

# Student Leadership Development: A Closer Look at Student Gains

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Thesis submitted to the Faculty of the  
Virginia Polytechnic Institute and State University  
in partial fulfillment of the requirements for the degree of

Master of Arts in Education  
Educational Leadership and Policy Studies  
Higher Education and Student Affairs

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April 25, 2000  
Blacksburg, Virginia

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### Abstract

The purpose of this study is to investigate student leadership development. This study will investigate if there are any differences in the estimate of gains from attending college between students who participated in a Leadership Community and a sample of non-participants. In this study, estimate of gains is defined as students' progress toward educational goals, as reflected in the College Student Experiences Questionnaire (CSEQ). The estimate of gains represents a measure of growth in college.

The participants in this study were recipients of a first-year \$1000 merit-based scholarship. Recipients of this scholarship earned a 3.75 grade point average and were ranked in the top 10 percent of his or her high school graduating class. One hundred and seventy-two students received these scholarships in the 1998-1999 academic year. Seventy-nine of these students chose to live in a Leadership Community their first-year in college. Ninety-three of these students chose to live else where on campus.

Specifically, the study is designed to examine the following hypotheses:  
Null Hypothesis: There will be no difference in the mean scores of the CSEQ scales (a) Estimate of gains; (b) Student acquaintances; (c) Experiences with faculty; (d) Clubs and organizations; and (e) Course learning, for LC students as compared to NLC students.  
Research Hypothesis: The LC students will have higher mean scores on the CSEQ scales (a) Estimate of gains; (b) Student acquaintances; (c) Experiences with faculty; (d) Clubs and organizations; and (e) Course learning, than the NLC students.

This quantitative study uses the College Student Experiences Questionnaire. The participants of this study will be in their fourth semester of college. The researcher will collect data from sections of the CSEQ that correspond with the hypotheses. This study isolates the variables that are associated with student leadership development to explore student leadership development within a specific population of students.

The researcher will analyze the data using descriptive statistics, as the study measures the characteristics of a population at one point in time. The researcher will determine if there are differences between scores from students who participated in the leadership community and those who did not.

The researcher anticipates this study will benefit educators in evaluating the leadership development efforts on their own campuses.

## Acknowledgements

I would like to take this opportunity to thank my thesis committee for making this research project a success. Each member of my committee has played a key role in improving this study. Without their guidance and support throughout the year, I would not have made it through.

First, I am appreciative to my chair, Don Creamer. Especially this semester, you have challenged me to improve my writing and research skills. I am thankful for all the time you have meet with me in your office and allowed me to work through my problems with you. You have been a mentor to me this semester. Thank you for your support.

Second, I am grateful for my committee member, Cathy Turrentine. I remember sitting in your office over the summer and getting so excited when you helped me finalize my ideas for implementing this research. You have inspired me to continue to improve my writing. Thank you for your numerous hours of editing and assistance on this study. You have become an advisor and a friend. Without your support I could not have completed this project.

Third, I am thankful for my committee member, Nicki Cantrell. You have been my leadership expert. This project was first created in your office after teaching the Summer Leadership Seminar class. You took time to discuss your thoughts and I appreciate all your advice. Thank you for all your help and even allowing me to make stops by your house to give you my latest draft. You have also been an advisor and a friend. Thank you.

I would also like to thank my family for their continual support and reminders that the race is not over yet. I appreciate all the phone calls, e-mails, and cards. Your support means the world to me. I blessed to have such a wonderful family. You have helped me reach my goals all the way. Thank you.

And Finally, I would like to thank my fiancé, Matthew. Without your patience and understanding through a stressful year I would not have been able to make it. You have been there to support me through good times and bad. You have been my inspiration. Thank you for helping me reach my goals.

## Table of Contents

<b>Chapter One</b>	<b>2</b>
Introduction	2
Purpose of the Study	5
Hypotheses	7
Significance of the Study	7
Limitations of the Study	9
<b>Chapter Two</b>	<b>10</b>
Review of the Literature	10
Student Leadership Development	10
Basis for the Present Study	13
Student-to-Student Interaction	15
Student-to-Faculty Interaction	17
Student Involvement	18
<b>Chapter Three</b>	<b>22</b>
Method	22
Participants	22
Instrument	24
Reliability	25
Data Collection Procedures	25
Data Analysis Procedures	27
<b>Chapter Four</b>	<b>29</b>
Findings	29
Profile of the Participants	29
Estimate of Gains	31
Student Acquaintances	35
Experiences with Faculty	36
Clubs and Organizations	39
Course Learning	44
Summary	44
<b>Chapter Five</b>	<b>50</b>
Summary	50
Discussion	51
Literature	53
Recommendations for Further Research	55
References	57

## List of Tables

<b>Table 1:</b> Coefficient Alpha Reliability Estimates for the <u>College Student Experiences Questionnaire</u> , 1979 and 1983	26
<b>Table 2:</b> Demographics of Study Participants	30
<b>Table 3:</b> Means, Standard Deviations, and Mean Differences of Estimate of Gains Items and Scale by Leadership Community and Non-Leadership Community Groups	32
<b>Table 4:</b> Means, Standard Deviations, and Mean Differences of Student Acquaintances Items and Scale by Leadership Community and Non-Leadership Community Groups	37
<b>Table 5:</b> Means, Standard Deviations, and Mean Differences of Experiences with Faculty Items and Scale by Leadership Community and Non-Leadership Community Groups	40
<b>Table 6:</b> Means, Standard Deviations, and Mean Differences of Clubs and Organizations Items and Scale by Leadership Community and Non-Leadership Community Groups	43
<b>Table 7:</b> Means, Standard Deviations, and Mean Differences of Course Learning Items and Scale by Leadership Community and Non-Leadership Community Groups	45
<b>Table 8:</b> Means, Standard Deviations, and Mean Differences of Estimate of Gains, Student Acquaintances, Experiences with Faculty, Clubs and Organizations, and Course Learning Scale by Leadership Community and Non-Leadership Community Groups	47

List of Figures

**Figure 1:** Summary of Scale Means by Leadership ..... 49  
Community and Non-Leadership Community Groups

## Chapter One

### Introduction

In the 1980s colleges and universities began to establish specific leadership development programs and leadership curricula for students. A view that leadership was taught through theories, experiences, and interactions replaced an earlier view that merely attending college created a leader (Boccia, 1997). With this paradigm shift, student leadership development became a priority and was put into the curriculum. Hence, many institutions now have leadership requirements for graduation of their institution (Bennett & Shayner, 1988).

At the same time, students' primary reasons for attending college changed during the late Twentieth Century. Until World War II, many students attended college for the pure experience of learning and to develop a meaningful philosophy of life (Bennett & Shayer, 1988). Beginning in the past 20 years students' reasons for attending college have shifted. Students have become more interested in gaining higher earning power (Levine & Cureton, 1998). The top reason students cite for attending college is to get a better job (Sax, Astin, Korn, & Mahoney, 1998). According to the Cooperative Institutional Research Program data, "getting a better job" and "making more money" have been steadily increasing as students' reasons for attending college. Students believe that they must obtain a bachelor's degree to garner a high paying job (Sax et al., 1998).

Employers agree with students' assumptions and predominately hire individuals with bachelor's degrees. Employers who hire students look for students who have completed their bachelor's degrees and have a variety of skills (Aksoy, 1998). Employers seek employees with basic knowledge skills (reading skills, writing skills, ability to

follow directions, and problem solving skills), technical skills (experience in field, completed course work, high grades), interpersonal skills (good public relations, public speaking, team player, positive attitude, motivation, and enthusiasm), employability skills (punctuality, interviewing and application skills, leadership or participation in activities), and computer technology literacy skills (databases, server administration, web design and maintenance) (Aksoy, 1998).

