements of college-level classes.  If, for example, a professor requires students to complete an online tutorial and the student is not familiar with computer skills necessary to access information, the student must seek assistance at a tutoring center.  Many times professors assume all students have computer skills and own computers when this is not always the case, particularly for students from low-income backgrounds.  Under such circumstances, universities need to take several measures:  recognize that often minority students come to college with weaker computer skills, but equal computer needs; equalize access; and train minority students in the value of technology as a tool, and in ways to make use of it (Hawkins, 1997).  In addition, educators need to evaluate computer-based instruction.  Kaplan's (2004) study conducted at a public New Mexican community college investigated the

relationship between hours of tutoring and computer-based instruction to student success, as reflected by the student's overall grade point average, course completion, and student retention statistics. He found that students using tutoring alone had a significantly higher retention rate than those who used computer -based instruction exclusively. Nontraditional students and senior college faculty may not have been born in the digital era and may be categorized as "digital immigrants" who struggle with technology (Prensky, 2005). As is the case with second language learners, these digital immigrants may retain an "accent" because they have one foot in the past. Building communication between "digital natives" who are comfortable with advanced technologies and those that do not feel as adept at using computers can present problems (Prensky, 2005). However, it is not only age but also economic opportunity that can pose obstacles for underrepresented populations.

The term "digital divide," entered the public when a study was conducted by the Markle Foundation in 1995. It was described as the "divergence found in society along cultural and racial lines and is [also] found online and off-line" (Stoicheva, 2000, p. 1). Technology is embedded in larger social and economic relations, and its use in schools emulates these social inequities (Munoz, 2002). President Clinton referred to this as the "have and have-nots," and perhaps toyed with an analogy of the social and economic "have and have-nots" (Munoz, 2002). Does this technology interfere with the socialization of students, particularly minorities? In 1929, John Dewey wrote the following in his pedagogical creed:

> In sum, I believe that the individual to be educated is a social individual and that society is an organic union of individuals. If we eliminate the social factor from the child we are left with only an abstraction . . . Much of present education fails because it neglects the fundamental principle of the school as a form of community life. (Dewey, 1929, p. 7)

Educators and tutoring programs must be careful that "they do not render students silent, invisible, and unimportant. Once the student is muted, learning has been sacrificed and education has been placed at risk. Once computers roll into privileged and underprivileged classrooms and centers, it is time to reexamine who and what will be "at-risk" as they arrive" (Munoz, 2002, p. 20).

Secondly, the issue exists of diverse students seeking tutoring services. Each culture brings its own set of beliefs to the session. Unless students are brought into the school community, they will not succeed regardless of teaching strategies and instructional methods (Quinn, 2001). There needs to be an awareness of the diversities not only of the cultures, but also within the cultures themselves. For example, each culture has a different concept about personal space and some cultures are uncomfortable when there is less than 12 inches of physical distance between themselves and others when they are speaking to one another (Quinn, 2001). In contrast, some members of the Hispanic and Asian cultures choose to stand in closer physical proximity when speaking (Quinn, 2001). Hispanic students are taught at home about how to responsibly care for the well-being of the family and the community; thus, collaboration is a common study method of Mexican students. As with others, some Hispanic students work best in cooperative learning environments (Griggs & Dunn, 1996). This is provided by peer tutoring or small group tutoring. For these reasons, it is imperative that tutors are cognizant of diversity and the demands of acknowledging preferences.

Thirdly, increasing numbers of English Language Learners increases the need for tutoring centers in higher education institutions. Many students come to college without the experiences or opportunities that promote critical thinking and reading. English Language Learners can learn to critically read print, visualize, and approach electronic texts using certain strategies (Crismore,

2000).  By working with students from different backgrounds, the students get to know each other and work with each other as equals (Webb & Sullivan-Palincsar, 1996).

A study was conducted by Valdez (2003) on the effectiveness of secondary school tutoring services in the public schools in Chicago, Illinois for the purpose of identifying why students of mixed race/ethnicity did not utilize recommended tutoring services.  During 2001-2002, 4,211 students from four Latino schools were interviewed.  Results revealed that many students did not seek tutoring when they needed homework assistance.  Surveys were used to address the tutoring services and five student focus groups were held at one school.  "Over 30% of students were recommended for tutoring services with the highest rate of recommendation being for students of mixed race/ethnicity.  About 26% of the students claimed they attended tutoring when it was recommended.  The results varied by school, race/ethnicity, grade level, and grade point average; however, only 6% said the tutor helped them improve if they were failing a class." (p. 1).  The recommendations of the study were to establish well-developed tutoring programs, hire professional tutors, and advertise tutoring services more effectively.

According to Goyette and Xie (1999), three factors explain Asian Americans' higher educational expectations: "(a) socioeconomic and other background characteristics, (b) tested academic ability, and (c) parents' educational expectations for children" (p. 23).  There is extensive discussion in the literature of "the model minority," taken to mean that students from China, Japan, and other Asian countries tend to respect authority and work hard to succeed (Petersen, 1966, p. 21).  Ogbu (1991) takes a somewhat different perspective; he would posit that Asian Americans are "voluntary" minorities (willingly immigrate to a country), and are more confident.  They are willing to invest more time in education.  Traditionally, Asians appear to attribute more of their success to effort than to ability.  They strive to obtain as much education as possible (Stevenson & Stigler, 1992).  Although the Pew Research Center portrays Asian

Americans as high achieving and adept at reaching educational success, many Asian Americans disagree. According to Judy Chu, Chair of the Congressional Asian Pacific American Caucus, they exclude many subgroups from the report that possibly have the greatest needs (Hing, 2012). Don Ichinose, director of the Asian Pacific American Legal Center's Demographic Research Project, claims that the higher education rates of Asian Americans has more to do with the politics of immigration and who gets to come to the U.S. (Hing, 2012). Asian Americans are concerned about the way questions or surveys are framed by the Pew Research Center and the implications they have on how Asian Americans are perceived (Hing, 2012).

The fourth need for tutoring programs in higher education is the need for grade point averages that meet the qualifications for graduation. Tutoring can help students maintain the required GPA in order to proceed and graduate in their program of study. A study conducted by Bye (2005) at the University of South Dakota provided information about the benefit vs. cost in order to make budgetary decisions. "Analysis of variance (ANOVA) was used to analyze the effects of supplemental instruction (SI) on course grades and grade point averages. The Pearson product-moment correlation was used to determine the relationship between attendance at SI, course grades, and term grade point averages" (p. 2). Bye (2005) concluded that "SI attendance increased targeted course grades as well as grade point averages" (p. 3-8). Finally, a chi-square analysis "revealed that student attendance at SI sessions had a positive relationship with student persistence to degree completion" (pp. 3-8).

Finally, with the recent economy, there is an expectation that students should attend college. With the increase in college attendance, there is an increase in the diverse group of students enrolling. As a result, it is difficult to provide the support that is needed for them to succeed and meet their full potential (Luck, 2010).

Research by Hixenbaugh and Williams (2009) found that the relationship that developed between the peer tutor and the student played an integral role in the success of that student. When the student is able to connect to the university, he/she is more likely to stay. A university environment that provides assistance not only encourages students to use the services, but gives them the feeling that they are receiving support from the campus (Stern, 2001). This "learner-centered environment" allows students to feel that they belong in college which has a significant effect on learning outcomes (Silverman & Casazza, 2000). For Enright (1997), having an actual locale where support services are offered on campus "enables students to realize a place of their own, their personal sense of place" (p. 2). This important relationship to the institution appears to exert a positive effect on student retention (Enright, 1997). The next section will explore how effective tutoring centers can be a reflection of the sociotransformative constructivism theory.

## Theoretical Frameworks of Tutoring Centers in Higher Education

One key aspect of the sociotransformative constructivism theory is *reflexivity*, "how social location, ideological location, and academic location affect students' perceptions of what is worth learning" (Rodriguez & Berryman, 2002 p. 1022). Cooperative learning (tutoring) is an effective way to practice learner-centered instruction. Learners are empowered to feel they are in charge of the learning process (Erdal & Ongel, 2003). Nevertheless, this can become a challenge to a tutoring center attempting to accommodate new students through a seemingly revolving door (Popp, Stronge, & Hindman., 2003).

Although educators struggle with the means of transferring skills to lifelong learning and real-world situations, some theories can inform the aspects of peer tutoring in higher education (Falchikov, 2001). The cognitive development theory of Jean Piaget (1952), the Swiss biologist, relates to the concept of peer tutoring. He believed that peer interaction encouraged thought and discussion and that this cooperation was essential in developing the critical attitude of mind,

objectivity and discursive reflection. Piaget's element of dynamic active learning, challenged students to become self-directed. In addition, he also stressed the importance of the differing levels of development, skills, abilities, and rates of progression of student learners (Falchikov, 2001). Koch (1992) emphasized Piaget's constructivist theory in studying problem solving and co-operative grouping in learning mathematics. Mann (1994) studied peer tutor journals and argued that "the role-taking aspect of acting as tutor can also facilitate the transformation of adolescent thinking away from the egocentric perspective of childhood toward a more decentered perspective that recognizes multiple points of view and that is more reflective"(Mann, 1994, p. 164).

Although Piaget's theory is useful in understanding cognitive development in order to understand this conflict within the social context, Vygotsky's (1978) theory provides more of a social/cultural perspective on learning, one that is rooted in language. Vygotsky, (1978) proposed a concept called the "zone of proximal development" or ZPD; it is the point where the learning task is challenging and beyond what the learner already knows, yet is capable of advancing to with support. He argued that skill development with adult guidance or peer collaboration exceeds that which could be attained alone, particularly through interaction with "more competent" peers (Falchikov, 2001). He claimed that learning is embedded in a culture and is passed from generation to generation through social interaction. Language is a powerful tool for this transmission. Transmission is accomplished most easily when a member more experienced in one aspect of the culture (instructor or lecturer or in this case tutor) is aware of the novice's current level of understanding, and through language, helps the novice to acquire new understanding and ultimately internalize it (Archer, Scevak, & Monfries, 1995).

Slavin's (1985) theory from social psychology claims that cooperative learning is based in this theory (Falchilov, 2001). In cooperative learning each member is dependent upon the

other to provide the resources necessary for development (Doolittle, 1995). Kahne and Bailey (1999) found in their case studies that when strong relationships and substantive supports are provided and maintained, interventions can have a significant positive effect. Tutoring helps both tutors and tutees to identify the strengths and qualities that make each person extraordinary and special. By doing so, tutoring also has the capacity to promote a sense of belonging and desire to try harder and perform to the best of each person's ability (Varlaro, 2003). In the case of cooperative learning, many times the advanced students take on the role of the instructor. Learning is enhanced in cooperative groups when students know each other well, share similar experiences, use familiar language, and want each other to learn (Archer et al., 1995). When students learn in this non-threatening environment, they develop authentic voices, share perspectives, and take risks. Fletcher (1997) supports the sociotransformative constructivism theory when he revealed in his study the need to develop practices for tutors that encouraged them to reflect upon their words, interactions, and practices in preparation for subsequent sessions with same and different students. Learners who have self-efficacy, or positive self-concepts and that take control over their own learning, are more likely to succeed (Alexander & Murphy, 1998). When the students are permitted to recover from their mistakes, they gain control of the learning process. Concurrently, when the tutor guides the student with prompts, he/she is less likely to get discouraged and continue with the session (Merrill, Reiser, Ranney, & Trafton, 1992).

Another source of support for college students seeking support has to do with cultural responsiveness. Moll (1992) defines funds of knowledge as "the historically accumulated and culturally developed bodies of knowledge and skills essential for household or individual functioning and well-being" (p. 133). He suggests that social class can act as either a catalyst or an impediment to learning and achievement. His research illustrates that if schools attempt to

understand the underlying social and cultural networks of the students, there would be more congruence between content taught and students' ability to learn. Therefore, this broadened definition of privileged cultures and tools would include more than just social class. Much of what is accepted in curriculum and testing is based on the backgrounds of the middle-class students, the majority of whom are Caucasian. There is great danger in assuming that students sharing the same racial, ethnic, or language characteristics bring the same funds of knowledge to the classroom (Dantes & Manyak, 2010). It is not enough to expect results from simply making the curriculum more rigorous. The literature is clear about the need to bridge or scaffold between the school environment and the home in order to teach all students to the best of their abilities (Zeichner, 2003).

The sociotransformative constructivism theory, when merged with culturally responsive approaches to interacting with learners, provides fresh insight into how "issues of power, gender, and equity influence not only curriculum (what is taught), but how it is taught and to whom" (p. 401). When teaching a more diverse curriculum, the facilitator would include more gender based information and relevant strategies that would evoke social change in the student. In addition, the facilitator would include strategies whereby the student would gain intellectual meaning and inquire about what was being taught (Zozakiewicz & Rodriguez, 2007). Through empowering dialogue, students gain a deeper understanding of the subject and means of applying newly gained knowledge in socially relevant ways. Whereas teaching becomes socially transformative, curriculum becomes the context where the struggle for that social change is played out. The notion is that ideas + words = transformative action (Rodriguez & Berryman, 2002).

**Dialogic Conversation and College Student Learning**

The dialogic conversation in the sociotransformative constructivist theory posits that trust must be established between different hierarchical locations (tutor and tutee) and different sociocultural locations (various ethnic backgrounds) to come together to work as a team (Rodriguez & Berryman, 2002). Although much is known about language diversity and the relationship between the communication of students and their academic success, a sociopolitical climate remains that is less supportive of this research and its implementation in the classroom (Ball, 2002). Ball posits that language is the vehicle through which teaching and learning take place, whether through oral or written language, multiple literacies, visual literacies, or verbal and nonverbal symbolic systems. Pinnell (1991) reminds us that much of daily classroom life is conducted through the spoken language. The reality of changing demographics in our country and populations within the classroom bring to light the need to change attitudes about oral and written language use and the risk of educational failure of our culturally and linguistically diverse students.

Vygotsky viewed language as a tool for human beings to extract meaning from the outside world; whereas Piaget regarded thought as a precursor to language, Vygotsky saw language as the precondition for thought. To Vygotsky (1962) "Thought becomes verbal and speech [becomes] rational" (1962, p. 44). He demonstrated that young children often "talk aloud to themselves when presented with obstacles" (Vygotsky, 1962, pp. 16-17) and that this "conversation with oneself" results in problem solving (Vygotsky, 1987, pp. 24-26) and can be sensitive to social factors. The older the child, the more thought becomes inner speech. Vygotsky claims that, "Development in thinking, is not from the individual to the socialized, but from the social to the individual" (Vygotsky, 1962, p. 20). Bakhtin (1986a) proposes:

This is why the unique speech experience of each individual is shaped and developed in

continuous and constant interaction with others' individual utterances. This experience

can be characterized to some degree as the process of *assimilation*--more or less creative-

-of others' words (and not the words of a language). Our speech, that is, all our utterances

(including our creative works), is filled with others' words, varying degrees of otherness

or varying degrees of "our-own-ness". . . These words of others carry with them their

own expression, their own evaluative tone, which we assimilate, rework, and re-

accentuate. (p. 89)

Therefore, for both Vygotsky and Bakhtin, the spoken word is a major pedagogical tool

(Emerson, 1983). Vygotsky (1978) professes that we learn, through the word, who we are *not,*

who we might yet become. Communication remains inert until it is connected to procedural

knowledge in sight of some goal. In formal learning studies, collaborative dialogue has been

used to promote self-reflective learning (based on the interaction between students' experiences

and their socio-cultural environment) (Imel, 1992; Isaacs, 1993; Tillema, 1997). The reflective

dialogue focuses on students' introspection and reflections on their personal experiences and

compares them to those of other peers. When the learner does not understand what is said by the

tutor, the tutor fleshes out the meaning by demonstrating the action and negotiating the meaning

of the language. Often the tutor will replace showing by telling and eventually remain silent as

the student begins to understand the verbal hints. Often tutors convey information by actually

saying nothing (Merrill, Reiser, & Landes, 1992). Wood and Wood (2009), cited Bloom as

finding "that face-to-face instruction leads to an improvement of two standard deviations over

conventional class teaching; in other words, about 98% of individually taught learners scored

above the average group taught learners" (p. 143).

Sarja's (2000) study indicates the need to deepen understanding of knowledge construction processes and quality of dialogues entered into by students and tutors. During a 5-month qualitative study exploring the relationship between the teacher's role and the students' participation within literature discussion groups in a third-grade classroom, two themes emerged: "(a) problems encountered by students in the transition from teacher-led to student-led discussions, and (b) means by which the teacher intervened when students had difficulty with the discussions" (Maloch, 2002, p. 108). This study looked at the theories of Bruner (1990), Mercer (1995, 1998), and Vygotsky's (1978) perspective of teaching and learning and the impact of both the teacher and learner role. Students struggled with accepting the leadership role and therefore limited themselves in the interaction. As a result, discussion was non-productive and limited (Maloch, 2002). A number of researchers (Evans, 1996; Lewis, 1995; Mercer, 1998) have shown that as a result of these challenges, there are less successful peer-led groups, groups that demonstrate gender and social status inequities, and talk that is not meaningful. Through engagement in relevant discussions, students gain a deeper meaning from text (Almasi, 1995). Foucault (1973) professed that "language is no longer linked to the knowing of things, but to men's freedom" (p. 296).

Oftentimes, there is a discrepancy between the perspectives of peer tutors and tutees. In the body of research conducted by Ertl and Wright (2008), the complexity of students' feedback was a key variable. Pitts (2005) found that when students had difficulty articulating what they wanted to say to their tutors, the feedback from the tutors tended to misinterpret the student's comments.

**Questions Posed during a Peer Tutor Session**

Dewey (1990) referred to inquiry as the "question of questioning," and explains:

It is, however, as true in the school as in the university that the spirit of inquiry can be got

through and with the attitude of inquiry. The pupil must learn what has meaning, what

enlarges his [her] horizon instead of forever trivialities. (p. 78)

A study by Graesser and Person (1994) investigated questions asked during tutoring

sessions on research methods (college students) and algebra (7th graders). Student questions

"were approximately 240 times as frequent in tutoring settings as in classroom settings; however,

tutor questions were slightly more frequent than teacher questions" (p. 128). Student

achievement was "positively correlated with the quality of student questions after students had

some experience with tutoring, but the frequency of questions was not correlated with

achievement. Ways that tutors and teachers might improve their question-asking skills were

identified" (p. 128).

Students may not have asked as many questions due to the fact that they did not

recognize when they did not understand information (Baker, 1979; Glenberg, Wilkinson, &

Epstein, 1982; Graesser & McMahen, 1993; Markman, 1979; Pressley, Ghatala, Woloshyn, &

Pirie, 1990). Graesser, McMahen, & Johnson, 1994, & van der Meij, 1987, 1988, identified a

second issue of students asking questions that did not pertain to the topic and thereby, losing

status because they revealed their ignorance. The third barrier is when the student does not have

good question-asking skills. Often teachers model unsophisticated questioning. The means of

alleviating these barriers in a tutoring session would be to initially address the knowledge deficits

of a particular student. Second, one-on-one dialogue could alleviate the social inequities of not

knowing the information in a group setting. The student is less embarrassed. The achievement

gap is lowered when there is a one-on-one session rather than a group session (Finn, Gerber,

Achilles, & Boyd-Zaharias, 2001; Wasley et al., 2000). Whereas a question may be perceived by the learner as an admission of ignorance within a classroom setting and in front of peers, the same question is minimized in a one-to-one tutoring session. Third, better questioning may occur in a tutoring session because the tutor can concentrate on deeper levels of understanding and reasoning. Often due to time restraints and resource limitations, there is not enough time for student reasoning and problem solving. Students have more opportunities to self-regulate their learning by asking more questions in a tutoring session. Question distributions indicated that tutors asked more short-answer questions than did the students (Graesser & Person, 1994). The findings in this study support the claim that "tutoring provides a social, cognitive, and pedagogical context for students to take control of their learning and to correct their knowledge deficits" (p. 479). In classroom environments the student is less likely to ask questions. The fact that "89% of the students' questions were to confirm that their knowledge was correct is indicative of active monitoring of their own learning" (p. 479). There is substantial empirical evidence that "there are improvements in learning even if content-free prompts such as 'Did you understand that?' or 'What else does it mean to you?' are used" (Chi, Siler, Jeong, Yamauchi, & Hausmann, 2001, p. 479). Tutors need to formulate higher level questions, longer-answer questions, and deeper reasoning questions.

Research conducted by Graesser and Person (1994) found four major mechanisms that generate questions in naturalistic conversation (including tutorial dialogue). "First, were the questions asked to obtain knowledge. Students recognize that they are not comprehending and need more information. The second type of question is asked when the student is trying to confirm what he/she thinks. The tutor is trying to ascertain what the student knows. Third, questioning can be used by the tutor to engage the student in an activity (e.g., "Could you graph these data on the board?"). The fourth category of questioning includes greetings, gripes, replies

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to summons, rhetorical questions, and questions that change the flow of conversation. These questions tended to be infrequent during tutoring sessions" (pp. 112-115). This study looked at student questions because they are both indicative of learning and are often less frequent in classroom settings. The tutoring sample represented a normal learning environment. The first sample was a graduate research methods class that had received As and the second sample was seventh grade algebra students. The results demonstrated that students asked more questions during tutoring sessions than in classroom settings. Moreover, tutors asked more questions than classroom teachers. The findings are encouraging for learning research centers and the impact they have on the teaching/learning process.

**Metacognition and Peer Interaction**

Another component of the sociotransformative constructivist theory (STC), *metacogniton*-awareness of one's own learning, was explored in a three-year study looking at student social interaction that mediated activity in a classroom. The emphasis was on interpreting learning in complex social settings and the research methods were consistent with the naturalist inquiry approach (Lincoln & Guba, 1985). The study looked at how metacognition was mediated by collaborative peer interaction (Gous, Galbraith, & Renshaw, 2002). Metacognition involved "planning an overall course of action, selecting specific strategies, monitoring progress, assessing results, and revising plans and strategies if necessary" (Garofalo & Lester, 1985, p. 166). The conversational turns of speakers (moves) were coded to identify their metacognitive function. Metacognition involves sharing one's thoughts and waiting for a reaction from a partner. After the partner shares his/her reaction, the person reciprocates by evaluating that partner's thinking. These reflective discussions are crucial to creating the zone of proximal development. These strategies lead to effective problem solving and correction of errors. The zone of proximal development suggests progress can be obtained when both students have

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expertise.  However, they each require the other partner's knowledge and contribution in order to make progress and proceed with learning.

Students are encouraged to experiment with new ideas and re-examine their own assumptions.  This experimentation appears to improve students' metacognition awareness. Students defend their own ideas and ask peers to clarify ideas they do not understand.  On the other hand, causes of metacognitive failure could be traced to the absence of such challenges: in failing to engage with each other's ideas, students were unable to create a zone of proximal development (ZPD).  Being held accountable by peers for explaining "how" and "why" may have prompted students to explore an idea more thoroughly, or to step back from a task and recognize a mistake or.  Within these collaborative ZPDs, then, the process of articulating and justifying strategies represent the social means by which students reason.  The study was grounded in the sociocultural theory of learning.  It extended the idea of metacognition as "self-directed dialogue to include collaborative conversation between peers of comparable expertise" (p. 193).  The emphasis was on the group rather than the individual contribution.  The results highlighted the significance of metacognition's ability to open students' thinking up to others and allowing them to scrutinize the thinking process (Gous et al., 2002).

