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Relationships Among Student Identity Development, Sense of Community, and Academic Adjustment in Community College Distance Learners

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RELATIONSHIPS AMONG STUDENT IDENTITY DEVELOPMENT, SENSE OF

COMMUNITY, AND ACADEMIC ADJUSTMENT IN COMMUNITY COLLEGE

DISTANCE LEARNERS

by

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ABSTRACT

RELATIONSHIPS AMONG STUDENT IDENTITY DEVELOPMENT, SENSE OF
COMMUNITY, AND ACADEMIC ADJUSTMENT IN COMMUNITY COLLEGE
DISTANCE LEARNERS

Lorrie Coe-Meade
Old Dominion University, 2015
Director: Dr. Alan Schwitzer

Student identity development is an important aspect of college life for traditional age college students and may influence learning. Sense of community in online courses may also promote learning. A non-experimental, correlational research design was used to determine how student identity development and sense of community independently and together predict academic adjustment. Traditional-age students, 18-25, from ten rural-serving, suburban-serving, or urban-serving community colleges in a Southeastern state in the United States who had taken distance learning courses and a minimum of twelve credits were administered three survey instruments during spring or fall semester. The Student Developmental Task & Lifestyle Assessment was used to measure level of student identity development and was completed by 111 students. The Classroom Community Scale was used to measure sense of classroom community, and the Academic Adjustment subscale of the Student Adaptation to College Questionnaire was used to measure perceived academic adjustment. Each was completed by 169 students. Chickering's theory of student identity development provided a framework for the research.

A moderate positive correlation was found between achievement of student identity development and perceived academic adjustment, between student sense of classroom community and perceived academic adjustment, and between the two

constructs together and student perceived academic adjustment. Additional research is needed to fully examine the relationships among student identity development, classroom community, and academic adjustment.

DEDICATION

This dissertation process is dedicated to my husband, Billy Harris Meade. Without his continuous love and support, completion of the dissertation would only be a dream unrealized. He is the wind beneath my wings.

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Thank you to my husband, Bill, for countless hours of dissertation discussion and travel, and helping to keep my life in order during the process. Your patience, encouragement, and support helped me to endure, especially when "life happened."

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Thank you to my mom and dad for wanting me to have educational opportunities they didn't and for being proud of me each step of my educational journey.

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Most importantly, thank you to all of the staff and administrators who helped to identify students eligible to participate in my study and to all of the students who did.

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CHAPTER ONE

Research Problem

The traditional method of providing students a college education in the classroom has changed due to the influence of technology. This influence has propelled education into cyberspace. The tenants of online learning are reaching more students and providing greater opportunity to achieve an education than ever before.   Higher education institutions using distance learning and students taking distance learning courses continues to grow at an accelerated rate (Allen & Seaman, 2011).

The number of college students taking distance learning courses has continued to increase since 1990 (Batts, Pagliari, Mallett, & McFadden, 2010). During the fall 2010 academic term, more than 6.1 million higher education students were taking at least one distance learning course and the annual rate of growth of distance learners continued to exceed that of college enrollment nationally (Allen & Seaman, 2011). From fall 2010 to fall 2011 community college campuses reported an 8.2 % increase in enrollments for distance education (Instructional Technology Council, 2012).

From the 2007-2008 academic year to the 2011-2012 academic year the number of students in the Virginia Community College System taking only distance learning courses increased from 26,735 to 43,820 (Virginia Community College System [VCCS], 2012a). Of the 13,969 VCCS students responding to a survey on information technology, 45% took courses completely online compared to 31% of higher education students nationally (VCCS, 2012b). Enrollment in distance learning courses has outpaced the traditional courses in enrollment in higher education during the last decade (Allen & Seaman, 2011; Instructional Technology Council, 2012). While the number of courses

offered online has grown, the success rate of students completing these courses is a concern.

Nationally the completion rate for distance learning courses is 69% in comparison to 75% for traditional classroom courses (Instructional Technology Council, 2011). A longitudinal study of 24,000 students in all 23 colleges of the VCCS who took distance learning courses found the withdrawal and failure rates were greater for distance learning students than those taking face-to-face courses, and those taking distance learning courses early in their college experience were less likely to return (Jaggers & XU, 2010).

In fall 2012, an estimated 60% of the college students enrolled in public two year institutions were age 24 and under (National Student Clearinghouse, 2012). Of those students taking distance learning courses in community colleges from fall 2009-fall 2010, 50% were traditional age, 18-25, and 50% were non-traditional, 26 and above (Instructional Technology Council, 2011). An important aspect of the college experience for the traditional age college student is student identity development defined for the purposes of this study as achieving one or more of the seven vectors of Chickering's psychosocial theory of student identity development: developing competence, managing emotions, moving through autonomy toward interdependence, developing mature interpersonal relationships, establishing identity, developing purpose, and developing integrity (Chickering & Reisser, 1993). Student identity development can be provided more easily on a traditional college campus than in distance learning courses because of accessibility to others, activities, and student services (Schwitzer, Ancis, & Brown, 2001). Faculty and students are more accessible to one another on campus and in the classroom which provides opportunities for student-learner and learner-learner

interactions (Schwitzer, Ancis, & Brown, 2001). Student development is facilitated by interactions between faculty-learner and learner-learner in and out of the classroom, engagement in activities, and usage of student services (Schwitzer, Ancis, & Brown, 2001). Faculty can play a key role in facilitating student identity development through course design and delivery, and interactions (Chickering & Reisser, 1993).

Frequent contact with students by faculty using a variety of mediums facilitates student identity development (Chickering & Reisser, 1993; Sull, 2012b). This contact demonstrates faculty support of the student (Chickering & Reisser, 1993; Sull, 2012b). Faculty accessibility to students enhances student confidence and provides opportunities to advise students of needed services that may promote academic success (Frost, Strom, Downey, Schultz, & Holland, 2010). Frequent feedback to students from faculty assists students in developing new patterns of thinking (Frost et al., 2010; Sull, 2012b). Student confidence, academic success, and developing new ways of thinking are important aspects of student identity development (Chickering & Reisser, 1993).

Schwitzer, Ancis & Brown (2001) promoted using a learner-centered approach to teaching online. Faculty-learner and learner-learner interaction is an integral part of this approach (Schwitzer et al., 2001). Faculty-learner interaction can be demonstrated through faculty support, and learner-learner interaction can be facilitated through a variety of teaching methods (Schwitzer et al., 2001). A supportive and positive interpersonal climate will assist the student's transition into college and promote student motivation, development, and learning (Schwitzer et al., 2001). These personal and online environment interactions help to create a community of learners which is also

crucial to the learner-centered approach (Schwitzer et al., 2001; Scott, 2012; Sull, 2012a; Sull, 2012b).

Research supports the benefit of sense of community to student success. Rovai (2002c) studied the relationship between sense of community and cognitive learning in online learning environments and found a significant relationship. Results of a qualitative study indicated students described social connectedness in their definition of college success (Toews, Sevin, & Purswell, 2008). Rovai and Wighting (2005) found an inverse relationship between alienation and sense of community in online learning environments. Using the Classroom Community Scale coupled with interviews with students taking online courses, Ouzts (2006) found sense of community was influenced by student connection. Providing for interactions during class strengthens students' sense of community and promotes persistence (Chickering, 2000). This sense of community is also linked to student identity development (Chickering, 2000).

Although studies have been conducted on distance learning (Batts, Pagliari, Mallett, & McFadden, 2010; Burton & Goldsmith, 2002; Maier, 2012; Morris, 2011; Tirrell & Quick, 2010); distance learning teaching methods (Grandzol & Grandzol, 2010; Lieu, 2008); student identity development (Horne & Ethington, 2002; Lounsbury, Huffstetler, Leong, & Givson, 2005; Macari, Maples, & D'Andrea, 2006; Martin, 2000; Phaiah, 2006); and sense of community (Brown, 2001; Dawson, 2006a, 2006b; Drouin & Vartanian, 2010; Ertmer & Stepich, 2005; Ouzts, 2006; Rovai, 2000, 2002a, 2002b, 2005; Rovai & Wighting, 2005; Rovai, Wighting, & Liu, 2005; Shackelford & Maxwell, 2012; Spinks, 2007), there is a lack of understanding and research is lacking in studying the relationship of sense of community and student development to academic adjustment

in distance learning students. If students have advancement in student identity development and feel a sense of community in their distance learning courses this may predict academic adjustment.

Theoretical Framework

In 1969, Arthur W. Chickering published *Education and Identity,* which detailed his psychosocial theory of student identity development and explained his views on how the college experience influenced this development (Chickering & Reisser, 1993). The development of the theory was influenced by his experience as a psychology professor, administrator, and researcher in higher education (Chickering & Reisser, 1993). The theory explained seven vectors that influence identity development (Chickering & Reisser, 1993). Much research focusing on the impact of higher education on students used this theory, some of which challenged the sequencing of vectors which prompted revision (Chickering & Reisser, 1993). In 1993 Chickering and a colleague, Linda Reisser, revised the sequencing of the vectors and updated them based on significant contributions of research since the original publication (Chickering & Reisser, 1993).

The revised theory of student identity development, which was applicable to college students, identified the seven vectors, some renamed and sequenced in the following order: developing competence, managing emotions, moving through autonomy toward interdependence, developing mature interpersonal relationships, establishing identity, developing purpose, and developing integrity (Chickering & Reisser, 1993). The vectors are a path to individuation, the unique self, and to relationships with groups and individuals (Chickering & Reisser, 1993). The college

experience is more likely to influence the first four vectors which ultimately contribute to identity (Chickering & Reisser, 1993).

Educational environments influence student identity development (Chickering & Reisser, 1993; Schwitzer et al., 2001). Seven factors of these environments affect student identity development (Chickering & Reisser, 1993). These factors are institutional objectives, institutional size, student-faculty relationships, curriculum, teaching, friendships and student communities, and student development programs and services (Chickering & Reisser, 1993). At least four of these factors are related to online learning and can help promote a sense of community: faculty-learner relationships, curriculum, teaching, and friendships and student communities (Chickering & Reisser, 1993).

Purpose Statement

The purpose of this study was to determine if there was a relationship between student identity development and sense of community and academic adjustment in community college students who took only distance learning courses.

Research Questions

The research attempted to answer the following questions:

1. How will student identity development predict academic adjustment in traditional community college students taking only distance learning courses?

2. How will sense of community predict academic adjustment in traditional community college students taking only distance learning courses?

3. How will student identity development and sense of community together predict academic adjustment in traditional community college students taking only distance learning courses?

Significance of the Study

The review of literature revealed an absence of research directly related to facilitating student identity development for students enrolled in distance learning courses; however, much of the literature related to distance learning focused on themes of the significance of faculty-learner and learner-learner interaction in distance learning, and creating a sense of community at a distance. Faculty-learner and learner-learner interactions are integral to creating a sense of community and can have an influence on college student identity development (Chickering, 2000; Chickering & Reisser, 1993; Schwitzer et al., 2001). The significance of these interactions to learning in a distance learning context, and to student identity development supports the relevance of student identity development in distance learning courses and the need for the current research. The significant increase each year within the last decade of students taking only distance learning courses in higher education also supports the current need for this study.

As the frequency with which distance learning course offerings continues, to rise, the impact these courses have on student identity development needs to be more fully understood. Administrators, faculty, and student affairs officers need to be aware of how distance learning courses affect student identity development, and how distance learning course design and delivery may help promote this development by creating a sense of community,. Faculty using distance learning can help their students succeed by supporting their student identity development. What is not understood and where research is apparently lacking is in studies that focus on the relationship between student identity development, sense of community, and academic adjustment in community college students taking only distance learning courses. If students feel a sense of

community in their courses and achieve advancement in identity development, this may

promote academic adjustment.

Delimitations

The following are delimitations of the study:

1. Only students between the ages of 18-25 were included in the study.

2. Only students who had taken 12 credits in succession at his/her respective
    institution were included in the study.

3. Only students who had taken only distance learning courses during college,
    with the exception of speech, physical education, health, and science classes,
    were included in the study.

Assumptions

The researcher assumed the participants in the study answered all of the inventory

questions accurately and honestly.

Definition of Terms

Student Identity Development

Student development refers to achieving one or more of the seven vectors outlined

in Chickering's theory of student identity development.

Distance Learning

There are many terms used to identify distance learning, including online

learning, distance education, virtual learning, e-learning and others. Distance learning

refers to courses taught online at a distance, including synchronous and asynchronous

courses.

Asynchronous Distance Learning

Asynchronous distance learning refers to fully online, without any face-to-face meetings. The distance learning model studied included asynchronous online instruction. Asynchronous online courses do not restrict students to a set date or time for communicating, use a variety of mediums to communicate course content such as pre-recorded audio/video recordings and podcasts, and may facilitate collaboration among students through the intranet and internet (Skylar, 2009).

Blended Courses

Blended courses refers to courses taught using a combination of learning delivery methods in a traditional face-to-face classroom setting and a distance learning environment.

Sense of Community

Sense of community refers to a "feeling of connectedness" and "sense of belonging" to others in the environment (Rovai, 2002, pp. 198-199).

Synchronous Distance Learning

Synchronous distance learning refers to fully online instructor and students face-to-face meetings in real time. The distance learning model studied included synchronous online instruction. Synchronous online courses restrict students to a set date or time for communicating and use a variety of software accessed through internet to conduct meetings (Skylar, 2009).

Traditional College Student

The traditional college student is defined as falling on or between 18 and 25 years of age.

Rural-serving Community College

A rural-serving community college is a rural-serving institution located within a Primary Metropolitan Statistical Area [PMSA] or Metropolitan Statistical Area [MSA] or not located in a PMSA or MSA with a total population less than 500,000 according to the 2000 census (Carnegie Foundation for the Advancement of Teaching, n.d.).

Suburban-serving Community College

A suburban-serving community college is a suburban-serving institution "physically located" within a MSA with a total population exceeding 500,000 according to the 2000 census (Carnegie Foundation for the Advancement of Teaching, n.d.).

Urban-serving Community College

An urban-serving community college is an urban-serving institution "physically located" within a PMSA with a total population exceeding 500,000 according to the 2000 census (Carnegie Foundation for the Advancement of Teaching, n.d.).

Organization of Remaining Chapters

The review of this study is contained within five chapters and concludes with a bibliography and applicable appendices. Chapter two consists of the literature review of distance learning, sense of community, student identity development, and Chickering's seven vectors of student identity development. Chapter three details the design of the study, the methodology, and a discussion of the Student Developmental Task & Lifestyle Assessment [SDTLA], the Classroom Community Scale [CCS], and the Student Adjustment to College Questionnaire [SACQ] and specifically, the Academic Adjustment subscale. Chapter four identifies the analysis of data and the presentation of findings.

Lastly, chapter five provides the summary, implications, and recommendations of the research and the conclusion.

CHAPTER TWO

LITERATURE REVIEW

This study explored student development within the framework of Chickering's psychosocial theory of student identity development, sense of community, and academic adjustment among community college students. To date, there has been a lack of research focusing on community college students, particularly with regards to student development, sense of community, and academic adjustment. Under investigation was the achievement of aspects of student identity development of traditional community college students taking only distance learning courses and the perceived sense of community in the same population. Also examined was whether these two variables predicted perceived academic adjustment. The study is relevant because community college personnel are interested in promoting student success and these variables seem to be significant to this.

In order to provide a context for this research, the review of literature in chapter two will discuss student development, sense of community, and distance learning presented by sections. This chapter begins with a discussion of student development. In this section psychosocial development will be introduced and evolve into a discussion of Chickering's psychosocial theory of student identity development. Next, the seven vectors comprising this theory will be detailed, followed by a discussion of psychosocial development. The second section will explore sense of community. The third section will discuss distance learning with regards to creating learning communities that may promote sense of community, student identity development, and thus learning.

Search Strategies

The primary search mediums used were EBSCO database of journals, Google scholar, and dissertation abstracts. Key words used in this search were: asynchronous learner, asynchronous learning, distance learning, classroom community, online learning, psychosocial development, sense of community, and student development.

Student Development

Although the concept of student development has been in education since the 1600s, there is greater understanding of this today due to the theories that have developed since the inception of the concept (Evans, Forney, Guido, Patton, & Renn, 2010). Student development theory can be used as a guide for educators. Theory can serve as a guide to teaching, facilitating learning, and working with students (Evans et al., 2010). One aspect of student development is psychosocial development.

Psychosocial development is concerned with the important issues individuals confront during life such as the aspects of self-identity and relationships with others (Evans et al., 2010). Psychosocial theories define these issues in regards to different stages of human development (Evans et al., 2010). In an effort to promote psychosocial development, educators should consider developmental issues students face during the college years when designing courses and interacting with their students.

Arthur Chickering's original theory of psychosocial development identifying developmental issues of college students helped to create an understanding of student identity development. This theory has been widely recognized by student affairs professionals in higher education. A discussion of Chickering's original theory and the

revised theory of psychosocial development by Chickering and his colleague Linda

Reisser follows. This theory served as the theoretical framework for this study.

Student Identity Development According to Chickering

Arthur W. Chickering developed a psychosocial theory of student identity

development (Chickering & Reisser, 1993). In 1969, he published *Education and*

Identity, which detailed his theory and explained his views on how the college experience

influenced this development (Chickering & Reisser, 1993). Chickering identified seven

vectors, which describe "direction and magnitude", that influence identity development

(Chickering & Reisser, p. XV). In 1993, the sequencing of vectors was revised by

Chickering and Reisser (1993) as a result of research that challenged the original

sequencing. The revised theory of student identity development identified seven vectors,

with some being renamed and sequenced in the following order: developing

competence, managing emotions, moving through autonomy toward interdependence,

developing mature interpersonal relationships, establishing identity, developing purpose,

and developing integrity (Chickering & Reisser, 1993). The vectors are a path to

individuation, the unique self, and to relationships with groups and individuals

(Chickering & Reisser, 1993). The college experience is more likely to influence the first

four vectors which ultimately contribute to identity, the fifth vector (Chickering &

Reisser, 1993). The development of identity should be recognized as a major task for

development in young adult college students. It should also be recognized that

development varies by student and by college (Chickering & Reisser, 1993). A

discussion of the vectors follows.

Developing competence.