According to national survey data collected by Colorado State University, the skills and qualities that employers value most in new hires, include relevant work experience, academic field of study, grades, relocation mobility, leadership potential, and extracurricular activities (Kretovics & McCambridge, 1998). A study conducted at Florida State University examined the value employers place on students' participating in activities outside of the classroom. This study found that employers feel it is very important for graduates to have job-related experience and leadership experience (Reardon, Lenz, & Folsom, 1998).

It is apparent from such studies that for students to be competitive in the job market, they must intentionally choose which out-of-class experiences to participate in at college. Students need to be proactive and forthright to gain job-related experience and leadership skills that they have not gained solely through the course work.

Colleges and universities have many ways to afford students opportunities for leadership development in curricular and co-curricular areas. In the curricular areas, students gain leadership experience through group projects, class presentations, and independent studies. Management, humanities, and military courses teach leadership theory and practice. In the co-curricular area, students gain leadership experience through



involvement in athletics, Greek letter organizations, general clubs and organizations, and service and volunteer activities provide leadership opportunities. Each of these activities provides students with ways to learn and develop specific leadership skills.

Around the nation, campuses have created more than a hundred formal leadership studies programs in the past twenty years (Green, 1990). Many colleges and universities are invested in student involvement and leadership development (Green, 1990). Many colleges and universities participate in discussions of how their curriculum and co-curriculum develop leadership skills for their undergraduates. College and university officials have begun to adjust the mission statements of their institutions to emphasize student leadership development (Green, 1990). Colleges offer students credit-bearing and co-curricular activities to develop their leadership skills (Boatman, 1999). They also offer students leadership opportunities through participation in mentoring programs, leadership courses, extracurricular activities, sports, and service or volunteer activities (Smith, 1998). These programs are dedicated to teaching leadership skills.

One program offered by institutions is theme housing (Brower & Dettinger, 1998). Theme housing programs assign students to a specific resident hall community that has a specific focus. Residence education professionals design theme housing programs for the purposes of promoting student interaction, leadership, and learning (Brower & Dettinger, 1998). Some examples of theme housing programs include first-year experience programs designed to aid in first year students' transition to college; wellness programs designed to focus on student wellness and healthy living; international programs centered around international cultures, languages, and lifestyles; and leadership

community programs designed to facilitate leadership development among students (Brower & Dettinger, 1998).

Leadership communities are being offered at several institutions (Brungardt, 1998). A leadership community is designed to foster leadership development in the students who participate. A leadership community could be classified as both curricular and co-curricular, as the community would have the participants attending a leadership theory class and offering students leadership opportunities outside of class. A leadership community could also be just academic or just co-curricular in nature. The leadership community could be offered as a theme-housing program. In this case, students who participate in a leadership community would also be housed on campus in the same residence hall.

Leadership communities and initiatives are being created in colleges and universities across the nation (Green, 1990). The effect of participating in a leadership community on students' leadership development is an important area for student affairs professionals to study.

#### Purpose of the Study

The purpose of this study was to determine if there are differences in the estimated gains from attending college between students who participated in a leadership community and a sample of non-participants. In this study, estimated gains are defined as students' progress toward educational goals, as reflected in the College Student Experiences Questionnaire (CSEQ). These educational goals include general education (literature, art, and social science), personal and social competence development, science

and technology, intellectual skills, and vocational competence (Kuh, 1999). The estimated gains represent a measure of student growth in college.

In the fall of 1998, the institution under study established a residential leadership community composed of 114 students, living in two floors of a suite-style residence hall. The members of the community were selected by a committee, based on applications which included a leadership essay. Selected students were enrolled for a 3-credit-hour leadership course each semester, undertook service-learning projects together, and participated in weekly peer-discussion groups led by undergraduate student assistants. The community was 55% female and 85% first-year students. Recipients of a scholarship for first-year students who demonstrated both academic achievement and leadership in high school comprised 61% of the community.

This scholarship was a \$1000 one-year merit-based first-year award administered through the University Honors Program. To obtain this scholarship the student must have earned a 3.75 grade point average in high school and be ranked in the top 10 percent of his or her high school graduating class. The student also must have achieved academic accomplishment, leadership experience, and service activities during high school. A selection committee reviews student applications and selects scholarship recipients. Only one student per high school can receive this award.

One hundred seventy two students received these scholarships in the 1998-1999 academic year. Seventy-nine of these students chose to live in the Leadership Community and 93 of them chose to live elsewhere on campus.

This study compares members of this leadership community who were recipients of the scholarship (LC) with recipients of the same scholarship who chose not to live in

the leadership community (NLC). The LC students and NLC students are alike in many pre-college characteristics. They are high achievers both academically and in terms of leadership in high school. They differ principally in whether they participated in the leadership community or not. Therefore, a comparison of their educational gains, taken during the sophomore year, should be an indication of the value of this leadership community for high achieving freshman.

### Hypotheses

This study was designed to explore the following hypotheses:

Null Hypothesis: There will be no difference in the mean scores of the CSEQ scales (a) Estimate of gains; (b) Student acquaintances; (c) Experiences with faculty; (d) Clubs and organizations; and (e) Course learning, for LC students as compared to NLC students.

Research Hypothesis: The LC students will have higher mean scores on the CSEQ scales (a) Estimate of gains; (b) Student acquaintances; (c) Experiences with faculty; (d) Clubs and organizations; and (e) Course learning, than the NLC students.

### Significance of the Study

The present study has significance for both future practice and future research. In terms of professional practice, the results might be useful to student affairs practitioners, students attending higher education institutions, and future employers of graduates. The ways these results might be useful are described below.

For student affairs practitioners, this study provided information about student gains from participation in a leadership community. Student affairs professionals might use this information to assess leadership community efforts on their own campuses.

Student affairs professionals might also use this information to aid in the creation of leadership communities.

Students attending universities and colleges might benefit from this study. The data reveal students' Estimate of Gains, Student Acquaintances, Experiences with Faculty, Clubs and Organizations, and Course Learning differences between the student participants. Students might use these findings to determine leadership development activities they wish to pursue while in college.

Employers of graduates might benefit from this study. This study provides information about the level and type of involvement of two categories of college students. This study provided information about what students have invested their time in during college. Employers might use this information to help determine what they should expect from their college interview candidates concerning utilization of resources and opportunities on campus. This study also provides information about the type of activities that would be considered indicators of leadership development in college candidates.

This study also had implications for future research. Other scholars may wish to replicate this study. Researchers may choose to expand this study longitudinally. For example, they could investigate the estimated gains of students during a four-year time span. Such studies might reveal if there are differences in the estimated gains students receive throughout their time in college.

Results of this study could also lead to research that examines other student groups, such as first-year experience programs. Such a study would examine first-year experience program participants with respect to their estimated gains compared to non-first-year experience program participants.

### Limitations of the Study

This study had several limitations. One limitation was related to the sample. The sample all came from one leadership community at one institution. The residents living in the leadership community could have differed in a unique way from students living in other leadership communities. This limits the generalizability of this study to other settings.

A second limitation also related to the sample of this study is that the data were only collected at one type of institution. The institution involved in this study was a Research I, land-grant institution. Leadership communities at other types of institutions, such as private universities or community colleges could yield different results due to the type of students attending those institutions.

This study used an entire population of students. This may be unusual for a researcher to have access to a population of students. Participants of this study had similar entry characteristics upon entering college and differed primarily on whether or not they participated in the Leadership Community.

## Chapter Two

### Review of the Literature

To gain a better understanding of the topic addressed in the present study, it was necessary to examine the literature and research relating to student leadership development. First, the literature on student leadership in general is described. Then, the primary research that influenced the present study is reviewed. Finally, studies on student-to-student interaction, student-to-faculty interaction, and student involvement are described, since the present study examined these factors in determining student leadership.