Learning is influenced by a student's capacity to seek help.  This is an important metacognitive skill identified by Nelson-LeGall, 1981 and Newman, 1994.  Learners may be reluctant to seek help for fear that their peers will view them as incompetent (Ryan, Pintrich, & Midgley, 2001). This interaction between prior knowledge and help seeking is very complex. Surprisingly, Wood and Wood (1999) conducted a study and found that "learners with higher prior knowledge requested help more frequently than those learners with less prior knowledge. The students not seeking help may not have developed the self-regulatory skills needed to do so

because of that lower prior knowledge. Moreover, they may not have had the self-confidence in themselves and therefore did not request help" (pp.153-169).

Researchers are interested in the learner's ability to regulate his/her knowledge and the ability to apply it to both the educational field as well as real world situations. Adult education theorists refer to it as reflective learning and theorists of student learning refer to it as metacognitive skills (Tynjala, Valimaa, & Sarja, 2003). Rogers (1969) experiential learning discussed the importance of learning to learn and an openness to change. He advocated self-evaluation as the form of assessing progress and success. Students identify problems, attempt to solve them, and then figure out what worked and what did not and why (Chi, Bassok, Lewis, Reimann, & Glaser, 1989; Ohlsson & Rees, 1991; VanLehn, 1990). According to Hughes (2004), this reflection helps with the gleaning of facts as well as making sense of progress and performance.

A study conducted by Gynnild, Holstad, and Myrhaug (2008), focused on the tutor's role in identifying and promoting self-regulated learning with eight students in a Master of Science program. The study found that students need to realize their potential to self-correct during the learning process. Peer tutor feedback enhanced their self-efficacy and helped them focus on challenging areas so they could develop the skills needed to succeed.

Fitzpatrick's (2006) study of a third-year communications module with students earning a nursing degree, found not only student insecurity and resistance in evaluating their own work, but considerable tutor time and effort in providing appropriate support materials and guidance. However, self-assessment helped the students and tutors take responsibility for their own learning.

**Authentic Activity and Peer Interaction**

Thirdly, the sociotransformative constructivist (STC) theory includes "*authentic activity*-spaces where students explore how the subject under study is socially relevant and connected to their everyday lives" (p. 401). "Often activities performed in classrooms remain disconnected and isolated from each other. Although entertaining, teachers need to explore the ways the activities are "minds-on" rather than "hands-on" and establish ways that students can become aware of the roles they can play in bringing about social change" (Rodriguez & Berryman, 2002, p. 401). The sociocultural theory emphasizes collaborative learning and the interaction with others (Brown, Collins, & Duguid, 1989; Lave & Wenger, 1991; Rogoff, 1991; Darrah, 1995; Wenger, 1998).

As a higher percentage of nontraditional students enter higher education, researchers are looking at other learning theories. Knowles (1984) theory of andragogy assumes that adults need to understand the relevancy of what they are learning, how to problem solve, and the value of what they are learning. Often these adults are self-directed and take full responsibility for their choices.

Help-seeking abilities tend to improve with age (Newman & Schwager, 1995). As age increases, students are better able to reflect on their learning and recognize their needs (Ryan & Pintrich, 1998). This phenomenon could explain why non-traditional students seek tutoring services with much more ease than traditional students. Ryan, Gheen and Midgley (1998) studied the relationship between help seeking and gender in these social contexts and found that boys are more likely than girls to avoid help when needed. Boys reported feeling that seeking help implied that they were incompetent (Butler, 1998). Finally, students with learning goals see the benefits of help seeking whereas those with performance goals perceive help seeking as a threat to self-worth (Ryan & Pintrich, 1998).

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Webb (1992) reviewed studies dealing with relationships between learning outcomes and help received and found that matches between the amount of help received and achievement produced only 20% positive significant correlations. She saw effective help as being: timely; relevant; of sufficient elaboration; capable of being understood by the recipient; and, applied by the recipient to the problem at hand.

**Reflexivity during Peer Interaction and Role Conflict**

Finally, the sociotransformative constructivism theory contains the element of "*reflexivity*-how our social location (i.e., ethnic and cultural background and socioeconomic status), ideological location (e.g., belief systems and values), and academic location (i.e., education level and skills) affect learners' perceptions of what is worth learning. Also, reflexivity is tied to our understanding of how we can use that new knowledge to bring about social change" (Rodriguez & Berryman, 2002 p.402). Presently, many university students are being deprived of assisted discovery and social interaction necessary for transmission of cultural knowledge and values (Archer et al., 1995).

For example, it can be a burden for African American students to pursue academic excellence within an oppositional peer-group culture. Therefore, they will develop strategies to reduce the psychological pressures that they experience. Some of these strategies include: reducing academic effort; using extracurricular activities; choosing friends carefully; and other techniques (Fordham & Ogbu, 1986). This research is being challenged by Ainsworth-Darnell and Downey (2002) who claim that the results appear to reject the hypothesis that African American students are discouraged by their peers from doing well in school, and find instead that, far from being discouraged from doing well at school, African Americans who are viewed as good students actually become especially popular with their peers, even more so than is the case for white or Asian students. However, the results show that oppositional culture cannot be

ruled out as a possible cause for lower school performance among ethnic minorities and low-income students (Farkas, Lleras, & Maczuga, 2002).

Increased numbers of students in classrooms have resulted in less interactive teaching and learning. There may be less opportunity to ask questions to clarify information than there is in a tutoring session (Graesser & Person, 1994). According to Bakhtin (1986a), "each social group--class, profession, generation, religion, region--has its own characteristic way of speaking, its own dialect that embodies a set of values and shared experiences" (p. 60). Because "no two individuals belong to the same set of social groups or share the same experiences, understanding involves translation and negotiation of values" (p. 60). "For Bakhtin, words come not out of dictionaries but out of concrete dialogic situations" (Emerson, 1983, p. 247). Through engagement in relevant discussions, students gain a deeper meaning from text (Almasi, 1995).

The development of knowledge and understanding is shaped by interactions and relationships with others-both peers and adults. Often, during peer-led groups, gender and social class inequities lead to discussions that are meaningless and non-engaging.
For example, Mercer (1998) stated,

> Although it is widely accepted that one of the aims of education should be the induction of children into ways of using language for seeking, sharing and constructing knowledge, observational studies of classroom life reveal that this induction is rarely carried out in any systematic way. Teachers very rarely offer their pupils explicit guidance on such matters, and researchers have found that pupils commonly lack any clear, shared understanding of the purpose of many of the activities that they are engaged in and the criteria by which they are judged by teachers, and so are often confused. (p. 2)

Nevertheless, the roles of tutor and tutee may present problems. Garrett (1982), identified the need to maintain a 'delicate balance between the "tutor" and the "peer" element in

the development of peer tutors' perceptions of their role' as a potential problem for tutors (p. 94). Hawkins (1982) also acknowledged the difficulty by arguing that 'this subtle, sometimes precarious juggling of a dual role is a pedagogical stance unique to peer tutors (p. 30). The dual role of the position of tutor with authority and the role of fellow-student may present conflicting social allegiances (Gillam, Callaway, & Wikoff, 1994, p. 165). Tajfel and Fraser (1978) posit that people become what they are obliged to be. Owen (1983) claims that students perceive the tutor as an authority figure and that 'no tutor can avoid being perceived as a frame of reference, a legitimator of knowledge', and one who sets 'the parameters of acceptability' (p. 94). Maynard (1991), points out, "by first exploring the interactional basis of institutional discourse, it may be possible to better explicate just how power and authority are manifested within it." (p. 458)

In addition, there is a possibility of power issues evolving between the tutor and tutee. First, with the advent of these teacher-like characteristics comes tutor self-esteem improvement. In addition, the tutee may begin to share the perception of the peer as competent and in authority, which might, in turn, cause role conflict for the tutee. Thus the dissonance between tutee and the pre-existing role as equal exists. Homans (1961) claimed that as the leader's authority is established, it becomes more incongruent with the social equality which existed earlier. The tutees may then begin to dislike the tutor or envy the tutor's position.

Secondly, role conflict may occur when there is lack of information provided to the tutor/tutee and the role is not clearly defined. For example, the tutor may be required to engage tutees actively in the peer session, while the tutees may desire a more passive role (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964). Role conflict may also occur when: values or needs of the tutee are violated; the tutor views his position as having too many roles (facilitator, supporter, leader and resistor) (Brannon, 1982); when one member of the dyad has conflicting expectations (tutor needs to provide critical feedback and encouragement at the same time); and, when these

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conflicting expectations are shared by both (tutor sees himself as facilitator and tutee wants correct answers to problems).

Finally, the role of a tutee may be at odds with his position in other status hierarchy. For example, he/she may be a parent with high domestic status and at the same time a tutee which could be perceived as low status in a tutoring dyad. Often, students' rankings control their expectations of themselves, others' expectations of them, and their control of their expectations of others. This can be addressed when there is a tutor dyad relationship where both benefit from the effort expended (Walster, Berscheid, & Walster, 1973; Homans, 1976; Nadler & Fisher, 1986). However, a little status inconsistency may be motivating. In order to maintain equity, the tutee may increase preparation for the tutoring session, or the tutor may look at the benefits they are deriving from the session. (Walster et al., 1973).

Few studies have examined the impact tutoring has on the teaching/learning process. This leads to this researcher's direction to examine tutoring strategies to ascertain their effectiveness and inclusiveness of the sociotransformative constructivist theory elements in the tutor/tutee sessions.

### Studies of Effective Peer Tutoring Programs

Blatchford, Moriarty, Edmonds & Martin (2002), conducted a study on two cohorts of more than 10,000 children altogether for 3 years combining qualitative data from case studies and quantitative data from systematic observations and found: "(a) children receive more interactions from their teachers of a social nature in small classes, indicating that the interactions are more personalized; (b) teaching in both individual and group contexts increases as class size decreased; (c) in smaller classrooms there is more likelihood of *teacher support for learning;* (d) teachers' experiences of class size are connected to their emotional involvement in the job of

teaching; and (e) in small classrooms, teachers could provide scaffolding more effectively" (pp. 101-132)  Wood (1998) found effective tutoring in small class sizes.

In 2001, the Office of Institutional Development and Technology prepared a report assessing the impact tutoring services had on student success.  Student success was operationalized as retention and success rates of students.  Retention is defined as completing a course (not withdrawing) and success is defined as the percentage of students passing a class with a "C" or better or credit earned (Gribbons & Dixon, 2001, pp. 1-15).  In the analyses contained in the full report, there were statistically significant relationships between the number of hours students used the tutoring centers and students' retention and success in courses.  The differences were primarily between those who received tutoring and those who did not, rather than the amount of tutoring received.  In all analyses, students engaged in tutoring outperform students not receiving tutoring, regardless of the amount of tutoring they received and the measure of success (retention and success rates). These differences could be attributable to several factors, including motivational differences in students.  However, the results are necessary to support conclusions that tutoring services do improve success.  Furthermore, results indicate that students pursuing tutoring are more likely to succeed than other students, negating any claims that students pursuing tutoring are less capable of success (Gribbons & Dixon, 2001, pp. 1-15).  The study reinforces the potent influence that peers have on the day-to-day behaviors of students in school.

There is a misunderstanding that students are not able to teach other students (Maheady, 1998).  Some perceive it as the proverbial "blind leading the blind."  Tutors are sometimes perceived as not having the qualifications to disseminate the information as skillfully as the teacher.  However, this low ratio of student to tutor allows for more individualized instruction (Cohen, Kulik, & Kulik, 1982).  Some other advantages of a low tutor/tutee ratio are: "increased

time on-task; improved student motivation; immediate error correction and feedback; and, additional opportunities to receive help and encouragement" (Greenwood, Terry, Delquadri, Elliot, & Arreaga-Mayer, 1995, pp. 54-55). Tutors themselves benefit from the interaction with their peers.  Tutors benefit from the repetition of previously learned material, the ability to ask higher order questions, and the benefit of consistently organizing sessions (Cohen, 1986).

Anania (1982) and Burke (1984), completed dissertations comparing student learning under three conditions:  "conventional; mastery learning; and, tutoring" (p. 4).  They "replicated the study with four different samples of students at grades four, five, and eight and with two different subject matters" (p. 4).  Their findings were most striking in final achievement measures. "Using the standard deviation (sigma) of the control (conventional) class, it was found that the average student under tutoring was about two standard deviations above the average of the control class" (p. 4).  Students' achievement also changed under these conditions.  "Attainment of the level of summative achievement was 90% of the tutored students and 70% of the mastery learning students which compared to only the highest 20% attainment of the students under conventional conditions.  In addition, time on task in the classroom was 65% under conventional instruction, 75% under mastery learning, and 90%+ under tutoring.  Students' attitudes and interests were least positive under conventional learning and most positive under tutoring" (Anania, 1982; Burke, 1984, p. 4).  This could have significant effects on what educational institutions should do with students' human potential.  Why would higher education institutions resist tutoring practices?  Would it not be more beneficial financially to maintain and graduate students from institutions utilizing these practices?

While reviewing higher education programs, Lee (1988) performed a comparative analysis on different kinds of programs and how they affected retention.  The study showed that neither expense nor size were factors in retention and dropout rates.  Peer tutoring was very cost

effective.  Lawson (1989) surveyed 19 colleges and found peer tutoring more common than peer

counseling.  Moore-West, Hennessy, Meilman, and O'Donnell (1990) surveyed 127 medical

schools and found 47 of the 62 that replied to have peer tutoring programs.  Student feedback has

been positive.  For example, Moust and Schmidt (1994a) found that "students felt peer tutors

understood their problems, were interested in their lives and personalities, and were less

authoritarian" (p. 287).

An empirical study by Lidren, Meiser, and Brigham (1991) "used randomized control

groups and compared outcomes of peer tutored groups of six with groups of twenty and found

both groups to perform better academically than non-tutored students.  In addition, smaller peer

tutored groups produced better outcomes than the larger groups" (p. 69).  On the other hand, a

study conducted by Bell (2005), found that tutoring did not academically help student athletes,

especially if they were involved in a revenue sport.

Being a peer tutor is challenging, as well as rewarding.  In order for a session to be

successful, the tutor must not only know subject matter well, but must also be a good facilitator

of the information.  The tutor has the responsibility of helping the students "*learn how to learn*"

(p. 1021*).*  Rodriguez's and Berryman's (2002) sociotransformative constructivism (STC) theory

includes "*authentic activity*-spaces where students explore how the subject under study is

socially relevant and connected to everyday lives" (p. 1021).  The tutor session involves an

exchange of information that helps the tutee improve academically, advance in their program of

study, and graduate on time (Valdez, 2003).  As the tutee progresses academically, the tutor's

self-esteem rises (Foster-Harrison, 1997).  When students experience difficulty with a subject,

tutors will often take the focus away from the student and place it on the task at hand (Lepper,

Aspinwall, Mumme, & Chabay, 1990).  The final element in the sociotransformative

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constructivism theory is *metacognition*-awareness of one's own learning. Tutors have their tutees reflect on how they learn.

"Observations of teacher interaction with students in a classroom reveal that teachers frequently: give much positive reinforcement and encouragement to some students and not others; direct their teaching and explanations to some students and ignore others; and, active participation from some students and discourage it from others" (Brophy & Good, 1970, pp. 365-366). Conversely, students in the upper one-third of the class' academic performance tend to get the most instructor attention while those in the lowest one-third of achievement receive the least instructor attention (Brophy & Good, 1970, pp. 365-366). In contrast, during a tutor/tutee session, there is constant feedback and corrective measures. If an explanation is not understood, the tutor explains it further. Tutors will not correct students' errors, but will guide them to discover the errors themselves (Fox, 1991). Tutors "quickly correct errors that would be distracting and could lead to floundering, quickly focus the students on more serious problematic components of the solution so they can fix them, and withhold comments or offer less directive feedback that might lead to productive learning later" (Merrill, Reiser, & Landes, 1992, p. 11). In addition, there is much reinforcement and encouragement, and the tutee must actively participate in learning for the tutoring process to continue. Peer groups are very influential on students' academic performance, involvement in activities, and their expectations of themselves (Ide, Haertel, Parkerson, & Walberg, 1981).

Student retention is important to higher education institutions. As the methods of obtaining and disseminating information changes, there is an increased need for tutoring centers in higher education. Moreover the preferable one-on-one method of teaching is no longer affordable. When faculty are required to teach larger classroom sizes, and there is no additional hiring of faculty due to funding constraints, peer tutors can provide the needed support (Goodlad

& Hirst, 1989; Miller et al., 2001; Miller & MacGilchrist, 1996; Parkin & McKegany, 2000).

The TESAT (Tutor Evaluation and Self-Assessment Tool) was a concept developed by Bastian (1996). She believed that there were many parallels between training of teacher-education students and peer tutors.

> When asked about evaluating peer tutors, Bastian (1996) stated:
>
> Teaching tutors, like teaching student-teachers, may prove more productive by involving the tutors in learning a basic understanding of proven methods, giving them an opportunity to practice these during actual tutoring sessions, and involving them in their own self-evaluation. Supervised observations will prove helpful for initiating professional interaction and dialog. Learning then becomes the ownership of the learning-professional and the supervisor merely offers direction and guidance. Encouraging tutors (and teachers) in this self-discovery and self-improvement is a lifelong skill we can't teach, we can only model. (p. 3)

This independent self-assessment tool helps tutors understand what is expected of them during individual tutoring sessions.

There are various personal attributes and qualifications that effective tutors possess. First, they must be patient. Many students come to sessions with attitudes that have evolved throughout their experiences. The tutor may need to resort to various methods of instruction to address the different rates and methods of learning. A second criterion is sensitivity to the needs of the student approaching him/her. This student asking for help needs to feel comfortable and at ease. Third, the tutor needs to feel a commitment to the sessions he/she is providing. Preparation for tutoring causes the tutor to enhance cognitive processing (Topping, 1996). The tutor needs to clarify, exemplify, and simplify which cognitively challenges the tutor. By being non-judgmental to the student asking for help (the tutee), the tutor begins to see things from the

perspective of the student in need of services. Lastly, the tutor needs to believe that the tutee has the ability to learn the material. Students are influenced by their own beliefs that they can succeed academically and in the everyday world. Once again, this emphasizes the sociotransformative constructivism theory (STC) of *authentic activity*. However, students struggling with the prospect of doing poorly, rather than doing well, may matter more and overshadow the consequences (Steinberg, Dornbusch, & Brown, 1992).

Responsible tutors are able to manage time well, organize information, limit what they teach, and practice empathy (Cohen, 1986). Maheady (1998) reported increased one-on-one instruction provided opportunity for immediate feedback and gave the students the opportunity to respond to peer tutors responses. This led to positive appropriate behaviors and positive attitudes toward school and racial relations in peer tutoring sessions.

Research conducted by Baxter (1989) found that, although there were differences in tutors' approaches, tutors sustained a high degree of commitment to their tutees. For example, Mary was a good listener, supportive, and focused on the interpersonal rather than the instruction. John, on the other hand, was prompt, thoughtful, purchased supplemental materials, used drill and practice, and focused on subject matter. There were, however, significant differences in effectiveness. Mary's tutees demonstrated positive changes in achievement, attitudes, and motivation. In contrast, John's tutees underwent significant and positive changes in achievement, and somewhat less but significant, positive changes in attitudes towards learning the subject. However, John's tutees did not undergo significant and positive changes in motivation to learn and intrinsic motivation. Commitment was the same, so what was causing the change? Brophy (1987) posits that if tutors represent significant others for tutees, tutees may undergo significant changes in motivation to learn. The goal is intrinsic motivation which is

highly influenced by human interaction with the peer tutor. This affective motivation may be absent with the use of computers in tutoring.

Serving as a tutor may increase the achievement of the tutor as well as the tutee. Annis (1983)) compared three groups: "one that read the material to be studied, one that read with the expectation to teach to a peer, and the third to carry it out. On a forty-eight item test of general and specific competence, the 'read to teach' group gained more than the other two groups. A 24 item test of rote memory and conceptual understanding revealed the 'learn to teach' group outperformed the others on higher order conceptual understanding, motivation, and perception of the experience as active and interesting" (pp. 39-47).

Rogoff's (1990) review of the literature suggests several features of the collaboration between the tutor and tutee. They consist of:

1. Tutors provide a bridge between the learner's existing knowledge and skills of the new task. Left alone, the tutee may not see the relationship between the demands of the task and what they already know or can do that is relevant.

2. Tutors support the learner's problem solving by instructing and helping within the context of the learner's activity.

3. Through guided instruction, the learner is actively involved in the learning process and solution of the problem.

4. Responsibility is transferred from the tutor to the learner.

5. Not all guided participation involves attempts to teach and learn.

Inservice training of students utilizes different formats. Often times scenarios are dramatized to give tutors hands-on experience of handling different situations. Also, ideal training situations provide videos of what tutors should not do in a tutor-tutee interaction. One very effective means of training is to have skilled trained tutors share their past experiences with

the inservice tutors. Depending on the institution, some training sessions take a couple of weeks while other training programs are continuous  Observation of active tutor sessions provides firsthand knowledge of what works and what does not work.

Some tutoring programs provide initial training, reviewing commitment to the program, teaching strategies, program goals for tutors and tutees, scheduling procedures, referral processes, and paperwork. Sometimes informal sessions to discuss issues are provided. On-the-job feedback is one of the most effective measures to ensure a successful program. Any issue can be addressed and changes implemented (Coenen, 2002).

Stonerock (2005) followed tutors in a college setting first-year writing tutorial program for three weeks of training and fifteen weeks of tutoring. Ethnographic methods were used to identify personal and educational settings which shaped tutors' roles and the ways they shaped their practices when tensions arose. The contextual factors of outside settings, personal goals, and prior experiences mediated what means of support and ability they used to support sessions. The study demonstrated a need for continuous and critical reflective practices on the part of both the tutor and tutee. This substantiates Rodriguez and Berryman's (2002) sociotransformative constructivistism's (STC) element of *reflexivity*.

A study was conducted by Sniad (2000) at the University of Pennsylvania to look at the interactions between the tutor trainer and the trainees. The trainer was to be highly involved and not only discuss material, but ask questions as well. The tutor was to learn about the center and gain an understanding about his/her responsibilities. However, the goal of engaging the tutor and also imparting information about the center called for different strategies. Although the tutor trainer's primary goal was to demonstrate interaction among the tutors, the strategies appeared to disengage them. The trainer did not relinquish control over the discussion and therefore influenced the outcomes. "The findings suggest that tutors may not be involved in the training

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sessions because of an overt asymmetrical social relationship between the trainer and the tutors which limits the tutor's participation" (p. 79). Although the trainer does attempt to reduce his status during these interactions, it is not enough to perpetuate an effect on the tutor involvement. "Some of the implications of this study are for the tutoring center to reevaluate the sessions and presentation of material. If more informal conversations are desired, the trainer may need to employ status decreasing strategies. In addition, two separate training sessions could be held, one to present information and one to discuss tutoring practices. Lastly, to understand how power and status structures work in our society, we need to be able to recognize how it is expressed and perpetuated in our daily interactions" (p.79). Rodriguez's and Berryman's (2002) last element of the sociotransformative constructivism theory (STC) emphasizes this *reflexivity*.