During the transition through the first vector, developing competence, the young

adult student continues to develop intellectual competence through problem solving and

participating in active learning, which can lead to academic success; developing physical

and manual competence using the body as a means of self-expression and creativity; and

developing interpersonal competence by communicating and collaborating with others

(Chickering & Reisser, 1993). The student is learning how to get along in the adult world

(Chickering & Reisser, 1993).

Managing emotions.

Managing emotions is concerned with the student's ability to recognize and

accept emotions such as love, hope, joy, fear, anxiety and anger (Chickering & Reisser,

1993). The young adult learns to express and control emotions appropriately; how to

identify an emotion and when to express it; and how to use feelings and emotions as

information (Chickering & Reisser, 1993).

Moving through autonomy toward interdependence.

Moving through autonomy toward interdependence involves learning to be self-

directed in problem-solving and confident in choosing direction toward opportunity

(Chickering & Reisser, 1993). Emotions become independent and the young adult no

longer needs approval of others such as family, yet healthy relationships are maintained

(Chickering & Reisser, 1993).

Developing mature interpersonal relationships.

The experiences of developing mature interpersonal relationships contribute to a

sense of self (Chickering & Reisser, 1993). These relationships provide a connection to

others and opportunities to learn how to tolerate and respect differences, accept others who are different, and to learn to be empathetic (Chickering & Reisser, 1993).

Identity.

Achievement of the first four vectors prepares the student for the development of identity, the fifth vector (Chickering & Reisser, 1993). At this level of development, the young adult becomes comfortable with self, lifestyle, and abilities (Chickering & Reisser, 1993). It must be recognized that identity development differs by gender, ethnic background, and sexual orientation (Chickering & Reisser, 1993). Part of identity development involves deciding a major (Chickering & Reisser, 1993).

Developing purpose.

Planning and prioritizing vocational strategies, making commitments to personal interests, and establishing interpersonal and family commitments helps the student to develop purpose, the sixth vector (Chickering & Reisser, 1993). Another aspect of this stage of development is intentionally making decisions and remaining steadfast when confronted with opposition (Chickering & Reisser, 1993).

Developing integrity.

The seventh vector, developing integrity, incorporates three stages; humanizing values, personalizing values, and developing congruence (Chickering & Reisser, 1993). The stages are sequenced and overlap (Chickering & Reisser, 1993). During the humanizing values stage, students evolve from a rigid, moralistic way of thinking to a more humanized value system of balancing others interests with their own (Chickering & Reisser, 1993). During the personalizing values stage, students affirm their own values while maintaining a respect for the values of others (Chickering & Reisser, 1993). This

emotional and intellectual maturity results in developing a congruence which brings about authenticity and equality with the students values and actions (Chickering & Reisser, 1993). Students then consider social responsibility along with their self-interest (Chickering & Reisser, 1993).

The literature reviewed identifies three primary areas of influence on student identity development psychologically and socially. These three areas are demographic differences in student identity development, environmental influences on student identity development, and the influence of student identity development on academic success.

Demographics

Community colleges provide educational opportunities for a diverse population of students through the mission of open access (Vaughan, 2006). Student identity development needs of all students must be understood, considered, and opportunities for growth provided equally. To do this, it must be recognized that student identity development differs by student and demographics (Evans et al., 2010).

Differences in student identity development have been noted in student enrollment status. Community colleges have students enrolled full-time and part-time. In 2007-2008, 80% of full-time students and 87% of part-time students in community colleges were employed full or part-time (American Association of Community Colleges, n.d.). A study by Horne and Ethington (2002) looked at whether there were differences in perceptions of growth and development gains as a result of students' community college experience. Students from four ethnic groups, Asian/Pacific Islander, Black/African-American, Hispanic/Latino, and Caucasian who were enrolled part-time or full-time participated. Data was collected from a national subset of students completing

the Community College Student Experience Questionnaire (Horne & Ethington, 2002). The researchers found that full-time students reported significantly higher perceptions of gains in growth and development than part-time students although the magnitude of these differences was small (Horne & Ethington, 2002). Furthermore, Hispanic students had higher perceptions of gains in personal and social development when compared to Asian students and Caucasian students; however, consideration must be given to the level of developmental achievement upon entry to college with lower levels indicating greater room for gains (Horne & Ethington, 2002).

A study conducted by Macari, Maples, and D'Andrea (2006) measured student identity development in nontraditional and traditional college students enrolled in a university, and using the Student Developmental Task and Lifestyle Assessment [SDTLA]. The SDTLA was used to measure three of Chickering's tasks or vectors: establishing and clarifying purpose, developing autonomy, and developing mature interpersonal relationships (Macari, Maples, and D'Andrea, 2006). In this study, a student was considered nontraditional if at least one of the following seven categories was applicable to them: delayed enrollment in college post high school; enrolled in college part-time; were financially independent; work full-time; have dependents other than a spouse; single parents supporting children greater than 50% of the time; and those who did not receive a standard high school diploma (Macari, Maples, and D'Andrea, 2006). Although these criteria did not include age, which is a typical criterion for classifying nontraditional college students, all students in the study greater than twenty-four years of age also met at least one of the criteria (Macari, Maples, and D'Andrea, 2006). Forty-four percent of the sample of students younger than twenty-four met at least one of the

criteria (Macari, Maples, and D'Andrea, 2006). The results of the study indicated older students and nontraditional students, regardless of age, scored significantly lower than traditional students (Macari, Maples, and D'Andrea, 2006). The factors included in the criteria for nontraditional students may impede aspects of student identity development (Macari, Maples, and D'Andrea, 2006). Although this study was conducted in a university setting, many of the factors are characteristics of the current population of community college students regardless of their age. In 2011, 39% of community college students were age twenty-one or younger, at least 40% of students were minorities, and 16% were single parents (American Association of Community Colleges, n.d.). These statistics, taking into consideration the results of the study by Macari, Maples, and D'Andrea, support the need to provide for opportunities to promote student identity development in distance learning.

Environments

The diversity in community college enrollment necessitates the creation of an educational environment in which students of different ages, educational preparedness, and social background may succeed. Educational environments also influence student identity development (Chickering & Reisser, 1993; Schwitzer et al., 2001). Seven factors of these environments may affect student identity development. The factors are institutional objectives, institutional size, student-faculty relationships, curriculum, teaching, friendships and student communities, and student development programs and services (Chickering & Reisser, 1993). In a study conducted to determine the relationship between college experiences and student identity development, Martin (2000) found a relationship between student-faculty interaction and Chickering's vectors

of development of purpose and sense of competence. Students at a four year college completed the Student Developmental Task and Lifestyle Inventory and the College Student Experiences Questionnaire at the onset of their freshman year and then again during the second semester of their fourth year (Martin, 2000). Additional influences on the two vectors included student community such as campus activities, relationships with acquaintances, and topics and information in communication (Martin, 2000).

Another study of interest related to educational environments is Phaiah's (2006) study of student identity development needs. Senior Student Affairs Officers who served at institutions accredited by the Southern Association of Colleges and Schools-Commission on Colleges were surveyed. Participants identified their perceptions of effectiveness for co-curricular integration of fourteen growth and development components for undergraduates age 18-24 who were enrolled in degree programs on campus (Phaiah, 2006). A subset of participants who also had degree programs that were offered completely online were surveyed to determine if there were significant differences between online and on campus programs (Phaiah, 2006). The growth and development components included intellectual development, personal development, ethical and moral development, cultural and aesthetic awareness, religious development, vocational preparation, preparation for life-long learning, self-understanding, interpersonal development, social and political responsibility, humanism and altruism, physical wellness, character development, and leadership development (Phaiah, 2006). The researcher's data analysis supported the need to integrate all fourteen growth and development components in campus and online courses. Participants' perceived effectiveness for integrating each component in co-curricular activities in on campus

degree programs was medium to highly effective (Phaiah, 2006). This was in contrast to online programs with analysis indicating online programs were not receiving effective co-curricular growth and development components (Phaiah, 2006). The two most prevalent reasons indicated for not integrating growth and development components online were difficulty to integrate the components online and a lack of priority on behalf of the institution (Phaiah, 2006).

Student Development and Academic Success

Research addressing student identity development and academic success has been limited. Chickering and Reisser (1993) purport that student identity development influences academic success. Lounsbury, Huffstetler, Leong, and Gibson (2005) examined sense of identity and academic achievement in university students taking an introductory psychology course and a first-year studies program. Participants were second-semester freshman students of whom eighty percent were between eighteen and nineteen years old (Lounsbury et al., 2005). The Resource Associates' Adolescent Personal Style Inventory for College Students was used to measure Big Five Traits of personality and sense of identity (Lounsbury et al., 2005). The Big Five Traits are agreeableness, conscientiousness, emotional stability, extraversion, and openness (Lounsbury et al., 2005). Findings supported a significant positive correlation between all five personality traits, sense of identity and grade point average (Lounsbury et al., 2005).

The next research example of interest compared college behaviors of academically talented students and average ability students during the course of their freshman year at a university (Shepherd, 1995). The Student Developmental Tasks and

Lifestyle Inventory was used to measure psychosocial development and administered at the onset and again at the end of the year (Shepherd, 1995).   Participants were also interviewed monthly throughout the year to determine participation in college behaviors (Shepherd, 1995). Although significant differences were noted in student identity development in both groups, between-group differences were not noted (Shepherd, 1995).   Significant between-group differences were found in grade point average (Shepherd, 1995).   Results indicated both groups of students experience college in much the same way (Shepherd, 1995).

Section Summary

Student identity development is a significant aspect of traditional students' college experience. Chickering and Reisser outline important tasks by which to gauge the development of traditional students. To provide an education that promotes student identity development in traditional community college students, it is imperative to note demographic and environmental factors that can influence this development. The lack of effective co-curricular activities in distance learning supports the need to enhance these opportunities in distance learning courses to promote student identity development. These factors support the significance of understanding and providing opportunities for student identity development in distance learning learning. Furthermore, the possible relationship between student identity development and academic adjustment also merits understanding.

Sense of Community

According to Rovai (2002a), the most significant aspects of sense of community include "mutual interdependence among members, connectedness, trust, interactivity, and

shared values and goals" (p. 321). These aspects of sense of community parallel aspects of Chickering's (1993) vectors of developing competence, moving through autonomy toward interdependence, and developing mature interpersonal relationships. When sense of community is facilitated, student development may occur.

A study of university students taking only online courses compared with students taking only on campus courses found sense of community was weaker in the former population (Rovai, Wighting, & Liu, 2005). Furthermore, social bonds for traditional age students were found to be less than those for nontraditional students (Rovai, Wighting, & Liu, 2005). These results support the need to design distance learning courses that facilitate sense of community.

Facilitating Sense of Community Online

Rovai (2000) identified factors that can influence sense of community in distance learning through the quality of interactions. Dialogue, a significant factor, decreases psychological distance between online students, and therefore increases sense of community (Rovai, 2000). Dialogue is positively influenced by the control of the learner rather than the instructor and can be facilitated through learner-learner interactions (Rovai, 2000). Dawson's (2006a) research indicated students and study units with greater frequencies of communication interactions also have stronger levels of sense of community.

Discussion forums facilitate interactions between online students. In another study, Dawson (2006b) found a significant relationship between discussion forum interaction types and sense of community; however, a relationship was not found between quantities of discussion forums.

In addition to dialogue and interactions, sense of community is also influenced by social presence and instructor immediacy (Rovai, 2000). Instructor immediacy, meaning immediate communications, can be used to promote social presence (Rovai, 2000) Instructors can demonstrate instructor immediacy by providing feedback to students, such as acknowledging receipt of assignments (Rovai, 2000). Social presence is an important factor in this learning process and can be facilitated through a variety of methods such as discussion boards (Palloff & Pratt, 2007). Learners feel social presence when other learners are responding to their discussion board communications (Rovai, 2000). Instructors facilitate this learner-learner promotion of social presence without interfering with dialogue (Rovai, 2000).

Using the CCS coupled with interviews with students taking distance learning courses, Ouzts (2006) found sense of community was influenced by student connection. If student connection influences sense of community, this may result in advancement in student identity development in Chickering's vectors of development of competence with respect to interpersonal competence, or developing mature interpersonal relationships.

Rovai and Wighting (2005) found an inverse relationship between alienation and sense of community in distance learning environments. This inverse relationship between alienation and sense of community may hinder or delay development in Chickering's vectors of competence, moving through autonomy toward interdependence, or developing mature interpersonal relationships. If the student feels alienated from others in the learning environment, the opportunities for advancement along these vectors of Chickering's student identity development may be affected. These findings support the relevance of student connection to sense of community.

A related qualitative study of community college instructors perceptions of disadvantages of teaching and learning online cited isolation as having negative consequences to distance learning courses (Hurt, 2008) Isolation could be a result of few opportunities for interaction initiated by the instructor. which supports the inclusion of faculty-learner and learner-learner interaction in the design of distance learning courses (Hurt, 2008).

Sense of Community and Learning

Research by Rovai (2002b) studied graduate students to determine the relationship between perceived sense of community and perceived cognitive learning in distance learning environments and found a significant positive relationship. This relationship between sense of community and perceived cognitive learning may also influence the development of Chickering's competence vector of student development. In a similar study with graduate students conducted by Ertmer & Stepich (2005), perceptions of community and perceptions of learning were found to be related; however, perceptions of community and higher-order learning, as measured by pre and post analyses of student discussion board postings involving case studies, were not related.

Spinks (2007) conducted a similar study with new students enrolled in an associate's or bachelor's program and in asynchronous learning environments, to determine the relationships between sense of classroom community and academic success, measured by GPA, and the mediating role of academic self-efficacy. The students who comprised the sample did not have any previous experience with distance learning (Spinks, 2007). Students completed the CCS, which included a learning subscale, and the College Academic Self-Efficacy Scale at the beginning and end of their

first semester (Spinks, 2007). Analysis did not reveal a relationship between overall sense of community and academic success; however, overall sense of community did have a significant indirect effect on GPA when mediated by academic self-efficacy (Spinks, 2007). Further analysis supported results from the learning subscale of the CCS did prove to have both a direct and indirect effect on GPA (Spinks, 2007).

Section Summary

Learning in distance courses and students sense of community seems to require a balance of interaction between learner-learner forums and faculty-learner interactions. Students taking only distance learning courses appear to run the risk of alienation as opposed to developing a sense of community if opportunities for student interactions and connection are not provided. The literature suggests that group assignments, teacher feedback and discussion board interaction by students may assist students to develop a sense of community in distance learning.

Although studies have been conducted on sense of community and the concept of learning, results are mixed as to the relationships between the two variables. The research cited was mostly limited to university students and concluded mixed results regarding the relationship between the two variables. These findings warrant further research in sense of community and the relationship between sense of community and learning with community college students.

In consideration of the literature cited regarding student identity development, it should be noted that influences on sense of community, learner-learner and faculty-learner interactions and communications, parallel influences on some of Chickering's vectors of student identity development. If these influences promote sense of community

and advancement in Chickering's vectors of student identity development, further research is needed to determine if there is a relationship between these two variables and academic adjustment.

Distance Learning

Distance learning enrollment continues to outpace traditional class enrollment (Allen & Seaman, 2011; Instructional Technology Council, 2012). In the last decade, distance learning has been the predominant source of enrollment increases in higher education (Instructional Technology Council, 2012). A majority of the nation's academic administrators in higher education continue to report distance learning to be a critical element of strategic planning (Allen & Seaman, 2011). Although growth in distance learning education is evident, 62% of community college administrators responding to a survey by the Instructional Technology Council (2012) reported their distance learning course offerings were inadequate to meet the demand of students wanting to enroll (Instructional Technology Council, 2012). The concept of supply and demand supports that community colleges will continue to offer course offerings at a distance.

Distance learning education has become a mainstay in higher education. Although great strides have been made to advance the quality of distance learning education, internal constituents of higher education are still trying to achieve greater equitableness between distance learning educational experiences and that of the traditional campus setting (Instructional Technology Council, 2013). Higher education has long been focused on the development of the whole person. This includes academic and student identity development. The traditional campus education has integrated strategies to facilitate both academic and student identity development in students. To

achieve balance in the quality of traditional campus education and distance learning education, educators must adopt distance learning course design that promotes both aspects of the development of the whole person (Schwitzer, Ancis, & Brown, 2001).

Traditional Online Learners and Student Identity Development

Approximately thirty-one percent of all students in higher education take at least one distance learning course (Allen & Seaman, 2011) In Fall 2012, an estimated 60% of college students enrolled in public two year institutions were age 24 and younger (National Student Clearinghouse, 2012).   For traditional college students, student identity development is a significant component of the college experience (Chickering & Reisser, 1993). These demographics support the need to design distance learning courses that promote student identity development. This is critical for students taking only distance learning courses with little to no interaction with the campus environment.

Learning Communities

Designing distance learning courses to create learning communities integrates opportunities to promote student identity development, sense of community, and learning. Palloff and Pratt (2007) defined the role of the instructor in online teaching as a facilitator of learning, and the role of the learner as being an active, and interactive participant in the learning process; therefore, the focus of the learning process is on the learner rather than the instructor. Faculty-learner and learner-learner interaction is an integral part of the learner-centered approach (Schwitzer et al., 2001). These interactions help to create a community of learners (Schwitzer et al., 2001; Scott, 2012; Sull, 2012a; Sull, 2012b). Social presence and opportunities for collaboration will also help to build a

community of learners (Palloff & Pratt, 2007). Developing a community of learners is a crucial element in the distance learning process (Palloff & Pratt, 2007).

Faculty-learner Relationships

Teaching approaches should incorporate faculty-learner interactions (Chickering & Reisser, 1993). This is one of Chickering's and Reisser's (1993) seven principles of good practice in undergraduate education. Faculty-learner relationships are instrumental in promoting sense of community and student identity development and specifically may foster Chickering's developmental vectors of intellectual competence, autonomy and interdependence, and purpose (Chickering & Reisser, 1993).

Teaching approaches should also incorporate providing prompt feedback to students, another principle of good practice in undergraduate education (Chickering & Reisser, 1993). Burton & Goldsmith (2002) conducted a qualitative study on students' experiences in distance learning courses and found prompt feedback to students taking online courses can foster a positive faculty-learner relationship.   Training of instructors to implement effective online teaching methods would improve the distance learning experience for students.