### Student Leadership Development

The topic of leadership in scholarly literature has been popular because leadership is applicable to many disciplines (Nanus, 1992). Scholars have discussed leadership as a subject concentrating on prominent figures in world history. The word leadership suggests images of commanders of victorious armies, CEOs of high power corporations, and heads of state. Most of the world history that students are taught in high schools and colleges concentrates on stories of leaders within political, social, religious, and military arenas (Yulk, 1981).

Scholars of leadership have based their work on various definitions:

1. Leadership is to “occupy positions of responsibility in coordinating the activities of the members of a group in their task of attaining a common goal” (Bass & Stogdill, 1974, p. 76)
2. Leadership is “the initiation and maintenance of structure in expectation and interaction” (Yulk, 1981, p.3)

3. Leadership is being “determined and confident in your sense of direction, unafraid to take risks, bold and courageous, inspiring and uplifting” (Nanus, 1992, p. xvii).
4. Leadership is combining knowledge, skills, and attitudes with taking risks, challenging convention, and stirring other into action (Boccia, 1997).
5. Leadership is being a good listener, having energy, being able to adapt easily to new situation, being able to change, and having good rapport (Merriman, 1999).

Scholars have asked many questions about leadership. In particular they search to find how leaders influence followers, what makes a leader successful, how leaders are created, and how one measures an effective leader (Yulk, 1981). It was not until the Twentieth Century that behavioral scientists began to conduct scientific research on leadership. From their research scientists discovered traits, abilities, and behaviors associated with being a leader. Scholars agree that having the traits, abilities, and behaviors of a leader is only a starting point for possessing leadership skills (Kirkpatrick & Locke, 1995).

Scholars also agree that leadership is a skill. This skill can be strengthened and improved with the proper practice and motivation. Role models, feedback, and coaching also play a part in learning to become a leader (Kouzes & Posner, 1995). Many scholars agree that leadership is a learnable skill.

Students learn leadership skills through their involvement in class and out-of-class activities (Kuh & Lund, 1994). The general consensus among researchers is that students' involvement affects their learning and development (Kuh, Schuh, Whitt, & Associates,



1991). More specifically, when students become involved in their college environment, they develop and learn inside and outside of the classroom (Moore, Lovell, McGann, & Wyrick, 1998). Most of the involvement literature is based on Astin's (1985) Theory of Involvement.

Astin's Theory of Involvement states that students learn by becoming "involved," is defined as investment of physical and psychological time and energy into activities, tasks, and people. The greater the student's involvement in college, the greater the students' learning and personal development (Astin, 1985). Since a common mission of colleges and universities is to promote student learning, leadership and personal development, studies of student leadership development are understandably important to colleges and universities (Boatman, 1999).

Colleges and universities are invested in student involvement and leadership development (Green, 1990). Many colleges and universities participate in discussions of how curriculum and co-curriculum affect the development of their undergraduates. Colleges and universities offer students credit-bearing and co-curricular activities to develop their leadership skills (Boatman, 1999). Leadership opportunities include participation in mentoring programs, leadership courses, extracurricular activities, sports, and service or volunteer activities are offered to students (Smith, 1998). Since 1980, more than a hundred formal leadership studies programs have been created on campuses around the nation (Green, 1990). These programs are dedicated to teaching leadership skills.

An example of a leadership program is the Jepson School of Leadership Studies. This program was ranked as one of the best undergraduate programs in leadership in the

United States in 1998 and is located at the University of Richmond in Richmond, Virginia (Smith, 1998). Jepson courses combine academics with experiential learning. The teaching style is student-centered with the professor as a participant in the class. This approach empowers students to become responsible for their own learning and the professor operates as a facilitator. (Smith, 1998).

Programs like Jepson are being created across the nation. One institution created a program for students called Growth Opportunities in Leadership Development (GOLD). This program teaches leadership by incorporating student development theory into teaching leadership skills (Grant, 1994). According to studies of the program, GOLD has given students a greater understanding of themselves, greater understanding of how their behavior affects others, increased confidence, and self-esteem (Grant, 1994).

#### Basis for the Present Study

Research questions for the present study are based on longitudinal research conducted by Astin through the Cooperative Institutional Research Program (CIRP). The Higher Education Research Institute at the University of California has conducted CIRP research since 1973 with institutions across the nation (Astin, 1993). A portion of Astin's longitudinal research focused on college student personality characteristics.

These personality types were identified based on a factor analysis of 60 items from a questionnaire administered to first-year college students in 1971. Then comparative factor analysis was completed on similar sets of questions administered to first-year students in 1976 and 1986. From the analysis came six personality characteristics. The six personality characteristics measured were scholarship, social activism, hedonism, status striving, artistic inclination, and leadership (Astin, 1993).

The present study focused on the findings on student leadership. Leadership was defined in Astin's study by three self-ratings. The self-ratings were leadership ability, popularity, and social self-confidence (Astin, 1993).

Students rating high in leadership tended to have well-educated and wealthy parents. These students excelled in speech and debate. They showed preference for majors such as pre-law, military science, and communications. High leadership scores were found unequally concentrated in private colleges and universities and disproportionately low in community colleges. Students with high socioeconomic levels show increases in leadership from attending college. Men also show increases in leadership from attending college. Increases in student leadership were found to be a result of the college experience rather than maturation or other environmental factors (Astin, 1993).

Astin inventoried the college experiences associated with student leadership. From this inventory Astin discovered negative and positive indicators of student leadership during the college years. Factors negatively affecting leadership development were employment or work activities off-campus, increased hours spent watching television, increased hours spent commuting to campus, and taking courses with higher research-oriented professors (Astin, 1993).

Factors positively affecting leadership development were living away from home, student-to-student interaction, student-to-faculty interaction, involvement in campus activities, and involvement in class activities (Astin, 1993). Living on campus and living in a private room or apartment increased leadership development.

The strongest indicator of leadership is associated with student-to-student interaction. Students who interact frequently with peers show a high increase in leadership development. Students who lack interaction with peers show a decrease in leadership development.

Leadership is also affected by the degree of interaction with the faculty. High interaction with faculty is associated with leadership development. This finding is specific to non-research-oriented faculty.

Involvement in campus activities included fraternity and sorority membership, participation in intramural sports, volunteer activities, and tutoring other students. Involvement in class activities included participation in group class projects and class presentations (Astin, 1993).

The present study used Astin's theory of leadership indicators as a basis for creating the research question. The researcher included each of Astin's positive indicators associated with student leadership development in the research question. The positive indicators correspond with certain sections and items found on the College Student Experiences Questionnaire (CSEQ). The sections that correspond with the positive indicators are Student Acquaintances, Experiences with Faculty, Clubs and Organizations, and Course Learning. For the purposes of this study, leadership is defined as high scores on these sections.

#### Student-to-Student Interaction

Student-to-student interaction refers to student contact or interaction with peers. The present study uses Astin's research (Astin, 1993) as a basis for defining student-to-student interaction. Astin defined student-to-student interaction as: discussing course

content with other students, working on group projects for classes, tutoring other students, participating in intramural sports, being a member of a fraternity or sorority, discussing racial or ethnic issues, socializing with someone from a different racial or ethnic group, participating in a campus protest, being elected to a student office, and hours per week spent socializing or in student clubs or organizations (Astin, 1993). From this definition the researcher selected similar items from the CSEQ to define student-to-student interaction. In the CSEQ, the relevant items are located in the group of questions labeled Student Acquaintances (Appendix A).