Tutor program evaluations are an important way to document the effectiveness of any tutoring program. The more direct involvement of the participants in the evaluation, the more the results can be substantiated. This would include tutors, tutees, staff, faculty, and other evaluations. Each component would be evaluated separately based on its own previously established criteria.

There are various criteria used to evaluate tutoring programs. They range from simple tallies, such as hourly attendance, to important documentation and evaluations to assure the overall success of a program. Particular attention is paid to what courses are requested the most for tutoring as well as availability of peer tutors to address these needs. Along with program evaluations, tutors also are evaluated by their peers.

Professors will often refer students to the tutoring center for help in specific subject matter or to learn basic study skills. Some tutoring centers are allocated or share space with other non-academic support services. Ideally, university faculty members would support and value the efforts of these programs and would readily and enthusiastically refer students to them.

This is not always the case. Sometimes faculty look at students as "just not college material" and are dismissive of the efforts of these programs or look down on the instructors. Although peer tutoring is being used more frequently, administrators cannot assume that faculty will use their services to enhance classroom learning. Oftentimes previous experiences deter faculty from recommending peer tutoring services to their students. Therefore, peer tutors need to continually network and facilitate their usefulness to students. Hopefully faculty will not resist but negotiate the usefulness of these services to their classroom setting (Colvin, 2007).

According to Colvin (2007), peer tutoring needs to be a basic part of academic programs and integrated with the institution rather than being viewed as just an interesting appendage. Evidence needs to be gathered about what makes a tutor session successful: how the participants are making sense of the session; what types of questions are being asked and by whom; what social changes are occurring; are the participants reflecting and taking ownership of their learning; how are they are coming to understand the experience; whose voice, interests, values, and beliefs are represented by the speaker and listener; is trust established between the various ethnic backgrounds; and, how are the power issues perceived between the tutor and tutee? The elements of the STC (Sociotransformative Constructivism Theory) "could provide the bridge connecting multicultural and gender-inclusive education with social constructivism. Empowerment is the voice individuals use to enact their rights and responsibilities; however, equity is the social and institutional process by which individuals attain empowerment. Although equity can be mandated by law, individuals need to enact their own voices" (Zozakiewicz & Rodriguez, 2007, p. 403).

Tutoring programs provide factors that influence student learning and motivation to learn. According to Marzano (1992), students will put forth the effort when they understand the goal;

the goal is clear and meaningful; and, they realize that it is possible to reach the goal. It is also imperative that they realize when they have reached the goal.

## Chapter Summary

This chapter has provided a general summary overview of the research on tutoring centers in higher education. The review began with a historical overview of tutoring in higher education and continued with some of the theoretical frameworks influencing peer tutoring. The study's theoretical base, the sociotransformative constructivism theory (STC), and the relationship between language and peer interaction were explored, and finally, effective peer tutor programs were addressed.

Although research has addressed various subcomponents of tutoring centers in higher education, an in depth study needs to investigate what is actually happening during a peer tutor session that helps to sustain student enrollment especially during a time of accountability and budgetary reductions. Levine, Glass, and Meister (1987).found "peer tutoring to be more cost effective in both mathematics and reading in elementary and secondary schools than computer-assisted tutoring" (pp. 50-72). Peer tutoring was also more effective than lengthening the days or the school year. Therefore, it is important that educational research focus on means of retaining college students through the use of these support services. While this may not be generalized to higher education, the implications may be worth studying. One of the best means to validate the tutoring centers is through the students themselves. This study will examine how effectively tutoring centers address institutional need and student need. Further, it will focus on the evident effect of program design on meeting these needs. Additionally, the researcher will evaluate peer tutoring sessions to determine whether language and peer interaction supports the sociotransformative constructivist theory (Rodriguez & Berryman, 2002).

CHAPTER 3

METHODOLOGY

This chapter includes a detailed description of the research methodology that was used in the study. The chapter is organized into several sections that provide a framework to describe the research plan. Few studies have researched what institutions of higher education should be doing to assist all students, particularly those with diverse racial or economic backgrounds. The campus environment plays an integral role in the academic and social development of students (Kuh, 2003; Hurtado, Dey, Gurin, & Gurin, 2003). When a university provides a friendly, supportive campus environment, students are more likely to connect to faculty and become engaged outside of the classroom (Tinto, 1993). Many students have misconceptions about college and, without parental guidance about the college experience; first-generation students are at a disadvantage. Students, particularly males, do not utilize all of the services offered on campuses. This lack of receptivity to services has been associated with lower GPA and increased likelihood of leaving college before obtaining a degree (Bylsma & Shannon, 2005). The findings from this study may assist other higher education institutions in changing their approach and support systems to meet the needs and challenges of the twenty-first century student.

**Rationale for Qualitative Approach**

By selecting tutoring centers in higher education to visit, the researcher was able to select settings that were appropriate in order to answer the research questions. Bondy (1983) posits that qualitative studies include physical settings in which a social action occurs, a set of participants and their relationships to one another, and activities in which participants are involved.

The researcher conducted a qualitative case study by conducting focus groups during on-site visitations. "Conducting research, like teaching and other complex acts can be improved, it cannot be mastered" (Glesne & Peshkin, 1992, p. xiii). On-site visitations provided this approach to research. By adopting a qualitative research methodology, the researcher could more fully describe information from her perspective, as well as from the reader's perspective. "If you want people to understand better than they otherwise might, provide them information in the form in which they usually experience it" (Lincoln & Guba, 1985, p. 120). Some refer to this form of qualitative research as portraiture. The concept of portraiture was pioneered by Sara Lawrence-Lightfoot. According to Lawrence- Lightfoot and Davis (1997), portraiture allows the reader to empathize with the research subject. She recommends that the researcher shares information that is relevant to the study and pays close attention to the body language, silences, and hesitations of the participants.

The authors Denzin and Lincoln note "It is apparent that the constantly changing field of qualitative research is defined by a series of tensions and contradictions as well as emergent understandings." Qualitative refers to research that involves "the meanings, concepts, definitions, characteristics, metaphors, symbols and description of things" (as cited in Bieger & Gerlach, 1996, p. 35). Spradley (1979) in *Ethnographic Interview* describes the interview as a friendly conversation carried out with participants, and that care must be taken not to turn the interview into an interrogation. Secondly, the researcher wanted to use interviews as one method of collecting data, and to accurately reflect opinions of the participants interviewed. Also, interpretation of narrative data would be more reliable. The interview is challenging because as Creswell suggests "if the questions one asks are not crucial, then differences in responses are not crucial either" (Creswell, 1998, p. 335). Oakley (1981) states that "Interviewing is rather like marriage: everybody knows what it is; an awful lot of people do it, and yet behind each closed

door there is a world of secrets" (p. 41). The greatest contrast between quantitative and qualitative research is the amount of control by the investigator. In qualitative interviews, interviewees frequently take the topic and develop it, providing new direction and allowing the interview to change course and the interviewer to explore unexpected topics (Books, 1997). Another function of the interview is to reveal a relationship between the differing views of the interviewee and the interviewer (Krathwohl, 1993). In qualitative research interviews, the creativity follows the data collection. In interviews the non-restrictive environment permits the participants to express themselves. In contrast the interviews do have some weaknesses such as time constraints, setting appointments, commuting to meetings, transcribing recordings, and analyzing the data (Books, 1997).

One of the most important elements of a successful interview is the interviewer's ability to listen. One must value the participant's contributions (Books, 1997). Due to the flexibility of qualitative interviews, the interview questions can be modified to focus on other areas of importance. The researcher may exclude questions that are not conducive to enhancing the research (Lofland & Lofland, 1984).

## Setting of the Study

Six higher education institutions were selected that met the criteria of having tutoring programs that were members of the College Reading and Learning Association (CRLA), the National Tutoring Association (NTA), or the National Association for Developmental Education (NADE). The contact person of each of these higher education institutions was notified of the institution's selection in this study based on the qualifications of having an exemplary tutoring program. The sites included: University A, University B, University C, University D, University E, and University F. A request was sent to the contact person at each of these institutions and a consent form for those who agreed to participate (Appendix A). In addition, arrangements were

made for a specific date and time for the visit as well as confirmation to room availability and focus group participation. The six institutions verified their part in arranging the 6-10 focus group members who were peer tutors.

Once the viable focus group members were established, they were notified individually to confirm interest and availability. Times and locations were verified and a call was made as a reminder two days before the scheduled group session. A consent to participate in focus group was provided for each member of the group (Appendix B). The main purpose of the on-site focus group sessions was to obtain an in-depth description of the tutor/tutor interaction as it related to the sociotransformative constructivist (STC) theory.

## Research Design

This study used a qualitative research approach. Focus groups, artifacts, and audiotapes were the data collection tools. Bogdan and Biklen (2007) define qualitative research as "an approach to social science research that emphasizes collecting descriptive data in natural settings, uses inductive thinking, and emphasizes understanding the subjects point of view" (p. 274). According to Rossman and Rallis (2003), "qualitative research is about creating knowledge that has practical application; continual learning that affects the direction of research, and interacting with people in real-world settings" (p. 4). Surveys alone do not provide the researcher with enough information. Therefore, direct interaction with the subjects is beneficial when gathering data for qualitative research. They say that "the ultimate purpose [of qualitative research] is learning" (p. 4). "It involves acquiring raw data, grouping that data into meaningful information and creating knowledge that can be used to improve a situation, product, or service" (p. 4). Patterns, relationships, and themes were identified from the collected data and statements grouped into meaning units (Creswell, 1998, p. 148). Analysis of data collected from each on-site visitation included a description of tutor/tutee interactions that affected the student dynamics

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of the teaching/learning experience and determined what happened when the sociotransformative constructivist theory (STC) was applied to the relationship between language and peer interaction during a tutoring session. The qualitative approach examines the subject in its entirety and looks at the perspective of each of the participants (Patton, 1990). This study examined this holistic approach through the following focus group interview questions.

## Interview Questions

**Focus Group Questions**

Engagement Question: How would you describe your experience as a peer tutor? Has it helped you understand the teaching and learning process?

Questions for focus group participants:

1. How did you decide to become a peer tutor?

2. What type of training have you had for the role of peer tutor?

3. Please describe your biggest challenge as a tutor/tutee, then your most rewarding session.

Exploration Question: How does your dialogue encourage the tutee to become actively involved in the learning during a tutor/tutee session?

Questions for focus group participants:

1. Please describe ways that tutors and tutees of various ethnic backgrounds establish trust and respect.

2. Explain how you know when to speak and when to listen during a tutor/tutee session.

3. How much interaction is necessary for you to feel satisfied that the session was successful?

Exploration Question: While working with students, how do you explore the relevancy of the subject with the tutee and how it connects to everyday living-*authentic activity*?

Questions for focus group participants:

1. What advice do you give tutees that would help them become successful students?

2. How do you help your tutee understand course content?

3. How do you know if the tutees apply what they have learned in the session to their coursework?

Exploration Question:  During a tutoring session, do you focus on how to learn rather than giving the correct answer?

Questions for focus group participants:

1. How do students demonstrate their understanding and control over their own learning?

2. What does the student do when he/she discovers that they do not understand a concept?

3. Do you encourage the student to reflect?  How?

4. Can you give some examples of questions that you ask?

Exploration Question: How are you perceived by your peers when they come for a tutor session?

Questions for focus group participants:

1. How do you perceive your tutee's role in comparison to yours?

2. Explain how you deal with student frustrations during a peer tutoring session.

3. What personal satisfaction do you get from the role of peer tutor?

Exit Question:  Is there anything else you would like to say about the peer tutoring experience that might help other tutors?

Question for focus group participants:

    1. What skills, abilities and personal characteristics help a person to become an effective

        tutor?

    The main focus of this study was to: (a) develop data useful in designing and refining

existing tutoring centers that serve college students with academic needs; (b) aid in identifying

program design trends for college tutoring centers; and (c) examine influences on teaching and

learning in a tutor/tutee relationship. This was accomplished by conducting focus groups at a

select number of higher education institutions that met the criteria of having exemplary tutoring

programs. An exemplary tutoring program would: "(a) increase learning with a great deal of

consistency; (b) evaluate research for effectiveness and disseminate information accordingly; (c)

provide a more powerful learning environment including materials and techniques than what is

conventionally available; and (d) consist of a dissemination team that would provide outstanding

support" (Pogrow, 1998, p. 22). This support is extended to the university and is integrated into

the college academic environment. An exemplary program shares its successful experiences and

learns from the research of others (Shaw & London, 2001).

    The tutoring centers selected for the study were either certified through the College

Reading and Learning Association's International Tutor Program Certification (ITPC), the

National Tutoring Association (NTA), or belonged to the National Association for

Developmental Education. The College Reading and Learning Association's (CRLA) purpose is

twofold. "First, it provides recognition and positive reinforcement for tutors' successful work

from an international organization, CRLA. Second, its certification process sets a standard of

skills and training for tutors" (CRLA, 2009, p. 1). "CRLA's ITPC has been endorsed by the

National Association for Developmental Education, Commission XVI of the American College

Personnel Association, the American Council of Developmental Education Associations, and

Association for the Tutoring Professional and the National Tutoring Association" (CRLA, 2009, p. 1). The College Reading and Learning Association "certifies programs, not individual tutors. It certifies a particular tutor training program to issue CRLA certificates to individual tutors at certain levels. The most vital function and overall purpose of CRLA is to provide a forum for the interchange of ideas, methods, and information to improve student learning and facilitate the professional growth of its members" (CRLA, 2009, p. 1).

The National Tutoring Association "certifies at the individual or program level. Members represent colleges, universities, high schools, middle schools, elementary schools, school districts, literacy programs, community programs, grant supported programs, and NCLB/SES providers. This nonprofit organization serves over 5000 tutors and tutorial administrators across the United States and internationally. The mission of the NTA is to foster the advancement of peer and professional tutoring, support research into best practices and standards for all tutors, support tutor training, advocate for tutor certification, and uphold the NTA Code of Ethics" (National Tutoring Association, 2013, p. 1).

The National Association for Developmental Education (2013) "previously served those who taught remedial and developmental courses at the college level; however, the recent nationwide membership includes a substantial number of administrators, tutors, advisors, and other learning specialists associated with learning assistance centers. In addition to students and programs, developmental education also includes professional associations. These professional associations provide professional development activities, promote communication among members, encourage research in the field, and disseminate information" (p. 1).

The purpose of this chapter was to describe the research methodology for the study. Focus groups were conducted in six higher education institutions meeting the criteria for an exemplary college-level tutoring programs. The six universities identified and that agreed to the

study were:  University A, University B, University C University D; University E, and, University F.

## Data Collection

Focus groups were well suited to this qualitative study because participants were able to listen to others' opinions in a small non-threatening group setting.  Unlike surveys, where information about attributes and attitudes is collected, the focus group provided understanding at a deeper level. The non-threatening environment put participants at ease and allowed them to provide thoughtful answers to questions in their own words and add meaning to their answers. The number of participants in each focus group varied with each university; however, the group was large enough to generate much discussion, but not so large that any of the participants were excluded.

Following IRB and university approval, the focus groups were conducted from August, 2011 through April 2012.  Participation in focus groups was voluntary and selection was determined by letters of consent. Focus groups were held at the six higher education institutions and a room was provided by the contact individual at each of the schools.  The focus groups were audio- taped with the participant's permission.

The researcher explained the purpose of the study to the participants, explained the focus group process, and provided open-ended questions to aid in responses.  However, these open-ended questions served only as tools to draw out the participants' reflections on their experiences and the effects of those experiences on them (Rudestam & Newton, 2001).  The researcher wanted to encourage all participants to offer opinions and ideas.  The ideal amount of time allotted is between 45 to 90 minutes (Eliot & Associates, 2007).  A set amount of pre-determined questions, usually no more than 10, were asked.  These questions were of three types: (a) engagement questions- introduced to participants to make them feel comfortable; (b) exploration

questions- to get to the focus of the discussion; and (c) exit questions- to check to see if anything was missed in the discussion (Eliot & Associates, 2007). In order for results to be valid, it takes more than one focus group to participate on any one topic. Therefore, six different focus groups met from six higher education learning research centers (Guion, Diehl, & McDonald, 2011). The participants in this study were selected because of their roles as tutors in a university setting. For confidentiality purposes, name tents identified participants with a number as they responded to questions.

Although transcriptions of focus groups were very time-consuming, the emerging themes and patterns in due course linked the data. The focus group questions served as a guide. Miles and Huberman (1994) suggest coding transcripts by chunking specific parts in each transcript under specific "tags" (p. 56). Phrases and words were used for coding. Some themes fit better under categories that already existed and an attempt was made to include only relevant information.

It was important to collect some demographic information from participants in order to correlate focus group findings. The data collected required no more than two to three minutes to complete; this information was collected before the focus group began (Appendix C).

Written documentation samples that were offered such as tutor sessions, sign-in sheets for tutors and tutees, contracts signed by tutors or tutee, or training materials used by the coordinators and tutors were used in the study. The researcher compared the patterns, categories, and themes that developed by analyzing the documents and comparing them to those identified in the focus group sessions. Yin (2003) argues that relevant information comes from the corroboration and augmentation of other sources. Through the analysis of the documentation, the researcher was able to determine if the material supported or contradicted that gathered from the focus groups. In addition, the researcher used portraiture to analyze the tutoring centers and

documentation.  Lastly, the researcher synthesized all of the information gathered to ascertain an understanding of the program trends for college tutoring centers and examine the influence on the teaching and learning in a tutor/tutee relationship.

<p align="center">**Focus Group Questions**</p>

The focus group questions were based on the sociotransformative constructivist framework and were designed to determine if and how the elements were applied to the tutor/tutee relationship.  These elements included: "*dialogic conversation, authentic activity, metacognition,* and *reflexivity*" (Rodriguez & Berryman, p. 1020).  (Appendix D) identifies the focus group questions and the sub-questions used by the researcher during the focus groups to gather the perceptions of the tutors regarding their participation in the process.  The questions were open-ended so the tutors would share their interests and concerns, as well as their personal experiences.  Probing questions were used to clarify meaning.

<p align="center">**Validity and Reliability**</p>

This study was conducted to (a) develop data useful in designing and refining existing tutoring centers that serve college students with academic needs; (b) aid in identifying program design trends for college tutoring centers; and (c) examine influences on teaching and learning in a tutor/tutee relationship.

Stake (2000) stresses the importance of behavior of those carrying out qualitative research stating, "Their manners should be good and their code of ethics strict" (p. 447).  Since participants are exposing life experiences and views, the researcher must protect participants from embarrassment and exposure.  Data triangulation was used to promote validity.  Focus group sessions were conducted with tutors, centers were visited, and documents were analyzed. All participants were protected with pseudonyms and after informing them of the nature of the study, provided voluntary consent forms to sign.

The study included multiple perspectives of tutor/tutee participants. Written documentation was gathered and evaluated to discern common themes and patterns. Focus groups were audio taped and transcribed on the same day or the day after to take advantage of the information being fresh in the mind of the researcher. Transcripts were provided to participants in the study upon request and also to solicit feedback for clarification (Spradley, 1979). The participants only had access to their personal data. Every effort was made to not misrepresent information during this study. In addition, open-ended questions permitted participants to share their own perspectives.

## Data Analysis

The researcher used the sociotransformative constructivist theory as the framework for data analysis. Stake (1995) professes that during data analysis, sense-making continues. Merriam (1998) agrees and advocates collecting and analyzing data simultaneously to refine future data collection. To reduce the influence of researcher bias, the researcher followed a step-by-step data collection procedure that is described in the paragraphs that follow.