Batts, Pagliari, Mallett, & McFadden (2010) conducted a study to determine if community college faculty teaching distance learning courses participated in training, and if so, what type. Participants were also asked what online methods were used in their courses.   A survey was administered to 404 full-time and part-time online teaching faculty at eight community colleges (Batts et al., 2010). A of 28% revealed 59% attended campus group training sessions, 30% participated in web-based training, 27% received person-to-person training, and 58% had not attended any off-campus training within the

last twelve months (Batts et al., 2010). One aspect of the survey focused on whether

faculty had received information on best practices for distance learning (Batts et al.,

2010). The two most prevalent practices covered were timely feedback, 68%, and using

discussion boards to promote interaction, 67% (Batts et al., 2010). Another aspect of the

survey focused on which best practices faculty integrated in distance learning courses

(Batts et al., 2010). Analysis revealed the top four responses to be timely feedback, 86%,

providing detailed syllabus information, 75%, and using online assessment tools, 74%,

and using discussion boards to facilitate interaction, 71% (Batts et al., 2010).

Learner-learner Relationships

Encouraging cooperation among students and encouraging active learning, two

additional principles of good practice in undergraduate education, help to facilitate

learner-learner relationships (Chickering & Reisser, 1993). Brown (2001) conducted a

qualitative study and concluded the processes through which community formed in adult

asynchronous distance learning courses were making friends on-line, acceptance by

online peers, and camaraderie with online peers. Acceptance occurred through threaded

discussions on important concepts which upon conclusion left students with personal

satisfaction (Brown, 2001). According to Chickering & Reisser (1993), course

curriculums that offer diverse perspectives and provide opportunities to synthesize

learning help facilitate student development.

Friendships and student communities that form in courses may facilitate student

identity development for all seven of Chickering's identity vectors (Chickering &

Reisser, 1993). This is also applicable to distance learning courses. Student communities

may become meaningful subcultures of students with diverse backgrounds (Chickering &

Reisser, 1993). Chickering & Reisser (1993) suggest interactions within these communities are significant to student identity development. Faculty teaching distance learning courses should incorporate opportunities for student interactions and collaborations.

Smith (2008) purports effective collaborative learning in small groups must be facilitated by the faculty teaching a distance learning course. Part of this facilitation is faculty empowering students to share in the authority of the learning environment (Smith, 2008). When students must accept this authority and group members work interdependently and accept accountability for the learning of each member, students work through the tensions and emotional issues associated with group work (Smith, 2008). In distance learning students may fear losing their individuality but many recognize they have a commitment to the group and also an interdependency (Smith, 2008). The conflict of dealing with authority issues in the online and group environment coupled with forming relationships with group members challenges the student to deal with authority and intimacy simultaneously (Smith, 2008). Confronting these conflicts promotes individual and group identity (Smith, 2008). The faculty can facilitate effective collaborative learning in small groups by helping students to work through these conflicts by offering tips on how to be an effective group member, creating ground rules for group communication, and providing feedback to students as they take responsibility for shared learning experiences (Smith, 2008).

Interaction with others is part of collaborative learning. Although collaborative learning can positively influence identity development, balance in the quantity of interaction times needs to be considered. A quantitative study by Grandzol and Grandzol

(2010) examined data from a course management system that tracked time spent in interaction activities specific to faculty participation and student participation to determine if these were variables affecting the completion of the course. All distance learning business courses at six mid-Western community colleges were evaluated over a two-year period. (Grandzol & Grandzol, 2010). Grandzol & Grandzol found only student or learner-learner participation had a significant influence on course completion with higher interaction times leading to lower course completion rates. One implication may be for the instructor to be selective in assigning activities that require learner-learner participation (Grandzol & Grandzol, 2010). Courses requiring excessive interaction amongst students may contribute to dissatisfaction with the course or inability to meet course expectations and complete the course.

In addition to quantity of expected interactions in a course, student learning styles must also be considered. Liu (2008) conducted a phenomenological study to explore learner-learner interaction experiences of students taking distance learning courses at community colleges and public and private universities. Five students who had taken distance learning courses were interviewed (Liu, 2008). Analysis of the data revealed five factors, one of which was the learner factor, and the patterns that emerged in relationship to each factor (Lieu, 2008). Three themes emerged with the learner factor: learning style, motivation, and satisfaction (Lieu, 2008). Diversity in learning styles had an effect on interaction processes (Lieu, 20008). While some liked to interact with their peer learners, others did not. (Lieu, 2008). Those who liked to interact and were not provided many opportunities were less satisfied with their courses (Lieu, 2008). This was in contrast to students who preferred to be independent learners (Lieu, 2008). Most

students reported a lack of motivation to interact with other students (Lieu, 2008). Key to

the findings is the need for instructors to motivate students to interact with their peers in

the class and to consider individual learning styles in balancing requirements for

interaction.

Section Summary

Distance learning requires both learner-learner and faculty-learner interactions

and communications to provide a learner-centered approach and foster learning

communities.   These interactions and communications and thus learning communities

also have the potential to promote sense of community and aspects of student identity

development. Student identity development is a critical aspect of the college experience

for traditional learners.

Chapter Summary

This chapter explored the concepts of student identity development, sense of

community, and distance learning in college environments. The significance of student

identity development and sense of community has been well documented. Previous

research on sense of community indicates the relevance of this concept to distance

learning. However, research results are mixed as to the relationship between sense of

community and learning. Previous research on student development indicates the

relevance of this concept to distance learning. Few of the studies cited were conducted

with the community college population.   Following an extensive literature review,

studies conducted on the relationship between sense of community, and student identity

development, and academic adjustment have not been found.

A dominant thread throughout the literature on student development, sense of community and distance learning were the influences of learner-learner and faculty-learner interactions and communications on these concepts. If these influences promote sense of community and advancement in Chickering's vectors of student identity development, further research is needed to determine if there is a relationship between these two variables and academic adjustment in community college students taking distance learning courses. This study attempted to address this gap in the literature.

CHAPTER THREE

This chapter presents the research methodology and identifies details of the population and sample selected for the study. The instruments used in the study are described. An explanation of their applicability to the study, the validity and reliability of each, and an explanation of how the instruments were administered and scored during the study are included. Data collection procedures are outlined, followed by a discussion of methods of data analysis.

Student identity development has been studied extensively in college students and specifically those students taking courses in a traditional face-to-face classroom setting. Sense of community in students taking distance learning courses has also been researched extensively. Research supports that sense of community may have an impact on aspects of student identity development. Research on student identity development, sense of community, and learning in students taking online courses has not been found following an extensive search of literature by the researcher. To address this gap in the research, three questions were addressed in this study:

1. How will student identity development predict academic adjustment in traditional community college students taking only distance learning courses?

2. How will sense of community predict academic adjustment in community college students taking only distance learning courses?

3. How will student identity development and sense of community together predict academic adjustment in traditional community college students taking only distance learning courses?

Research Design

This study's design is summarized in Table 1, which presents the variables, measures, and analytical procedures used for each of the three research questions. As can be seen, the study was conducted using a non-experimental, correlational research design. Sense of community, student identity development, and academic adjustment were the continuous variables under study. The correlational research method was selected to make predictions between independent variables and the dependent variable (Rovai, Baker, & Ponton, 2014). This method was used to address questions one through three to determine if student identity development and sense of community, the independent variables, independently or together predicted academic adjustment, the dependent variable.

Population and Sample

A multi-stage purposive sampling method was used. The target population was defined as community college students who met the following criteria:

1. Students who were between the ages of 18-25,

2. Students who had taken 12 credits in succession at his/her respective institution.

3. Students who had taken only distance learning courses during college with the exception of speech, physical education, health, and science classes.

A purposive sampling method was used to determine participants eligible to be included in the study. For the first criterion, this is the age range for the traditional college student when student identity development is critical to the college experience and success (Chickering & Reisser, 1993). For the second criterion, students who have taken 12 credits at college have had longer to achieve some aspect of student identity development. For the third criterion, if sense of community and student identity

development in courses is a predictor of academic adjustment, only distance learning courses were a factor and possibly speech, physical education, health, and science classes.

Students in a transfer curriculum were likely to compose the majority of the sample at most community colleges. Most of these curricula in the community colleges represented in the study require a speech class and a physical education or health class. Many transfer curricula require a science class.

Speech classes were not offered through distance learning completely at some of the colleges in the study. The classes were offered as blended or traditional courses. Physical education classes were not offered through distance learning at some of the colleges. Most were offered as blended or traditional courses. While basic science courses were offered completely through distance learning at some colleges, others offered these courses only as a blended course with the labs occurring on campus.

Some of the students who participated in the study had taken developmental courses. These courses were offered on campus and through distance learning and some were self-paced. Some students had taken dual credit courses in high school and some had transfer credits from courses taken at other colleges. Developmental, dual, and transfer credits were not included in the total number of credits a student had taken at her or his respective college. Students who took other courses in a traditional classroom setting or in a blended course were not included in the sample in an effort to control for the possible influence of these types of courses on student identity development.

Table 1

Research Questions and Variables and Measures and Analysis Method

Research Questions	Independent Variable/Measure	Dependent Variable/Measure	Analysis
How will student identity development predict academic adjustment in traditional community college students taking only distance learning schedules?	Student identity development SDTLA	Academic adjustment Academic Adjustment subscale of the SACQ	simple regression
How will sense of community predict academic adjustment in traditional community college students taking only distance learning schedules?	Sense of community CCS	Academic adjustment Academic Adjustment subscale of the SACQ	simple regression
How will student identity development and sense of community together predict academic adjustment in traditional community college students taking only distance learning schedules?	Sense of community CCS Student identity development SDTLA	Academic adjustment Academic Adjustment subscale of the SACQ	multiple regression

Representatives of twenty-two of the twenty-three community colleges within a community college system in the Southeastern United States were asked for permission to collect data at the respective college from the target population. One college was not considered due to the low number of students taking distance learning courses. Representatives from ten colleges granted permission, seven rural-serving, two suburban-serving, and one urban-serving. The colleges were classified based on the type of setting the institution served, rural-serving, suburban-serving, and urban-serving. The Carnegie Foundation for Advancement of Teaching identifies associate's colleges as rural-serving, suburban-serving, or urban-serving institutions based on a classification scheme developed by colleagues Stephen Katsinas, Vincent Lacey, and David Hardy at The University of Alabama (Carnegie Foundation for the Advancement of Teaching, n.d.). The classification scheme classifies rural-serving institutions as physically located within a Primary Metropolitan Statistical Area [PMSA] or Metropolitan Statistical Area [MSA] with a total population less than 500,000, or not located in a PMSA or MSA according to the 2000 census (Carnegie Foundation for the Advancement of Teaching, n.d.). Urban-serving and suburban-serving institutions are "physically located within PMSAs or MSAs, respectively, with populations exceeding 500,000 according to the 2000 census" (Carnegie Foundation for the Advancement of Teaching, n.d.).

The ten community colleges represented a geographical distribution across the state. The urban-, suburban-, and five of the rural-serving colleges represented each had a large percentage of distance learners who met the specific criteria. The geographical distribution of the colleges across the state provides greater generalizability and therefore, external validity of study findings (Leedy & Ormrod, 2005).

The computerized student information system was used at each college to determine all students who met the criteria to participate in the study. This was done by running a query based on the criteria.

Instrumentation

Student Developmental Task and Lifestyle Assessment

The SDTLA was used to measure each student's level of student identity development. See Appendix A for the SDTLA as it appears in paper format. This copyrighted instrument has been revised since the development of the original instrument and measures student identity development based on three of Chickering's developmental vectors and without limitation to gender or race (Wachs & Cooper, 2002). The instrument was applicable to this study because the theoretical framework used was Chickering's developmental vectors. The vectors are developing competence, managing emotions, moving through autonomy toward interdependence, developing mature interpersonal relationships, establishing identity, developing purpose, and developing integrity (Chickering & Reisser, 1993). The current instrument, based on the revised vectors, measures three of the vectors: moving through autonomy toward interdependence, developing mature interpersonal relationships, and developing purpose (Wachs & Cooper, 2002; Winston, Miller & Cooper, n.d.).

The instrument consists of three tasks and each has subtasks defined within that task (Wachs & Cooper, 2002; Winston, Miller & Cooper, n.d.). Table 2 identifies the tasks and subtasks. Included in the instrument is also a Salubrious Lifestyle Scale [SL] and a Response Bias Scale [RB] (Wachs & Cooper, 2002; Winston, Miller & Cooper, n.d.). The SL measures degree of lifestyle as it relates to health and wellness but does not measure development. If there is a high score on the RB, a score between 4 and 6, the

student is answering the tasks in a way that indicates an outcome better than what is realistic (Winston, Miller & Cooper, n.d.).

A longitudinal study of students from four-year and two-year higher education institutions conducted by Wachs and Coopers (2002) purports that the SDTLA is valid to measure student development according to Chickering's vectors. Table 2 identifies the coefficient alpha for each task and subtask (Winston, Miller, & Cooper, 1999). The subtasks with relatively low Alpha Coefficients should not be considered separately but as a total task (Winston, Miller, & Cooper, n.d**.).** Subtasks were not evaluated as dependent variables in the study (Winston, Miller, & Cooper, 1999).

For this study, students were requested to complete the SDTLA online one time. Students were assigned and used a unique username and password to sign in to complete the assessment, which takes approximately 25-35 minutes (Winston, Miller & Cooper, n.d.). The assessment did not have to be completed during one log-in and could be accessed until the deadline for completion (Winston, Miller, & Cooper, n.d.). Students were asked to read and answer each of the 153 items which mostly addressed some aspect of the three developmental vectors (Winston, Miller, & Cooper, n.d.). Answer choices accompanied each item, reflected on that particular item, and were multiple choice or true or false (Winston, Miller, & Cooper, n.d.). Students were directed to click on the answer that was applicable to them (Winston, Miller, & Cooper, n.d.). Upon submission of the assessment, the student received a report of her or his answers (Winston, Miller, & Cooper, n.d.). Scores for the instrument were calculated by computer analysis and indicated scores achieved on each subtask within a task,

Table 2

Student Developmental Task and Lifestyle Assessment Tasks, Subtasks and Reliability

Tasks	Subtasks	Coefficient Alpha
Establishing and Clarifying Purpose Task		.81
	Educational Involvement	.76
	Career Planning	.84
	Lifestyle Planning	.81
	Cultural Participation	.82
Developing Autonomy Task		.88
	Emotional Autonomy	.71
	Interdependence	.77
	Academic Autonomy	.76
	Instrumental Autonomy	.62
Mature Interpersonal Relationships Task		.76
	Peer Relationships	.65
	Tolerance	.74

and included a statement comparing the score to the students peers of the same gender and classification as the student (Winston, Miller, & Cooper, n.d.) The RB accounted for six questions in the instrument. Students were directed to answer true or false to these questions. Each question was given a number value. Student data with response bias scores between 4 and 6 were not considered in data analysis (Winston, Miller & Cooper, n.d.). Also included in the assessment were seven demographic questions, two of which were essential in interpreting participants' scores, gender and class standing (Winston, Miller & Cooper, n.d.).

The computer analysis also evaluated any missing data and did not score any subtask or scale with greater than 12% missing responses (Winston, Miller & Cooper, 1999). Only questions that were answered were analyzed by the computer by taking the sum of the item values for the subtask and dividing it by the number of items answered

for that subtask. Item values for most subtasks ranged from 1 to 5 (Winston, Miller & Cooper, 1999). Only data with scores for every subtask were included in data analysis for the study.

The higher the score achieved on each subtask and the instrument as a whole, the greater the level of identity development achieved. The computer analysis converted raw scores for each subtask to T scores. The T score is a standard score in which the mean is 50 and the standard deviation is 10 (Winston, Miller & Cooper, 1999). The standard scores were the scores reported to each participant and the researcher. It is recommended that measurement error be taken into consideration; therefore, "scores that are within one-half standard deviation above or below the mean (that is, between 55 and 45) be treated as substantially equivalent to the mean" (Winston, Miller & Cooper, 1999, p. 15). Each student participant's electronic results on the SDTLA indicated "a score between 45 and 55 is representative of the average score for a national sample of persons of your same gender and year in school." The statement was referring to each subtask score (Winston, Miller & Cooper, n.d.).

Classroom Community Scale [CCS]

The CCS was used to measure each student's sense of community in the student's respective online learning environment. See Appendix B for the CCS. The instrument was developed and copyrighted by Rovai (2002b) to measure sense of community in online learning environments. Rovai's intent was to create a test instrument to be used in studies to help educators identify instructional methods that facilitate sense of community. The CCS has two subsets, one to measure connectedness and the other to measure learning (Rovai, 2002b). Connectedness relates to students feelings of

"connectedness, cohesion, spirit, trust, and interdependence" in their classroom community, and learning relates to students feelings of "interaction" as they gain understanding, and their perceptions of achievement of "educational goals" and accomplishment of meeting their "expectations" (Rovai, 2002b, p. 207).

The CCS was applicable to this study because it was designed to be used in distance learning environments and incorporates characteristics of sense of community in educational environments based on professional literature (Rovai, 2002b). The characteristics were evaluated for content validity and found to be totally relevant to sense of community (Rovai, 2002b). The instrument has ease of understandability with a Flesch Reading ease score of 68.4 (Rovai, 2002b).

The CCS originally consisted of 40 items: 20 items were related to sense of community and 20 items were related to sense of community as it relates to specific learning environments, online and the traditional face-to-face classroom (Rovai, 2002b). A five-point Likert-style scale is used for participants to identify their perception of an item: strongly agree, agree, neutral, disagree, and strongly disagree (Rovai, 2002b). Overall scores were computed with higher scores indicating greater sense of community (Rovai, 2002b). Content validity was evaluated by three experts who were university psychology faculty (Rovai, 2002b). This process concluded with 20 items remaining: 10 related to perceptions of connectedness and 10 related to achievement of learning (Rovai, 2002b). The final 20 items were rated by the experts to be "totally relevant to sense of community in a classroom setting" (Rovai, 2002b, p. 204).