According to Astin's research, student-to-student interaction has the strongest positive correlations with student leadership and self-reported growth in leadership skills. Student-to-student interaction also has positive correlations with growth in public speaking skills, interpersonal skills, and overall satisfaction with campus life (Astin, 1993).

Other researchers have found similar conclusions that peer interaction contributes to students' development. Interaction with peers contributed to seniors' gains in cognitive growth and interpersonal competence in a study of senior students (Kuh, 1995). In this study, Kuh found women attribute gains in cognitive growth to peer interaction more than men. Student-to-student interaction also had significant positive effects on students' openness to diversity and challenge in a study of rising second-year students (Edison, Nora, Hagedorn, & Terrenzini, 1996). In another study student interaction with peers had an impact on students' moral development (Pascarella & Terrenzini, 1991). The quality of relationships with peers is related to personal development and intellectual gains during college (Kuh, Whitt, & Associates, 1991).

Realizing that student-to-student interaction plays a role in student development in college is important for student affairs practitioners. This knowledge can help shape co-curricular interaction and involvement with peers that focus on specific developmental areas for college or university (Hernandez, Hogan, Hathoway, & Lovell, 1991).

### Student-to-Faculty Interaction

Student-to-faculty interaction refers to interaction with professors outside of class. The present student used Astin's research on student-to-faculty interaction as a basis for defining student-to-faculty interaction (Astin, 1993). Astin defines student-to-faculty interaction as being a guest in a professor's home, working on a professor's research project, assisting faculty in teaching a class, and hours per week spent talking with faculty outside of class. The present study took similar items from the CSEQ to define student-to-faculty interaction. These items are located in the section of the CSEQ labeled Experiences with Faculty (Appendix A).

From Astin's research, student-to-faculty interaction is an indicator of student leadership. Student-to-faculty interaction also had positive correlations with college GPA, degree attainment, graduating with honors and attending graduate programs. Student-to-faculty interaction also affected students' self-reporting of intellectual and personal growth. Student-to-faculty interaction negatively affected the attitude that the reason to attend college was to increase one's earning power or that one could do little to change society. Students' interaction with faculty positively affected students' campus involvement, such as being elected to student office, attending campus recitals and performances, and participating in campus demonstrations.

Other researchers found similar evidence that supports student-to-faculty interaction as crucial to student development. A study of senior students found that student gains such as knowledge, academic skills and cognitive growth were positively associated with student-to-faculty interaction (Kuh, 1995). Another study found students who had high interaction with faculty also had stronger gains in cognitive skills such as comprehension, interpretation, evaluation, and the ability to apply principles (Pascarella, Edison, Whitt, Nora, Hagedorn, & Terrenzini, 1996). A study of first-year students found that frequent informal contact with faculty outside of class is positively associated with increases in students' basic knowledge (Pascarella & Terrenzini, 1991). In a study examining the student-faculty relationship, students reported an effective faculty member was one who made time outside of the class to meet with students. Faculty were also found to have the greatest impact on students' values, behaviors, and attitudes through informal contact beyond the classroom. (Pascarella & Terrenzini, 1991). However, a recent study found that student-to-faculty interaction has been on decline each year (Love, 1995).

### Student Involvement

In Astin's 1993 research, student involvement included fraternity and sorority membership, participation in intramural sports, volunteer activities, tutoring other students, participation in group class projects, and class presentations. The present study defined student involvement using similar items found on the CSEQ. These items are located in two sections of the CSEQ: Course Learning, and Clubs and Organizations.

Two types of involvement are considered in the present study: Involvement in out-of-class activities and involvement in the classroom. For the purposes of this study

out-of-class activities include fraternity and sorority membership, participation in intramural sports, volunteer activities, and tutoring other students. Involvement in the classroom includes participation in group class projects and class presentations.

Pace (1987) administered the College Student Experiences Questionnaire to 70 colleges. Important correlations between involvement and student development were found in this study. Pace found students' involvement in personal and social activities were directly related to intellectual gains. Pace concluded that the amount of time and effort students put into their own achievement and development are important in determining their educational outcomes (Pace, 1987).

Cooper, Healy, and Simpson (1994) examined students' involvement in organizations and leadership positions throughout their time in college. This research found student leadership roles provided students with opportunities to develop leadership skills in areas of maturity, commitment, and negotiation.

Another study investigated leadership experiences on work-related and personal life skill development among students involved in Greek-letter fraternities and sororities (Sermersheim, 1996). Ninety-five percent of the students surveyed felt their undergraduate Greek leadership position and involvement in the Greek system was extremely beneficial. Ninety-five percent of the students surveyed also felt their Greek leadership position had prepared them for their chosen profession.

There are several studies examining volunteer involvement among college students. One study found students involved in volunteer community service activities have different demographic characteristics and interpersonal values than other students (Fitch, 1991). A total of 330 surveys were sent to a sample of students drawn from 10



different academic classes at a major southeastern university. The instrument used was the Survey of Interpersonal Values (Fitch, 1991). The study found women are more likely than men to be involved in community volunteering. Students involved in community volunteering are also more religiously affiliated than other students. This study also found that students living on campus scored higher on involvement overall and involvement in community volunteering.

Another study found high involvement in extracurricular activities had a positive impact on students' evaluation of their college career (Woo & Bilynsky, 1994). This study defined involvement by time commitment to campus activities. Researchers administered a self-report measure of adjustment, the Student Adaptation to College Questionnaire (Woo & Bilynsky, 1994), to first-year college students at a predominantly White, state-supported institution. Students who had high or moderate time commitment to a group gained positively with respect to social adjustment and attaining academic goals. Males were the primary beneficiary of involvement in terms of their overall adjustment to college, social adjustment, and overall sense of belonging. Females relied more on personal support networks for adjustment to college than on organized activities. Males who reported low time commitment to campus activities scored consistently lower on all dimensions of adjustment (Woo & Bilynsky, 1994).

Studies have also been conducted on students' in-class involvement. One study found that students are more attentive and involved in the events of class when they are required to take notes. This study also found taking notes in class had positive effects on achieving high grades (Pascarella & Terrenzini, 1991). Another study on student involvement in class activities found that the greater the student's investment of time in

taking notes, participating in class discussions, and answering questions, the higher the cognitive development for the student (Pascarella & Terenzini, 1991).

Scholars agree it is difficult to evaluate student gains from involvement because students learn from their involvement experiences in different ways (Pankanin, 1995). For example, not all student organization presidents have the same experience and gain the same developmentally. Differences may emerge depending on the environment and other students with whom the president interacts. The impact of a student's involvement experience is determined by the amount and quality of the individual student's effort (Pankanin, 1995). The impact of a student's involvement is also directly related to the extent to which a student connects to a network of people, leadership positions, facilities, and a variety of opportunities provided by the college (Hernandez, et. al., 1999).

## Chapter 3

### Method

The present study investigated the difference in Estimate of Gains, Student Acquaintances, Experiences with Faculty, Clubs and Organizations, and Course Learning scales on the College Student Experiences Questionnaire (CSEQ) between scholarship recipients who lived in a leadership community during their first year and similar scholarship recipients who chose not to live in a leadership community during their first year. These categories were selected as the indicators that positively affect student leadership during college (Astin, 1993). The following hypotheses guided the study:

Null Hypothesis: There will be no difference in the mean scores of the CSEQ scales (a) Estimate of gains; (b) Student Acquaintances; (c) Experiences with Faculty; (d) Clubs and Organizations; and (e) Course Learning, for LC students as compared to NLC students.

Research Hypothesis: The LC students will have higher mean scores on the CSEQ scales (a) Estimate of gains; (b) Student Acquaintances; (c) Experiences with Faculty; (d) Clubs and Organizations; and (e) Course Learning, than the NLC students.