The first step involved visiting the sites of six university learning research centers. Arrangements were made in advance to meet with peer tutors in focus group sessions upon arrival. The researcher had focus group questions prepared that included an engagement question, exploration questions, and an exit question. After the tutors introduced themselves and the researcher introduced herself, the participants completed informed consent forms. Next, the researcher gathered demographic information regarding the individuals who volunteered to participate and were included in the focus group sessions. Following is the demographic material gathered from each of the six universities:

Table 1

*Demographic Data of Participants Interviewed by University*

| University A | | | | | |
|---|---|---|---|---|---|
| Major | Tutoring Experience (in years) | Students tutored per month | Subject tutored most often | Age | Gender |
| Chemical Engineering | < 1 | < 5 | Chemistry | 18 to 20 | Male |
| Biological Sciences | 1 - 3 | < 5 | Chinese | 21 to 25 | Female |
| Electrical and Computer Engineering | 3+ | < 5 | Intro to Electrical Computer Eng. | Over 25 | Female |
| Chemical Engineering | 1 - 3 | 5 - 10 | Calculus | 18 to 20 | Female |
| Creative Writing and Philosophy | 1 - 3 | 5 - 10 | Writing | 18 to 20 | Female |
| Electrical and Computer Engineering | 3+ | 5 - 10 | Calculus | Over 25 | Female |
| Electrical and Computer Engineering | 3+ | 5 - 10 | Electrical and Computer Engineering | Over 25 | Female |

| University B | | | | | |
|---|---|---|---|---|---|
| Major | Tutoring Experience (in years) | Students tutored per month | Subject tutored most often | Age | Gender |
| Master's Business Administration | 3+ | 10+ | Business courses; statistics | Over 25 | Male |
| Biology; Chemistry | 3+ | 10+ | Biology; Chemistry | 18 to 20 | Female |
| Mathematics | 1 - 3 | 10+ | Mathematics | 18 to 20 | Female |

## University C

| Major | Tutoring Experience (in years) | Students tutored per month | Subject tutored most often | Age | Gender |
|---|---|---|---|---|---|
| Chemistry | 3+ | 10+ | Chemistry | 21 to 25 | Female |
| Natural Science; Pre-Optometry | 1 - 3 | 10+ | Human Physiology | 21 to 25 | Female |

## University D

| Major | Tutoring Experience (in years) | Students tutored per month | Subject tutored most often | Age | Gender |
|---|---|---|---|---|---|
| History | 1 - 3 | 10+ | Political Science | 21 to 25 | Female |
| Accounting | < 1 | 10+ | Biology | 18 to 20 | Male |
| History; Secondary Education | < 1 | 10+ | History to/since 1500 | 18 to 20 | Male |
| Sociology | < 1 | 10+ | Sociology | 18 to 20 | Female |
| History; Secondary Education | < 1 | 10+ | World History | 21 to 25 | Male |
| English | 3+ | 10+ | Writing | 21 to 25 | Female |
| Elementary Education; Sociology | 1 - 3 | 10+ | Sociology | 18 to 20 | Female |
| Marketing; Advertising | 1 - 3 | 10+ | CBA 110 Intro to Business | 21 to 25 | Female |
| Accounting; Finance | 1 - 3 | 5 - 10 | Quantitative Methods of Bus. | 21 to 25 | Female |
| Behavioral Neuroscience | 1 - 3 | 10+ | Biology | 21 to 25 | Female |
| Elem, Ed.; Integrated Sciences & Math | 1 - 3 | 10+ | Psychology | 21 to 25 | Female |
| Psychology | 1 - 3 | 10+ | Psychology; Biology | 18 to 20 | Female |
| Accounting | < 1 | 10+ | Productions and Operations | 18 to 20 | Female |

| Major | Tutoring Experience (in years) | Students tutored per month | Subject tutored most often | Age | Gender |
|---|---|---|---|---|---|
| Biology | 3+ | 10+ | Cell and Molecular Biology | 21 to 25 | Female |
| Spanish | 1 - 3 | 10+ | Sociology; Sociological Imagination | 18 to 20 | Female |
| Marketing; Adver; Multimedia; Entrepreneurship | 3+ | 10+ | Quantitative Methods of Bus. | 21 to 25 | Female |
| Behavioral Neuroscience | < 1 | < 5 | Behavioral Neuroscience Emphasis | 21 to 25 | Female |
| Microbiology | 1 - 3 | 5 - 10 | Maths | 21 to 25 | Female |
| Psychology | 1 - 3 | 10+ | Psychology | 21 to 25 | Female |

University E

| Major | Tutoring Experience (in years) | Students tutored per month | Subject tutored most often | Age | Gender |
|---|---|---|---|---|---|
| Physician Assistant | < 1 | 10+ | Organic Chemistry | 18 to 20 | Female |
| Biology; Pre-Osteopathic medicine | < 1 | 5 - 10 | General Chemistry | 18 to 20 | Female |
| Biology | 1 - 3 | < 5 | Microbiology | 21 to 25 | Female |
| Biochemistry | < 1 | < 5 | Organic Chemistry | 18 to 20 | Male |
| Mathematics | 1 - 3 | 10+ | Math for Managerial Sciences | 21 to 25 | Male |
| Chemistry | 1 - 3 | < 5 | General Chemistry | 21 to 25 | Female |
| Mathematics | 1 - 3 | 10+ | Mathematics | 18 to 20 | Female |
| Actuary Science; Computer Science | < 1 | 10+ | Mathematics; College Algebra | 21 to 25 | Male |
| Psychology | 3+ | 5 - 10 | Intro to Psychology | 21 to 25 | Female |
| Dietetics | 1 - 3 | < 5 | Chemistry (Organic Principles) | Over 25 | Female |

| | University F | | | | |
|---|---|---|---|---|---|
| Major | Tutoring Experience (in years) | Students tutored per month | Subject tutored most often | Age | Gender |
| Biology | < 1 | 5 - 10 | English | 18 to 20 | Female |
| Neurobiology /Physiology | 1 - 3 | 10+ | Biochem; Org. Chem.; Biology | 21 to 25 | Female |
| Biology | 1 - 3 | 10+ | Chemistry | 21 to 25 | Male |
| Cell Biology; Genetics; Spanish | 1 - 3 | 5 - 10 | Biology; Chem.; Spanish | 18 to 20 | Female |
| Biology | 1 - 3 | 10+ | Organic Chemistry | 21 to 25 | Male |
| Accounting | < 1 | 5 - 10 | Accounting | 21 to 25 | Female |
| Electrical Engineering | 1 - 3 | 10+ | Math | 21 to 25 | Male |
| PhD Program Comparative Literature | < 1 | < 5 | Academic Writing | Over 25 | Female |
| Math and Business | 3+ | 10+ | Math | 18 to 20 | Male |

Secondly, this information was audio-taped and then transcribed to a word processor immediately after the focus group session. The researcher reviewed the text while listening to the tape recordings to verify accuracy. The data from the focus group sessions were collected and imported into the NVivo 10 (2013) qualitative software program. Emerging patterns developed and clusters were compiled to show relationships. Data were coded and stored in nodes. After analyzing the focus group responses, the references to the themes were placed in the nodes. The researcher then looked for themes and words commonly used by the focus group participants. This provided patterns as well as frequencies to responses. Categories were constructed from the responses to the research questions. The most frequent responses were used as inclusive data in the researcher's analysis. Responses included in the data analysis were used to ascertain if the

sociotransformative constructivist theory (STC) was included in the focus group participants' responses.

## Chapter Summary

Chapter Three provided the purpose of qualitative research and how it related to the identified research questions. In addition, the populations and participants of the study were identified. The method of data collection of focus group sessions and documents used by the learning assistance centers was used to establish validity and reliability.

Chapter Four presents the themes that developed from the research questions posed during the focus group sessions. Although pseudo names are used to assure anonymity, the six higher education institutions are identified so that commonalities and differences can be ascertained to gain an understanding of the various contexts of each university.

CHAPTER 4

ANALYSIS OF DATA

This research explored peer and professional tutoring programs in exemplary learning

assistance centers housed in higher education institutions so that faculty, support staff, and

administration will recognize its potential as a support for college students' learning, particularly

for those populations that traditionally have been underrepresented in the college population.

Although studies have demonstrated the efficacy of tutoring programs in higher education, the

focus has not been on the social dynamics within the peer interaction (Colvin, 2007). This

research seeks to examine how tutor/tutee interactions affect the dynamics of the

teaching/learning experience in a university-based learning assistance center. The following

research questions, which guided this study, focused on the sociotransformative constructivist

theoretical framework including: dialogic conversation; question asking; metacognition;

authentic activity; and, reflexivity during peer interaction.

1. How do peer tutors in a learning resource center encourage dialogue and facilitate

   trust with the tutees during a tutoring session?

2. How do peer tutors in a learning resource center help tutees apply what they learned

   in a session to other courses and real-life experiences?

3. How do peer tutors in a learning resource center collaborate with the tutees to

   demonstrate concept attainment and control over learning?

4. How do peer tutors in a learning resource center conceptualize their roles?

The sociotransformative constructivist theory explores "how issues of power, gender, and equity

influence not only the subject matter taught, but how it is taught and to whom" (Rodriguez &

Berryman, 2002, p. 1021). Peer tutors may ignore what they have learned about student-centered

and collaborative learning and choose what they perceive to be safe teaching styles in order to

maintain control (Rodriquez, 1993; Zeichner & Gore, 1990; Zeichner & Tabachnick, 1981).

There is a need to investigate various issues that prevent tutors from implementing relevant teaching strategies. The first area investigated the amount and extensiveness of peer tutor training that each learning research center provided for its peer tutors and how it helped them understand the teaching and learning process. This question was used to engage the peer tutors by asking the type of training they had, the biggest challenge they experienced as a peer tutor, the most rewarding session, and what influenced them to become peer tutors. The results of each of these areas are addressed individually.

**Peer Tutor Training in Six Higher Education Learning Assistance Centers**

Peer tutor training varied among the institutions of higher education. University A's training involved taking a 6-8 week class that taught effective strategies. In addition, the peer tutors observed previous tutors in sessions for 3 hours and then had peer tutor example training sessions one night a week for an academic semester. All of the universities provided an initial orientation that provided handouts, guidelines, or power points demonstrating how to be a successful peer tutor and how to interact with the person being tutored. Many of the universities provided ongoing training throughout the academic year after the initial training.

Supplemental instruction leaders at University D had a course that trained the tutors how to structure sessions and interact with larger groups of varying levels of understanding. These peer educators attended the classes they were tutoring and then met three times a week to help groups of students understand concepts and material presented in class. They found themselves emailing and motivating the students to attend the sessions. They discussed the various teaching styles of the professors and how they could teach their tutees to adjust to these teaching styles when they had different learning styles that varied from that of the professor. The peer educator emphasized the professor's teaching methods, types of exams, and professor expectations.

Previous tutor experience aided the peer tutors when they began tutoring at the college level. Often they started helping classmates prior to the tutoring position. One student at University F claimed, "Peer tutoring helped to reinforce my learning." Another professed, "You do not just deal with tutoring; you deal with how people relate and use their study skills." Finally, one peer tutor said, "It all depends on how you define training. The different situations where you are just discussing experiences or what did or did not work would be considered training. Training is an ongoing process."

## Peer Tutors' Challenges and Rewards

The most frequent challenge stated by the tutors was the unpreparedness of the tutee. Ten peer tutors cited unpreparedness as an issue of concern. "Sometimes they do not even bring notes" a University B tutor stated, "I need the notes to see the way the teacher is approaching the material because I may teach it a totally different way." A tutor at University B also cited the unprepared tutee as a challenge. He took statistics 5 years ago and does not have all the formulas memorized and whenever they come without a handout of problems they need help with, without notes or a book, and have not attempted a problem, I think, "Your teacher may as well of handed your homework to me and that is extremely frustrating. It is hard to tell someone because I am there to help." Motivation was a challenge that coincided with lack of preparation. A peer tutor from University D shared, "When students are required to attend sessions, they sometimes come and sign in and then begin to socialize with their peers. I must redirect their focus and get them engaged." Finally, a peer tutor from University B shared that the greatest challenge was to let go of his control.

> I have to understand that I am not their professor and if they do not do well in class, I can't do anything about it. I try to tell the students to go to the professor for extra help if they are not doing well.

One peer tutor from University D stated that when you work with the same students over time, they become too comfortable with us as the learning assistant. "It can't be a buddy buddy type thing. That sometimes can be a problem." The sociotransformative constructivist theory addresses the issue of power and equity. A University D tutor had claimed that:

> You have all types of tutees from all around the world and some have never learned to study or parents have micromanaged their studies and it is a whole new world for them. Therefore, we not only have to teach them the subject; we have to help them learn different ways on how to review, not just for the class we are tutoring, but for other things.

According to the sociotransformative constructivist theory, the basic premise is that all learners at any grade level be provided equitable opportunities for academic success. Therefore, the tutor as a peer educator must provide these learners with opportunities for empowerment. An example would be our sciences where a small percentage comes "from traditionally underserved backgrounds (i.e., Latino or Hispanic, African American, Native American, or First Nations, and female students)" (Zozakiewicz & Rodriguez, 200, p. 402).

Supplemental instruction leaders had other challenges, such as size of sessions. University C peer educators had as high as 70 students in a session. Eventually the size lessened to 40-45; however, this was still overwhelming to the tutor. Another University C tutor said, "Even in smaller sessions, you get a wide range of abilities and some are bored because you are moving too slowly while others cannot keep up. It is difficult all around."

Second, the peer tutors shared rewards of tutoring. The most common reward cited by tutors was understanding of content material and success in class.

A peer tutor from University B shared,

> I had one student that I worked really hard with throughout the semester and this tutee was pulling Cs and Ds on her tests. I worked with her 4 days a week for 4 hours each session and she got an "A" on her final. I cried because I was so happy that I finally got through to her.

A University B tutor claims that after tutoring statistics, it reinforces his own learning and helps him help other students in his MBA classes. Another business tutor at University B says,

> Oh yeah, I remember this and it is registering and it's kind of stuck in my brain now. I take upper level classes and I'm like, yeah this is easy because it's like I'm tutoring myself when I'm tutoring them.

A University D tutor found tutoring rewarding because the students understand the service that the tutors provide. In his evaluations, the tutee revealed that at first he was upset about coming to the center but then he understood and knew why he was there and it had really helped him. A University E tutor cited the most rewarding session as the time he was tutoring a tutee in the adult degree program. The tutee hit a wall for some reason and the course was just not making sense to him. The tutee had taken the course twice and failed both times. The tutor met with him once a week throughout the duration of the course and he passed with a "C". The tutee was so happy because without this course, he would not have been able to continue in his program. The tutor commented, "We were both so happy. We had gotten to know each other well and it was so rewarding to see someone go from not understanding to doing really well and understanding the course content."

A peer tutor at University E professes that one of the rewards of being a peer tutor as opposed to being a professor with authority, is that you are a student just like your tutee and you have taken the course they are taking. That provides hope for them and they tell you that. "I see

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my students in the cafeteria or library or after they take a big test and they are like, "The test was a success. Thank you for the tutoring". That is just the most rewarding thing." Given the element of reflexivity in the sociotransformative constructivist theory, one can see how the role each plays influences what each considers important to learn. For example, if a tutor has an older, non-traditional student who has been in the military, has a family and obligations, and is president of the Parent Teacher Association; it could be quite difficult for the tutee to look at his role as the learner when his experiences affect his perspective. He may look differently at a peer tutor that is much younger and considered to be the "expert." Also, the perception of the tutor changes as well when this type of tutee uses his or her services. A peer tutor may not consider his/her own beliefs concerning gender inclusive instruction. When a female approaches them for tutoring in a content area where she is under-represented such as science, math, engineering, or technology, the tutor may not include tutoring practices that demonstrate gender inclusiveness because of his/her own lack of training in nonsexist and inclusive language and resources.

## Decision to Tutor

The final engagement sub- question asked the students how they decided to become peer tutors. The general consensus was that they themselves had used the tutoring services and realized how beneficial these services were for their own academic success, and therefore, wanted to pay it forward and help others. Many of these tutors had previous experience tutoring their peers. A student at University F stated:

> I love accounting and maybe some students hate it because they do not understand it. It's like a totally different language the first time. I went to class and didn't understand what they were saying. And that's okay, so that is why I wanted to become a tutor. I wanted to show them the steps so that later they too would love the major. I did not want them to do it because of their parents or the money but because they love it.

A peer tutor at University A shared that "It is the strangest situation. It is a strange occurrence. So what has changed between you didn't understand this in this moment and to now you do. That was cool." Another University B peer tutor used to gather with friends in the library and would basically have a whole tutoring session without realizing that he was actually tutoring a lot of people. He claimed, "It wasn't for the money. It was just fun." Some tutors had tutored since high school.

One University F tutor said,

I did it unofficially in classes and always helped people. I pick up on concepts quickly and since I was doing it unofficially and I really enjoyed it, why not do it officially and get paid!

An equal number of peer tutors arrived at their positions as a result of a recommendation either from their peers or a faculty member. A University A tutor said, "I learned from friends that were peer tutoring and I said "Oh what is it? Let me find out about this!" Several University D tutors had been recommended for their positions by a faculty member. One of the University D tutors shared that he tutored Biology even though he was an accounting major with a minor in Spanish. He stated,

Professors do not like to hear: I'm a business major or an education major and I never need science. I want to help them understand that just because it is not your major, it can still help you and better your life for the future.

University E tutors were often recommended by professors through an email. The remaining tutors became interested in their positions because of the desire to "pay it forward." They realized the importance of the academic support that they had received from these services and wanted to share that success with others.

A University E tutor shared,

> I helped a student in an adult degree program succeed in a class that was needed for this
> student to move forward in his program.  The student was struggling and had previously
> failed the class.  With the help of my services, the student was able to obtain a "C" which
> meant everything to him.  The student went from no understanding to doing well.
> Observing this was very rewarding.

### Successful Peer Tutor Dialogue

The first exploration focus group interview question was:  "How does your dialogue encourage the tutee to become actively involved in the learning during a tutor/tutee session?  The first sub-question under this interview question asked the tutors to describe ways that tutors and tutees of various ethnic backgrounds establish trust and respect.  According to the sociotransformative constructivist theory, "dialogue is complex and involves a deeper understanding of how each individual's voice-or "speaking consciousness" engages in conversation with others to create context-relevant meaning. The tutor must now not only understand what is being said but the reason the tutee is choosing to say what he says in specific contexts" (Rodriguez & Berryman, 2002, p. 1021).  Moreover, the sociotransformative constructivist theory "claims that through this dialogue, safe spaces are created for the speaker and listener to ask "Who is doing the talking?"  Whose voice, interests, values, and beliefs are represented by the speaker and the listener" (p. 1021)?  Henceforth, trust needs to be established through this conversation because the tutor and tutee may be in different hierarchical locations and in different sociocultural locations (various ethnic and socioeconomic classes).  They must come together and work as a team.  This trust is paramount to establishing a productive exchange of ideas.  Sometimes it is necessary to close the computer and "just talk" (Smith, Helfenbein, Hughes, & Stuckey, 2008).

**Establishing Trust with Ethnically Diverse Students**

When asked about means of establishing trust and respect with ethnically diverse students, the majority of peer tutors did not feel that they had a problem. A University A tutor claimed, "My university is one of the most ethnically diverse universities around." One peer tutor from University B shared,

> Because I am a minority tutor, certain students who approach me for tutoring do not feel that I know as much as I do. It offends me sometimes but I do not blame them for the way they were raised. Eventually I earn their respect and trust because as soon as I break down a math problem and they get 100s on their exams, they think maybe she does know what she is doing.

She then continued to develop many friendships from tutoring. A second international peer tutor from University D claimed,

> I must be certain that I make my tutees feel comfortable and understand the point I am trying to make. I want them to feel like they are in a safe place. I sometimes ask questions not pertaining to their course material so they are not scared.

A third international peer tutor from the University F said she enjoyed learning from different backgrounds and she felt she could relate because she struggled as well. "Sometimes I am the only Latino sitting in a class. I can relate and talk to my tutees about how I feel and it makes them feel better."

The most common comment was that a tutee's dialect was sometimes difficult to understand. However, the majority agreed that building rapport was very important in the tutor/tutee interaction. Asking questions about the tutee was common in establishing this rapport and a peer tutor from University D said, "I go out of my way to use inclusive language so no one

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is offended." Another University D writing tutor worked with cohorts from China. She began her work with them by building rapport and trying to help them feel more comfortable. She felt they then opened up about their cultural differences and this might be the reason that they wrote, approached a subject, or even studied a certain way. "They are grateful that you are willing to get to know them and their culture." A history tutor from University D approached difficult concepts by sharing videos or movies for clarification. He claimed, "It is easier for them to understand without having to deal with the complexity of who is who."

Oftentimes, peer tutors try to treat ethnically diverse students the same as others. One peer tutor from University E had eight clients that were all minority students. He claimed that he approached them the same as any other client by being more casual than formal. He tried to make jokes so they felt comfortable and stated that any cultural gap can be bridged by having conversation. An MBA peer tutor from University B said having international students had the opposite effect. He felt that they were more trusting and receptive to help. He shared:

> They obviously have a strong desire to be here. So they almost fall into a different
> category. I haven't had any problems. Actually, I have had more success with those
> types of students. They seem like they are eager for help. They're not ashamed of
> getting help.

A University C peer tutor felt that all supplemental instruction sessions had multiple personalities involved. "They do not have to be ethnically diverse to be challenging." Often students struggled with professors that had really strong accents as well. A University D tutor shared with his students that he struggled also and had to study a lot. He said, "Regardless of where you come from or how prepared you think you might be, you might find the material challenging. So we can share information with each other that is helpful, regardless of our backgrounds." Finally a peer tutor from the University F concluded that he did not feel the

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students came to the sessions really mindful of their ethnic background as much as their mindful need for help. He felt the respect came from the fact that (a) you are trying to help them and taking the time to do so and (b) you know what you are saying and they see the results. They suddenly understand a concept that they were confused about.

**When to Speak and When to Listen While Conducting a Peer Tutor Session**

When asked to explain when the tutor should speak and when he/she should listen, it was apparent that the majority felt that the tutee should be doing the majority of the speaking; however, the tutors found it surprising as they reflected that this was not something that they really thought about. One peer tutor from University C said,

> That's a good point. I never really thought about that. I listen to conversation and questions and if I hear someone mumble the answer, I will have that person explain to the others. Or I will put similar problems on the board and have them explain to me how to do it.

A University E tutor says he had his students talk to see if they understood a concept. "I try to let them figure it out and answer specific questions." Another tutor from University E also had the tutees explain the information back for clarification. The consensus was that the more you listen, the more you can learn about the student. At University A, a peer tutor encouraged the tutee to talk and if needed asked a question or provided an open-ended sentence for them to complete. A math tutor at University B says,

> That was hard for me to get over at first but when I do a problem with them; usually I'll explain it first and then have them explain it back to me. I will not say anything until they really either struggle or they think they have the answer. Then I will talk as necessary.

Another University C peer tutor played off of what others said in group sessions.

Regardless of who the tutors were, they all gauged their tutees. They could tell if the students were frightened, confused, or really did not know what they needed. A University E tutor noticed gestures and body language. He shared,

> People disengage if you are spewing information for a half hour. I think it is important for you to listen more than speak if possible. But it is not always possible. They should almost be the authority in the relationship since they are there to learn. They should set the tone and everything. You should go on with what they need.

Another University F tutor read body language and facial expressions to gauge understanding. At University D, a peer tutor got the feel of his students before proceeding. This helped him determine if he wanted to pair them, put them in groups, or work with the entire group at one time.

**Interaction during the Tutoring Session**

The third sub-question posed to the peer tutors was how much interaction was necessary for them to feel satisfied that the session was successful? The tutors felt that it depended on the individual requesting the help. A tutor at University B claimed she had one student who needed a lot of interaction whereas another student only needed 10 minutes to understand how to solve the problem. Another tutor from University E agreed with this. University E provided walk in hours as well as scheduled appointments but most students stayed for one hour. At University B, a peer tutor had the advantage of tutoring for a wide range of time; therefore, the student asking for help could stay in the session until the tutor felt that the student was comfortable with the problem or could solve the problem on his own. A University F tutor said it depends on the student and the subject. "Writing can be a different form of interaction than speaking." A second University F tutor agreed that some students are better listeners and some are better

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writers. "It is about analyzing the person and knowing what kind of person it is." A University C tutor broke his groups up so they could explain concepts to each other.

> You really learn best when you can explain it to someone else. When I give multiple choice quizzes and the student gives the answer, I make him explain why the other three answers would not be the correct one. Others at the table then begin to interact and try to help each other.

The general consensus was that the more interaction the better. A University C peer tutor stated that "If they can explain it to someone else, then they probably know it themselves. Sometimes they say they understand when they do not and this is a good way to tell if they are actually learning the material." A tutor at University D says "The term "successful" is subjective and depends on each tutor's definition. The amount of communication is dependent on how well the tutee knows the material." At University D a tutor felt that you do not want much communication when you are the one talking. He felt that you are to be the facilitator and the tutee should take the lead and do most of the talking. At University E, a Nutrition Science tutor emailed her students frequently or answered questions when she saw them on campus. Sometimes the text questions are shortened and other times she will peruse through the book and then direct the student to check out a specific area to answer a question. Occasionally, she met up with her students at Starbucks or Panera Bread. She felt this was the best way for her to handle the students due to the small size of her program and the limited number of students enrolled.

The researcher analyzed the data to determine the frequency of references of tutors to each of the sociotransformative constructivist elements. The determination was made by the researcher as to the level of frequency indicating one of four categories: advanced understanding; basic understanding; and, no understanding. Using the NVivo 10 (2013) software

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program, the answers to the focus group questions were coded and then placed under each node (research questions). They were ranked according to the frequency of themes in each category. The percentages included all focus groups due to the various number of participants in each focus group which would have skewed the results.

As indicated in Table 2, the majority of the university focus groups had a basic understanding of the dialogic conversation.