Reliability analysis of the instrument was calculated using Cronbach's Alpha coefficient and the split-half coefficient with results indicating excellent reliability

(Rovai, 2002). For the full CCS, scores were .93 and .91 respectively, with the "split-half coefficient corrected by the Spearman-Brown prophecy formula" (Rovai, 2002b, p. 206). The subscales were evaluated for internal consistency estimates with a Cronbach's coefficient and split-half coefficient for the connectedness subscale of .92 for each indicating excellent reliability, and for the learning subscale .87 and .80 respectively indicating good reliability (Rovai, 2002b).

A factor analysis of each subscale supported the construct validity of classroom community (Rovai, 2002b). Internal consistencies determined by factor analysis were high for each subscale and the overall instrument indicating the CCS overall is a valid measure of classroom community (Rovai, 2002b).

For this study, students were requested to complete the instrument one time online while reflecting on only one specific distance learning course they took the previous semester. Students were asked to read each of the 20 questions and answer each item while reflecting on the specific distance learning course (Rovai, 2002b). The answer choices were indicated in a Likert-style format that was previously detailed in the discussion of the instrument. Students were directed to select an answer in the column indicating the statement that reflected their perception of the course as it related to the question (Rovai, 2002b). Total scores for the instrument were calculated by computer analysis with higher scores indicating greater sense of community in the course (Rovai, 2002b). Raw scores for the CCS range from a minimum of 0 to a maximum of 40 (Rovai, 2002b).

Academic Adjustment Subscale of the Student Adaptation to College Questionnaire

The Academic Adjustment subscale of the Student Adjustment to College

Questionnaire [SACQ] was used to measure each student's perceived academic

adjustment. See Appendix C for the Academic Adjustment subscale of the SACQ. The

SACQ is a self-report instrument designed to measure student adjustment to the demands

of college (Baker & Siryk, 1999).   The copyrighted instrument has four subscales which

measure specific aspects of adjustment or coping to college (Baker & Siryk, 1999).   The

subscales are Academic Adjustment, Social Adjustment, Personal-Emotional Adjustment,

and Goal Commitment/ Institutional Attachment (Baker & Siryk, 1999).

     The SACQ consists of 67 items (Baker & Siryk, 1999). The total score for all 67

items is an index for overall adjustment, while the sum of individual subscales is an index

of adjustment for that specific subscale (Baker & Siryk, 1999). The SACQ is applicable

to identifying students who may benefit from counseling with regard to specific

adjustment and to basic research purposes (Baker & Siryk, 1999). The SACQ can be

used with students at any time during the college career; however, most studies using the

SACQ have been conducted with freshman students (Baker & Siryk, 1999). Use of the

instrument with students at other college levels may need to be empirically evaluated

(Baker & Siryk, 1999).

     Estimates of internal consistency reliability have been determined for the 67-item

SACQ (Baker & Siryk, 1999). Cronbach's coefficient alpha values for the full scale

range from .92 to .95, and for the Academic Adjustment subscale range from .81 to .90

(Baker & Siryk, 1999). The values were based on data gathered over several years from

first- and second-semester freshman at three colleges (Baker & Siryk, 1999).

     The Academic Adjustment subscale was applicable to this study because it

measures each student's adjustment or coping to the educational demands of college

(Baker & Siryk, 1999).   The Academic Adjustment subscale consists of 24 items, specifically questions 3, 5, 6, 10, 13, 17, 19, 21, 23, 25, 27, 29, 32, 36, 39, 41, 43, 44, 50, 52, 54, 58, 62, and 66 of the SACQ (Baker & Siryk, 1999). The items are classified into four clusters which include motivation, application, performance, and academic environment (Baker & Siryk, 1999).   The motivation cluster evaluates "attitudes toward academic goals and the academic work required, motivation for being in college and for doing academic work, and sense of educational purpose" (Baker & Siryk, 1999, p. 14). The application cluster evaluates "how well motivation is being translated into actual academic effort, how successfully the student is applying herself/himself to the academic work and meeting academic requirements" (Baker & Siryk, 1999, p. 14).   The performance cluster evaluates the "efficacy or success of academic effort as reflected in various aspects of academic performance, the effectiveness of academic functioning" (Baker & Siryk, 1999, p. 14). The academic environment cluster evaluates "satisfaction with the academic environment and what it offers" (Baker & Siryk, 1999, p. 14).

A nine-point scale is used for participants to self-report their perception of academic adjustment to college (Baker & Siryk, 1999). Each of the 24 items is scored from one to nine (Baker & Siryk, 1999). The responses range from "applies very closely to me" beginning at one point and "doesn't apply to me at all" at nine points or less adaptive to more adaptive, respectively (Baker & Siryk, 1999). The Academic Adjustment subscale can be separately scored from the rest of the SACQ (Baker & Siryk, 1999).

For this study, students were requested to complete the Academic Adjustment subscale one time online and select the answer that best reflected the degree of truth

related to each question at the time the instrument was being completed (Baker & Siryk, 1999). The subscale took approximately 10 minutes to complete. Students were asked to read the 24 questions and use the nine-point scale previously detailed to answer each question by selecting an answer choice from the appropriate column (Baker & Siryk, 1999).

Total scores for the subscale were calculated by computer analysis with higher scores indicating greater academic adjustment in college and lower scores indicating difficulty in academic adjustment (Baker & Siryk, 1999). Items with missing responses were identified before the computer analysis. When one or two responses were missing from individual student data, the value of a missing response was prorated "by substituting the mean of the responses for the subscale on which the missing item appeared, rounded to the nearest whole number" (Baker & Siryk, 1999, p. 11). When greater than two item responses were missing, the data was not included in overall data analysis (Baker & Siryk, 1999). Raw scores for the Academic Adjustment subscale range from 24-216 (Baker & Siryk, 1999). Empirically evaluated behavior correlates of the subscale indicate lower score associations (Baker & Siryk, 1999). The lower score associations relevant to this study include "feelings of lack of control over the outcome of one's academic efforts; unstable and age-inappropriate goals; and less realistic self-appraisal" (Baker & Siryk, 1999, p. 15).

Demographic Questionnaire

A five item demographic questionnaire was included in data collection. See Appendix D for the demographic questionnaire. Student information specific to age, gender, ethnicity and college standing were requested. The final question requested a

student email address which would be used to communicate with the student regarding incentives for participating in the study.

Data Collection Procedures

The president of each college or their designee was provided a full review of the proposal and acknowledged consent to allow the study to proceed at her or his respective college. Spring and fall semesters of 2014, following the registration drop-add period, the researcher worked with personnel in institutional research on each of the represented campuses to identify students who met the criteria to participate in the study. Students who were eligible to participate in the study were sent an email requesting their participation. See Appendix E for email 1. Participants were informed in the email of the nature of the study, what participation involved, contact information of the researcher, and acknowledgement that they could discontinue participation at any time during the study without penalty. Participants were assured within this document that confidentiality would be maintained during and following the study.

The initial email included a web address to access to the first two surveys which included the CCS and the Academic Adjustment subscale of the SACQ instruments, and the demographic questionnaire. The email explained that beginning and completing the surveys acknowledged their consent to participate in the study and that participation in the study was elective. Data for the first two surveys were collected using the platform SurveyMonkey. Students were told if they completed the surveys by the date indicated their name would be entered into a random drawing for $100.

Two weeks after the initial email was sent, a reminder email was sent to all eligible participants who had not completed the first two surveys and demographic questionnaire. See Appendix F for email 2. When students completed the first two surveys and the demographic questionnaire, they were sent a thank you email with a web link to access the third survey, the SDTLA, and a user name which was a unique code, and a password. See Appendix G for email 3.

The SDTLA was administered by Appalachian State University and accessed through the college's website for the instrument. Students were told if they completed the surveys by the date indicated, their name would be entered into a second random drawing for $100. In an effort to boost response rates in the study during the fall semester, students who completed all three instruments were offered a $15 e-card to one of three food vendors. This incentive for participation was included in the initial email sent to students. If students had not accessed or completed the SDTLA two weeks following receipt of the survey three information, a reminder email was sent. See Appendix H for email 4. Following completion of all three surveys and the demographic questionnaire, students were sent a thank you email and an e-card for the food vendor they choose. See Appendix I for email 5.

Data Analysis

SPSS statistical software was used to analyze the data by linear regression analysis. "Regression uses the relationship between variables in making predictions" (Rovai, Baker, & Ponton, 2014, p. 349). For research questions one and two, simple regression analysis was used (Rovai, Baker, & Ponton, 2014). In question one, simple regression analysis was used to determine if student identity development predicted

academic adjustment (Rovai, Baker, & Ponton, 2014). In question two, simple regression analysis was used to determine if sense of community predicted academic adjustment (Rovai, Baker, & Ponton, 2014). For question three, multiple regression analysis was used to determine if student identity development and sense of community together predicted academic adjustment (Rovai, Baker, & Ponton, 2014). Multiple regression analysis was used because there were two independent or predictor variables (Rovai, Baker, & Ponton, 2014). In linear regression analysis, the least-squares solution is used to determine the line of best fit, the adjusted coefficient of multiple determination to measure goodness of fit of the model, and the coefficient of multiple determination adjusted for the number of independent variables in the regression model to determine effect size (Rovai, Baker, & Ponton, 2014).

Missing data were determined for the CCS and the Academic Adjustment subscale of the SACQ. Since there wasn't a standard protocol identified in the literature for missing data in the CCS, the same method for imputing missing data for the Academic Adjustment subscale was used which was discussed previously.

Data were evaluated for outliers from a preliminary regression analysis using SPSS. Outliers are significant because they can skew data analysis results and thus the meaning of the regression correlation, specifically if the skew is in the same direction (Sprinthall, 2007). Multiple regression and correlation procedures used in multivariate tests have an assumption that multivariate outliers will not exist; therefore, it was imperative that statistical tests be performed to identify any outliers (Rovai, Baker, & Ponton, 2014). Extreme univariate and multivariate outliers were evaluated using any value greater than or less than three standard deviations from the mean of the variable

(Rovai, Baker, & Ponton, 2014). The researcher evaluated standardized residual to determine this. Multivariate outliers were evaluated using *Cook's distance (D)* using the definition of cases having a Cook's distance greater than one (Rovai, Baker, & Ponton, 2014).

Outliers also contribute to non-normal distribution of data; therefore normality was evaluated (Rovai, Baker, & Ponton, 2014). Normality is an assumption of regression analysis (Rovai, Baker, & Ponton, 2014). Correlation coefficient sizes indicate normality or non-normality. Non-normality was evaluated as skewness values outside of the range -1.0 and +1.0 (Rovai, Baker, & Ponton, 2014).

Possible causes of outliers include data collection, entry or scoring errors, and valid, but rare measurements (Rovai, Baker, & Ponton, 2014). Outliers that existed because of typos or invalid responses will be deleted (Rovai, Baker, & Ponton, 2014). Outliers that resulted from valid, rare measurements remained in the dataset (Rovai, Baker, & Ponton, 2014).

Additional assumptions of regression analysis include independence of observations, measurement without error, and linearity (Rovai, Baker, & Ponton, 2014). Checking for each of the assumptions discussed was done in an attempt to avoid Type I and Type II errors and boost effect sizes (Rovai, Baker, & Ponton, 2014).

The Durbin-Watson test was used to evaluate assumption of independence of observations (Rovai, Baker, & Ponton, 2014). A violation of this assumption can substantially affect level of significance and statistical power of a test (Rovai, Baker, & Ponton, 2014). For observations to be deemed independent the *d* should be between 1.5

and 2.5 (Rovai, Baker, & Ponton, 2014). Values can range from 0 to 4 with values closer to 0 indicative of extreme positive autocorrelation, and values closer to 4 indicative of extreme negative autocorrelation (Rovai, Baker, & Ponton, 2014).

Measurement without error assumption was evaluated by reviewing reliability characteristics of instruments used in the study (Rovai, Baker, & Ponton, 2014). Instruments should have a high reliability or .70 or higher to avoid this assumption (Rovai, Baker, & Ponton, 2014). Additional measures were taken by confirming this reliability as part of the study (Rovai, Baker, & Ponton, 2014). Unreliable measurements are problematic for regression and correlation analyses producing biases with regression analysis if independent errors are measured with error, therefore affecting least squares estimators and variance estimators (Rovai, Baker, & Ponton, 2014).

To evaluate for assumption of linearity, a common assumption of regression and correlation analysis, a scatterplot was produced to attempt to identify outliers and slopes. If a relationship is nonlinear and it is assumed linear, this error can underestimate the strength of the relationship or not detect a relationship exists (Rovai, Baker, & Ponton, 2014).

Limitations

The study is not without limitations. Because the questionnaires were emailed there was the risk there would be a low return rate, although reminders were sent requesting participation (Leedy & Ormrod, 2005). Those individuals who returned questionnaires may not have been representative of the population (Leedy & Ormrod, 2005). Because each participant read the questionnaires himself or herself without the researchers presence there was also the potential for respondents to have misinterpreted

questions (Leedy & Ormrod, 2005). The resulting response rate of participants may be a sampling bias since the percentage of non-respondents is high (Leedy & Ormrod, 2005). Sampling bias may have occurred because differences may have existed between participants and non-participants, such as respondents having more of an interest in the concepts being studied (Leedy & Ormrod, 2005). The sampling bias affected external validity related to generalizability to the population (Leedy & Ormrod, 2005).

The self-report style of the SDTLA may have contributed to participants responding to questions in a way they deemed to be socially desirable (Winston, Miller, & Cooper, n.d.). The self-report style of the Academic Adjustment subscale of the SACQ may have contributed to participants responding to questions in a way to have made him or her seem more or less adjusted to college (Baker & Siryk, 1999).

Because the study was a correlational non-experiment, the outcome predicted a correlational relationship between variables and not a cause and effect relationship (Leedy & Ormrod, 2005). A follow-up experimental study is needed to test a hypothesis related to cause and effect (Leedy & Ormrod, 2005).

Chapter Summary

This chapter detailed the methodology for this study. A correlation design was used to answer three research questions. Simple and multiple linear regression analysis was used to answer the three research questions.

CHAPTER FOUR

The purpose of this study was to determine if there is a relationship between student identity development and sense of community independently, and whether these two constructs jointly have a relationship with academic adjustment in traditional community college students who took only distance learning courses. This chapter presents a brief review of research methodology, a description of the participants in the study, the statistical measures used, and results for each research question.

Review of Methodology

The study was conducted during the spring 2014 academic semester with students from five community colleges and the fall 2014 academic semester with students from five different community colleges. The students who met the criteria for the study were emailed and asked to complete two electronic surveys using SurveyMonkey. The first survey included questions from the CCS. The second survey, which was continuous from the first survey, included questions from the Academic Adjustment subscale of the SACQ, and demographic questions regarding gender, age, ethnicity, and number of credits completed. Upon completion of the two surveys, students were requested to complete a third survey, the SDTLA, using an electronic platform through Appalachian State University. Students were provided a user name and password to access the third survey. Reminder emails were sent to students during the four to five weeks the surveys were available. The number of emails sent to a student was based on individual participation and may have been sent prior to the beginning and following completion of the first two surveys, and following the beginning and before completing the third survey.

The SDTLA was used to measure each student's level of student identity developmental based on three of Chickering's developmental vectors: moving through autonomy toward interdependence, developing mature interpersonal relationships, and developing purpose (Wachs & Cooper, 2002; Winston, Miller & Cooper, n.d.). See appendix A for the SDTLA. The 153 item instrument included a salubrious lifestyle scale, demographic questions, and a response bias scale (Wachs & Cooper, 2002; Winston, Miller & Cooper, n.d.). Participants' results with response bias were not used in data analysis. The salubrious lifestyle scale, unrelated to measuring student identity development, was not included in the total score for the instrument. The higher the score on the SDTLA indicated the student had achieved a greater level of student identity.

The CCS was used to measure each student's sense of community in the student's respective online learning environment. See appendix B for the CCS. The higher the score achieved on the 20 item scale, the greater the sense of community in a course (Rovai, 2002b). Raw scores for the CCS range from 0 to 40 (Rovai, 2002b).

The Academic Adjustment subscale of the SACQ was used to measure each student's perceived academic adjustment to college (Baker & Siryk, 1999). See appendix C for the SACQ. The sum of the 24 item subscale is an index of academic adjustment with higher scores indicating greater academic adjustment in college (Baker & Siryk, 1999). Raw scores for the Academic Adjustment subscale range from 24-216 (Baker & Siryk, 1999).

Sample

Ten colleges approved the researcher's request to permit her to seek study participants from students enrolled at their college. From the ten colleges collectively,

769 students met the criteria to participate in the study. The CCS and Academic

Adjustment subscale were completed by 169 participants (21.9%). One participant's

CCS survey had to be discarded because the number of responses missing exceeded what

was allowed for the instrument. The SDTLA was completed by 111 participants

(14.6%). Two participants surveys had to be discarded due to response bias scores. Of

the participants completing all three instruments, four did not indicate an age and three

did not indicate an ethnicity. Tables 3-10 indicate by gender, age, ethnicity, and

community college classification the number and percentage of the CCS and Academic

Adjustment subscale, survey one, and the SDTLA, survey two, completed. The

community colleges were categorized as either rural-, suburban-, or urban-serving.

Descriptive analysis of data were performed to determine the frequencies and

percentages.