### Participants

This study was conducted at a large, southeastern, public, Research I institution, Land Grant Institution with a student body of approximately 25,000 undergraduate, graduate, and professional students. The freshman class of 1998-1999 was approximately 4,600 students. With very few exceptions, all first-year students were required to live on campus. The study was conducted in the spring of the 1999-2000 school year. The

researcher examined a population of first-year scholarship recipients during their fourth semester of college.

The institution under study established a leadership community in the fall of 1998. This leadership community was composed of 114 students. The students of the community were housed in two floors of a suite-style residence hall. The students were also enrolled in a 3-credit-hour leadership course for both semesters of the program. In this course students participated in service-learning projects, weekly discussion groups led by undergraduate student assistants, and traditional faculty-led classroom activities. First-year students comprised 85% of the leadership community. Of these first year students 61% received a scholarship administered by the Honors Program.

To obtain this scholarship, a first-year student must have at least a 3.75 high school grade point average (GPA) and be ranked in the top 10 percent of his or her high school graduating class. Students were also evaluated on their academic accomplishments, leadership experience, and service activities during high school. The students selected for the scholarship receive a \$1000 one-year merit-based scholarship.

One hundred seventy-two students received these scholarships in the fall of 1998 through the spring of 1999. Seventy-nine of these students chose to live in the Leadership Community and 93 chose to live elsewhere on campus. The 79 scholarship recipients living in the Leadership Community were the first sample group for this study, designated as LC. The 93 scholarship recipients not participating in the Leadership Community were the comparison group for this study, designated NLC.

This study compares members of this leadership community who were recipients of the scholarship (LC) with recipients of the same scholarship who chose not to live in

the leadership community (NLC). This study measures students during their fourth semester or sophomore year in college. This comparison group was selected because both groups have similar pre-college characteristics. The first-year experiences of these students differed principally in their choice to participate in this leadership community or not. Therefore, any differences in their leadership development that are measured during the sophomore year can arguably be attributed to the leadership community.

#### Instrument

This study used the College Student Experiences Questionnaire. The CSEQ is an instrument distributed by the Indiana University Center for Postsecondary Research and Planning.

The CSEQ is divided into six sections. The first section collects demographic information about the participant. The second section identifies the student's college activities. These college activities include those related to the library; computer and information technology; course learning; writing experiences; experiences with faculty; art, music, and theater; campus facilities; clubs and organizations; personal experiences; student acquaintances; scientific and quantitative experiences; topics of conversation; and information in conversations. The third section records reading and writing skills used by the participant. The fourth section examines the participant's opinions about his or her college or university. The fifth section investigates the student's perception of the college environment. The last section concerns the student's estimate of gains while in college.

## Reliability

The authors of the CSEQ report evidence that the CSEQ is reliable. The author of the CSEQ reported the following coefficient alpha reliability estimates for the 1979 edition of the CSEQ: Library (.79), Faculty (.82), Course Learning (.79), Arts (.83), Student Unions (.83), Athletic Facilities (.89), Clubs (.90), Writing (.84), Personal Experiences (.82), Student Acquaintances (.87), Dorm (.89), Science Lab (.90), Conversation Topic (.80), and Conversation Information (.81). With the 1983 edition, the author of the CSEQ added reliability estimates for Science/Technology (.88) and Conversation Topics (.81) (Pace, 1984). Refer to Table 1 for a list of the reliability estimates. The reliability estimates are coefficient alpha; an index based on the variance of scores. “These reliability coefficients, unusually high for such a short test, indicate that the scores are dependable” (Pace, 1984, page 26).

## Data Collection Procedures

This study complied with the approval procedures for research on human subjects. Before participants were asked to complete the CSEQ they were required to read and sign a consent form indicating they were informed of the procedures used in this research. This consent form included the purpose of the study, the procedures, risks, benefits, confidentiality of the data collected, compensation, freedom to withdraw information, and subject’s approval and permission to participate in the study. The students were given two copies of the consent form to sign; one for the researcher and one for the student’s personal records. A copy of the consent form is in Appendix A. Student were also given participant instructions on completing the CSEQ. A copy of the participant instructions is in Appendix B.

Table 1

Coefficient Alpha Reliability Estimates for the College Student Experiences  
Questionnaire, 1979 and 1983

<u>Scales</u> <u>1979 Edition</u>	Number of Items	Reliability Estimates
Library	10	.79
Faculty	10	.82
Course Learning	10	.79
Arts, Music, Theater	12	.83
Student Union	10	.83
Athletic Facilities	10	.89
Clubs	10	.90
Writing	10	.84
Personal Experiences	10	.82
Student Acquaintances	10	.87
Dorm	10	.89
Science Lab	10	.90
Conversation Topics	10	.80
Conversation Information	6	.81
<u>Scales</u> <u>1983 Edition</u>	Number of Items	Reliability Estimates
Science/ Technology	12	.88
Conversation Topics	12	.81

During the week of February 14, 2000, an electronic mail message (Appendix C) was sent to potential participants informing them of the study. A letter (Appendix D-H) from the Honors Program requesting student participation was sent two days later. Then on Sunday February 20, 2000, participants were sent a reminder electronic mail message (Appendix I) about the data collection session dates for participating in the study. During the fourth week of February, data collection sessions were conducted. Students were assigned a session to take the CSEQ in the letter from the Honors Program. If they were unable to make their scheduled session they were able to pick one of the other four data collection session days.

As an incentive for completing the study, participants were eligible for a drawing for one of three cash awards (\$100, \$50, or \$25). The incentive drawing was held in the last data collection session. Students did not need to be present to win the incentive.

After the data collection sessions were completed, the researcher contacted the students, by telephone or letter, who did not attend any of the data collection sessions. In this contact the researcher requested a personal meeting, during which the remaining students could complete the instrument. This was done to increase the participation rate.

#### Data Analysis Procedures

The participants completed the CSEQ by the fourth week in February 2000. The researcher mailed the completed instruments to the Center for Postsecondary Research and Planning at Indiana University for scoring. Within four weeks, Indiana University provided a computer diskette that contained all the scored data, frequency counts, and descriptive statistics.



From the data provided by the Center for Postsecondary Research and Planning at Indiana University the researcher analyzed the data using descriptive statistics.

Descriptive statistics were used because the study investigated an entire population rather than a sample. The population is students who were 1998-1999 recipients of the \$1000 merit-based scholarship described earlier.

The researcher first reviewed the data received from the Estimate of Gains section. This section contained 25 questions that used a four-point Likert-type scale: 1=very little; 2= some; 3=quite a bit; 4=very much. The researcher created a Table to display means, standard deviations, and standard error of the mean for each item in the Estimate of Gains section. The Table also displayed the overall section score with respect to mean, the standard deviation, and mean difference between the LC and NLC comparison groups.

The researcher then repeated this procedure with the data found in the Student Acquaintances, Experiences with Faculty, Clubs and Organizations, and Course Learning sections of the CSEQ. For each section a table and graph were created to display the means, standard deviations, and the mean differences between the two groups. From these data the researcher was able to answer the research hypotheses proposed earlier in this study.

## Chapter Four

### Findings

Data analysis for this study was done using descriptive statistics. Descriptive statistics were used because the study investigated an entire population rather than a sample.

#### Profile of the Participants

Table 2 is used to display the demographics of the participants. One hundred and seventy two recipients of a \$1000 merit-based scholarship were asked to participate in the study. All students were completing their fourth semester or sophomore year of college. Of the 172 recipients, 79 students participated in a Leadership Community their freshman year (LC group). The remaining 93 students did not participate in a Leadership Community (NLC group).