Table 2

*Percentages of Six Focus Groups' Understandings of Dialogic Conversation*

| Group | Advanced Understanding | Basic Understanding | No Understanding |
|---|---|---|---|
| Focus Group A | 17% | 50% | 33% |
| Focus Group B | 0% | 67% | 33% |
| Focus Group C | 20% | 80% | 0% |
| Focus Group D | 42% | 37% | 21% |
| Focus Group E | 19% | 44% | 38% |
| Focus Group F | 27% | 64% | 9% |
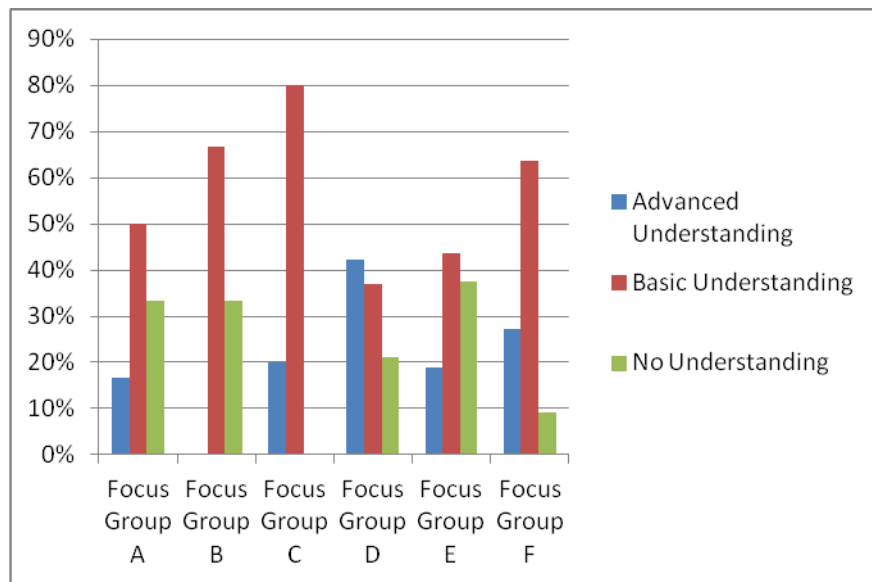
**Relevancy of Tutoring Sessions to Life Experiences**

The second exploration question asked: "While working with students, how do you explore the relevancy of the subject with the tutee and how it connects to everyday living-*authentic activity?"* According to the sociotransformative constructivist theory, "this authentic activity is hands-on, minds-on and tied to the everyday life of the learner (Rodriquez & Berryman, 2002, p. 1021). For example, it is not enough to discuss the importance of gender inclusion without modeling it and engaging students in the practice of using it in context. Students become empowered through the accessibility and opportunity of the equitable outcomes. This especially pertains to students who have been traditionally underserved.

*"Empowerment* is defined as the voice that individuals use to enact their rights and responsibilities, whereas *equity* is the social and institutional process by which individuals can attain empowerment. Although equity is mandated by law, only empowerment can be facilitated. Therefore, individuals or groups of individuals must enact their own voices" (Zozakiewicz & Rodriguez, 2007, p. 403).

**Peer Tutor's Advice to Tutees to Help Them Succeed Academically**

The first sub-question posed to the tutors was: "What advice would you give tutees that would help them become successful students?" The main concern of the tutors was that the tutees were coming to the sessions lacking study skills and organizational skills. One tutor from University B said the students even come to a tutoring session without notes or even a text. "You can't do it entirely for them. They need to recognize that you are there to help but you are not there to do it for them" claimed a University E tutor. The tutors shared some of the strategies that worked for them. For example, a tutor form University B said, "I sometimes read things over and over before going to sleep and then again when I awake." The remaining tutors shared specific strategies that they used that worked for them. Some of the suggestions were: "read it

aloud so they can hear the sound of the language" (University A tutor); "practice calculations over and over again until you know it" (University A tutor); "Do the answers make sense to you?" (University A tutor); "I study by reading actively, summarizing notes, highlighting, and practicing problems.  How do you study?" (University C tutor);

> I share study guides I made for the class.  We do post-exam surveys and people that got As I ask to write on the back what they did to study and how many hours they estimate they put into it and without showing the name of the course, I put that under the doc camera so people can really see that the more you study, the better you are going to do. If you put in 30 hours to study, you are going to get a better grade than if you study the night before. (University C tutor)

> I tell the students if there is a diagram in the book and you can explain it to somebody else then you know the entire chapter because it's in the picture.  It doesn't even matter if they care, as long as you're saying it out loud to somebody else.  If you can teach it, then you know it. (University E)

"I tell my students to make lists of what they need to include and explain." (University E).  "I tell my students to prepare every day.  Review your notes the same day of class." (University F).  "In history, every civilization has the same rise and fall pattern.  Recognize the similarities and it is easier for you to understand." (University D tutor) and finally a University F tutor shared that many students coming to the session are very diligent people, but it is not happening for them.  "I think the reason it is not happening for them is that they don't necessarily know how to use their resources."

> I tell them: the reason why I am able to explain this to you has nothing to do with the fact that I have magic.  It has to do with the fact that I am reading it this way.  They

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understand then how to approach reading, extract facts, and remember information. The study skill was not there before.

In conclusion, some Supplemental Instruction Leaders serve as role models for their students in the classroom. They sit up front and take lots of notes (University D tutor). A psychology tutor at University D finds that drawing on real life experiences to explain concepts is a good way for students to understand. The tutor had groups of students working on the same information come up with examples and then they shared their examples with the entire group. This tapping into everyday experiences helped the students understand the material. A University F tutor agreed stating,

> I think if you look at any person who is objectively considered intelligent, one thing that you notice about them is their ability to relate concepts and how knowledge for them is so interrelated and it's not like everything is memorized into lists. Whenever they are learning something, they are trying to make as many connections as they can.

Finally, a University E tutor said it is important to talk to the student about him or herself; just being empowered in a situation because it is good that they're asking for help.

> It's good that they're using their resources and maybe it gets rid of the stigma that you should be embarrassed because you have to see a tutor. It is good that they are seeing a tutor. They are going to be a better student. If they have a question, they should ask the professor because that should be one of their number one resources or get with another student to study outside of class. You know you can be in charge of your own situation.

**How Peer Tutors Help Students Understand Course Content**

The second sub-question posed to the focus group of tutors for the second interview question was: "How do you help your tutee understand course content?" Understandably, helping students understand course content depended on the particular course being tutored. Generally speaking, the tutors wanted to see if students were able to do the problems or if the answer was making sense. Occasionally, the tutor would change the approach for completion of answers. A University F tutor suggested self-study as a means of understanding course content.

> It is better for them to get wrong answers and then they will learn from their mistakes. And that's more important than if they get 100% on the exam. Once they get a mistake, they learn from it. It is the best way for them to learn.

Other suggestions for understanding course content were subject specific. For example, a Biology tutor from University A said, "I sometimes ask the student the same question he asks me." A Biology tutor from University B went over the power points provided by the professor on line. She went over the notes and explained where the gaps were and what they needed to be focusing on. She states: "Sometimes I think they don't fully understand what's important out of the class and I feel like that's where I have to focus with them." A third Biology/Human Genetics tutor used punnett squares to explain concepts. "The students enjoy them and they show how it relates to their life to some degree." Mathematics tutors and statistic tutors have a somewhat different approach. A college algebra tutor from University E utilized visual recognition because math is so specific.

> We go through recognition instead of doing a bunch of problems and that seems to help. That way, when they get to the test, they're not studying from the same problem over and over and over again. They're studying from new things where they just pick out and it seems as though that's pretty helpful and so I try to stick to that.

A math tutor from University E used what the student had given him and built on that.

> I find myself using very concrete examples instead of working in the abstract because I think back about the very abstract fields…and I even like when I can apply things. So sometimes just explaining it in a different way or just using it in more concrete terms is something I've found that's very helpful.

Another math tutor from University E agreed that math is a building subject and the connections and continuity of the subject matter makes more sense to them and they understand the course material better. "It helps them be more confident and understand better." Finally a statistics tutor talked to the professor and shared the concepts that were challenging the students.

Chemistry tutors shared that they need to cover concepts. A University C tutor shared that she explained things in as simple words as possible instead of using jargon all of the time or related the problem to the outside world. She would do a problem with them and then have them try a similar problem right afterwards. At University D, the tutor explained that his sessions were highly qualitative; therefore, they needed to break the problem down and actually highlight on the line what they needed to figure out and what formula they would need to use before they even began to write. "They must read the question, understand what it is asking, and then practice a lot. You are not going to get it the first time. You have to go over different examples because each problem is unique in its own way."

A Sociology tutor from University D used graphic organizers or charts to tie in what was going on in the students' lives and how it related to what was happening in the world. The physiology tutor from University C dealt with processes that are usually 15-16 steps. She asked her students to write out each step in no more than 10 words. They had to use arrows and flowcharts which helped them understand the process.

Finally a Biology tutor from the University F explained to his tutees that he makes connections from all that he has learned in elementary school and up to this point. He connected biology facts to chemistry or biology to physics. That is how he was able to remember all the facts. After making the connections, he kept reading and practicing so he didn't forget. The literature tutor from University F said I taught them that they have to challenge what they read.

> There is a tendency to take things at face value because they are written by maybe someone who has established himself/herself as an authority through several historical readings of this particular text. You have to really question why things are the way they are and why they are written and why the author chose to put things in a particular order in the text. It is important to engage with the text with an inquisitive look and always challenge the authority of the person who has given it to you.

## Indications That Tutees are Applying Information to Coursework

The final sub-question asked in this exploration question was: "How do you know if the tutees apply what they have learned in the session to their coursework?" The math tutors agreed that if they came back and did not understand the problem, they were not able to apply the information. If the students were not able to explain statistics and samples of data on tests, they were not applying information. A University F math tutor crafted the problems to be slightly different to check for application.

The majority of the tutors looked at the students' test results to gauge whether they had mastered the material. At University A, the tutor focused not only on the question missed on returned exams, but also the grammar used in the question for clarification. A University B tutor used not only test results for gauging understanding but also the student's explanation of the concept in his/her own words as proof of mastery of material. One supplemental instruction leader stated that exams are an indication of learning. He said, "Some students come to sessions

mainly for reinforcement and others only come a few times and still are able to master material and pass exams with a 75% or better."

A University A tutor that tutored Chinese students said that when they came with a question, he asked them to open the book to a specific place where the grammar was used and then go back to the question for clarification. A University C tutor checked for application by having them complete a worksheet without using notes, by only letting them discuss concepts with people at their table, or by asking them to talk to classmates before asking him the question. A University D tutor agreed saying, "Usually you can tell if they are applying their techniques by the session. The ones who come prepared have been to a previous session and participate." Another tutor at University D gave his students real life examples and asked how they would apply the information. One tutor at University D shared that a professor administered open-ended tests and then afterwards asked, "How does this make you feel? What are your reflections on this?" The professor can tell from the answers whether the student was applying the information. The student with understanding could explain the way they felt and why and then used the knowledge and material to back up what they said. A University C tutor gave worksheets for the students to take class notes that later served as study guides. When the tutor gave his pretest, he saw the prepared students take out their worksheets before they looked in their books and he felt that was an indication of application. The University D tutor in Sociology claimed that information is continually referenced from previous semesters; therefore, the students must continually make connections and realize that they cannot remember this information in a vacuum.

The exploration question posed to the peer tutors asked how they explored the relevancy of the subject with the tutee and how it connects to everyday living. It would appear that the

peer tutors understood the element of authentic activity and relevancy of application to coursework.

Table 3

*Percentages of Six Focus Groups' Understandings of Authenticity*

| Group | Advanced Understanding | Basic Understanding | No Understanding |
|---|---|---|---|
| Focus Group A | 8% | 54% | 38% |
| Focus Group B | 70% | 10% | 20% |
| Focus Group C | 36% | 45% | 18% |
| Focus Group D | 69% | 23% | 8% |
| Focus Group E | 60% | 33% | 7% |
| Focus Group F | 25% | 58% | 17% |
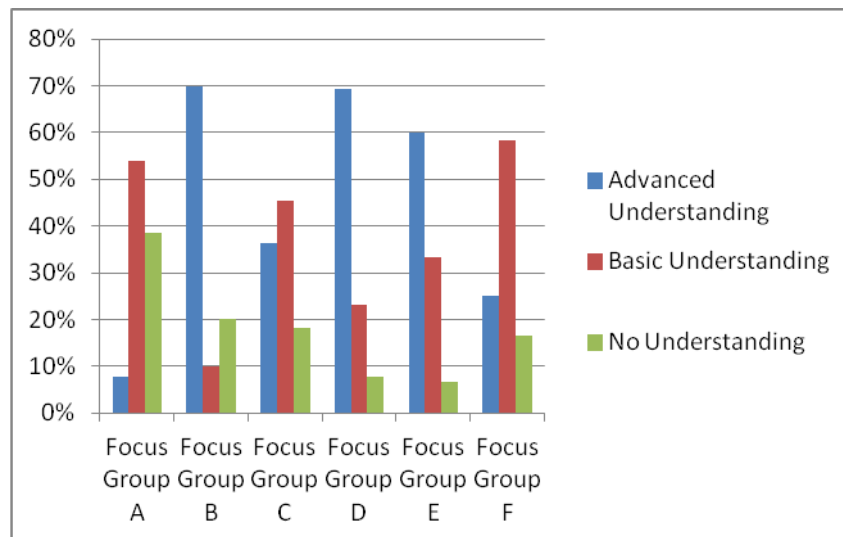


## How Tutees Demonstrate Control of Their Own Learning

The next exploration question dealt with the third element of the sociotransformative constructivist theory –metacognition. This term is defined as the "knowledge, awareness, and control of one's own learning" (Baird, 1990, cited in Gunstone & Mitchell, 1998, p. 134). When the student questions the reasoning and purpose behind certain activities, he/she becomes more reflective of their own learning styles and how these patterns aid or hinder the learning process ((Zozakiewicz & Rodriguez, 2007). Oftentimes the Twenty-first Century students are first

generation students arriving on campuses without the prerequisite information about college and learning that many second and third generation college students take for granted. They often lack the ability to look at the type of learner they are in order to capitalize on particular areas and do not have experience reflecting on the learning process. By modeling how to take control of your learning and reflecting on what does and does not work, the tutor can build confidence in the tutee to become a successful independent learner. In a study conducted by Rodriguez and Berryman (2002), the STC theory encouraged students to ask themselves "Why am I learning about this topic? "Why am I learning these concepts in this way?" "What control [voice] do I have in how to proceed?" "By what other method(s) can I learn this subject matter best?"

**Understanding and Control of Learning by Tutees**

The first sub-question under metacognition was, "How do students demonstrate their understanding and control over their own learning?" A tutor from University E shared that he remembered the director saying at the beginning of the training,

> Your goal for your tutoring is that your client is able to do it on their own and to not need you. So you are tutoring them to not need you essentially and sometimes it's a little hard to remember that and when a student starts to not come to sessions, you assume he/she is able to learn the material. This could be a good barometer.

At University A, a tutor shared that once he asked a question and the tutee remained silent, he gave a clue and the tutee would say, "No, no don't tell me." The tutor interpreted this as a sign of the tutee taking control of his own learning. Another University A tutor shared, "If the student can give me a good summary of the material, that is a sign that he/she is going to class and if they cannot summarize, they probably haven't learned on their own." Sometimes by having the student write what he/she knows and does not know, the tutor can get an idea of how much help is needed. Writing helps the student see the connection.

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A University D tutor claimed her students have gotten closer. She reported that they started to study together and were enforcing the study strategies that she had given them; for example, studying in groups; reviewing their notes prior to a session; and reviewing their notes right after class. "I let them know that learning is a process and discuss the forgetting curve and how much you forget and how fast you forget so you must keep reinforcing what you have learned." Practice quizzes test for understanding for a University B tutor and a University D tutor.

The key to learning and controlling their learning appeared to be the ability to explain concepts to others. More importantly was when the student did not understand and recognized it enough to ask for further assistance. Some tutors according to a University F tutor chose to memorize information until they realized that memorizing was not going to work for in depth understanding.

**Recognizing When Student has Reached Concept Attainment**

The second sub-question under metacognition asked, "What does the student do when he/she discovers that they do not understand the concept?" A University A student claimed, "The hardest thing is that sometimes they do not realize that they don't understand." The peer tutor at University B said that most students will come in when they are aware that a certain concept is too difficult for them to understand and they will ask specific questions. "I don't understand a, b, and c, but I do understand "d" and "e" and I need help in these certain areas."

The general theme that most of the tutors agreed with was that you could gauge understanding oftentimes from the student's behavior. A University B tutor said there was a difference in how receptive the student was and how hard he was trying that was demonstrated in behavior. A University C tutor stated, "You could see the frustration and the student getting upset. Sometimes you just see people sitting there staring at you blankly." One physiology tutor

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from University C used different methods when the student did not understand.  He turned to the internet and claimed that You Tube has millions of videos that do a nice animation of say perhaps how the kidney works.  This helped the student to visualize and remember the concepts.  When students do not understand for a University D tutor, he puts the students in groups and by the end of the session, it goes from no participation to all of them wanting to answer and excited that they were then able to understand.  Another University D tutor called it the "aha moment."  "You see it in their faces."  A University E tutor agreed saying,

> You can almost see the light bulb go on over their head and you can see it in their eyes
>
> and face.  It is a great feeling for them and for you.  You hear them say, so this is why.

Another University E tutor said, "You will hear, "Oh why didn't the professor say it that way?"

**Ways Tutors Encourage Tutees to Reflect on Learning**

The third exploration question under metacognition was, "Do you encourage the student to reflect?  How?"  The main occurring theme that was continually shared by the tutors was retelling, summarizing, or rephrasing.  A University A tutor asked her students, "What are the main points?  What is the message that you are taking away from the session today?"  A University B tutor encouraged her students to go home and explain and reflect for understanding when no one else is around to make certain you understand.  The University D tutor had her students rephrase by visually depicting the concept.  She was then able to gauge whether they felt confident or if they needed to talk more.  She claimed, "Since there are all types of learners (visual, auditory, kinesthetic), the tutor has to address these different learning styles through reflection."  According to a University F tutor, this confidence is key to the learning process and helps the student apply the information not only to the subject tutored, but to other subjects as well.  One University C tutor used practice problems and worksheets with similar problems and another used quizzes and case studies whereby the students had to apply the concepts.

At University D, a tutor had an interesting approach. She had what she called the "muddiest point" where she had the students write down something that was still confusing at the beginning of the session. At the end of the session, she collected them (they did not include names) and she looked at what the majority did not understand. The tutor then used the information to structure and model future sessions. Similarly, another University D tutor had the students write down a problem that they went over or a similar problem and then collected them and made a quiz from them for the students before an exam.

**Questions Posed to the Tutees by the Peer Tutor**

The last sub-question asked under metacognition was, "Can you give some examples of questions that you ask?" The majority of peer tutors asked the students the "why" question. Why something worked or why something did not work. A University B tutor claimed he did not really ask many questions but asked the students if they had any questions. He then asked, "Why don't you think you are getting this or what do you think is supposed to happen?" He then explained errors and helped them understand.

Many math tutors dealt with applied math problems. A University C tutor asked questions such as, "Where do you start? What are you given? What are you looking for? What equation do you need?" Another University C University tutor shared that on the exams the professor would put answers such as "a" through "f" or "all the above", or "none of the above." Students really struggle because they know parts of the answers and miss others.

They must first outline the problem. Next they must circle all of the words that they do not know, define them, and then go back and insert their definition of the word. They then must think of any concept that relates and write it down. If need be, they may figure out meaning by the context clues.

The history tutor from University D used a lot of comparison and contrast questions and the biology tutor used punnettt squares. Another University D tutor asked, "What if this would happen or what if that would happen?" and then explained the process. A couple of the University D tutors applied Bloom's Taxonomy (1956) and asked knowledge based questions first and then later application questions. One tutor then had them reflect on why they would do it this way. At University F, a peer tutor asked questions pertaining to previously learned material to check for understanding and a writing tutor had her students tell in one sentence the purpose of each paragraph. This helped her students clarify ideas and see for themselves whether they had a coherent argument or not. Finally, a peer tutor from University B said, "This is a good question. I guess I ask simple questions. But I guess I probably should be asking more questions now that I think about it. I kind of do a lot of talking when I'm tutoring."

This would appear to be an area that would need more practice on the part of the peer tutors in order to enhance metacognition on the part of the tutees. Encouraging students to do more than memorizing facts and asking more open-ended questions which required more explanation were two areas that need to be addressed.

Table 4

*Percentages of Six Focus Groups' Understandings of Metacognition*

| Group | Advanced Understanding | Basic Understanding | No Understanding |
|---|---|---|---|
| Focus Group A | 17% | 33% | 50% |
| Focus Group B | 0% | 33% | 67% |
| Focus Group C | 33% | 33% | 33% |
| Focus Group D | 33% | 50% | 17% |
| Focus Group E | 18% | 64% | 18% |
| Focus Group F | 50% | 0% | 50% |
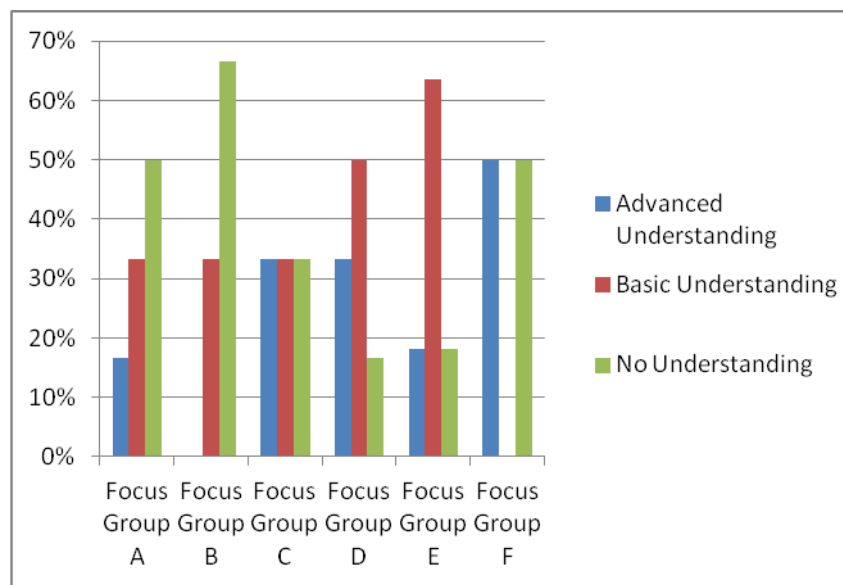


**How Peer Tutors Conceptualize Their Roles**

The last exploration question posed to the tutors was "How are you perceived by your peers when they come for a tutor session? According to Rodriguez and Berryman (2002), "reflexivity is critical to explore how our social location (e.g., in terms of ethnic and cultural background and socioeconomic status), ideological location (e.g., belief systems and values), and academic location (e.g., education level and skills) affect our perceptions of what is worth learning. Reflexivity is important in helping us understand how we can use our knowledge to bring about social change" (p. 1022). Therefore, the sociotransformative constructivist theory looks at "how knowledge is produced and reproduced, who is recognized as scholars, who

decides what is worth researching, and whose interests are served" (p. 1022).. The tutor would be encouraging the tutee to look at his/her role in future decision-making and his role in maintaining or disrupting the status quo. It is important for the tutors to realize that their own cultural beliefs affect how they teach their tutees and what they choose to include or not include in their sessions.