Table 3

Number and Percent of CCS and Academic Adjustment Subscale Surveys by Gender

Gender	CCS # of students	% of students	Academic Adjustment subscale # of students	% of students
Female	148	88.1	149	88.2
Male	20	11.9	20	11.8
Total	168	100	169	100

Table 4

Number and Percent of CCS and Academic Adjustment Subscale Surveys by Age

Age	CCS # of students	% of students	Academic Adjustment subscale # of students	% of students
18	7	4.2	7	4.1
19	26	15.5	26	15.4
20	28	16.7	28	16.6
21	26	15.5	26	15.4
22	20	11.9	20	11.8
23	14	8.3	14	8.3
24	21	12.5	22	13.0
25	22	13.1	22	13.0
Missing	4	2.4	4	2.4
Total	168	100	169	100

Table 5

Number and Percent of CCS and Academic Adjustment Subscale Surveys by Ethnicity

Ethnicity	CCS # of students	% of students	Academic Adjustment subscale # of students	% of students
Black	22	13.1	22	13
White	123	73.2	124	73.4
Hispanic	6	3.6	6	3.6
Asian/Pacific Islander	1	.6	1	.6
Arab	1	.6	1	.6
Multiracial	12	7.1	12	7.1
Missing	3	1.8	3	1.8
Total	168	100	169	100

Table 6

Number and Percent of CCS and Academic Adjustment Subscale Surveys by Community College Classification

Classification	CCS # of students	% of students	Academic Adjustment subscale # of students	% of students
Rural-serving	82	48.8	82	48.5
Suburban-/Urban-serving	86	51.2	87	51.5
Total	168	100	169	100

Table 7

Number and Percent of SDTLA Surveys by Gender

Gender	# of students	% of students
Female	99	90.8
Male	10	9.2
Total	109	100

Table 8

Number and Percent of SDTLA Surveys by Age

Age	# of students	% of students
18	5	4.6
19	22	20.2
20	16	14.7
21	15	13.8
22	9	8.3
23	10	9.2
24	15	13.8
25	14	12.8
Missing	3	2.8
Total	109	100

Table 9

Number and Percent of SDTLA Surveys by Ethnicity

Ethnicity	# of students	% of students
Black	14	12.8
White	85	78.0
Hispanic	1	.9
Asian/Pacific Islander	0	0
Arab	0	0
Multiracial	7	6.4
Missing	2	1.8
Total	109	100

Table 10

Number and Percent of SDTLA Surveys by Community College Classfication

Classification	# of students	% of students
Rural-serving	51	46.8
Suburban-/Urban-Serving	58	53.2
Total	109	100

Quantitative Statistics

Statistical package for social sciences [SPSS] was used to analyze data. Data were entered into SPSS, coded, and organized. Total scores were determined for the CCS, the SDTLA, and the Academic Adjustment subscale of the SACQ. A preliminary analysis of data was done using a one-way ANOVA test to determine if there was a statistically significant difference in the mean CCS, SDTLA, and Academic Adjustment subscale total scores for community colleges based on classification, rural-, suburban-, or urban-serving, and ultimately if there were between group differences by classification. Suburban- and urban-serving college data were collapsed into one classification and approximated the sample size for rural-serving community college participants. Rural-serving community college participant data were compared to suburban-/urban-serving community college participant data. Levene's test indicated that the homogeneity of variance assumption was tenable for differences in total scores for the Academic Adjustment subscale, the SDTLA, and the type of community colleges, rural-serving, and suburban-/urban-serving. The analysis of variance indicated that there were not statistically significant difference among the rural-serving and suburban-/urban-serving community colleges and total scores for the Academic Adjustment subscale: $F(1, 167)=.880$, $p > .05$; and total scores for the SDTLA: $F(1, 107)=1.633.$, $p > .05$.

Levene's test indicated that the homogeneity of variance assumption was

significantly different for differences in total scores for the CCS and type of community

colleges, rural-serving, and suburban-/urban-serving. The analysis of variance indicated

that there was a statistically significant difference among the rural-serving and suburban-

/urban-serving community colleges and total scores for the CCS: $F(1, 166)=1.098., p =$

.05. One-way ANOVA p values were .296, .350, and .204 for the CCS, Academic

Adjustment subscale, and SDTLA total scores respectively, The sample size, mean, and

standard deviation for total scores for each instrument and by community college

classification are illustrated in Table 11. The means and standard deviations for

instrument total scores by college classification and overall were fairly consistent.

Table 11

Mean of Instrument Total Scores by Community College Classifications and Overall

Instrument	Classification	N	Mean	Standard Deviation
CCS	Rural-serving	82	51.26	10.26
	Suburban-/Urban-serving	86	49.37	12.84
	Total	168	50.29	11.65
Academic Adjustment subscale	Rural-serving	82	165.26	28.46
	Suburban-/Urban-serving	87	160.85	32.32
	Total	169	162.99	30.50
SDTLA	Rural-serving	51	486.41	71.84
	Suburban-/Urban-serving	58	505.55	83.06
	Total	109	496.70	78.25

Research Question One: How will student identity development predict academic

adjustment in traditional community college students taking only distance learning

courses?

The Pearson correlation coefficient was computed and tested for statistical significance to determine whether there was a relationship between advancement in student identity development and perception of academic adjustment for traditional community college students taking only distance learning courses. Advancement in student identity development was measured by administering the SDTLA and academic adjustment was measured by administering the Academic Adjustment subscale of the SACQ.   Mean scales on each score were $M = 496.60$ (SD $= 78.25$) for advancement in identity development, and $M = 163.92$ (SD $= 29.90$) for perception of academic adjustment.

An examination of the scatterplot between the two variables suggested a relatively strong, linear relationship between the two variables. See Figure 1. Pearson's correlation coefficient indicated a strong, statistically significant relationship between advancement in identity development and perception of academic adjustment (r (109) $= .601$, $p =$ .000). See table 12. The coefficient of determination was $r^2 = .362$, indicating that both variables shared only 36% of variance in common, which suggests a large relationship. Students who achieved a high level of student identity development were more likely to have a high level of perceived academic adjustment to college.
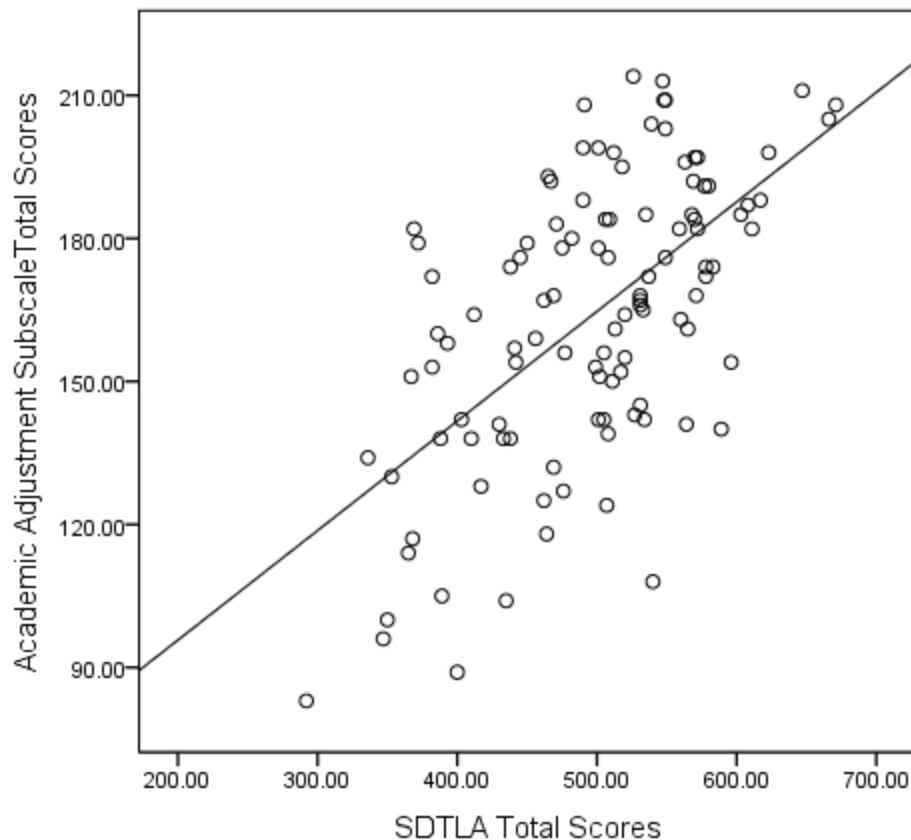
Figure 1. Scatterplot showing linear relationship between SDTLA total scores and the

Academic Adjustment subscale of the SACQ total scores.

Table 12

Students SDTLA Scores Correlated to Academic Adjustment Subscale Scores

r	n	*p*
.601	109	.000

Significant p < .05

Outliers and assumptions of regression analysis, specifically assumptions of

normality, independence, and linearity, were evaluated using SPSS to avoid Type I and

Type II errors and boost effect sizes (Rovai, Baker, & Ponton, 2014). A Cook's distance

mean of .009 and standard deviation of .014, and the Pearson correlation coefficients of

.601 and 1.000 for the Academic Adjustment subscale and the SDTLA, respectively, indicated there were no significant outliers in the data. The Pearson correlation coefficients also supported normality in the distribution of data. A Durbin-Watson test measure of 1.930 supported the assumption of independence of observations as indicated by *d* levels between 1.5 and 2.5 (Rovai, Baker, & Ponton, 2014).

Research Question Two: How will sense of community predict academic adjustment in traditional community college students taking only distance learning courses?

The Pearson correlation coefficient was computed and tested for statistical significance to determine whether there was a relationship between sense of classroom community and perception of academic adjustment in traditional community college students taking only distance learning courses. Classroom community was measured by administering the CCS and academic adjustment was measured by administering the Academic Adjustment subscale of the SACQ. Mean scales on each score were $M =$ 50.29 (SD = 11.65) for sense of classroom community, and $M = 163.33$ (SD = 30.25) for perception of academic adjustment.

An examination of the scatterplot between the two constructs suggested a relatively strong, linear relationship. See Figure 2. Pearson's correlation coefficient indicated a strong, statistically significant relationship between sense of classroom community and perception of academic adjustment (r (168) = .527, p = .000). See table 13. The coefficient of determination was $r^2 = .278$, indicating that both variables shared only 28% of variance in common, which suggests a large relationship. Students who had

a high level of perceived sense of classroom community in a distance learning class were more likely to have a high level of perceived academic adjustment to college.
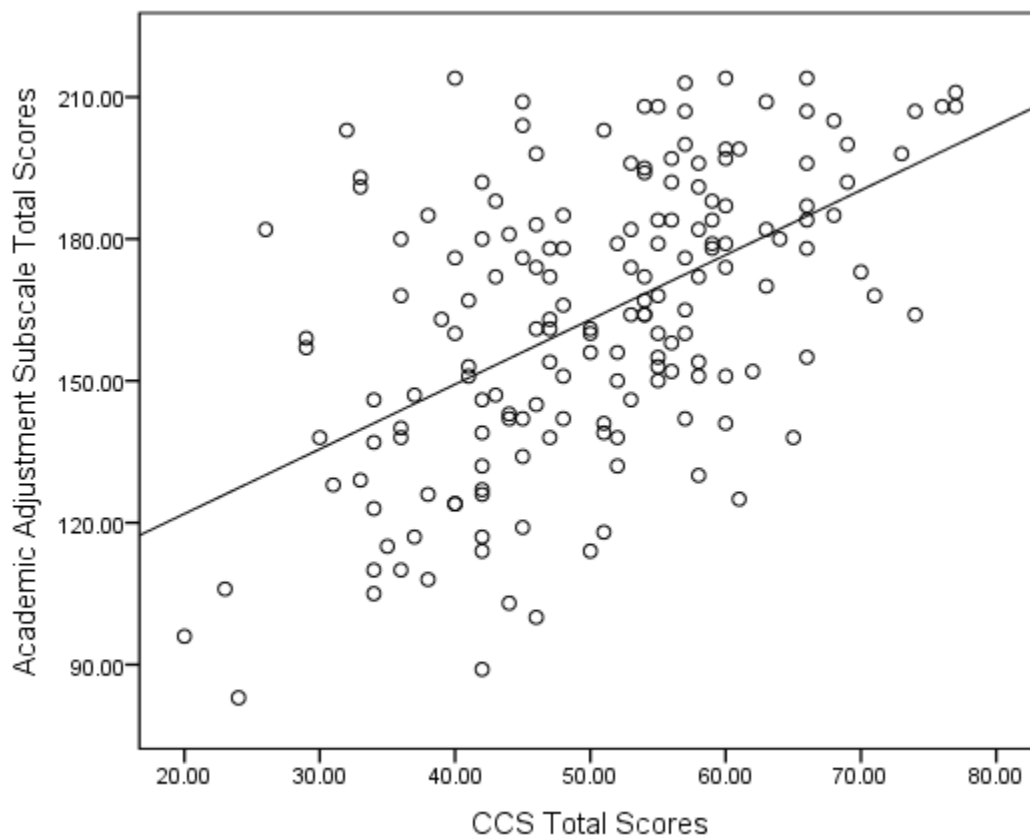
Figure 2. Scatterplot showing linear relationship between CCS total scores and the Academic Adjustment subscale total scores.

Table 13

Students CCS Scores Correlated to Academic Adjustment Subscale Scores

r	*n*	*p*
.527	168	.000*

Significant p < .05

Outliers and assumptions of regression analysis were evaluated using SPSS. A Cook's distance mean of .006 and standard deviation of .011, and the Pearson correlation

coefficients of .527 and 1.000 for the Academic Adjustment subscale and the CCS respectively, indicated there were no significant outliers in the data. The Pearson correlation coefficients also supported normality in the distribution of data. A Durbin-Watson test measure of 1.774 supported the assumption of independence of observations as indicated by d levels between 1.5 and 2.5 (Rovai, Baker, & Ponton, 2014).

Research Question Three: How will student identity development and sense of community together predict academic adjustment in traditional community college students taking only distance learning courses?

The Pearson correlation coefficient was computed and tested for statistical significance to determine whether there was a relationship between advancement in identity development and sense of classroom community together and perception of academic adjustment in traditional community college students taking only distance learning courses. The SDTLA, the CCS and the Academic Adjustment subscale of the SACQ were administered to measure the variables. Mean scales on each score were $M = 497.17$ (SD = 78.38) for identity development, $M = 50.65$ (SD = 11.43) for sense of classroom community, and $M = 164.47$ (SD = 29.47) for perception of academic adjustment.

Pearson's correlation coefficient indicated a strong, statistically significant relationship between identity development and sense of classroom community together and perception of academic adjustment (r (108) = .647, p = .000). See table 14. About 41% of the variance in academic adjustment in the sample was accounted for by advancement in identity development and sense of community as measured by the adjusted coefficient of determination, $r^2\Delta = .407$. Students who achieved a high level of

student identity development were more likely to have a high level of perceived academic adjustment to college. Students who had advancement in identity development and a high level of perceived sense of classroom community in a distance learning class were more likely to have a high level of perceived academic adjustment to college.

A significant positive correlation was found with the CCS (r (108) = .600, p = .002) together with the SDTLA (r (108) = .600, p = .000), indicating a significant positive linear relationship between the two variables and academic adjustment to college. Students who achieved a high level of student identity development and had a high perceived sense of classroom community in a distance learning course were more likely to have a high level of perceived academic adjustment to college.

Table 14

Students CCS and SDTLA Total Scores Correlated to Academic Adjustment Subscale Scores

r	n	p
.647	108	.000*

Significant p < .05

Outliers and assumptions of regression analysis, specifically assumptions of normality, independence, and linearity, were evaluated using SPSS to avoid Type I and Type II errors and boost effect sizes (Rovai, Baker, & Ponton, 2014). A Cook's distance mean of .009 and standard deviation of .014, and the Pearson correlation coefficients of .459, and .600 for the CCS and the SDTLA, respectively, supported that there were no significant outliers in the data. The Pearson correlation coefficients also supported normality in the distribution of data. A Durbin-Watson test measure of 1.884 supported

the assumption of independence of observations as indicated by d levels between 1.5 and 2.5 (Rovai, Baker, & Ponton, 2014).

Conclusion

This chapter provided an overview of research analysis results. It was determined that all independent variables under study, student identity development, sense of community, and both constructs together predict academic adjustment to college. A summary of the research, findings, implications, and recommendations will be presented in chapter five.

CHAPTER FIVE

This chapter presents a summary of traditional community college distance learners' level of student identity development, perceived sense of classroom community, and perceived academic adjustment and offers relevant conclusions and recommendations derived from the correlational results presented in chapter four. It includes a review of the problem, purpose, and a summary of the methodology, followed by a discussion of the findings for each of the three research questions, implications for practice, and recommendations for community college leaders and further research.

Summary of the Study

Problem

Identity development and being a part of a community of learners are important aspects of the college experience for traditional students. Advancement in identity development and creating a community of learners can be facilitated on campus through classroom activities and student events where face-to-face encounters with other students and college faculty and staff are the norm. Research supports that achieving identity development and being a part of a community of learners can have a positive effect on student success in college.

The number of students opting to take college courses at a distance has continued to expand since 1990 (Batts, Pagliari, Mallett, & McFadden, 2010). Students who take only distance learning courses don't have the campus experience that can facilitate identity development and a community of learners and therefore, learning; however, if students feel a sense of community in their distance learning courses and achieve advancement in identity development, this may promote academic adjustment.

Purpose and Research Questions

The purpose of this study was to determine if there is a relationship between student identity development and sense of community independently and whether these two constructs jointly have a relationship with academic adjustment in traditional community college students who took only distance learning courses. The research answered the following questions:

1. How will student identity development predict academic adjustment in traditional community college students taking only distance learning courses?

2. How will sense of community predict academic adjustment in traditional community college students taking only distance learning courses?

3. How will student identity development and sense of community together predict academic adjustment in traditional community college students taking only distance learning courses?

Summary of the Methodology

A non-experimental, correlational research design was conducted. Students from ten community colleges in the Southeastern state, categorized as rural-, suburban-, or urban-serving, participated in the study. A multi-stage purposive sampling method was used to select eligible participants for the study. The target population included community college students ages 18-25 who had taken 12 credits in succession at his/her respective institution and had only taken distance learning courses with the exception of speech, physical education, health, and science classes. Exceptions were made for these courses as the population was likely to consist of students in transfer curriculums where

these courses are required. Some of the colleges participating in the study did not offer these courses through distance learning or may have offered them as blended courses.

The study was conducted during the spring and fall semesters of 2014 over a 4-5 week period. The number of students eligible to participate in the study, 772, was determined by running an electronic query at each college. An email was sent to each student with information regarding the nature of the study and requested she or he complete three electronic surveys and a demographic questionnaire. A web link for the first two surveys and the questionnaire was included. The CCS, the first survey, was used to measure sense of classroom community, and the Academic Adjustment subscale of the SACQ, the second survey, was used to measured academic adjustment to college. The SDTLA, the third survey, was used to measure student identity development. The demographic questionnaire requested information pertaining to age, gender, ethnicity, number of college credits taken, and email address. Subsequent emails were sent to students reminding them to complete the surveys by a specific deadline or thanking them for completing surveys.

Summary of Major Findings

Data were analyzed using SPSS statistical software and linear regression analysis to determine correlations, specifically Pearson correlation coefficients. Data analysis revealed a strong, positive linear correlation between student identity development and academic adjustment, sense of community and academic adjustment, and student identity development and sense of community together with academic adjustment. Presence of outliers and assumptions of regression analysis were also evaluated. Significant outliers were not found to be present and assumptions of regression analysis were supported.