From the two groups, 20 students (11.62%) were dropped from the study because they were on co-operative education work assignments at the time of data collection. Six of these students (8.21%) were in the LC group and 14 students (17.72%) were in the NLC group. This brought the total number of students asked to participate in the study to 152 students with 73 students (48.02%) in the LC group and 79 students (51.97%) in the NLC group. Ninety-eight (64.47%) of these students were female and 54 (35.52%) were male.

The response rate for the entire population was 67.10% (102 students). Forty-four students were from the LC group and fifty-eight were from the NLC group. The subgroup response rates were 60.27% for the LC group and 73.40% for the NLC group.

Table 2

Demographics of Study Participants

Demographics	Leadership Community Group			Non-Leadership Community Group		
	Number Original Group	Number Final Group	Percent Final Responding	Number Original Group	Number Final Group	Percent Final Responding
Gender						
Female	48	28	63.63%	50	32	55.17%
Male	25	16	36.36%	29	26	44.82%
Residence						
On-campus	42	23	52.27%	40	31	53.44%
Off-campus	31	21	47.72%	39	27	46.55%
Total	73	44	60.27%	79	58	73.41%

The distribution of students living on and off campus was similar between the LC and NLC groups within the entire population. Twenty-one students (47.72%) lived off-campus in the LC group and 27 students (46.55%) lived off-campus in the NLC group. Twenty-three students (52.27%) lived on-campus in the LC group and 31 students (53.44%) lived on-campus from the NLC group.

Both the LC and NLC groups had more females than males participate. From the LC group, 16 students (36.36%) were male and 28 students (63.63%) were female. From the NLC group, 26 students (44.82%) were male and 32 students (55.17%) were female.

#### Estimate of Gains

The Estimate of Gains Section of the College Student Experiences Questionnaire (CSEQ) measures students' progress towards educational goals in college. These goals include general education (literature, art, and social science), personal and social competence development, science and technology, intellectual skills and vocational competence (Kuh, 1999). The Estimate of Gains represents a measure of student growth in college. There were 25 items on the Estimate of Gains section on the CSEQ using four-point Likert-type response options: 1= very little, 2= some, 3= quite a bit, 4= very much.

These results are displayed in Table 3. The LC group scored higher overall in the Estimate of Gains section scale score compared to the NLC group. The LC group scored an average of 2.96 on the Estimate of Gains section with a standard deviation of .79. The NLC group scored an average of 2.90 on the Estimate of Gains section with a standard deviation of .77. The LC group item scores range from 3.64 at the highest to 1.95 at the lowest. The NLC group item scores range from 3.71 at the highest to 1.90 at the lowest.

Table 3

Means, Standard Deviations, and Mean Differences of Estimate of Gains Items and Scale by Leadership Community and Non-Leadership Community Groups

Item/Scale	Leadership Community Group		Non-Leadership Community Group		Mean Difference
	Means	Standard Deviations	Means	Standard Deviations	
<hr/>					
Items					
Vocational Preparation	3.09	.60	3.00	.79	.09
Skills for Profession	2.98	.76	3.24	.71	-.26
Broad General Education	3.00	.68	2.95	.63	.05
Career Information	3.14	.60	3.21	.67	-.07
Enjoyment of Art and Music	2.09	1.01	2.00	.96	.09
Acquaintance with Literature	2.23	.91	1.90	.83	.33
Understanding History	2.25	.92	2.17	1.01	.08
Knowledge of the World	1.95	.81	2.10	.93	-.15
Writing Effectively	3.00	.78	2.91	.71	.25

Table 3 Continued

Means, Standard Deviations, and Mean Differences of Estimate of Gains Items and Scale by Leadership Community and Non-Leadership Community Groups

Item/Scale	Leadership Community Group		Non-Leadership Community Group		Mean Difference
	Means	Standard Deviations	Means	Standard Deviations	
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Items					
Speaking Effectively	3.16	.78	2.91	.71	.25
Using Computers	3.64	.53	3.71	.50	-.07
Awareness of Other Philosophies	2.68	.91	2.36	.85	.32
Value and Ethical Standards	3.14	.70	2.98	.89	.16
Understanding Self	3.55	.59	3.28	.67	.27
Getting Along with Others	3.27	.73	3.17	.68	.10
Functioning as a Team	3.34	.68	3.12	.77	.22
Personal Health Habits and Fitness	2.91	1.03	2.69	.88	.22
Understanding Science	2.77	1.08	2.91	.96	-.14

Table 3 Continued

Means, Standard Deviations, and Mean Differences of Estimate of Gains Items and Scale by Leadership Community and Non-Leadership Community Groups

Item/Scale	Leadership Community Group		Non-Leadership Community Group		Mean Difference
	Means	Standard Deviations	Means	Standard Deviations	
<b>Items</b>					
Understanding New Technology	2.77	.96	3.02	.81	-.25
Consequences of Science	2.55	.93	2.78	.94	-.23
Thinking Analytically	3.30	.73	3.34	.74	-.04
Analyzing	3.11	.89	3.03	.90	.08
Synthesizing Ideas	3.27	.69	3.12	.73	.15
Learning on One's Own	3.41	.69	3.38	.56	.03
Adapting to Change	3.45	.66	3.43	.57	.02
Scale	2.96	.79	2.90	.77	.06

Note: A negative symbol next to the mean difference indicates the NLC scored higher than the LC group on that item.

The LC group scored higher than the NLC group on 17 of the 25 questions in the Estimate of gains section. The items in the Estimate of Gains section most closely associated with leadership development goals of this leadership learning community were: Speaking effectively, Awareness of other philosophies, Values and Ethical standards, Understanding self, Getting along with others, Functioning as a team, and Learning on one's own. On each of these questions the LC group scored higher than the NLC group. All of these items have positive differences in the means.

The NLC group scored higher than the LC group on 8 out of 25 items on the CSEQ. These are the items: Skills for professional career, Career information, Knowledge about the world, Using computers, Understanding science, Understanding new technology, Consequences of science, and Thinking analytically. All of these items have negative differences in the mean.

The LC group scored higher on items in the Estimate of Gains section that were community orientated rather than individualistic. The NLC group scored higher on items in the Estimate of Gains section that were non-community orientated or individualistic areas of growth.

#### Student Acquaintances

The Student Acquaintances section of the CSEQ measures student-to-student interaction or student contact with peers. This section has the strongest positive correlations with student leadership and self-reported growth in leadership skills. High scores in this section also are related to strong public speaking skills, strong interpersonal skills, and overall satisfaction with campus life (Astin, 1993). There are 10 items in the



Student Acquaintances section of the CSEQ using a four-point Likert-type response option: 1= Never, 2= Occasionally, 3= Often, 4= Very Often.

Table 4 is used to display the means, standard deviations, and differences of the mean scores on the Student Acquaintances scale of the CSEQ. The LC group scored higher overall in the Student Acquaintances section scale score compared to the NLC group. The LC group scored an average score of 2.68 on the Student Acquaintances section with a standard deviation of .72. The NLC group scored an average score of 2.54 on the Student Acquaintances section with a standard deviation of .55. The LC group item mean scores ranged from 3.06 to 2.11. The NLC group item mean scores ranged from 3.01 to 1.98.

The LC group scored higher than the NLC group on 9 out of the 10 individual questions in the Student Acquaintances section. These 9 items have positive mean differences. The NLC group scored higher on this item: Acquainted with students of a different race, which has a negative difference between the means. However it should be noted, the LC group scored higher than the NLC group on a related question: Discussions with students of different race.

#### Experiences with Faculty

The Experiences with Faculty section of the CSEQ measures student-to-faculty interaction. This refers to students' interactions with faculty primarily outside of the classroom. Examples of student-to-faculty interaction are being a guest in a professor's home, working on a professor's research project, assisting faculty in teaching a class, and talking to a faculty outside of class.