**Perception of Tutee's Role in Comparison to Tutor's Role**

The first sub-question asked of the tutors was, "How do you perceive your tutee's role in comparison to yours? A University A peer tutor felt the tutees had the harder job. It was interesting to see how the tutors perceived themselves in regard to the students they tutored. Some felt they were more like instructors whereas others felt they were facilitators. There were some tutors that felt they were authority figures but more approachable because they were recommended by faculty. A tutor at University E said,

> We know the subject and information but a lot of students seem to have a fear of going into the professor's office and talking to them and getting help that way. But since we are students ourselves, they have an easier time coming and talking to us and asking questions. I see myself as an authority figure as well as a peer. It is kind of like a mixture of those two roles.

A University D tutor also agreed that he was not a teacher. He explained,

> We are all college students; college is very different than high school. You facilitate your own learning. In high school, you may have been able to just go to class and never even pick up the book. It is not like that in college. We are here for a purpose and when you leave here I want you to feel as though this wasn't a waste of your time nor was it a waste of my time.

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A second University D tutor agreed that you move very quickly through the semester and cover a wealth of information. "Do not wait until the final or the night before a test. Get help from the professor or the tutoring center when you need it." Another tutor from University D emphasized that he was not a professor but rather a peer.

> We are student to student rather than an authority figure to someone beneath us. This builds rapport with the student and helps them be more comfortable, but at the same time you have to keep your space between the tutor and the tutee to show that we are here to be serious.

During trainings at University D, the tutors received training in the zone of proximal development. Therefore, the peer tutors felt more knowledgeable but were there to help students reach their own zone and level of understanding. "Often we have had the same professor and can give tips on teacher expectations, how to take notes for this particular class, and how to study for exams." A University F peer tutor had high expectations for his students and realized that they expected him to be prepared. He said, "In the session each person has a different role to play." At University B a tutor shared,

> I never look at it as being the instructor but that I am there to help another student. I don't think of it as a role or I have this title of a tutor and you're the one being instructed. It's more like, we are two students trying to figure a problem out together.

The University C peer educators are taught that they are not instructors but facilitators. One peer educator states,

> I am not an expert in a field. I have had the course or a similar course but I do not know everything. If I do not know something, we will try to figure it out together and if that doesn't work, I will ask the professor to clarify and then come back to the next session to explain it to them.

Another University C tutor agreed that they are just supplemental.

> We don't do anything that you cannot do on your own. Even if you come to
> supplemental instruction and sit there, you are going to absorb information. If you attend
> all of the sessions, you can calculate that you usually have about 8 or 9 hours already
> applied to the course and the upcoming exam.

And yet another tutor from University E looks at himself as another resource. "Instead of consulting a textbook, you consult us. We are more of an interactive textbook if you will." Another University E tutor claims he clarifies what a textbook says because sometimes they can be wordy and confusing. "An actual textbook can be overwhelming to some people."

**Student Frustrations during a Peer Tutor Session**

The second sub-question asked the tutors: "Explain how you deal with student frustrations during a peer tutor session. The majority of tutors shared that often for the tutee, it is a matter of no confidence or low self-esteem and once they establish that, they are fine. A tutor from University A deals with this type of frustration by starting with less difficult material so the student experiences success. A University D tutor shared, "You may get frustrated yourself when you have to explain something multiple times; however, it is not about you, but rather it is about the student." Another University E tutor builds confidence by taking breaks during long sessions, playing music, or letting the students make calls. He states,

> I think having a break always helps. I let them know that it is very informal and that they
> are not expected to be perfect because to be honest, a lot of people that come into the
> tutoring center have problems with confidence but they can apply the material well. It's
> almost like your job in addition to being a tutor is to be a motivator; someone to cheer
> them on and let them know they can do it. If they are confident in themselves; they get
> way less frustrated.

Finally a tutor at University E shared that if you acknowledge what they are good at and what they do understand; it provides confidence and then they approach the other material more openly.

The second theme that occurred dealing with student frustration was to meet one-on-one with the student rather than in groups and to break the material down for them. A University B tutor shared that he tells his students,

> You know if you want to stay after we can go over the material slower for you and we can break everything down. Or I'll say, you know what, maybe today is not a good day for you. Do you want to come back tomorrow or another day this week and just work one-on-one and try to go through the material until you understand it?

Another University C tutor uses different words to explain for understanding when a student becomes frustrated. A tutor at University D lets other students jump in and explain information to frustrated students.

> One time I was trying to explain the difference between mitosis and meiosis and could not get the student to understand. Another student jumped up and said, you know it is like how some of your pairs of shoes come from your mom and some from your gram. The student understood even though they lost me.

Sometimes textbooks are wordy and confusing. They overwhelm the student. A tutor can provide much needed clarification.

Other tutors shared that sometimes they just need to distract the student briefly and then get back on task. A University E tutor impresses upon her students that just because they do not understand a portion of a subject does not mean that they are bad in that entire subject. A University C tutor encourages his tutees to write down what they do not understand and then perhaps talk to the professor for further explanation. Finally, a tutor from the University F

impresses upon the students that this class is a means to an end.  It will get them to that long term goal of where they want to go and another tutor claims that the student may not be organized enough to understand the information and the frustration gets in the way of the learning.

**Satisfaction of the Peer Tutor Role**

The last sub-question for this exploration question was, "What personal satisfaction do you get from the role of peer tutor?  The general consensus of tutors was that they become more masterful of whatever subject they are tutoring.  A tutor from University F loves working with such diverse groups from all over the world.  Another tutor stated that tutoring helped him study for his MCAT.  Many of the subjects were still fresh in his mind.

Many of the tutors voiced how much they like their jobs and how they genuinely just enjoy helping people.  The outcomes could be very rewarding.  They appreciate the rapport they establish with the students and enjoy witnessing successful outcomes.  They welcome the positive feedback from the students and enjoy seeing them come to an understanding of material that had originally been confusing.  Oftentimes they reach their role as a peer tutor because they themselves had been tutored and see the benefits of successful learning.  A tutor from University C shared that it is rewarding when students utilize your methods of studying and they work for them.  Finally, a tutor from University E claims that students become confident enough to ask questions outside of the subject that you are tutoring them in and start to apply information to other subjects and make those connections.

Although there appeared to be a clear understanding of student frustrations and a general consensus of satisfaction of the peer tutor role; it was not apparent if the peer tutor role was clearly defined or if it altered what they included or omitted in their sessions.

Table 5

*Percentages of Six Focus Groups' Understandings of Reflexivity*

| Group | Advanced Understanding | Basic Understanding | No Understanding |
|---|---|---|---|
| Focus Group A | 14% | 43% | 43% |
| Focus Group B | 43% | 43% | 29% |
| Focus Group C | 40% | 40% | 20% |
| Focus Group D | 50% | 35% | 15% |
| Focus Group E | 78% | 11% | 11% |
| Focus Group F | 55% | 36% | 9% |
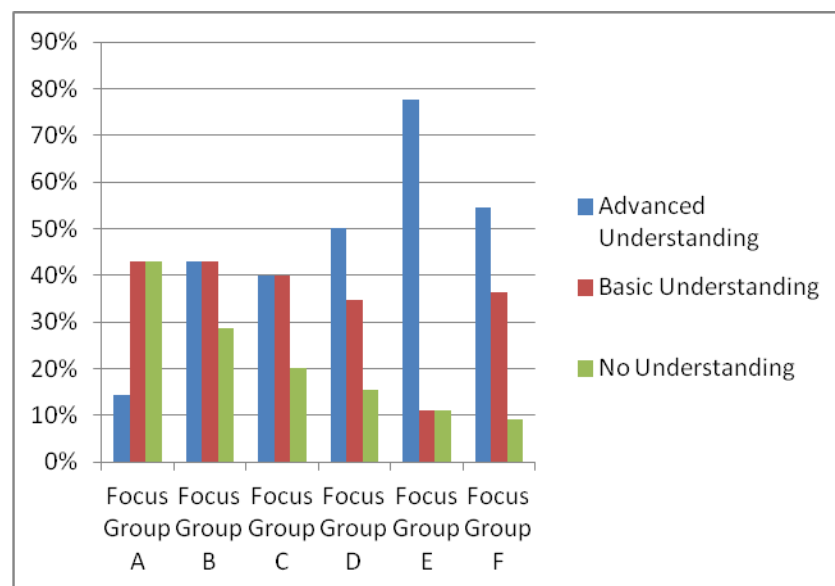


**Skills, Abilities, and Personal Characteristics of Effective Tutors**

The final exit question asked, "Is there anything else you would like to say about the peer tutoring experience that might help other tutors? The sub-question asked of the focus groups was, "What skills, abilities and personal characteristics help a person become an effective tutor?

A common term used by the tutors was patience. The student may not be prepared or know how to prepare and therefore, you must be flexible session to session. A University D tutor shared that sometimes it is difficult to be patient because you understand the concept and you sometimes have to wait until it clicks with the tutee. A University E tutor agreed that

patience is key to helping the student understand the material.  "You need to be able to think so that if you explained it one way and it doesn't register, you will need to explain it a different way."  Another University E tutor shared that you need to put yourself in their shoes.  "Just because you did well in the subject does not mean that everyone is going to do well in that particular subject."

Another theme shared by peer tutors was control.  A University B tutor shared that "I'm a very controlling person.  I like everything to be organized and exactly the same way every time and it cannot be with tutoring."  A University D tutor shared that you have to be relatable but the student must not look at you as the professor or you lose the relationship that should be between tutor and student. "The relationship should be more equal.  You're a college student. I'm a college student.  I've been where you are now let's move on from there."  A University E tutor claims you must understand where they are coming from and remember that you were in the same situation.  Another University E tutor agreed remembering sitting around a whiteboard drawing molecules the night before an exam.  According to a University F tutor, teaching the material to someone else helps you make connections and retain information.

Many tutors shared that you need a positive attitude.  The tutor reaps benefits from the sessions as well.  Being organized is key to covering harder concepts.  University C tutors agreed that there will be harder concepts that challenge students and you need the ability to break the material down within 50 minutes so the students understand these concepts.  University D tutors agreed that you need to be persistent and creative.  "You cannot give up and blame when someone doesn't understand.  It requires a different method of explaining things.  Not everyone has the same learning style so you must teach to that person."  Another tutor shared,

We will find a way for you to grasp this whether it be by finding other materials, talking

to other students, or mentioning it to the professor.  I am here to help you succeed and I

will do whatever it takes to make that happen.

One other tutor said, "I become creative.  When a student does not understand, I draw an outline,

find a diagram, or use a You Tube video to explain."  A University B tutor shared that no one

likes to come to a session when the tutor is not enthusiastic and does not have a positive attitude.

According to a University D tutor, when you empathize with the student, you often can help

them get past roadblocks to their learning.

Finally, a University A tutor shared that you need to develop a rapport with your

students.  "I have developed relationships and now have friends that continue to come back to

me."  Another University A tutor agreed and added, "You cannot be so knowledgeable that you

forget how to communicate with those who are not.  You need to find a way to bridge that

knowledge gap."  A University D tutor said, "It is more than you coming to get paid.  You are

here to help others and that is crucial.  It helps to love your job."

| Element | Quotations |
|---|---|
| Dialogic Conversation<br><br>Dialogic Conversation- tutor must now not only understand what is being said but the reason the tutee is choosing to say what he says in specific contexts.  Moreover, the sociotransformative constructivist theory "claims that through this dialogue, safe spaces | "Because I am a minority tutor, certain students do not feel that I know as much as I do.  It offends me sometimes but I do not blame them for how they were raised. Eventually I earn their respect and trust because as soon as I break down a math problem and they get 100s on their exams, they think maybe she does know what she is doing."<br><br>"I must be certain that I make my tutees feel comfortable and understand the point I am trying to make.  I want them to feel like they are in a safe place.  I sometimes ask questions not pertaining to their course material so they |

are created for the speaker and listener to ask "Who is doing the talking?"  Whose voice, interests, values, and beliefs are represented by the speaker and the listener" (Rodriguez & Berryman, 2002, p. 1021).  They must come together and work as a team.  This trust is paramount to establishing a productive exchange of ideas.

are not scared."

"I enjoy learning from different backgrounds and I feel that I can relate because I struggled as well.  Sometimes I am the only Latino sitting in a class.  I can relate and I talk to the tutees about how I feel and it makes them feel better."

"I go out of my way to use inclusive language so no one is offended."

"I work with cohorts from China.  I begin my work with them by building rapport and trying to help them feel more comfortable.  I feel they then open up about their cultural differences and this might be the reason that they write, approach a subject, or even study a certain way.  They are grateful that I am willing to get to know them and their culture."

"I approach difficult concepts by sharing videos or movies for clarification.  It is easier for them to understand without having to deal with the complexity of who is who."

"I have eight clients that are all minority students.  I approach them the same as any other client by being more casual than formal.  I try to make jokes so they felt comfortable.  Any cultural gap can be bridged by having conversation."

"They obviously have a strong desire to be here.  So they almost fall into a different category.  I haven't had any problems.  Actually, I have had more success with those types of students.  They seem like they are eager for help.  They're not ashamed of getting help."

"They do not have to be ethnically diverse to be challenging.  "

"Regardless of where you come from or how prepared you think you might be, you might find the material challenging.  So we can share information with each other that is helpful,

regardless of our backgrounds."

"People disengage if you are spewing information for a half hour. I think it is important for you to listen more than speak if possible. But it is not always possible. They should almost be the authority in the relationship since they are there to learn. They should set the tone and everything. You should go on with what they need.

## Authentic Activity

Spaces where students "explore how the

subject under study is socially relevant and

connected to their everyday lives. Often

activities performed in classrooms remain

disconnected and isolated from each other.

Although entertaining, teachers need to explore

the ways the activities are "minds-on" rather

than "hands-on" and establish ways that

students can become aware of the roles they

can play in bringing about social change"

(Rodriguez & Berryman, 2002, p. 1021).

"I share study guides I made for the class. We do post-exam surveys and people that got As I ask to write on the back what they did to study and how many hours they estimate they put into it and without showing the name of the course, I put that under the doc camera so people can really see that the more you study, the better you are going to do. If you put in 30 hours to study, you are going to get a better grade than if you study the night before." (University C tutor)

"I tell the students if there is a diagram in the book and you can explain it to somebody else then you know the entire chapter because it's in the picture. It doesn't even matter if they care, as long as you're saying it out loud to somebody else. If you can teach it, then you know it." (University E)

"I think if you look at any person who is objectively considered intelligent, one thing that you notice about them is their ability to relate concepts and how knowledge for them is so interrelated and it's not like everything is memorized into lists. Whenever they are learning something, they are trying to make as many connections as they can."
"I find myself using very concrete examples instead of working in the abstract because I think back about the very abstract fields . . . and I even like when I can apply things. So

sometimes just explaining it in a different way or just using it in more concrete terms is something I've found that's very helpful. "

"There is a tendency to take things at face value because they are written by maybe someone who has established himself/herself as an authority through several historical readings of this particular text. You have to really question why things are the way they are and why they are written and why the author chose to put things in a particular order in the text. It is important to engage with the text with an inquisitive look and always challenge the authority of the person who has given it to you."

<u>Metacognition</u>

Metacognition involved "planning an overall

course of action, selecting specific strategies,

monitoring progress, assessing results, and

revising plans and strategies if necessary"

(Garofalo & Lester, 1985, pp. 163-176). It is

the awareness of one's own learning.

"You can almost see the light bulb go on over their head and you can see it in their eyes and face. It is a great feeling for them and for you. You hear them say, so this is why."

She had what she called the "muddiest point" where she had the students write down something that was still confusing at the beginning of the session. At the end of the session, she collected them (they did not include names) and she looked at what the majority did not understand. The tutor then used the information to structure and model future sessions.

"I have students reflect on why they would do it this way."

| Reflexivity | "We know the subject and information but a lot of students seem to have a fear of going into the professor's office and talking to them and getting help that way. But since we are students ourselves, they have an easier time coming and talking to us and asking questions. I see myself as an authority figure as well as a peer. It is kind of like a mixture of those two roles." |
|---|---|
| How knowledge is produced and reproduced, who is recognized as scholars, who decides what is worth researching, and whose interests are served. The tutor would be encouraging the tutee to look at his/her role in future decision-making and his role in maintaining or disrupting the status quo. | |
| | "We are student to student rather than an authority figure to someone beneath us. This builds rapport with the student and helps them be more comfortable, but at the same time you have to keep your space between the tutor and the tutee to show that we are here to be serious." |
| | "One time I was trying to explain the difference between mitosis and meiosis and could not get the student to understand. Another student jumped up and said, "you know it is like how some of your pairs of shoes come from your mom and some from your gram." The student understood even though they lost me." |

*Figure 1*. Sociotransformative constructivist theory elements with quotes demonstrating each element.

## Program Evaluation

While evaluating the programs, it was obvious that each university had its own training policies that often included many of the same topics. All tutor training programs included the topic of the peer tutor's role, responsibilities, and qualifications. One university used the Thom Hawkins (1982) five tutoring types to explain different tutor approaches. The five types are: the expert; the guide; the scholar; the mentor; and, the academic adjunct. The goal was to help students become independent learners and promote active learning. Several of the universities trained peer tutors to address various learning styles for optimal learning.

Collaborative learning was encouraged in order to identify the zone of proximal development. According to Vygotsky (1962), "the zone of proximal development is the distance between a student's ability to perform a task under adult guidance and/or with peer collaboration and the student's ability to solve the problem independently" (pp. xvii-xviii). Lipsky's (2011) book: *A Training Guide for College Tutors and Peer Educators,* looked at the peer educator's role and the development of the students. Chickering and Reisser's (1993) universal model describing the psychosocial development of college students was used as a framework to explain college students' evolving behaviors and attitudes. The seven vectors include: "(a) developing intellectual, physical, and interpersonal competence; (b) managing emotions; (c) moving through autonomy toward interdependence; (d) developing mature interpersonal relationships; (e) establishing self-identity; (f) developing purpose; and (g) developing integrity" (pp. 4-6). Should the peer tutors select to use these examples in their role, some of the sociotransformative constructivist theory components would be used such as metacognition, dealing with cultural differences, and stressing relevancy by relating the subject to the individual's career goals.

Many of the programs addressed the varying learning styles of the students and promoted active learning. Some of the universities spent time on questioning and what an effective peer-

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led session should look like. Lipsky's (2011) book, *A Training Guide for College Tutors and Peer Educators,* capitalized on suggestions from experienced peer educators. University D addressed questioning strategies by using the 6PQ Method of Discovery Learning which guided student learning without telling or lecturing. The goal is for the tutee to become an active participant and discover the answers and methods that work best for them. The questions are arranged in sequential order: preface questions (to establish rapport and determine topic); pace questions (to determine what the student already knows); probe questions (to investigate the limits of the students' knowledge by seeking more details; prod questions ( to encourage speculation); prompt questions (to give the student a hint so he/she may discover the answer; and, process questions ( to enable the student to apply the content of skill and promote practice examples) (Hartman, 2010).

Effective communication training by University D: *Finding Common Ground:  Peer Educators and the Gibb's Communication Model* (1999, pp. 442-448), was adapted with permission from Diana Bell, University of Alabama, Huntsville conference presentation at the College Reading and Learning Association Conference in Portland Oregon. The model listed destructive and supportive means to communicate during tutoring sessions. University D also used a rubric to score the metacognition of students. The four areas covered were: motivation, acquisition, retention, and performance. All of the tutoring centers discussed the code of ethics of the tutors and emphasized topics such as responsibility, integrity, commitment, respect, professionalism, and confidentiality.

Although each university had their own program evaluations, it was difficult to ascertain how much time was spent on each area of training. Some universities covered topics that others did not and some selected to spend more time on particular areas as opposed to others. Tutor

evaluations by students were similar; however, some programs used observations as part of their evaluation programs.  All programs felt that training was essential.

The analysis and synthesis of the focus groups as well as the program artifacts were used to answer the research questions in chapter four.  Chapter five provides the conclusions and recommendations in response to the research questions.

## Portraiture

The concept of portraiture was pioneered by Sara Lawrence-Lightfoot.  According to Lawrence- Lightfoot and Davis (1997), portraiture allows the reader to empathize with the research subject.  Secondly, the language of the researcher allows him/her to create social change.  Third, the researcher maintains a strong role throughout the research.  Finally, through portraiture, the researcher can focus and highlight the successes of the program or subject.  She puts much emphasis on the researcher's voice and the importance of reporting information accurately.  Also, according to Lawrence- Lightfoot and Davis (1997), the researcher needs to describe the theoretical framework he or she is using during the research.  With portraiture research, Lawrence-Lightfoot and Davis (1997) recommend that the researcher shares information that is relevant to the study and pays close attention to the body language, silences, and hesitations of the participants.  Portraiture research also emphasizes the context which includes not only the physical setting, but the historical, cultural, and ideological setting which works well with the researcher's study.

Each of the six higher education learning assistance centers visited reflected its own culture.  All of the Tutorial Coordinators were very welcoming and accommodating.  Some of the centers were separate entities and some were embedded within other departments.  The learning resource centers were busy and although some had tables adjacent to each other, the students were so busy that they did not appear to be distracted by others.  All of the tutoring

centers made use of computers and downloaded specific program requests of peer tutors so that they could accommodate students.

When comparing the artifacts to the focus group sessions, it was apparent that many of the topics that applied to the sociotransformative constructivist theory were included in the training. The first learning assistance center visited was situated on a beautiful campus. A Teaching Assistant (TA) greeted me and helped to carry my material. The center was located on the bottom floor of one of the buildings and there were no windows in the room. As the peer tutors arrived, they appeared to be anxious about the session. After, receiving refreshments and mingling, they settled into their seats and were comfortable. I introduced myself and my assistant and each of the peer tutors introduced themselves. I welcomed them to the session and had them complete consent forms and a demographic form. I emphasized that the session was informal and I wanted them to feel comfortable. Next, I went over the purpose of the study and a few ground rules. The ground rules consisted of: (a) "I want you to do the talking and would appreciate everyone's participation;" (b) "There are no right or wrong answers. Every person's experiences and opinions are important. Please speak whether you agree or disagree;" (c) "What is said in this room stays here," and (d)."I will be audiotaping the group so that I may compare what you have to say. You will not be identified in the report. You will remain anonymous."

While reviewing the demographics of the group, it was interesting to note that eight of the participants were females and one was a male. The majority of the peer tutors were electrical and computer engineer majors and over 25 years of age. A few tutored subjects directly related to their majors; however, the majority tutored other areas such as calculus or chemistry. One biological science major tutored Chinese. Four of the five peer tutors met with between 5-10 students per month. After concluding the session of focus group questions, the peer tutors mingled and had some more refreshments before departing.

The atmosphere was very inviting. Peer tutoring took place in different areas on campus; however, the peer tutors were mostly associated with the Department of Academic Development. This department provided walk-in as well as standing tutoring appointments. Standing appointments had an attendance policy and included an on-going weekly commitment. Students met with tutors once a week for one hour at a set time. If the student could not make this weekly commitment, then a standing appointment would be discouraged. According to the interview with the Tutorial Coordinator from University A, "peer tutors are usually undergraduates who assist fellow students primarily (but not exclusively) with introductory level math, engineering, science, and writing courses." The student was to attempt to attend each session on time and if he/she needed to cancel, give the peer tutor at least twenty-four hours' notice. Before the session, the student was to read and study his/her text and lecture notes and jot down specific questions for the tutor.