Findings

Research Question 1: How will student identity development predict academic adjustment in traditional community college students taking only distance learning courses?

A moderate, positive correlation was found indicating a significant linear relationship between advancement in student identify development and student perceived academic adjustment to college. Although the relationship between the variables was moderately strong, one cannot conclude that advancement in student identity development leads to a greater perception of academic adjustment because academic adjustment may lead to identity development, or some third variable may lead to identity development and academic adjustment.

Research Question 2: How will sense of community predict academic adjustment in community college students taking only distance learning courses?

A moderate, positive correlation was found indicating a significant linear relationship between student perception of sense of community and perceived academic adjustment to college. These findings are in alignment with Rovai's (2002b) findings of a positive correlation between perceived sense of community and perceived cognitive learning in distance learning environments, Ertmer and Stepich (2005) findings of a positive relationship between perceptions of community and perceptions of learning, and Fiege (2011) who found a positive correlation between student perceived sense of community and final course grade. Spinks (2007) found a significant indirect relationship between overall sense of community and GPA when mediated by academic self-efficacy. Providing opportunities in distance learning courses that facilitate student

perception of sense of community may lead to students perceiving greater academic

adjustment to college and thus achieving success in their academic pursuits. Although

the relationship between the variables studied was moderately strong, one cannot

conclude that advancement in student identity development leads to a greater perception

of academic adjustment because academic adjustment may lead to identity development,

or some third variable may lead to identity development and academic adjustment.

Research Question 3: How will student identity development and sense of

community together predict academic adjustment in traditional community college

students taking only distance learning courses?

A moderate, positive correlation existed between student perception of sense of

community, advancement in student identity development and perception of academic

adjustment to college. The correlation between the predictor variables independently has

been supported by previous finding discussed in relationship to research questions one

and two (Ertmer & Stepich, 2005; Fiege, 2011; Rovai, 2002b, Spinks, 2007); however,

previous research has not been conducted with the two constructs together with academic

adjustment.

Although the relationship between the variables was moderately strong, one

cannot conclude that advancement in student identity development together with student

perception of classroom community leads to a high perception of academic adjustment

because academic adjustment may lead to advancement in student identity development

and student perceptions of classroom community, or some third variable may lead to

student identity development and academic adjustment. Consider the parallels between

what facilitates sense of community and student identity development. Creating a

community of learners is purported to influence each of the variables and thus could be an additional variable or the variable predicting academic adjustment (Chickering & Reisser, 1993; Palloff & Pratt, 2007).

Implications

The moderate, positive relationship between student advancement in student identity development and perceptions of academic adjustment supports developing distance learning courses that facilitate a community of learners. Phaiah (2006) found student affairs officers' perceptions of effectiveness for co-curricular integration of growth and development activities in distance learning courses to be lacking. The lack of these activities necessary to promote student identity development further supports the significance of understanding and providing opportunities for student identity development in distance learning.

The moderate, positive relationship between student perceptions of sense of classroom community and perceptions of academic adjustment supports developing distance learning courses that facilitate a community of learners. Creating a community of learners can also promote advancement in student identity development (Chickering & Reisser, 1993; Palloff & Pratt, 2007).

Faculty-learner and learner-learner interactions help to create a community of learners (Evans et al., 2010; Schwitzer et al., 2001; Scott, 2012; Sull, 2012a; Sull, 2012b). Collaboration, being socially present, making friends, gaining acceptance, and developing a camaraderie with peers online also builds community (Brown, 2001; Palloff & Pratt, 2007). The common thread that builds communities is relationships with others

in the distance learning classroom. Relationships are facilitated through interactions with others.

Interactions through discussions with the class as a whole or in small groups can occur more easily in synchronous distance learning courses where students and faculty can meet face-to-face in the virtual classroom. In asynchronous distance learning courses, interactions and collaborations can occur through discussion board assignments with the class as a whole or through small group projects where the discussion board is used as a forum for project planning. Projects encourage cooperation among students, engage the student in active and collaborative learning, and help to form learner-learner relationships (Chickering & Reisser, 1993). Faculty should empower students to share in the authority of the learning environment, and by doing so, help to facilitate effective collaborative learning in small groups (Smith, 2008).

Threaded discussions can help student feel accepted in the learning environment and feel personal satisfaction (Brown, 2001). Quantity of interaction times need to be considered. Grandzol and Grandzol (2010) found higher interaction times led to lower course completion rates. Faculty may also need to motivate students to interact with peers by taking learning styles into consideration (Lieu, 2008).

Faculty-learner relationships are also an integral part of forming learning communities. One method of fostering faculty-learner relationships is by providing prompt feedback to students (Chickering & Reisser, 1993). Prompt feedback can help build a positive relationship between faculty and learner (Burton & Goldsmith, 2002).

The moderate, positive relationship between the two constructs student advancement in identity development and perceptions of sense of classroom community

and perceptions of academic adjustment supports developing distance learning courses that facilitate identity development and a community of learners. As noted from the preceding discussion of literature, building learning communities in distance learning may facilitate identity development and sense of community. A commitment from community college internal constituents is needed to design and deliver distance learning courses that can promote these two outcomes and possibly academic adjustment to college.

Recommendations

Although the study did not test cause and effect, the positive, significant relationships found between the constructs studied cannot be discounted. Distance learning continues to be a prevalent means of offering courses and a popular choice with students. Community college administrators are focused on enrollment numbers as well as student success. To enhance academic success in distance learning courses, internal constituents must focus attention towards designing and implementing distance learning courses that will bring about this outcome. For distance learning students to achieve advancement in their identity development and perceive sense of community, their distance learning courses also need to be designed to facilitate this. A commitment from internal constituents is needed to achieve these outcomes. Administrators must provide the means for faculty to learn course design that will promote student sense of community and identity development in distance learning courses. In turn, faculty must participate in training and invest themselves in integrating strategies into their distance learning courses that will facilitate community and identity development.

Recommendations for Community College Internal Constituents

Administrators.

College administrators' commitment to providing the resources necessary for full-time and adjunct faculty to design and implement distance learning courses is warranted. Professional development should be provided prior to teaching a distance learning course and at least annually. A credentialing system should be in place as well as a quality enhancement program to evaluate the quality of the courses and inclusion of teaching and learning strategies that can promote advancement in identity development and sense of community. A distance learning specialist is also recommended for campuses to provide ongoing professional development and to serve as a resource for faculty when designing and implementing their distance learning courses.

Phaiah (2006) surveyed student affairs officers regarding their perceptions of effectiveness for co-curricular integration of growth and development components for undergraduates age 18-24 enrolled in degree programs on campus. A subset of officers who had degree programs offered completely online and on campus were also surveyed. Although it was determined from the surveys that growth and development components needed to be integrated in campus and distance learning courses, the affairs officers' perceptions were that integrating components was more effective in campus courses in contrast to distance learning courses. The most prevalent reasons identified for not integrating growth and development components in distance learning courses were difficulty in integrating the components and a lack of priority on behalf of the institution. The results of this study support the significance of professional development being offered and supported by college administrators.

Faculty.

Faculty need to be knowledgeable about and consider developmental issues students face during the college years when designing distance learning courses and interacting with their students.   This knowledge can help to strategize and implement teaching methods that help traditional learners to develop skills that help them work through developmental issues, foster advancement in student identity development, and can be applied to learning in course work.

Faculty don't always find the benefit in professional development, nor consider how it can be incorporated into their learning environments; therefore, distance learning specialists should be an available resource after participation in training, to follow-up with participants at established intervals, and to serve as an ongoing resource (Lawler, 2003).

Adjunct faculty.

As distance learning has grown and college budgets have tightened, more adjunct faculty are teaching distance learning courses. Professional development should include learning teaching skills that will help them work effectively with students (Rogers, McIntyre & Jazzar, 2009). Professional development opportunities for adjunct faculty should include orientation to distance learning strategies that can help to facilitate student advancement in identity development and sense of community, and should include mentoring them as they implement new teaching strategies and following up with them when their courses conclude (Rogers, McIntyre & Jazzar, 2009). Delivery methods may include online tutorials, web seminars, streaming videos, and virtual access (Rogers,

McIntyre & Jazzar, 2009); however, face-to-face communication is most effective as rapport can best be established (Rogers, McIntyre & Jazzar, 2009) and professional relationships can be built (O'Meara & Terosky, 2010). Effective professional development and mentoring can assist adjunct distance learning instructors to be successful with their teaching responsibilities (Rogers, McIntyre & Jazzar, 2009).

Limitations

The study is not without limitations. In the queries that were run to determine students eligible to participate in the study, transfer courses were not included in counting the minimum 12 credits the students were required to have. Including students who have taken transfer courses, as well as those who have taken speech, physical education, health, science or developmental courses on campus or as blended courses may be a limitation because of the possible influence of these classes on student identity development, perceptions of sense of community, and perceptions of academic adjustment.

Students who have taken 12 credits are more likely to have taken only distance learning courses than those with more credits and closer to completing a curriculum. Students who have taken more credits have had longer to achieve some aspect of student identity development. In the community college setting, many students are part-time and therefore the number of semesters a student enrolls varies. The length of time a student is enrolled in the college could affect advancement level of student identity development and therefore be another variable to consider.

Conducting the surveys through email influenced the low response rate although reminders were sent requesting participation (Leedy & Ormrod, 2005). Those

individuals who returned questionnaires may not have been representative of the

population (Leedy & Ormrod, 2005). The low response rate of participants may be a

sampling bias since the percentage of non-respondents is high (Leedy & Ormrod, 2005).

This may have contributed to a sampling bias because differences may have existed

between participants and non-participants such as respondents having more of an interest

in their identity development, sense of community, and academic adjustment, or an

interest in the receiving the incentives offered for participation (Leedy & Ormrod, 2005).

The incentives offered may also have influenced participants answering surveys in a

manner they thought would be pleasing to the researcher or may have influenced them to

complete the surveys just to receive the incentives and therefore did not reflect seriously

on each question. The self-report style of the SDTLA and Academic Adjustment

subscale of the SACQ may also have influenced accuracy of responses (Baker & Siryk,

1999; Winston, Miller, & Cooper, n.d). The sampling bias affects external validity

related to generalizability to the population (Leedy & Ormrod, 2005).

Future Research

Much of the literature on sense of community and student identity development

focused on research conducted in a university setting with undergraduate and graduate

students.

More research is needed with community college students. Empirically, this study

provides a foundation for future research and contributions to the understanding of

advancement in identity development, sense of community, and academic adjustment to

college. Study results indicate that the constructs studied should be researched more fully

to gain a broader understanding of their influence on student academic success. This

study could be replicated with traditional students to explore the relationship between sense of classroom community together with perception of academic adjustment and final grade in a distance learning course. The study could also be replicated with non-traditional age distance learners to determine if there is a relationship between sense of community and academic adjustment. Additionally, distance learning strategies identified in the literature that are believed to facilitate student identity development and sense of community but have not been studied could be explored empirically.

To further explore the relationship between the constructs studied, a longitudinal study is recommended to compare traditional distance learners' sense of classroom community in distance learning courses at the beginning of a semester and at the end of a semester. A longitudinal study is also recommended to determine advancement in student identity development in traditional distance learners taking courses completely online by assessing identity development at the onset of their distance learning program, after one year, and at the conclusion of a distance learning program. The same study could also be conducted using an experimental design with the control group being students taking classes completely on campus.

Conclusion

This study contributes to the knowledge in the area of distance learning and provides greater understanding of predictors of student perception of academic adjustment. This study examined the relationship of advancement of student identity development to perception of academic adjustment, the relationship of perception of sense of classroom community as it relates to perception of academic adjustment, and the relationship of the two constructs together with academic adjustment. The study will

help community college internal constituents to have a greater perspective of the

significance of distance learning course design and the potential influence the design can

have on student academic adjustment to college and perhaps success. The perspective

can empower them to implement strategies that will enhance the quality of their distance

learning courses.   Their distance learning students, in turn, may benefit by receiving a

higher quality education that may enhance their academic adjustment to college

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Appendix A

Student Developmental Task and Lifestyle Assessment

Reprinted with Permission from Appalachian State University

Roger B. Winston, Jr.
Theodore K. Miller
Diane L. Cooper

The Student Developmental Task and Lifestyle Assessment is composed of statements shown to be typical of some students and is designed to collect information concerning college students' activities, feelings, attitudes, aspirations, and relationships. The Assessment is designed to help students learn more about themselves and for colleges to learn how to assist students more effectively. The SDTLA's usefulness depends entirely on the care, honesty, and candor with which students answer the questions.

It will require about 25-35 minutes for you to complete this questionnaire.

DIRECTIONS

For each question choose the one response that most closely reflects your beliefs, feelings, attitudes, experiences, or interests. Record your responses as directed.

• Consider each statement carefully, but do not spend a great deal of time deliberating on a single statement. Work quickly, but carefully.

• In this questionnaire, "college" is used in a general sense to apply to both two and four year colleges, as well as universities; it refers to all kinds of post-secondary educational institutions.

• If you have no parent, substitute guardian or parent equivalent when responding to items about parent(s).

DEMOGRAPHIC QUESTIONS

Mark your responses where you have been instructed to provide this information. It is crucial that you provide this information.

Name. Provide your name in the space provided on the scan sheet if instructed to do so by the survey administrator.

Sex. Bubble in your sex in the space provided on the scan sheet.

Birth Date. Bubble in the month, day, and year of your birth in the space provided on the scan sheet.

Identification Number. Bubble in the identification number provided by the survey administrator in areas A-J.

For the following questions, please mark your responses in the special codes area K-O.

K. What is your racial or cultural background? (Select one best response.)
1 = Black or African American
2 = Hispanic, Latino/a, or Mexican American
3 = Asian American or Pacific Islander
4 = Native American/People
5 = White or Caucasian/European
6 = Bi-racial or multiracial
7 = Other

L. What is your academic class standing? (Select one.)
1 = Freshman (first year)
2 = Sophomore (second year)
3 = Junior (third year)
4 = Senior (fourth year)
5 = Other

M.   Where do you presently live? (Select one best response.)
1 = In on-campus residence hall
2 = At home with parent(s)
3 = At home with spouse/spouse equivalent
4 = In on-campus apartment/trailer/house (not with parent or spouse)
5 = In off-campus apartment/trailer/house (not with parent or spouse)
6 = In fraternity/sorority house

N.   Are you an international student? (Select one.)
1 = No
2 = Yes

O. How many semesters have you attended a college or university excluding the current semester? (If 10 or more, select 9.)

Part 1: Statements 1 –21
Respond to the following items by marking:
A = True
B = False

1.   I never regret anything I have done.

2.   I am currently involved in one or more activities that I have identified as being of help in determining what I will do with the rest of my life.

3. I followed a systematic plan in making an important decision within the past thirty days.

4. I have personal habits that are potentially dangerous for my health.

5. I like everyone I know.

6. It's important to me that I be liked by everyone.

7. I would prefer not to room with someone who is from a culture or race different from mine.

8. I never get angry.

9. Within the past six months, I have experienced unfamiliar artistic media or performances.

10. During the past 12 months, I have acquired a better understanding of what it feels like to be a member of another race.

11. Since beginning college, my friends have become more frequent sources   of support than my parents.

12. I only attend parties where there are plenty of alcoholic beverages available.

13. I never say things I shouldn't.

14. Within the past six months, I have learned about or experienced a culture different from my own through artistic expression.

15. I never lie.

16. I always take precautions (or abstain) to assure that I will not contract a sexually transmitted disease (STD).

17. Within the past 12 months, I have undertaken an activity intended to improve my understanding of culturally/racially different people.

18. I never get sad.

19. Within the past 12 months, I had a conversation or discussion about the   arts outside of class.

20. I avoid discussing religion with people who challenge my beliefs, because there is nothing that can change my mind about my beliefs.

21.   Within the past 12 months, I have undertaken an activity intended to improve my understanding of people with disabilities.

Part 2: Statements 22 – 68
Respond to the following statements by selecting the appropriate letter:
    A = Never (almost never) true of me
    B = Seldom true of me
    C = Usually true of me
    D = Always (almost always) true of me

22.   I satisfactorily accomplish all important daily tasks (e.g., class assignments, test preparation, room/apartment cleaning, eating, and sleeping).

23.   I seek out opportunities to learn about cultural/artistic forms that are new   to me.

24.   It bothers me if my friends don't share the same leisure interests as I have.

25.   I'm annoyed when I hear people speaking in a language I don't understand.

26.   I have made conscious efforts to make the college a better place to attend.

27.   I have a difficult time in courses when the instructor doesn't regularly check up on completion of assignments.

28.   I pay careful attention to the nutritional value of the foods I eat.

29.   I feel comfortable socializing with people who have physical, emotional, sensory, or learning disabilities.

30.   I plan my activities to make sure that I have adequate time for sleep.

31.   I seek to broaden my understanding of culture (e.g., art, music, or literature).

32.   When I wish to be alone, I have difficulty communicating my desire to others in a way that doesn't hurt their feelings.

33.   I avoid groups where I would be of the minority race.

34.   My classmates can depend upon me to help them master class materials.

35.   I don't perform as well in class as I could because I fall short of requirements.

36.   I limit the quantity of fats in my diet.

37. Because of my friends' urgings, I get involved in things that are not in my best interest.

38. A person's sexual orientation is a crucial factor in determining whether I will attempt to develop a friendship with her/him.

39. It's more important for me to make my own decisions than to have my parent's approval.

40. I conceal some of my talents or skills so I will not be asked to contribute to group efforts.

41. I have plenty of energy.

42. It's more important to me that my friends approve of what I do than it is for me to do what I want.

43. It's hard for me to work intensely on assignments for more than a short time.

44. I am satisfied with my physical appearance.

45. I feel uncomfortable when I'm around persons whose sexual orientation is different from mine.

46. When in groups, I present my ideas and views in a way that it's clear I have given them serious thought.

47. It's very important to me that I am successful both inside and outside the classroom.

48. My weight is maintained at a level appropriate for my height and frame.

49. My personal habits (e.g., procrastination, time management, assertiveness) get in the way of accomplishing my goals or meeting my responsibilities.