Table 4

Means, Standard Deviations, and Mean Differences of Student Acquaintances Items and Scale by Leadership Community and Non-Leadership Community Groups

Item/Scale	Leadership Community Group		Non-Leadership Community Group		Mean Difference
	Means	Standard Deviations	Means	Standard Deviations	
<hr/>					
Items					
Acquainted with students with different interests	3.00	.50	2.78	.45	.21
Acquainted with students of different backgrounds	3.04	.81	3.00	.91	.04
Acquainted with students of different age	3.06	.68	3.01	.60	.05
Acquainted with student of different race	2.84	1.01	2.91	.91	-.07
Acquainted with students from other country	2.29	.76	2.29	.71	.00
Discussions with students of different values	2.77	.68	2.43	.60	.34
Discussions with students of different political	2.52	.63	2.18	.67	.34

Table 4 Continued

Means, Standard Deviations, and Mean Differences of Student Acquaintances Items and Scale by Leadership Community and Non-Leadership Community Groups

Item/Scale	Leadership Community Group		Non-Leadership Community Group		Mean Difference
	Means	Standard Deviations	Means	Standard Deviations	
<hr/>					
Items					
Discussions with students of different religion	2.77	.91	2.37	.81	.40
Discussions with students of different country	2.11	1.01	1.98	.97	.13
Scale	2.68	.72	2.54	.55	.14

Note: A negative symbol next to the mean difference indicates the NLC scored higher than the LC group on that item.

According to Astin (1993), student-to-faculty interaction positively correlates with college GPA, degree attainment, graduating with honors and attending graduate programs. Students' interaction with faculty is also positively associated with students' campus involvement, such as being elected to student office, attending campus performances, and participating in campus demonstrations (Astin, 1993).

Table 5 is used to display the means, standard deviations, and differences of the means between the LC and NLC groups on the Experiences with Faculty scale of the CSEQ. There are 10 items in the Experiences with Faculty scale using a four-point Likert-type scale: 1= Never, 2= Occasionally, 3= Often, 4= Very Often.

The LC group scored higher overall in the Experiences with Faculty section scale score compared to the NLC group. The LC group scored an average score of 2.20 on the Experiences with Faculty section with a standard deviation of .60. The NLC group scored an average score of 2.09 on the section with a standard deviation of .48.

The LC group scored higher than the NLC group on 9 out of 10 individual items in the Experiences with Faculty section. The NLC group scored higher on this item: Worked to meet faculty expectations. However, the LC group scored higher on a related question: Worked harder due to instructor feedback.

#### Clubs and Organizations

The Clubs and Organizations section of the College Student Experiences Questionnaire measures students' involvement in out-of-class activities associated with students' participation with clubs and organizations. This includes fraternity and sorority membership, participation in intramural sports, volunteer activities, clubs or student union membership, and tutoring other students.

Table 5

Means, Standard Deviations, and Mean Differences of Experiences with Faculty Items and Scale by Leadership Community and Non-Leadership Community Groups

Item/Scale	Leadership Community Group		Non-Leadership Community Group		Mean Difference
	Means	Standard Deviations	Means	Standard Deviations	
<hr/>					
Items					
Asked Instructor for Course Information	2.93	.56	2.89	.50	.04
Discussed Academic Program with Faculty	2.59	.49	2.55	.40	.04
Discussed Term Paper with Faculty	2.31	.70	2.13	.68	.04
Discussed Career Plans with Faculty	2.38	.92	2.13	.78	.25
Worked Harder Due to Instructor Feedback	2.61	.86	2.46	.70	.15
Socialized with Faculty Outside of Class	1.70	.85	1.55	.69	.15
Discussed with Others Outside of Class	1.88	.98	1.75	.78	.13

Table 5 Continued

Means, Standard Deviations, and Mean Differences of Experiences with Faculty Items and Scale by Leadership Community and Non-Leadership Community Groups

Item/Scale	Leadership Community Group		Non-Leadership Community Group		Mean Difference
	Means	Standard Deviations	Means	Standard Deviations	
<hr/>					
Items					
Asked Instructor about Performance	1.90	.78	1.79	.69	.11
Worked with Faculty on Research	1.40	.78	1.27	.42	.13
Scale	2.20	.60	2.09	.48	.11

Note: A negative symbol next to the mean difference indicates the NLC scored higher than the LC group on that item.

Pace found that student involvement in personal and social activities were directly related to intellectual gain (Pace, 1987). Student involvement in clubs and organizations on campus is also positively related to students' development in maturity, commitment, and negotiation (Cooper, Healy, & Simpson, 1994).

Table 6 is used to display the means, standard deviations, and differences in the means of the Clubs and Organizations scale. There are 5 items in the Clubs and Organizations using a four-point Likert-type scale: 1= Never, 2= Occasionally, 3= Often, 4= Very Often.

The LC group scored higher overall in the Clubs and Organizations section scale score compared to the NLC group. The LC group scored an average score of 1.23 on the Clubs and Organizations section with a standard deviation of .42. The NLC group scored an average score of 1.10 on the section with a standard deviation of .44. The LC group item mean scores ranged from 3.22 to 1.23. The NLC group item mean scores ranged from 2.94 to 1.10.

The scale scores for both the LC and NLC group were extremely low for the Clubs and Organizations section. However, the LC group scored higher than the NLC group on all of the five items in the Clubs and Organization section. The items in the Clubs and Organizations section are: Attended meetings of campus organization, Worked on campus committee, Worked on off-campus committee, Met with faculty to discuss campus group, and Managed an organization on or off campus.

Table 6

Means, Standard Deviations, and Mean Differences of Clubs and Organizations Items and Scale by Leadership Community and Non-Leadership Community Groups

Item/Scale	Leadership Community Group		Non-Leadership Community Group		Mean Difference
	Means	Standard Deviations	Means	Standard Deviations	
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Items					
Attended a Meeting of Campus Organization	3.22	.40	2.94	.39	.28
Worked on Campus Committee/ Organization	2.65	.52	2.39	.65	.26
Worked off Campus Committee/ Organization	1.95	.56	1.82	.40	.13
Met with Faculty to Discuss Campus Group	1.93	.70	1.79	.58	.14
Managed an Organization on or off Campus	2.56	.68	2.05	.71	.51
Scale	1.23	.42	1.10	.44	.13

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## Course Learning

The Course Learning section of the CSEQ measures student involvement in the classroom. An example of involvement in the classroom is participating in group class projects and class presentations.

Table 7 is used to display the means, standard deviations, and differences in the means for the Course Learning scale. There are 11 items on the Course Learning section of the CSEQ. The Course Learning section uses a four-point Likert-type scale: 1= Never, 2= Occasionally, 3= Often, 4= Very Often.

The LC and NLC groups scored moderate on the Course Learning scale of the CSEQ. However, the LC group scored higher overall in the Course Learning section. The LC group scored an average score of 3.32 on the Course Learning section with a standard deviation of .57. The NLC group scored an average score of 3.22 on the section with a standard deviation of .51. The LC group item mean scores ranged from 3.59 to 1.72. The NLC group item mean scores ranged from 3.56 to 1.72.

The LC group scored higher than the NLC group on 8 of the 11 items in the Course Learning section. The LC group and NLC group scored the same on two items in the Course Learning section. These items are: Developed role play/case study for class and Worked with others on class project. The NLC group scored higher on this item: Explained course material to others.