The University A Tutorial Coordinator shared that "peer tutors do not provide answers or solutions to homework assignments but, instead, work with the student in an effort to model problem solving strategies and explain course specific concepts." These peer tutors conduct classroom visits to promote Academic Development Services. Following is a list of some of the documents and artifacts that I analyzed at this university.

The mission of Academic Development is to assist students in developing the skills, strategies, and behaviors needed to perform as confident, independent, and active learners. Our programs are available to all students. Our services enable students to adjust to the college learning environment, to meet the challenges of the University's academic standards, to achieve personal educational goals, and to prepare for an enriched lifetime of learning. The peer tutoring, study skills, supplemental instruction and EXCEL components of Academic Development utilize group and individualized instruction, as well as computer technology, to accommodate the diverse learning styles and skill levels of the student population. Trained student paraprofessionals are uniquely and integrally involved in the delivery of support services to their peers.

*Figure 2*. University A: Mission statement.

The prospective peer tutor must have an overall QPA of 3.5; an "A" in the course that he/she wishes to tutor; demonstrate good communication and interpersonal skills; have good organizational and time management skills; and, enjoy working with and helping others.

*Figure 3.* University A: Tutor qualifications.

The application to tutor is a standard application asking for general information such as major, year in school, and QPA. The student must answer if he/she is working and in which department, if he/she is eligible for a work study position, hours they wish to work each week, and how they found out about the program. They are asked to submit extracurricular activities that they are committed to and then answer some full response questions pertaining to experience and personal characteristics. Finally the applicant must provide two references.

*Figure 4*. University A: Tutor application.

Selected applicants participate in a 4.5 unit pass/fail training course in a fun and interactive group setting. The class lasts approximately nine weeks and is generally offered in the spring term form February through April. The course explores the roles and responsibilities of the tutor while offering insights into effective tutoring strategies through interactive discussion and role plays. In addition, trainees work hands-on with experienced tutors to troubleshoot potential problems and situations. Selected applicants will be asked to submit an unofficial transcript and to schedule an interview.

*Figure 5*. University A: Tutor training.

Global Communication Center (GCC) is a resource to support students' efforts to improve their communication skills and prepare for a complex global economy that not only demands excellence in one's core area of study but also requires effective and advanced communication practices. The center supports written, oral, and visual communication for any student, at any level, in any discipline, and at any stage of the process. They offer one-on-one tutoring services for students and support for faculty in integrating communication assignments into their curriculum.
International Communication Center offers language support and cross-cultural training to help all students who are non-native English speakers succeed in their academic programs. Open Learning Initiative's goal is to improve learning-whether you are a student at a college or university or learning on your own. Their courses provide you with targeted feedback and self-assessment tools so you'll know where you're excelling and where you need more work. Lynda.com contains a continually growing and evolving library of training videos and tutorials covering a wide range of software, technologies and business topics. Students, faculty, and staff at this university can take advantage of free 24/7 access to the entire library of training.

*Figure 6*. University A: Additional programs.

The second university visited had only three peer tutors attend the focus group sessions. The campus was inviting and the coordinator was very accommodating. The peer tutors consisted of one male and two females. The male tutor was working on a master's degree in business. The one female tutored biology and chemistry while the other peer tutor helped students with mathematics. Although the group was small, they were very excited to share information and remained in the focus group session for the full hour. As with other learning resource centers, the tutoring on this campus took place in the center and at other areas on

campus. They attempted to take advantage of all resources available to them including

computers.

It was interesting to note that this particular center trained peer tutors extensively on how

to handle students with disabilities. Following are some artifacts gathered from the learning

center.

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During the collegiate experience at this university, students may experience some form of academic difficulty with specific academic subjects and/or their basic learning skills. Recognizing this fact, the administration has committed institutional resources to the development of the Center for Academic Enrichment. The center provides comprehensive assistance in reading and study skills as well as in the content areas of specific subjects. It has two components, the Learning Skills Lab and the Tutorial Center. The prime objective of the Learning Skills Lab is to provide students with instruction in basic learning skills to become independent learners. The Tutorial Center provides supplemental aid to classroom instruction in the content areas.

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*Figure 7*. University B: Mission statement.

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The peer tutor has the following responsibilities: provide individual and/or group tutoring; meet with tutees' instructors for clarification on course material; provide study skills enhancement activities for tutees; maintain confidentiality where necessary and appropriate to the Family Educational Rights and Privacy Act (FERPA); adhere to the university policy on Academic Honesty; learn and utilize the Learning Center's resources; when tutoring at other site, have tutees sign in and out at the desk; attend tutor meetings held by the Coordinator of Tutoring; complete and submit all forms, including timecard, individual tutee reports, and end of semester master list in a timely manner.

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*Figure 8*. University B: Tutor responsibilities.

The following objectives are included in the tutor training: (a) The tutor will gain understanding of the specific purpose of undergraduates serving in the role of peer tutor; (b) The tutor will identify his/her personal strengths and weaknesses; (c) The tutor will know, understand, and demonstrate the use of goal setting, assessment, and behavioral objectives in the context of the tutorial setting; (d) The tutor will prepare to assist students in the implementation of a study system focusing on time management, note-taking, textbook reading, and test preparation; (e) The tutor will recognize the limitations of the tutor role and will make referrals where appropriate; (f) The tutor will be equipped to describe potential strengths and weaknesses of students seeking assistance in his/her content area; (g) The tutor will be able to assess student progress and achievements; (h) The tutor will understand the record keeping process.

*Figure 9*. University B: Tutor training.

Some of the topics covered in training of peer tutors at this institution included: ."*Tutoring Students with Disabilities"*(Marie Wilcom Bunner, Teaching and Learning Center, Philadelphia College of Textiles and Science, 2005);
Disability Etiquette;
Policy on Academic Honesty; Tips for Tutoring
Tips for the First Session, Tips for Later Sessions
Tutoring Suggestions;
Evaluating Your Lessons;
How to Get the Most From Tutoring;
Adjusting Tutoring Requests to What's Happening in Class;
Client Study Skills Interview;
Tutoring Reports;
Master List of Clients;
Tutoring Program Evaluation;

*Figure 10*. University B: Tutor training topics.

The third university visited had only two peer tutors participate in the focus group sessions. They were both females between the ages of 21 and 25. One peer tutor worked with students in chemistry and the other tutored human physiology. Both tutors had approximately ten students a month. This learning support center was a huge advocate for supplemental instruction. Many of the peer tutors were SI leaders. Training was intensive and they followed

Lipsky's (2011) book, *A Training Guide for College Tutors and Peer Educators.* There were

numerous topics covered in the book and opportunities for the students to check their

understanding. One area that was especially interesting was the suggestions from experienced

peer educators at the end of the chapters. Relating direct experiences is invaluable when training

peer tutors. Following is a list of documents and artifacts that were gathered as a result of the

study.

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Supplemental Instruction: Effect of Attendance on Outcome

By Erin Keller (2008)

"Supplemental Instruction (SI), a model of academic support and retention, targets introductory-level courses with high-risk content. For SI, trained undergraduate students are paid to lead weekly out-of-class study/review sessions for their peers, focusing on how to learn difficult course content. Participation is voluntary, though students are urged to attend on a regular basis. Since 1997, SI has been offered each term and assessed according to prescribed guidelines set forth by the international SI center—analyzing mean final grades and D/F/ withdrawal rates for students who have attended SI sessions one or more times versus students who have not participated. However, the researchers hypothesize that irregular attendance by students during a fourteen-week term, such as three or fewer sessions, has little impact on their performance in the course. For this project, researchers examine the correlation between students' attendance at SI sessions and learning outcomes, as measured by final course grades and rates of D/F/ withdrawals" (p. 1).

In addition to Supplemental Instruction, walk-in tutoring is available by trained paraprofessional peer educators in individual and small group assistance with how to learn content for mathematics, natural sciences, and various liberal arts courses.

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*Figure 11.* University C: Supplemental instruction.

The training consisted of using a book entitled: *"A Training Guide for College Tutors and Peer Educators* (Lipsky (2011). The book provided extensive peer tutor training in some of the following areas:
- The role of the peer tutor;
- Andragogy,or adult learning;
- Student's psychosocial development;
- Time management skills;
- Elements of effective peer-led sessions;
- Promoting active learning;
- Learning strategies, learning modalities, and personality types
- Critical thinking and questioning skills;
- Assessing student learning;
- Collaborative learning and group work
- Tutoring as a proactive process
- Assessing student needs;
- Active listening strategies;
- Valuing diversity among students;
- Online assistance

*Figure 12*. University C: Tutor training.

The fourth university visited was also very accommodating. The peer tutors were so anxious to share their knowledge in the focus group sessions. Surprisingly, nineteen tutors showed up for the focus group session and they all wanted to participate. Of the nineteen, sixteen were females and only three were males. Five were between the ages of 18 and 20. Seven of the sixteen females were majoring in either a science or business major. All but three of the focus group members tutored ten or more students per month. Peer tutoring and training were an integral part of this program. The focus group members included some Supplemental Instruction leaders. The students were very respectful of not only the researcher, but of each other as well.

Mission and Goals of the Student Success Center

The Student Success Center, as a part of the Student Affairs Division, strives to enhance student learning and development through our Peer and Professional Tutoring and Supplemental Instruction programs, our First Year initiatives for students in the Achievement Program, and academic support and guidance for students on academic probation (Raising Expectations for Academic CHange).

Our goal is to assist students to become active, informed, and confident learners who are prepared to accept responsibility for their learning and to make positive contributions to the campus community.

*Figure 13*. University D: Mission statement.

Training requires 10 hours of training plus 25 hours tutoring on each level.  Requirements for newly hired tutors included: attending 4 hours of New Tutor Training workshops; attend an individual appointment with supervisor to review resources and procedures; preview and write reflection of a tutoring session; attend an additional hour of tutor training workshop throughout the semester; completer 2 Tutor Training modules; and, be observed, followed by debriefing with supervisor.  Returning tutors attend at least one additional training workshop that semester and every semester thereafter;

*Figure 14*. University D: Tutor training.

Extensive training included topics such as:
- Active Reading (SQ3R);
- Bag of Tricks (Making tutoring fun); scenario;
- Collaborative learning;
- Facilitating independence;
- Gibbs Model Communication, 1999;
- Math and Science anxiety;
- Motivation;
- Question strategies;
- Bloom's Taxonomy (1956);
- Ethical scenarios;
- FERPA student forms;
- Learning style inventories;
- New tutor cheat sheet;
- Preview of tutoring session;
- Revised tutoring requirements;
- Application;
- Tutor information session agenda;
- Tutor packet schedule;
- Tutor training requirements;
- Your role as a tutor;
- Notetaking;
- Study strategies, Divide and Conquer;
- Zone of Proximal Development (ZPD);
- Goals

*Figure 15*. University D: Tutor training topics.

Tutoring Services has been in existence at this university since 1973. At its onset, tutoring was provided only for EOP students. Ten years later, it became a campus-wide program, but a fee was attached for students other than those in EOP. In 1989 Tutoring Services became a part of the Education Enhancement Program and moved to the Academic Annex. During the 1990's students, mostly freshmen, were served primarily through individual appointment tutoring.

In July 2000, the original Director of Tutoring Services retired from the university. A five year Professional Tutor in the Learning Center and Adjunct Instructor of Reading, replaced him. She was responsible for recruiting, hiring, training, supervising and evaluating approximately 60 peer tutors per semester.

In the Fall of 2002, Tutoring Services merged with the Learning Center, and she served as Director of the Learning Center and Tutoring Services/Associate Director of the Education Enhancement Program, a position she held until the Fall of 2007 when a new department, the Student Success Center was created and comprised of three academic support programs: Tutoring Services, Supplemental Instruction, the Student Success Center Writing Lab, the Achievement Program (RAP) a program for provisionally admitted freshmen, and the support program for students on academic probation called REACH (Raising Expectations for Academic CHange. The three tutoring programs support over 1300 students annually.

*Figure 16*. University D: History.

The fifth learning resource center visited had an interesting floor plan. The center was located on the upper level of the building. Oftentimes the students contacted the peer tutors and made arrangements to meet with them. One peer tutor majoring in Dietetics often met her students at Starbucks for sessions. The center was inviting. It was on the upper level of the building and the Tutorial Coordinator's office connected to the center. It was situated in a little alcove with a slanted roof. The atmosphere was very inviting as were the coordinator and peer tutors. Ten peer tutors participated in this session and seven of them were females. The three males majored in biochemistry, mathematics, and actuary science /computer science. Five of the seven females were majoring in a math or science related field of study. Of the ten peer tutors, four tutored ten or more students per month, two tutored between five and ten, and four tutored less than five. Following are some artifacts collected from the center.

The goal of the Tutoring Center is to provide assistance to students who are developing their skills for independent learning.

*Figure 17*. University E: Goal of tutoring center.

The tutors are trained through a series of workshops, which emphasize techniques for diagnosing and meeting the needs of students. Tutors continue to consult with faculty about course content and faculty expectations of student performance.

*Figure 18*. University E: Tutor training.

The university is launching a new "Student Success Department" that combines the services in the Academic Support program. They include the Writing Center, Tutoring Center, Academic Achievement center, and C. A. P. S. Program. These services now can all be accessed in one place. "We wanted to create a way to catch them all, said the assistant dean of student success. "Now we can all work together to serve the students with our new model. "Tutors will be specific to each course based on faculty recommendations. The Student Success Department has also partnered with the library for tutoring locations. Many of the sports teams are already taking advantage of their space and new model.

*Figure 19*. University E: New student success department.

The following topics are covered in training:
- Job description;
- Policy statements;
- What can a student expect from a tutor?
- Session cancellation policy;
- Locked cabinet policy;
- Habits of successful students;
- Time management tools;
- Tutoring schedule
- Do's and don'ts of notetaking

*Figure 20*. University E: Tutor training topics.

The last tutor center visited proved to be very interesting. The coordinator was so gracious. She was Latino. The peer tutors had the utmost respect for her. Nine peer tutors participated. Five were female and four were males. Of the four males, two were biology majors; one was an electrical engineering major; and, one was a mathematics and business major. Of the five females, four were in science and math related fields. Three of the tutors

were between the ages of 18-20; five were between the ages of twenty-one to twenty-five; and, one was over twenty-five. One female was in a PhD. Program majoring in Comparative Literature. The focus group participants were so respectful that they did not answer their cell phones that were vibrating in their pockets during the session. As the session ended and the students began to answer their phones, it became apparent that a tornado was spotted and we were all advised to take cover. Sirens were going off everywhere. Thankfully, the tornado did not touch down, but there was a severe storm. That made for an interesting drive home. Following are some artifacts collected from this center.

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The Learning Assistance Center supports the university's missions by:
- Fostering the education, critical thinking and intellectual growth of the students;
- Helping students develop personal and academic strategies, positive attitudes toward learning and the self, and behaviors which empower them to be successful in college and life.

Vision statement: LAS is the premier academic success service on campus. Through collaboration with other campus partners we provide innovative and supportive services to help all students achieve success in college and life.

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*Figure 21*. University F: Mission/Vision.

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- Taking Tests with Less Stress;
- Help, Where Do I Find the Time;
- Be an Action Hero with Your Reading: Take Charge of Your Textbooks;
- Math Placement Test Preparation;
- Emotional Intelligence (IQ);
- Ready, Set, Goal;
- I'd Rather be Studying (in a group);
- Maximizing Your Strengths for Academic Success;
- Take Charge of Your Math Exams;
- Brain Rules (Brain-Based Leaning Strategies);
- Becoming a Fearless Math Learner;
- Save Your Semester;
- Taking Tests with Less Stress

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*Figure 22*. University F: Tutor training topics.

- Training involved sessions and case scenarios shared by peer tutors that were course related.
- Tutoring took place in various places on campus due to the size of the campus area.
- Course specific subjects were tutored in buildings close to the major area of study.
- The tutor training took place in the Learning Assistance Center.
- Many support services took place throughout the campus at all times of the day.
- Supplemental Instruction was offered in specific subject areas.

*Figure 23*. University F: Tutor training.

In conclusion, all of the centers' applications were very similar and asked the same kinds of questions. Also, the evaluations looked at the topics covered during training to see if the peer tutors were using the strategies taught in training. The researcher could see that many of the strategies were being used during the sessions by what the peer tutors shared in focus groups. Some of the topics that were used were higher order questioning; listening skills; addressing learning styles; collaborative learning; and, active reading. I did not hear any information about how peer tutors deal with students with disabilities in the sessions. One program had extensive training on this topic. It was difficult for the researcher to ascertain how much of each strategy was used in the learning resource centers actual tutor sessions; however, it was apparent that some were being used more than others even though they were all covered in the training. The tutors were looking at the individual student and then deciding needs based on what they experienced.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

This study examined peer and professional tutoring programs in exemplary learning assistance centers housed in higher education institutions so that faculty, support staff, and administration would recognize its potential as a support for college students' learning, particularly for those populations that traditionally have been underrepresented in the college population. A study of exemplary tutoring centers in higher education can provide direction in the process of tutor selection and training to meet the academic needs of today's college students. Consequently, information can be used to provide a guide for designing and refining tutoring programs, to identify academic skill development trends in higher education, and to examine the influences of teaching and learning in a peer tutor relationship. Focus group perceptions and peer tutor training programs were gathered and analyzed in chapter four in relation to the sociotransformative constructivist theory (STC) to identify areas covered in training that pertain to the theory as well as the understanding that peer tutors or peer educators have in regard to implementing the theory components. The sociotransformative constructivism theory (STC) contains the four elements of: "(a) dialogic conversation; (b) authentic activity; (c) metacognition; and (d) reflexivity" (Rodriguez & Berryman, 2002, p. 1020). The implications of the conclusions and recommendations may be of value for future higher education learning assistance programs in their reform efforts. The analysis of chapter four provides the foundation to answer the research questions.

**Summary of the Study**

The perceptions of focus groups were gathered at six institutions of higher education to answer the research questions. An engagement question was asked prior to the research questions to ascertain the understanding of the peer tutors in relation to the teaching and learning process.

At the end of the study, an exit question was asked to give the tutors an opportunity to add information that was not covered or to give their opinions. Documents such as training manuals and program evaluations were used to support the findings and conclusions. The findings are reported for each interview question, although there is much overlap.

## Findings

### Question One

The sociotransformative constructivism (STC) theory draws from both multicultural education and social constructivism. "This teaching for diversity includes more gender inclusive and socially relevant teaching strategies that include more critically engaging, inquiry-based, and meaningful strategies" (Zozakiewicz & Rodriguez, 2007, p. 397).

The dialogic component of the STC theory includes the goal of not only understanding what is being said, but the reason the speaker is choosing to say what he/she is saying within that context (Bakhtin, 1981, 1986a). Establishing trust is of paramount importance in the exchange of dialogue. How the world is viewed and understood is often conveyed by the language used and nonverbal communications is an equally important part of culture (Banks, 2001). Oftentimes training of professional educators deal specifically with creating environments in which a variety of "race/ethnicity, gender, social class, regional groups, and people with disabilities experience educational opportunity without considering specific problems unique to each group" (Aronson & Gonzalez, 1988, pp. 301-314). Research indicates that cooperative rather than competitive teaching strategies help increase the academic achievement of all students and develops more positive racial attitudes (Aronson & Gonzalez, 1988). Although language is an important part of the educational process, it is only one component of the educational environment.

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Interestingly, some of the university focus groups that did not find establishing trust with ethnically diverse groups an issue, had the lowest percentage when compared to all focus groups as far as understanding was concerned. These same groups, had minorities as a majority of tutors in their focus groups. It would appear that the minority group perception of the dialogic interaction needs to be addressed as well when they are the peer tutor. Often the peer tutors treated the students the same, regardless of ethnic backgrounds. Occasionally dialect was cited as an obstacle but also recognized as an issue sometimes between professors and students when the professor was of another culture. Although some university tutor training included valuing diversity among students, the issue of gender inclusiveness and inclusive language did not appear to be addressed. One female minority tutor found that she had to prove herself to the tutees of her academic capability. She was in mathematics and the perception of the tutees was that she was not capable to tutor in these areas. Once the tutees experienced success, they changed their perception of the peer tutor.

A peer tutor shared that she understood why ethnically diverse students wrote the way they did, approached their studies the way they did, and why they studied in a particular way. It would appear that she perceived these students as "differently literate." Students bring gendered and stereotypical assumptions, expectations, and behaviors to reading and writing (Goldberg & Roswell, 2002). Some of the peer tutors capitalized on videos, movies, and shows to explain concepts. One tutor found international students more trusting and likely to ask for help. He felt they had a strong desire to be there.

The majority of tutors felt that the student should be doing most of the speaking. The consensus was that the more the peer tutor listens, the more he or she will learn about the student. They would gauge their students and observe body language to ascertain understanding.

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The peer tutors encouraged the students to explain back for clarification and they would ask the students open-ended questions.

The majority of the peer tutors felt the more interaction between the tutor and the tutee, the better.  However, they all agreed that it depends on the individual.  They perceived themselves as facilitators and encouraged the tutee to take the lead.  Oftentimes, they would break sessions into groups so that other students could explain to ones that did not understand.

**Question Two**

The second focus group interview question looks at how the peer educator explores the relevancy of the subject with the tutee and how it connects to everyday living.  This authentic activity involves "hands-on, minds-on activities and is tied into the everyday life of the learner" (Zozakiewicz & Rodriguez, 2007, p. 401).  It is not enough to discuss for example gender-inclusive curriculum without modeling how it should be enacted.  Tutors should be involved in the authentic activities and then supported with ways to implement these strategies into their sessions.

When asked what advice they give their students to succeed, the tutors had many strategies that they shared with their students.  Often they served as role models and drew on real life experiences to help the students understand material.  They emphasized how this learning would empower the student to become self-sufficient and independent learners.  When students are empowered, they have the ability to influence personal, social, political, and economic worlds.  The ability to influence their environments comes from their skill acquisition, knowledge, and attitudes (Banks, 2001).  Values and motivation helps them to participate in social change needed to create a more just society (Banks, 2001).  The stigma of tutoring being embarrassing was discussed and examples were given of how students that do well academically select tutoring as a means of reinforcing their knowledge.

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John Dewey (1938) emphasized the importance of authentic activity in the learning process when he stated:

> An experience may be immediately enjoyable and yet promote the
>
> formation of a slack and careless attitude; this attitude then operates
>
> to modify the quality of subsequent experiences so as to prevent a
>
> person from getting out of them what they have to give . . . [E]xperiences
>
> may be lively, vivid, and "interesting," yet their disconnectedness may
>
> artificially generate dispersive, disintegrated, centrifugal habits. (p. 26)

Some examples of strategies used by tutors were: read aloud; read over and over; read actively; summarize notes; highlight; practice problems; use study guides; and, ask the professor for assistance. They emphasized that if the learner can teach it, then he or she knows it.