50. I try to avoid people who act in unconventional ways.

51. I accept criticism from friends without getting upset.

52. I get bored and quit studying after working on an assignment for a short time.

53. I eat well-balanced, nutritious meals daily.

54. I find it difficult to accept some of the ways my close friends have changed over the past year.

55. I have difficulty following through with decisions I have made when I discover others (e.g., parents or friends) disagree with these decisions.

56. I have difficulty disciplining myself to study when I should.

57. I exercise for 30 minutes or more at least 3 times a week.

58. I don't socialize with people of whom my friends don't approve.

59. My study time seems rushed because I fail to realistically estimate the amount of time required.

60. I plan my week to make sure that I have sufficient time for physical exercise.

61. I feel confident in my ability to accomplish my goals.

62. I am annoyed when I have to make an accommodation for a person with a disability.

63. I become inebriated from the use of alcohol on weekends.

64. I try to dress so that I will fit in with my friends.

65. It's essential that those important to me approve of everything I do.

66. Even when I'm not particularly interested in a subject, I'm able to complete course requirements satisfactorily.

67. It's important to me that I achieve to the limits of my abilities.

68. I use library materials, resources, and facilities effectively.

Part 3: Statements 69 -73
Respond to the items below by selecting one of the following:
    A = Strongly Agree
    B = Agree
    C = Disagree
    D = Strongly Disagree

69. I have arranged my living quarters in a way that makes it easy for me to study, sleep, and relax.

70. I have become more culturally sophisticated since beginning college.

71. Learning to live with students from cultural or racial background different from mine is an important part of a college education.

72.   Society has a responsibility to assist people who cannot sustain themselves.

73.   As a citizen, I have the responsibility to keep myself well-informed about current issues.

Part 4: Statements 74-87
Respond to the statements below by selecting one of the following:
        A = Never
        B = Seldom
        C = Sometimes
        D = Often

74.   I wonder what my friends say about me behind my back.

75.   I dislike working in groups when there are a significant number of people who are from a race or culture that is different from mine.

76.   Within the past year, I have participated in activities that directly benefited my fellow students.

77.   Within the past 3 months, I engaged in activities that were dangerous or could be risky to my health.

78.   I have used my time in college to experiment with different ways of living or looking at the world.

79.   I am confident in my ability to make good decisions on my own.

80.   I participate in community service activities.

81.   I trust the validity of my values and opinions, even when they aren't shared by my parent(s).

82.   I express my disapproval when I hear others use racial or ethnic slurs or put-downs.

83.   I have an inner sense of direction that keeps me on track, even when I am criticized.

84.   In the past 6 months, I have gone out of my way to meet students who are culturally or racially different from me because I thought there were things I could learn from them.

85.   I feel anxious when confronted with making decisions or taking actions for which I am responsible.

86.   I meet my responsibilities to my parent(s) as well as I should.

87.   Within the past 12 months, I have taken a public stand on issues or beliefs when many friends and acquaintances didn't agree.

Part 5: Statements 88 – 153
Select the one best response from the alternatives provided.

88.   After a friend and I have a heated argument, I will
A.   Never (almost never) speak to him/her.
B.   Seldom speak to him/her.
C.   Usually speak to him/her.
D.   Always speak to him/her.
E.   I never have disagreements with friends.

89.   In terms of an academic major or concentration,
A.   I am uncertain about possible majors and am a long way from a decision.
B.   I have thought about several majors, but haven't done anything about it yet.
C.   I have made a tentative decision about what I major in.
D.   I have made a firm decision about a major, but I still have doubts about whether I have made the right decision.
E.   I have made a firm decision about a major in which I am confident that I   will be successful.

90.   Thinking about employment after college,
A.   I do not know how to find out about the prospects for employment in a variety of fields.
B.   I have a vague idea about how to find out about future employment prospects in a variety of fields.
C.   I know one source that could provide information about future employment prospects in a variety of fields.
D.   I know several sources that can provide information about future employment prospects in a variety of fields.

91.   When thinking about the kind of life I want 5 years after college, I have. . .
A.   not come up with a very clear picture.
B.   a vague picture, but have been unable to identify the specific steps I need   to take now.
C.   a clear enough picture that I can identify the step necessary for me to take now in order to realize my dream, even though I haven't done very much   about it yet.
D.   a clear enough picture and identified the steps.

92.   During this academic year,
A.   I have organized my time well enough for me to get everything completed.
B.   I sometimes had difficulty organizing my time well enough to get   everything done.
C.   I often had difficulty organizing my time well enough to get everything   done.
D.   I seldom seem able to organize my time well enough to do everything.

93.   I participate in the arts (e.g., draw, write, play musical instrument, or sing) just for my own enjoyment.
A.   I never (almost never) do this.
B.   I seldom do this.
C.   I occasionally do this.
D.   I frequently do this.

94.   When faced with important decisions this year, I have . . .
A.   relied on others—such as parent(s), friend(s), or teacher(s)—to tell me   what to do.
B.   sought information and opinions, but made the final decisions on my own.
C.   relied on myself alone in making the decisions.
D.   attempted to avoid making decisions as much as possible.

95.   I have identified, and can list, at least 3 ways I can be an asset to the community.
A.   No, I haven't thought about that much.
B.   No, I don't know what I can contribute.
C.   No, that's not important to me.
D.   Yes.

96.   During this academic year,
A.   I have tended to put off most school work, and assignments to the last   minute and, as a result, don't do as well as I could.
B.   I have often forgotten about assignments or put them off so long that I was unable to turn them in on time.
C.   I have established a study routine that has enabled me to get most school   work and assignments completed on time and to my own satisfaction.
D.   I have established a study routine that has enabled me to get all work and assignments completed on time and to my own satisfaction.

97.   When I have experienced stress or tension this term,
A.   I have most often sought relief by listening to music, reading, or visiting friends.
B.   I have most often had a few drinks or beers to relax.
C.   I have most often exercised, worked out, or played a sport.
D.   I have kept on going and ignored the stress.
E.   I have had occasions when it became too much to handle and I had to take days off to relax or rest/sleep.

98. In terms of the array of possible academic majors at this college, I have. . . A. not spent much time investigating the possibilities.
B. talked to some students about their majors, but have not done any   systematic investigation.
C. read the catalog and talked to some students and/or faculty/staff members about possible majors.
D. made a systematic effort to learn about possible majors and what they   entail.
E. made a systematic effort to learn about possible majors and have carefully looked at my abilities and interests and how they fit different majors.

99. Within the past 6 months,
A. I haven't seriously thought about possible post-college jobs or careers.
B. I have thought about possible post-college jobs or career, but haven't done much about exploring the possibilities.
C. I have asked relatives, faculty members, or others to describe positions in the fields in which they are working.
D. I have taken definite steps to decide about a career, such as visiting a counselor, placement center, or persons who hold the kinds of positions in which I am interested.

100. If something were to prevent me from realizing my present educational plans, I have . . .
A. no idea what else I might pursue.
B. a vague notion about acceptable alternatives.
C. several acceptable alternatives in mind, but I haven't explored them very much.
D. several acceptable alternatives in mind, which I have explored in some detail.

101. When I have heated disagreements with friends about matters such as religion, politics, or philosophy, I . . .
A. am likely to terminate the friendship.
B. am bothered by their failure to see my point of view but hide my feelings.
C. will express my disagreement, but will not discuss the issue.
D. will express my disagreement and am willing to discuss the issue.
E. don't talk about controversial matters.

102. I have made a positive contribution to my community (residence hall, campus, neighborhood, or hometown) within the past 3 months.
A. No, that isn't important to me.
B. No, I don't know what I could do to make a positive contribution.
C. No, but I have tried to find ways.
D. Yes.

103. In terms of an academic major/concentration, I have…
A. determined what all the requirements are and the deadlines by which things must be done, for the major I have chosen.

B.   investigated the basic requirements for graduating with a degree in my academic major.

C.   a general idea about the courses and other requirements needed in my major.

D.   not paid much attention to the requirements for my major; I depend on my advisor or others to tell me what to take.

E.   yet to decide on an academic major.

104.   I have decided the place (if any) that marriage has in my future.

A.   No, I will just wait to see what develops.

B.   No, I don't think about it.

C.   No, but I know what I would like to have happen.

D.   Yes, I have made a definite decision.

105.   I am familiar with sources of help on campus (e.g., tutoring, counseling, academic information, library research tools and procedures, and computers).

A.   I really don't know much about these things.

B.   I know about a few.

C.   I know about most of them.

D.   I know about all of them.

106.   When I don't agree with someone in authority (e.g., professor, administrator), I . . .

A.   never express my opinion.

B.   express my opinion only when I am angry.

C.   express my opinion when asked.

D.   express my opinion if given a chance.

E.   avoid dealing with persons in position of authority if possible.

107.   Within the past 3 months, I have taken an active part in a recycling activity/program.

A.   No, recycling is too much trouble.

B.   No, I don't know where to dispose of materials.

C.   Yes, I have participated occasionally.

D.   Yes, I have participated regularly.

E.   Yes, I have participated and promoted recycling activities to others.

108.   I use tobacco products (smoke, chew, or dip).

A.   Never.

B.   Once a week or less.

C.   Several times a week.

D.   Most days.

E.   Everyday.

109.   In terms of the labor market demand for people with a degree in my major, in the career area in which I am most interested,

A.   I have yet to decide on a career area and/or academic major.

B.   I don't have much of an idea of what I will face upon graduation.
C.   I have a general, although somewhat vague, picture of what I will face upon graduation.
D.   I have investigated things enough to be pretty clear about what I will face upon graduation.

110.   I can clearly state my plan for achieving the goals I have established for the next 10 years.
A.   No, because I have no specific goals for the next 10 years.
B.   No, because I don't like making detailed plans for long-range goals.
C.   No, because I haven't worked out my plan completely.
D.   Yes.

111.   Within the past month,
A.   I took the initiative to bring several people together to resolve a mutual problem.
B.   I joined with several people to resolve a mutual problem.
C.   I have not encountered a problem that needed a group effort to solve.
D.   I have avoided situations that required me to work with other people in solving problems.

112.   Within the last 12 months, I have attended a play or classical music concert when not required for a class.
A.   Yes
B.   No, I don't like those kinds of things.
C.   No, I just haven't gotten around to it.
D.   No, there aren't such things available here.

113.   If I thought my friends would disapprove of a decision I made, I would most likely . . .
A.   try to keep them from finding out (keep it a secret).
B.   tell them and pretend I didn't care what they thought.
C.   tell them and explain my reasoning for this decision.
D.   make up something to mislead them from knowing the truth.

114.   In the past 12 months, I have taken an active part in activities or projects designed to improve the community, such as a charity drive, clean up campaign, or blood drive.
A.   Never
B.   Once
C.   Twice
D.   Three times
E.   Four or more times

115.   I have more than one drink (i.e., 1.5 ounces of liquor, 5 ounces of wine, or 12
        ounces of beer).
A.   Never
B.   Once a week or less
C.   Two to three times a week
D.   Most days
E.   Everyday

116.   Over the past 12 months at this college, I have . . .
A.   taken the initiative to set up conferences with an academic advisor.
B.   kept appointments with an academic advisor when she/he scheduled them.
C.   avoided dealing with my academic advisor.
D.   not investigated how obtain academic advising.
E.   not been at this college long enough to get involved in academic advising.

117.   In the past year,
A.   I have discussed my career goals with at least 2 professionals in the field   that
        interests me most.
B.   I have had minimal exposure to people in the career field that interests me most.
C.   I know several professionals in the career field in which I am most interested, but
        I haven't talked to them about entering the field.
D.   I have yet to decide on a career area.

118.   My plans for the future are consistent with my personal values (for example,
        importance of service to others, religious beliefs, importance of   luxuries,
        desire for public recognition).
A.   No, my future plans are unclear and I am undecided about my personal values.
B.   No, my future plans are clear, but I am undecided about my personal values.
C.   No, my future plans are unclear, but I am clear about my personal values.
D.   Yes, I have recently begun to think about how my values will shape my future.
E.   Yes, I thought about this a lot and have a clear plan.

119.   Each day,
A.   I depend on my memory to make sure that I get done what needs to be done, and
        that works for me.
B.   I keep a calendar or make a "To Do" list of what needs to be done each day and
        that works for me.
C.   I dislike planning what I need to do; I just let things happen and that works
        for me.
D.   I don't make detailed plans about what I need to do each day, and as a result I
        forget important things.

120. Within the past 12 months, I have visited a museum or an art exhibit when not required for a class.
A. Yes
B. No, I don't like those kinds of things.
C. No, I just haven't gotten around to it.
D. No, there aren't such things available here.

121. In regard to social issues (e.g., homelessness, environmental pollution, or AIDS),
A. I don't think much about them.
B. I am concerned, but haven't taken any specific actions.
C. I contribute money to organizations that address the issue(s), but that is the extent of my involvement.
D. I am actively involved in organizations that address the issues(s).

122. I have a mature working relationship with one or more members of the academic community (faculty member, student affairs/services staff member, administrator).
A. Yes
B. No, I don't like dealing with them.
C. No, I have tried to form relationships, but haven't been successful yet.
D. No, I don't know any.
E. No, I don't have time for that kind of thing.

123. When thinking about occupations I am considering entering,
A. I don't know what is required in order to be competitive for a job.
B. I haven't decided which occupations interest me most.
C. I have a general idea of what is required.
D. I can list at least 5 requirements.

124. I have developed strategies to maximize my strengths and to minimize my weaknesses in order to accomplish my goals in life.
A. No, I don't know myself that well.
B. No, I haven't figure out how to do that.
C. No, I don't have a clear picture of my life goals.
D. Yes, I have done this, but I'm not very confident about my strategies.
E. Yes, I have done this, and I am confident that my strategies will be effective.

125. I have one or more goals that I am committed to accomplishing and have been working on for over a year.
A. No, I don't like making definite goals.
B. No, I have tried, but have been unable to follow through.
C. No, I have difficulty making realistic long-range plans.
D. Yes.

126. Over the past year, I have frequently participated in cultural activities.
A. No, that isn't something that I enjoy or consider important.
B. No, there haven't been any cultural activities available in which I could participate.
C. I have attended when others have encouraged or invited me.
D. Yes, I have taken advantage of as many opportunities as I could manage.
E. Yes, only when required by the college.

127. Within the past 12 months, I contributed my time to a worthy cause in my community (campus or town/city).
A. No
B. 1 – 10 hours
C. 11 – 20 hours
D. 21-30 hours
E. 31 or more hours

128. Within the past 12 months,
A. I haven't attended any non-required lectures, programs, or activities dealing with serious intellectual subjects.
B. I have attended 1 or 2 non-required lectures or programs dealing with serious intellectual subjects.
C. I have attended 3 or 4 lectures or programs dealing with serious intellectual subjects that were not required for any of my courses.
D. I have attended 5 or more lectures or programs dealing with serious intellectual subjects that were not required for any of my courses.

129. In terms of practical experience in the career area I plan to pursue after college, I have . . .
A. yet to decide on a post-college career area.
B. had no experience.
C. had very little experience.
D. had some experience.
E. had a great deal of experience.

130. I am involved in hobbies or leisure activities today that I see myself continuing to pursue 10 years from now.
A. Yes
B. No
C. I don't know

131. In addition to my academic studies,
A. I spend much of my free time involved in organized activities on campus   or in the community.
B. I spend most of my free time "goofing off" or watching television.
C. I spend most of my free time with friends doing things we enjoy.
D. I spend most of my time working to support myself and/or caring for my   family.

132. In regards to college organizations specifically related to my chosen occupational field, I have . . .
A. yet to decide on a post-college occupational field.
B. investigated joining one or more, but have not actually joined.
C. joined one or more, but am not very involved.
D. joined one or more and am actively involved.

133. I have investigated what I must do in order to satisfy my need or desire for material goods, such as cars, clothes, and a home once I complete my education.
A. No, I'm unsure about how important material goods are to me.
B. No, I haven't thought much about what I will need to do.
C. No, I have given some thought to this, but things are still unclear.
D. Yes, I'm somewhat sure that I will be able to satisfy my needs/desires.
E. Yes, my current plans are likely to meet my needs or desires.

134. I have formed a personal relationship (friendly acquaintanceship) with one or more professors.
A. Yes, but I find it difficult to talk to him/her (them).
B. Yes, we often enjoy interacting with each other.
C. No, I would like to but haven't taken any action.
D. No, I would like to and have tried unsuccessfully.
E. No, because that isn't important to me.

135. Considering beginning-level positions in business, industry, government,   or education for which I would be eligible when I complete my education, I . . .
A. can name 3 or more.
B. can name only 2.
C. can name only 1.
D. cannot name any.
E. haven't made a decision about my academic major/concentration;   therefore, I don't know for what I might be qualified.

136. I have considered the kinds of tradeoffs (in areas such as family time,   leisure time, job status, income, or time with friends) I will need to make   in order to have the kind of lifestyle I want to have 5 years after   completing my education.
A.   I haven't thought about this at all.
B.   I have thought about this in general.
C.   I have a fairly clear idea of the tradeoffs required.
D.   I have a very clear idea of the tradeoffs required.

137. I have been actively engaged in a student organization or college   committee in the past 6 months.
A.   Yes
B.   No, I don't have time because of my job(s) and/or family responsibilities.
C.   No, I am not interested.
D.   No, I haven't been in college long enough.
E.   No, but I plan to do so soon.

138. When thinking about narrowing the number of career areas I wish to explore,
A.   I have identified specific personal abilities and limitations which I can use to guide my thinking.
B.   I have some general ideas about what I would be successful in.
C.   I have only a vague sense of where I can best use my skills or minimize my shortcomings.
D.   I have never thought about careers in this way.

139. I am purposefully developing intellectual skills and personal habits that will assure that I continue to learn after completing my formal education.
A.   I haven't thought about this.
B.   I rely completely on course requirements to do this.
C.   I think about this sometimes.
D.   I do this systematically.

140. Within the past 3 months, I have had a serious discussion with a faculty member concerning something of importance to me.
A.   No, I don't like talking to faculty members.
B.   No, I have tried, but was unsuccessful.
C.   No, I haven't found one who seemed willing to interact in that way.
D.   Yes, I initiated such a discussion.
E.   Yes, I responded to a faculty member's initiative.

141. Within the past 3 months,
A. I haven't thought seriously about my career.
B. I have read about a career I am considering.
C. I have been involved in activities directly related to my future career.
D. I have thought about my career, but things are still too unsettled for me to take any action yet.

142. I have weighed the relative importance of establishing a family in relation to other life goals.
A. No, my desire to establish a family is too uncertain.
B. No, my life goals are too uncertain.
C. Yes, but my priorities tend to change.
D. Yes, my priorities about these goals are clear.

143. While in college I have acquired practical experience directly related to my educational goals through an internship, part-time work, summer job, or similar employment.
A. No, I haven't been enrolled long enough.
B. No, I haven't thought about it very much.
C. No, I have yet to establish any specific educational goals.
D. Yes, I did it to satisfy program requirements.
E. Yes, I did it on my own initiative.

144. I have established a specific plan for gaining practical experience in the career area I plan to pursue after college.
A. No, I have yet to decide on a career area.
B. No, but that is something I should be doing.
C. No, that isn't something I want to do.
D. Yes, but I haven't actually acted on my plan.
E. Yes, and I have begun implementing my plan.

145. I have considered how my present course of study will impact my goals for the future.
A. No, I haven't thought about this at all.
B. Yes, I have thought about this, but it's unclear how my studies will shape my future.
C. Yes, I have a fairly clear idea about how my studies will shape my future.
D. Yes, I have a very clear picture of how my studies will shape my future.

146. I have developed a financial plan for achieving my educational goals.
A. No, my parent(s) are taking take of it.
B. Yes, I have a plan which depends on the continuation of the present level of funding.
C. No, I haven't thought much beyond the current term.

147. I carefully investigated the intellectual abilities and necessary academic background needed to be successful in my chosen academic major.
A. No, I have yet to make a definite decision about an academic major/concentration.
B. No, I chose my major/concentration solely on the basis of what I enjoyed most.
C. No, I have narrowed the choice down to a few areas, but haven't really investigated majors in that way.
D. No, I never thought about it in that way.
E. Yes.

148. I am acquainted with at least one person who has a disability.
A. Yes.
B. No, I have not met anyone with a disability.
C. No, I am not interested in knowing anyone with a disability.

149. Within the past 3 months, I have read a non-required publication related to my major field of study.
A. No, I have yet to decide on an academic major/ field of study.
B. No, I don't have time to read such things.
C. No, that would be too boring.
D. Yes.

150. I am acquainted with at least 3 persons who are actively involved in the kind of work I visualize for myself in the future.
A. Yes.
B. No, I haven't met many people doing the work I visualize for myself.
C. No, I have yet to decide on a post-college occupational area.
D. No, I don't think that is very important.

151. I often have trouble visualizing day-to-day work in the career area I have selected.
A. Yes, because I have yet to decide on a career area.
B. Yes, because I don't know what routine work in my career area is really like.
C. Yes, because I don't like to think about that.
D. No, I can visualize work in that area, but I'm not sure that it's realistic.
E. No, I have a clear and realistic picture of work in my career area.

152. Within the past 12 months, I have had a serious conversation about my long-term educational objectives with an academic advisor or other college official.
A. No, I don't know to whom to talk.
B. No, I have tried, but no one will help me.
C. No, but I want to do that.
D. No, I don't want my options limited.
E. Yes.

153. While in college, I have visited a career center or library to obtain   information about a chosen career.
A. No, but I will do that when I find time.
B. No, I don't need career information.
C. No, there is no place or person that deals with careers on my campus.
D. Yes.

END

Appendix B

Classroom Community Scale

Classroom Community Scale

DIRECTIONS: You will see a series of statements concerning a specific distance learning course you have completed at TNCC. When completing this, reflect on one distance learning course you completed last semester at TNCC that was completely online. Read each statement carefully and select the statement that comes closest to indicating how you feel about the course. There are no correct or incorrect responses. If you neither agree nor disagree with a statement or are uncertain, select neutral (N). Do not spend too much time on any one statement, but give the response that seems to describe how you feel. Please respond to all items.

A.P. Rovai, 2002, Reprinted with permission.

1. I feel students in this course care about each other.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○ Strongly Agree	○ Agree	○ Neutral	○ Disagree	○ Strongly Disagree

2. I feel that I am encouraged to ask questions.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○ Strongly Agree	○ Agree	○ Neutral	○ Disagree	○ Strongly Disagree

3. I feel connected to others in this course.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○ Strongly Agree	○ Agree	○ Neutral	○ Disagree	○ Strongly Disagree

4. I feel that it is hard to get help when I have a question.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○ Strongly Agree	○ Agree	○ Neutral	○ Disagree	○ Strongly Disagree

5. I do not feel a spirit of community.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○ Strongly Agree	○ Agree	○ Neutral	○ Disagree	○ Strongly Disagree

6. I feel that I receive timely feedback.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○ Strongly Agree	○ Agree	○ Neutral	○ Disagree	○ Strongly Disagree

7. I feel that this course is like a family.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○ Strongly Agree	○ Agree	○ Neutral	○ Disagree	○ Strongly Disagree

8. I feel uneasy exposing gaps in my understanding.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○ Strongly Agree	○ Agree	○ Neutral	○ Disagree	○ Strongly Disagree

9. I feel isolated in this course.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○ Strongly Agree	○ Agree	○ Neutral	○ Disagree	○ Strongly Disagree

10. I feel reluctant to speak openly.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○ Strongly Agree	○ Agree	○ Neutral	○ Disagree	○ Strongly Disagree

11. I trust others in this course.

| | | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |

| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |

12. I feel that this course results in only modest learning.

| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |

13. I feel that I can rely on others in this course.

| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |

14. I feel that other students do not help me learn.

| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |

15. I feel that members of this course depend on me.

| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |

16. I feel that I am given ample opportunities to learn.

| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |

17. I feel uncertain about others in this course.

| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |

Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
○ Strongly Agree	○ Agree	○ Neutral	○ Disagree	○ Strongly Disagree

18. I feel that my educational needs are not being met.

Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
○ Strongly Agree	○ Agree	○ Neutral	○ Disagree	○ Strongly Disagree

19. I feel confident that others will support me.

Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
○ Strongly Agree	○ Agree	○ Neutral	○ Disagree	○ Strongly Disagree

20. I feel that this course does not promote a desire to learn.

Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
○ Strongly Agree	○ Agree	○ Neutral	○ Disagree	○ Strongly Disagree

33% of survey complete.

Next

Appendix C

Student Adjustment to College Questionnaire (SACQ)

Academic Adjustment Subscale

Academic Adjustment Subscale

The following questions describe college experiences. Read each one and decide how well it applies to you at the present time (within the past few days). For each statement select the point in the continuum that best represents how closely the statement applies to you. Choose only one answer.

1. I have been keeping up to date on my academic work.

Applies   Doesn't
 Very   Apply to
Closely   Me at
 to Me   All

○   ○   ○   ○   ○   ○   ○   ○   ○

2. I know why I'm in college and what I want out of it.

Applies   Doesn't
 Very   Apply to
Closely   Me at
 to Me   All

○   ○   ○   ○   ○   ○   ○   ○   ○

3. I am finding academic work at college difficult.

Applies   Doesn't
 Very   Apply to
Closely   Me at
 to Me   All

○   ○   ○   ○   ○   ○   ○   ○   ○

4. I have not been functioning well during examinations.

Applies   Doesn't
 Very   Apply to
Closely   Me at
 to Me   All

 ○   ○   ○   ○   ○   ○   ○   ○   ○

5. I am satisfied with the level at which I am performing academically.

Applies   Doesn't
 Very   Apply to
Closely   Me at
 to Me   All

 ○   ○   ○   ○   ○   ○   ○   ○   ○

6. I'm not working as hard as I should at my coursework.

Applies   Doesn't
 Very   Apply to
Closely   Me at
 to Me   All

 ○   ○   ○   ○   ○   ○   ○   ○   ○

7. My academic goals and purposes are well defined.

Applies   Doesn't
 Very   Apply to
Closely   Me at
 to Me   All

 ○   ○   ○   ○   ○   ○   ○   ○   ○

8. I'm not really smart enough for the academic work I am expected to be doing now.

Applies   Doesn't
 Very   Apply to
Closely   Me at
 to Me   All

 ○   ○   ○   ○   ○   ○   ○   ○   ○

9. Getting a college degree is very important to me.

Applies   Doesn't
 Very   Apply to
Closely   Me at
 to Me   All

 ○   ○   ○   ○   ○   ○   ○   ○   ○

10. I haven't been very efficient in the use of study time lately.

Applies   Doesn't
 Very   Apply to
Closely   Me at
 to Me   All

O   O   O   O   O   O   O   O   O

11. I enjoy writing papers for courses.

Applies   Doesn't
 Very   Apply to
Closely   Me at
 to Me   All

O   O   O   O   O   O   O   O   O

12. I really haven't had much motivation for studying lately.

Applies   Doesn't
 Very   Apply to
Closely   Me at
 to Me   All

O   O   O   O   O   O   O   O   O

13. Lately I have been having doubts regarding the value of a college education.

Applies   Doesn't
 Very   Apply to
Closely   Me at
 to Me   All

O   O   O   O   O   O   O   O   O

14. I am satisfied with the number and variety of courses available at college.

Applies   Doesn't
 Very   Apply to
Closely   Me at
 to Me   All

O   O   O   O   O   O   O   O   O

15. Recently I have had trouble concentrating when I try to study.

Applies   Doesn't
 Very   Apply to
Closely   Me at
 to Me   All

O   O   O   O   O   O   O   O   O

16. I'm not doing well enough academically for the amount of work I put in.

Applies   Doesn't
 Very   Apply to
Closely   Me at
 to Me   All

  ○   ○   ○   ○   ○   ○   ○   ○   ○

17. I am satisfied with the quality or the caliber of courses available at college.

Applies   Doesn't
 Very   Apply to
Closely   Me at
 to Me   All

  ○   ○   ○   ○   ○   ○   ○   ○   ○

18. I am attending classes regularly.

Applies   Doesn't
 Very   Apply to
Closely   Me at
 to Me   All

  ○   ○   ○   ○   ○   ○   ○   ○   ○

19. I am enjoying my academic work at college.

Applies   Doesn't
 Very   Apply to
Closely   Me at
 to Me   All

  ○   ○   ○   ○   ○   ○   ○   ○   ○

20. I am having a lot of trouble getting started on homework assignments.

Applies   Doesn't
 Very   Apply to
Closely   Me at
 to Me   All

  ○   ○   ○   ○   ○   ○   ○   ○   ○

21. I am satisfied with my program of courses for this semester.

Applies   Doesn't
 Very   Apply to
Closely   Me at
 to Me   All

  ○   ○   ○   ○   ○   ○   ○   ○   ○

22. Most of the things I am interested in are not related to any of my course work at college.

Applies Very Closely to Me								Doesn't Apply to Me at All
○	○	○	○	○	○	○	○	○

23. I am very satisfied with the professors I have now in my courses.

Applies Very Closely to Me								Doesn't Apply to Me at All
○	○	○	○	○	○	○	○	○

24. I'm quite satisfied with my academic situation at college.

Applies Very Closely to Me								Doesn't Apply to Me at All
○	○	○	○	○	○	○	○	○

67% of survey complete.

Prev Next

Appendix D

Demographic Questions

Demographic Questionnaire

1. What is your age?

[   ]

2. What is your gender?

○ Female

○ Male

3. How would you classify your ethnicity?

○ Black

○ White

○ Native American

○ Hispanic

○ Asian/Pacific Islander

○ Arab

○ Multiracial

Other (please specify) [   ]

4. How many credits have you taken in succession at your college?

○ Less than 12 credits

○ 12 credits or more

5. What is your college email address? (ie. lcoemeade@wcc.vccs.edu)

Your email address will be used to notify you if you win a drawing for $100 because you completed the surveys. It will also be used to send you a $15 e-card if you complete all 3 surveys and the demographic survey used in my study.

Your email address will also help me link the information from all surveys you complete so they are connected to one student. The information you submit will be recorded by me using a code identifier (ie. 02469) and not a personal identifier (ie. your name or email address).

[   ]

6. What $15 e-card would you like to receive if you complete all 3 surveys and the demographic survey used in my study and your data is useable?

[dropdown menu]

100% of survey complete.
Prev Done

Appendix E

Email 1

Greetings, [student first name if known].

A few minutes of your time may help to advance distance education at [name of community college] and give you the chance to win $100!

My name is Lorrie Coe-Meade. I am a doctoral candidate in the Community College Leadership Program at Old Dominion University. I am requesting your participation in a study I am conducting to advance knowledge at [name of community college] and in higher education regarding distance learning and to fulfill my degree requirements.

Your participation:

The study consists of a demographic questionnaire with five questions and three online surveys. **The web link to the questionnaire and first two surveys is shown below. The average time to complete these is 10 minutes.**

Survey Link: [web link]

Password: studentsuccess

Please complete the questionnaire and the first two surveys by [date] and your name will be entered into a random drawing for $100! (average time to complete is 10 minutes)

The first survey, Classroom Community Scale, consists of a series of questions related to your sense of community and learning in an online course. When completing this, reflect on one course you completed last semester at your current college that was completely online. The second survey, the Academic Adjustment scale, asks you how you perceive your academic adjustment. The third survey, Student Developmental Task and Lifestyle Assessment, may take approximately 30 minutes to complete, but it does not have to be completed all at one time. It will consist of questions related to your

student identity development. **You will receive the results of this survey upon completion which will tell you how you have been developing as a young adult.** The link to this survey will be sent to you within two weeks.

Complete the third/final survey by [date] and your name will be entered in another random drawing for $100! You will also be forwarded a $15 e-card to your choice of Ruby Tuesday's, Starbucks, or Papa John's Pizza.

Study title & information:

Relationships Among Student Identity Development, Sense of Community, and Academic Adjustment in Community College Distance Learners

The purpose of the study is to determine if there is a relationship between student identity development, student sense of community, and academic adjustment in distance learning.   Previous research studies support that student identity development and sense of community influence academic success. If there is a relationship between student identity development, sense of community, and academic adjustment in distance learning this may warrant further research to explore this relationship.

Your participation:

Your participation is voluntary. You are free to choose not to participate. If you choose to participate, you can withdraw at any time without any consequences; however, once your survey responses have been submitted and anonymously recorded you will not be able to withdraw from the study.

You received this email because you are a student who has completed at least 12 credits at [name of community college], have taken most courses that were completely online at your current community college (exceptions include campus or hybrid physical education courses, BIO and CHM hybrid courses, speech campus or hybrid courses, and developmental courses) and you are between the ages of 18-25. If this is not the case, please disregard this email.

Risks and benefits to you:

Some of the survey questions you will reflect on may prompt you to feel uncomfortable depending on experiences you had in the course. You may choose to not answer questions. You may or may not receive personal benefit from reflection on a distance learning course you took. You may not personally benefit from this study, but sharing your opinions could help better understand the relationship between student identity development, sense of community, and academic adjustment in distance learning.

Confidentiality:

Participation is strictly confidential. The results of your participation will be confidential and will be analyzed with data from other participants. Individual responses will not be reported in the final analysis of the study. Results will be kept in a secure location accessible only to the researcher and will be destroyed within five years of study completion. The results of the study will be written in my dissertation and may be discussed at meetings and in other publications, but your identity will not be disclosed.

Giving of your consent:

By accessing and completing the questionnaire and surveys, you are giving consent to participate in the study.

Questions:

If you have questions about the study contact Lorrie Coe-Meade at [telephone number], or [email address].

If you have questions about your rights as a participant in the study contact Dr. Ted Remley, Old Dominion University Darden College of Education Human Subjects Review Chairman, at [telephone number], or [email address].

Thank you for considering participation in this study.

Lorrie Coe-Meade

Appendix F

Email 2

Hi, [name].

Just a reminder that the student success in distance learning first surveys close

at **midnight [date], 2014**. See information in the forwarded email to access

the surveys.   It will only take approximately 10 minutes to complete the surveys and you

will be well on your way to receiving a $15 e-card to Ruby Tuesday's, Starbucks, or Papa

John's Pizza (your choice!) and being entered in 2 random drawing for $100.

Lorrie

Appendix G

Email 3

Greetings, [name}!

Thank you for completing the first two surveys and demographic questionnaire for my study, Relationships Among Student Identity Development, Sense of Community, and Academic Adjustment in Community College Distance Learners. Your name will be entered into a random drawing for $100.

Complete the SDTLA, the final survey, by [date] and your name will be entered into another random drawing for $100! You will also receive a $15 e-card to your indicated choice. Average time to complete the survey is 25 minutes. It doesn't have to be completed all at one time.

Survey Link: **https://sdtla.appstate.edu/odu/**

Enter the Username:

Enter the Password:

Please see previous email forwarded to you for details of the study or request you receive them again.

Questions:

If you have questions about the study contact Lorrie Coe-Meade at [phone number] or [email address].

If you have questions about your rights as a participant in the study or about ethical conduct in the research project contact Dr. Ted Remley, Old Dominion University Darden College of Education Human Subjects Review Chairman, at [phone number] or [email address].

Thank you!

Lorrie Coe-Meade
Old Dominion University Doctoral Candidate

Appendix H

Email 4

Hi, [name].

Just a reminder that the SDTLA survey, the final survey for my study, <u>closes at midnight [date], 2014.</u> See information in the forwarded email to access the survey.

Upon completion of the survey you will receive a $15 e-card to [vendor], your indicated choice, and be entered in 2 random drawings for $100.

Please take the time to complete your participation in my study.

Appreciatively,

Lorrie

Appendix I

Email 5

Greetings [name]

Thank you for completing your participation in my study, Relationships Among Student Identity Development, Sense of Community, and Academic Adjustment in Community College Distance Learners. I hope it was a beneficial learning experience for you. Your name will be included in TWO random drawings for $100. You will also receive a $15 e-card to the vendor you requested within the week. The winners of the drawings will be notified before the end of the semester and arrangements made to receive the award.

I appreciate your contribution toward helping to advance knowledge at [community college] and in higher education regarding distance learning and toward helping me to fulfill my degree requirements. Best wishes for a successful and rewarding educational journey.

Sincerely,

Lorrie Coe-Meade
Old Dominion University Doctoral Candidate