The peer tutors shared that it depended on the course when it came to helping students understand the content material. There were general strategies such as doing problems, checking to see if answers made sense, self-studying, and learning from mistakes. However, when it came to course specific material, the tutors used other strategies. Examples of those strategies are: ask students the same question that they asked you; go over power points; use visual recognition; go from concrete to abstract; apply information; emphasize connections and continuity of subject matter; break down problems; and, use simple language to relate to the outside world. Some of the tutors used graphic organizers and charts to relate information and one tutor encouraged her students to become engaged in the text and to challenge authority.

To test for understanding, tutors looked at how well students could do the problems or explain the concepts. They would craft similar problems. Some tutors looked at test results and questions missed as well as the grammar used in the question. International students were

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directed to the text where the grammar was used for clarification.  If worksheets could be completed without notes; it was an indication that they could apply information.  Worksheets could later be used as study guides.  The tutor would use the worksheets as a pretest.  Finally, the tutor often gave real-life experiences to see if the student could apply the information. Application is one of the highest levels of learning according to Bloom's Taxonomy of Learning. The tutors were noting that many students were lacking study skills and organizational skills. Often, unlike high school, students were being asked to interpret, analyze, and synthesize material and they did not have practice in using these levels of learning (Bloom, 1956).

A comparison of understanding of this question demonstrated an equal number of university learning assistance centers either having an advanced or a basic understanding of exploring relevancy of subject and how it connects to everyday living.  While evaluating training manuals, it would appear that the more intensive ongoing training programs had a better understanding of this component of the sociotransformative contructivism theory.  However, it appeared that it was one of many topics explored and therefore, not clear how much time was spent on discussion of this particular area.

**Question Three**

The third focus group interview question explored whether peer tutors focused on how to learn rather than giving correct answers.  When teaching for metacognition, the tutor needs to encourage students to reflect on how they learn.  The sociotransformative constructivist theory (STC) takes metacognition a step further and adds critical and reflective questions.  "Why am I learning about this topic?"  "Why am I learning these concepts in this way?"  "What control [voice] do I have in how I proceed?" (Rodriguez & Berryman, 2002, p. 1022).  The learner becomes more reflective about his/her own learning styles and why these either prevent or assist in learning new concepts (Zozakiewicz & Rodriguez, 2007).  The transformation begins with the

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peer tutor.  Simply adding curriculum, for instance about cultural groups or women, does not change or challenge the assumptions and perceptions of the dominant curriculum.  The students need to think and reflect critically on materials they read and voices they hear.  By reflecting on their own learning and considering the author's purpose for writing or speaking or the author's perspective compared to others, students can begin to analyze from different points of view. The only way for peer tutors to help students look at their own learning and the impact that their personal and cultural values have on their learning is to acknowledge these in themselves (Banks, 2001).  The best way for the peer tutor to learn may not be the best way for the tutee to learn or understand.  Also, professors are disseminating information without considering ways to optimize the student's learning and at the same time discouraging reflective practices that challenge his/her method.

The first sub-question asked how students demonstrated understanding and control of their learning.  One peer tutor shared that his purpose was for his client to no longer need his services.  "This was the only job that I try to work myself out of."  Often tutors shared that students were reflecting and trying to answer questions.  They did not want to be told the answer. Summarizing and writing to see connections in the material were cited as means of checking for understanding.  One peer tutor encouraged reviewing notes in groups, prior to a session, and immediately after a class.  Some tutors gave practice quizzes and had students explain concepts. The forgetting curve was discussed.  Peer tutors emphasized the importance of recognizing when the tutee did not understand.  Memorizing does not work for in depth understanding.

It appeared as though peer educators were using outcomes to measure understanding and control of learning.  There was not much evidence of the reflective thinking that is a part of the sociotransformative constructivism theory (STC).  Although the tutors used effective strategies to help students understand, the emphasis was not on the means they used to reach the outcome.

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Some of the tutor training manuals and programs had some stellar learning assessments. For example there were samples of metacognition rubrics that looked at motivation, control of attitude, and preparation for study. Another program used an in depth look at thinking and learning styles and had students reflect on their learning modalities.

The second sub-question looked at what the student did when he/she did not understand a concept. Interestingly, tutors shared that oftentimes students do not realize that they do not understand. Some would gauge understanding by student behavior. The tutor could tell how receptive they were. Sometimes not understanding was obvious in the student's apparent frustration. When difficulty occurred with understanding concepts, one peer tutor turned to the internet and You Tube so the student could visualize and remember concepts. He was capitalizing on a particular learning style of the student. Sometimes grouping worked so others could help the students grasp concepts and ask specific questions to clarify issues. Occasionally tutors would witness the "aha" moment and see the understanding in the student's expression.

The third sub-question asked how the peer tutors encouraged reflection. Once again, the strategies encouraged retelling, summarizing, and rephrasing which are higher order thinking. Some tutors felt that confidence was key in the learning process. Confidence helped the student apply information to not only the subject being tutored, but to other subjects as well.

One tutor used the "muddiest point" to have the students write something they were still confused about. She would collect them (they did not have names attached), look at what the majority did not understand, and then would use the information to structure future sessions. Another tutor would have students write down problems or similar problems and then collect to make quizzes prior to exams.

The peer tutor sessions reflected on strategies that worked to further their tutees' understandings. They did not reflect on the reasons why the students should understand the

material or the reasons they were learning the material this way which is what the sociotransformative constructivism theory emphasizes.

The last sub-question in this group looked at the types of questions asked by the peer tutors. Many asked the "why" question. Some asked the students if they had questions. Occasionally a tutor would continue with questions such as "Why don't you think you are getting this? Or "What do you think is supposed to happen?" Applied mathematics tutors asked, "Where do you start?" "What are you given?" "What are you looking for? And "What equation do you need?"

When students had problems with exams, one peer tutor had the student outline the problem, circle words he/she did not know, define them, go back and insert them and then think about the concept that relates and write it. If necessary, the student was encouraged to use context clues. Another tutor used comparison and contrasts and "What if" questions for cause and effect. Once again, some referenced Bloom's Taxonomy (1956) and started with knowledge based questions so the student experienced success and then moved to application questions. Finally, one tutor had students write in one sentence what a paragraph was about. The final tutor said, "I should be asking more questions. I do a lot of the talking."

According to the sociotransformative constructivism theory (STC), peer tutors "should be encouraged to ask more questions about purpose for and reasoning behind certain activities. Consequently, the learner would become more reflective about his or her preferred learning patterns and how they interact in preventing or assisting him or her in leaning concepts" (Zozakiewicz & Rodriguez, 2007, p.402). While comparing the data, all of the universities have at least a basic or advanced understanding of metacognition; however, some of the universities appear to lack intensive training in this area.

**Question Four**

The last exploration question asked how the tutors were perceived by their peers. This final element of the sociotransformative constructivism theory (STC) looks at "how the peer tutor's own cultural background, socioeconomic status, belief systems, values, education, and skills influence what they consider important to learn" (Zozakiewicz & Rodriguez, 2007, p. 402). This highly affects how the tutor approaches the session with his/her peers. As far as being multicultural and gender-inclusive, the peer tutor needs to make an effort to make certain that the session is relevant and meaningful to both male and female students.

The first sub-question asked how the tutor perceived the tutee's role in comparison to his. Some of the peer tutors felt they were more like instructors whereas others felt they were more like facilitators. One tutor felt that he was somewhat of an authority figure, but more approachable because he was recommended by a faculty member. Finally, some felt they were a mixture of two roles, authority figure and peer.

Often tutors felt they needed to build a rapport with their students; however, they needed to let the students know that they were there for a purpose. They did not wish to waste each other's time. A few programs trained tutors in the zone of proximal development (ZPD) and therefore, the peer tutor felt he/she was more knowledgeable but there to help the students reach their zone and level of understanding. Sometimes the peer tutor had the same professor as the student and therefore could provide tips on the professor's expectations, how to take notes, and how to study. One tutor felt they each had their own role to play. He had high expectations for his student and realized that the student expected him to be prepared as well. Some tutors felt they were supplemental and others felt they were another resource other than a textbook, an interactive textbook if you will.

The second sub-question asked how tutors handled student frustrations during a peer tutor session. Most of the tutors agreed that it is a matter of students having no confidence or low self-esteem. Therefore, many tutors acknowledge what the student does understand so they experience success and approach other material more openly. They feel like they have a dual role of tutor and motivator. Other tutors take breaks or meet with the students one-on-one rather than in groups. Sometimes they use different words to explain concepts, clarify textbook meaning, or let other students explain the concepts. Writing sometimes helps the students to understand material. One tutor explains that this is a means to an end and will help them reach their long term goal.

The last sub-question asked what personal satisfaction the tutor got from his/her role as a peer tutor. For many, it was not only personal satisfaction, but they became more masterful of the subject they were tutoring. Many genuinely enjoyed helping people. Oftentimes the tutors had been tutored themselves in the past and realized the benefits of successful learning. Another enjoyed working with diverse groups from around the world. As students become confident, they then apply information to other subjects and make necessary connections.

In conclusion, the tutor looked at who was in control and who had the most power during a tutor session. This reflexivity looked at the roles each plays in the decision-making process and whose interests are served.

The comparison of understandings between the higher education learning assistance centers conveyed that the programs had either a basic or advanced understanding of reflexivity. One program looked at pedagogy versus andragogy in order for the tutors to assist the students in becoming responsible, lifelong learners (Lipsky, 2011). Other programs touched on some of these topics when discussing the tutor's role. Future programs should include training about peer

tutor and student perceptions as far as who is in control during the session and who is deciding what is worth learning.

## Implications for Professional Practice

In all of the learning assistance centers that were visited in the higher education institutions, there were many commonalities shared by all. Moreover, the programs realized the importance of peer tutor training and its implications for success. Although, the six universities had programs that were unique to their college climate, they must recognize the value of bridging the cultural gaps that occur and understand that reassurance is not enough. As educators, we must prepare not only ourselves, but our peer tutors for the social changes and explore more effective strategies to deal with the challenges associated with working with these diverse students. The sociotransformative constructivist theory combines multicultural education and social constructivism and can provide powerful opportunities for underserved and underrepresented communities (Rodriguez & Barryman, 2002).

During the dialogic conversation between the peer tutor and the tutee, the tutor might begin to look more closely at who is doing the talking and why. The home language of the student must be acknowledged and not used to limit his/her learning potential (Delpit, 2006). If a peer tutor shares the first language of the student; there is no reason that he/she cannot use bilingual tutoring to increase confidence and comprehension. Sometimes biases shaped by the tutor's background surface in the language and attitudes of the peer tutor. They must be careful not to favor one human group or behavior (Destination Education, 1987). We must teach our tutors to view diverse students as resources that can help us learn about the various languages and cultures since we are all part of a global community (Delpit, 2006).

Another area that needs to be addressed is the relevancy of what is being taught. No matter what a student's background is, he/she can learn easier if they can see the significance of

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what you are teaching in their everyday lives.  If the peer tutor takes time to converse with the student, he/she will discover various contexts to apply what they are trying to teach.  For example, if a physics tutee is having difficulty with a physics concept, and the tutor knows that this student is a member of the equestrian team, the tutor can apply the physics concept to horseback riding in order for the student to understand.  The information becomes relevant.  It is so important that peer tutors understand that these diverse students bring different kinds of understandings about the world than those whose home lives are similar (Delpit, 2006).  The responses of the peer tutors demonstrated an understanding of the importance of making the sessions relevant to the student.

By monitoring their own biases, peer tutors are less likely to impose their own values on the students.  The goal is to foster independent learning on the part of the tutee.  Tutors cannot begin to understand who sits before them unless they connect to the student and value the experiences that the student brings to the session (Delpit, 2006).  As the peer tutor relinquishes control of the session, the tutee begins to demonstrate whether he/she understands.  Moreover, the student begins to reflect on whether particular strategies work for him/her.

### Recommendations for Further Study

It is important to note that each of the universities involved in this study had its own culture.  However, the similarities among them provide insight to what they consider important in the learning process between the tutor and tutee.  Future studies might look at the training of the directors/coordinators of these programs to see if they include the elements of the sociotransformative constructivist theory (STC) when they train the tutors.  Studies could look at the type of tutors being hired and whether they include an ethnically diverse group and are gender inclusive.  Why not tap into the experiences of diverse peer tutors and how they approach learning so that they might shed some light on students experiencing the same issues?

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Secondly, there should be a concerted effort to maintain the learning support services in higher education. Directors need to be proactive in reaching students prior to matriculation and through graduation (Molina & Abelman, 2000). Communication remains a challenge and colleges need to develop programs and opportunities to build and maintain effective communication networks (Twenty-First Century Scholars, n.d.). Future research could look at communication strategies and responsibilities of faculty, staff, and students in networking and providing information about learning resource centers.

Third, Waitoller and Artiles (2013) looked at the definition of inclusive education and found three different definitions. A group of studies' definitions looked at inclusive education only as it related to ability differences. A second group looked at ways to change curriculum to account for gender and cultural differences, and a third looked at overcoming barriers of learning for all students (students with diverse abilities, cultures, gender, and racial/ethnic background). Learning assistance centers in higher education might look at their specific definition of inclusive education in their training programs.

Fourth, initiating trust between the tutor and tutee needs to be addressed. Open communication in identifying differences in power and status should be discussed as well as analyzing oppressive behaviors. These remarks could be made because someone is visibly different or is implied to be different and the remarks may be in no way related to content discussed. Collaborative learning needs to be encouraged and competitive environments need to be avoided (Zozakiewicz & Rodriguez, 2007).

## Conclusions

All of the universities visited were committed to providing their students with valued learning assistance programs. Although they each had a unique perspective on training and maintaining their programs, their goal was to provide an exemplary learning assistance program that served as a tool for retaining college students. Each of the six universities emphasized the importance of peer training programs.

Although the elements of the sociotransformative constructivist theory were apparent in the training manuals and in the focus group conversations, it was not apparent how much diversity and gender inclusion were addressed. Multicultural and gender training should be addressed beginning with the program coordinators/directors. Learning assistance centers in higher education might begin to hire female tutors in the science, mathematics, technology, and engineering areas to serve as role models for students seeking services.

In universities that did have ethnically diverse peer tutors, there was a difference in how the peer tutors perceived the students they were tutoring. Expectations of these peer tutors were different for their students. Awareness training could possibly allay many misconceptions between the peer tutor and his/her student during a session. By looking at their own biases that they portray in language usage or non-verbal behavior, peer tutors may become more cognizant of the fact that they are displaying these tendencies.

The findings of this study speak to the importance of including diversity in the training of peer tutors in higher education. Training for diversity can be included in all four elements of the sociotransformative contructivist theory. Students' voices need to be considered. A productive exchange of ideas will only happen if trust is established between the peer tutor and student. By modeling the STC activities and making resources available, peer tutors can see the importance of putting theory into practice. Although each of the universities had its own culture, it is

imperative that all higher education institutions consider equity and diversity as they plan,

monitor, and assess peer tutoring programs.

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Appendix A

Informed Consent Form

Dear Tutorial Coordinator:

You are invited to participate in a study that examines peer tutoring interactions in higher education. You are eligible to participate in this study because you are the designated person to oversee the tutoring center at your facility and because your institution of higher learning meets the criteria for an exemplary tutoring center. A study is needed which would examine tutoring centers' peer interaction sessions to look at how learners interact in order to share knowledge. These interactions are the key to understanding the teaching and learning process and thereby helping to retain students until graduation.

The study has two parts: (1) audiotaped focus group sessions with peer tutors, and (2) collection of artifacts (general program information provided to students, tutor training manuals, tutor/tutee evaluation forms) from your tutoring center at your institution of higher learning. Your participation in this study could provide valuable information that higher education institutions need to meet accountability demands. Therefore, I am requesting site access to your institution for the purpose and duration of this study.

The following information is provided to help you make an informed decision about whether or not to participate. Indiana University of Pennsylvania supports the practice of protection for human subjects participating in research. There are no known risks associated with this research. Your participation in this study is strictly voluntary. You are free to withdraw from the study at any time by simply calling me or sending me an e-mail at the phone number or e-mail address which I have provided below.

Participation or non-participation in this study will not adversely affect you in any way. Should you agree to participate in the study, I will collect artifacts (brochures, evaluation forms, tutor training manuals, and any other documentation) that you feel would be relevant to this study. No one except the principal investigator will have access to the data. All anecdotal records will be secured in a locked file cabinet in my home for at least three years in compliance with federal regulations. When presenting and analyzing the data, I will use pseudonyms to protect your anonymity. All publications or presentations of the findings from this research will exclude information that would identify you or your program. In addition, I would like permission to conduct focus groups at your facility with 6-10 peer tutors and I will email those tutors who volunteer.

If you are willing to participate in this study, please sign the statement on the next page and return it to me. Take the extra unsigned copy with you. Your return of this letter implies consent. An executive summary of the findings from this study will be made available to you upon request. If you have any questions or require additional information, please feel free to contact me at the phone number or e-mail address provided. If you choose not to participate, simply return this letter, unsigned, and no questions will be asked. Thank you for your time and consideration.

Sincerely yours,

Patricia A. Johnson, Principal Investigator        Dr. Mary Renck Jalongo, Faculty Sponsor
California University of Pennsylvania              Indiana University of Pennsylvania
Department of Academic Development Services        Department of Professional Studies
250 University Avenue Box 76                        122 Davis Ha ll
California, PA 15419                                Indiana, PA 15705
(724) 938-4469                                      (724) 357-2400 ext. 2417
E-mail: Johnson_p@calu.edu

**This project has been approved by the Indiana University of Pennsylvania Institutional Review Board for the Protection of Human Subjects (Phone: 724-357-7730).**

VOLUNTARY CONSENT FORM:

I have read and understand the information on the form and I consent to volunteer to be a subject in this study. I understand that my responses are completely confidential and that I have the right to withdraw at any time. Also, I agree to a site visitation at my learning assistance center and I understand that the interviews with tutors from my center will be audiotaped with no mention of names. I have received an unsigned copy of this informed consent to keep in my possession.

Name (PLEASE PRINT):

Signature:

Date:

Phone number or location where you can be reached:

Best days and times to reach you:

I certify that I have explained to the above individual the nature and purpose, the potential benefits, and possible risks associated with participating in this research study, have answered any questions that have been raised, and have witnessed the above signature.

_____
Investigator's Signature                                              Date

Appendix B

Informed Consent Form


Dear Peer Tutor:

My name is Patricia Johnson and I am a Professor at California University of Pennsylvania. I am also a doctoral candidate at Indiana University of Pennsylvania and my research focuses on the effectiveness of tutoring centers in higher education. You have been asked to participate in a focus group so that information might be gathered about your thinking during a tutor session and the impact that it has on learning. I would appreciate your participation in this study. If you have any questions about the study, you may email me or phone me at the number provided below.

You are invited to participate in this study because you are actively tutoring at your university. Your participation is very important to the understanding of the resources provided for the learner and also to validate and improve existing college tutoring programs. Participating in this study is entirely voluntary. You are under no obligation to take part in this study and you are free to withdraw from this study at any time by contacting me by phone (724) 812-7962 or by email Johnson_p@calu.edu. Although the focus group will be audiotaped and no names will be mentioned in the report, a short summary of research findings from the study will be made available to you upon request.

There are no right or wrong answers to the focus group questions. I want to hear many different viewpoints and would like to hear from everyone. I hope that you can be honest even when your responses may not be in agreement with the rest of the group. In respect for each other, I ask that only one individual speak at a time in the group and that responses made by all participants be kept confidential.
Thank you for considering participation in this study. Your help is very important to me and is greatly appreciated.


Sincerely yours,

Patricia A. Johnson                                    Dr. Mary Renck Jalongo
Doctoral Candidate                                     Faculty Sponsor
Department of Professional Studies                     Department of Professional Studies
Indiana University of Pennsylvania                     122 Davis Hall
Indiana, PA 15705                                      Indiana University of Pennsylvania
(724) 812-7962                                         Indiana, PA 15705
Johnson_p@calu.edu                                     (724) 357- 2417
Johnson_p@calu.edu                                     mjalongo@iup.edu


**This project has been approved by the Indiana University of Pennsylvania Institutional Review Board for the Protection of Human Subjects (Phone: 724-357-773)**

VOLUNTARY CONSENT FORM:
I have read and understand the information on the form and I consent to volunteer to be a participant in this study.  I understand that my audiotaped responses are completely confidential and that I have the right to withdraw at any time.  I have received an unsigned copy of this informed consent form to keep in my possession.

**Name** (*please print*):
_____

**Signature:**
_____

**Date:** _____ Phone where you can be reached _____

Best days and times to reach you:

_____

I certify that I have explained to the above individual the nature, purpose, and potential benefits of this study.  In addition, I have answered any questions that have been raised, and have witnessed the above signature.

**Date:** _____ Investigator's signature

_____

I understand this information and agree to participate fully under the conditions stated above:

Signed:_____ Date:_____

Appendix C

Focus Group Demographics

| Focus Group Demographics | | |
|---|---|---|
| Date: | Time: | Location: |
| What is your major? | How long have you been a tutor?<br><br>○ Less than 1 year<br><br>○ 1 to 3 years<br><br>○ More than 3 years | Approximately how many students do you tutor per month?<br><br>○ Less than 5<br><br>○ 5 to 10<br><br>○ More than 10 |
| Subject you tutor most often: | Your age:<br><br>○ 18 to 20<br><br>○ 21 to 25<br><br>○ Over 25 | Your gender:<br><br>○ Male<br><br>○ Female |

Appendix D

Focus Group Questions

**Engagement Question:** **How would you describe your experience as a peer tutor and has it helped you understand the teaching and learning process?**

Questions for focus group participants:

1. What type of training have you had for the role of peer tutor?

2. Please describe your biggest challenge as a tutor/tutee, then your most rewarding session.

3. How did you decide to become a peer tutor?

**Exploration Question:** **How does your dialogue encourage the tutee to become actively involved in the learning during a tutor/tutee session?**

Questions for focus group participants:

1. Please describe ways that tutors and tutees of various ethnic backgrounds establish trust and respect.

2. Explain how you know when to speak and when to listen during a tutor/tutee session.

3. How much interaction is necessary for you to feel satisfied that the session was successful?

**Exploration Question:** **While working with students, how do you explore the relevancy of the subject with the tutee and how it connects to everyday living-*authentic activity*?**

Questions for focus group participants:

1. What advice do you give tutees that would help them become successful students?

2. How do you help your tutee understand course content?

3. How do you know if the tutees apply what they have learned in the session to their

   coursework?

**Exploration Question:** **During a tutoring session, do you focus on how to learn rather than**

**giving the correct answer?**

Questions for focus group participants:

1. How do students demonstrate their understanding and control over their own learning?

2. What does the student do when he/she discovers that they do not understand a

   concept?

3. Do you encourage the student to reflect? How?

4. Can you give some examples of questions that you ask?

**Exploration Question:** **How are you perceived by your peers when they come for a tutor**

**session?**

Questions for focus group participants:

1. How do you perceive your tutee's role in comparison to yours?

2. Explain how you deal with student frustrations during a peer tutor session.

3. What personal satisfaction do you get from the role of peer tutor?

**Exit Question:** **Is there anything else you would like to say about the peer tutoring**

**experience that might help other tutors?**

Questions for focus group participants:

1. What skills, abilities and personal characteristics help a person to become an effective

   tutor?