## Summary

To summarize, Table 8 is used to display the scale means and standard deviations for all of the scales in this study. The scales on the CSEQ involved in this study are: Estimate of Gains, Student Acquaintances, Experiences with Faculty, Clubs and

Table 7

Means, Standard Deviations, and Mean Differences of Course Learning Items and Scale by Leadership Community and Non-Leadership Community Groups

Item/Scale	Leadership Community Group		Non-Leadership Community Group		Mean Difference
	Means	Standard Deviations	Means	Standard Deviations	
<b>Items</b>					
Completed Assigned Readings	3.20	.79	3.13	.56	.07
Took Detailed Class Notes	3.59	.50	3.56	.45	.03
Contributed to Class Discussions	2.75	.68	2.74	.67	.01
Developed Role Play/ Case Study	1.72	.40	1.72	.58	.00
Put Together Different Facts and Ideas	3.18	.80	3.05	.56	.13
Summarized Major Points	3.15	.68	3.00	.63	.15
Worked with Others on Project	3.20	.72	3.20	.50	.00
Applied Class To Other Areas	3.15	.43	3.00	.37	.15
Used Info. for Other Areas	3.06	.47	2.79	.51	.27

Table 7 Continued

Means, Standard Deviations, and Mean Differences of Course Learning Items and Scale by Leadership Community and Non-Leadership Community Groups

Item/Scale	Leadership Community Group		Non-Leadership Community Group		Mean Difference
	Means	Standard Deviations	Means	Standard Deviations	
<hr/>					
Items					
Explained Course Material to Others	3.13	.54	3.22	.67	-.09
Worked on Project Integrating Ideas	3.06	.54	2.93	.40	.13
Scale	3.32	.57	3.22	.51	.10

Note: A negative symbol next to the mean difference indicates the NLC scored higher than the LC group on that item.

Table 8

Means, Standard Deviations, and Mean Differences of Estimate of Gains, Student Acquaintances, Experiences with Faculty, Clubs and Organizations, and Course Learning Scale by Leadership Community and Non-Leadership Community Groups

Scale	Leadership Community Group		Non-Leadership Community Group		Mean Difference
	Means	Standard Deviations	Means	Standard Deviations	
Estimate of Gains	2.96	.79	2.90	.77	.06
Student Acquaintances	2.68	.72	2.54	.55	.14
Experiences with Faculty	2.20	.60	2.09	.48	.11
Clubs and Organizations	1.23	.42	1.10	.44	.13
Course Learning	3.32	.57	3.22	.51	.10

Organizations, and Course Learning. The Table shows that on each scale the LC group scored higher than the NLC group. The differences in each instance are comparatively small. The Table also shows a considerable difference in the overall scores between the scales. Both the LC and NLC groups scored highest on the Course Learning scale. Both the LC and NLC scored lowest on the Clubs and Organizations scale.

None of the scales revealed extremely high scores for either the LC or NLC group. In other words, both the LC and NLC groups scored modest on the scales. In all instances the LC and NLC groups scored similar on the scales. The patterns of responses across the five scales were similar between the groups, and in each case the LC group scored slightly higher than the NLC group.

Figure 1 is used to display the same findings in graphic form. Based upon these results the null hypothesis stating there will be no difference in the LC and NLC group mean scores on the CSEQ scales is rejected. In chapter five, the researcher will interpret the results.

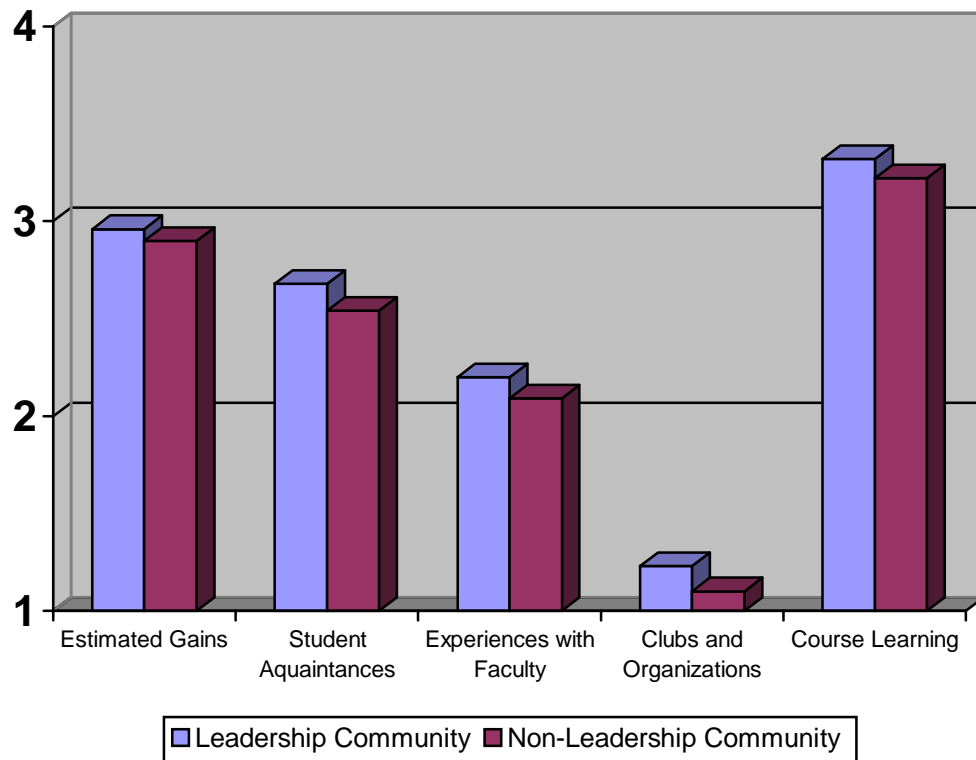


Figure 1. Summary of Scale Means by Leadership Community and Non-Leadership Community Groups

## Chapter Five

### Summary

The purpose of this study was to determine if there were any differences in the estimate of gains from attending college between students who participated in a leadership community and a sample of non-participants. In this study, estimate of gains is defined as students' progress toward educational goals, as reflected in the College Student Experiences Questionnaire(CSEQ). The estimate of gains represents a measure of growth in college.

This study explored the following hypotheses:

Null Hypothesis: There will be no difference in the mean scores of the CSEQ scales (a) Estimate of gains; (b) Student acquaintances; (c) Experiences with faculty; (d) Clubs and organizations; and (e) Course learning, for LC students as compared to NLC students.

Research Hypothesis: The LC students will have higher mean scores on the CSEQ scales (a) Estimate of gains; (b) Student acquaintances; (c) Experiences with faculty; (d) Clubs and organizations; and (e) Course learning, than the NLC students.

The participants in this study were recipients of a first-year \$1000 merit-based scholarship. Recipients of this scholarship earned a 3.75 grade point average and were ranked in the top 10 percent of his or her high school graduating class. One hundred and seventy-two students received these scholarships in the 1998-1999 academic year. Seventy-nine of these students chose to live in a Leadership Community their first-year in college. Ninety-three of these students chose to live else where on campus.

The institution under study established a Leadership Community composed of 114 students, living in two floors of a suite-style residence hall. Recipients of the first-year scholarship comprised 61% of the community.

This study compared members of this Leadership Community who were recipients of the scholarship (LC) with recipients of the same scholarship who chose not to live in the Leadership Community (NLC). The LC and NLC groups are alike in many pre-college characteristics. They were high achievers both academically and in terms of leadership in high school. They differed principally in whether they participated in the Leadership Community or not. The comparison of their educational gains is taken during their sophomore year, the 1999-2000 academic year. This comparison is an indication of the value of this Leadership Community for high achieving freshman.

The LC and NLC groups were administered the College Student Experiences Questionnaire, during his or her second semester sophomore year. The researcher looked at student scores on five scales that were predictors of student leadership development. These five scales were Estimate of Gains, Student Acquaintances, Experiences with Faculty, Clubs and Organizations, and Course Learning.

The data were analyzed using descriptive statistics, investigating the means, standard deviations, and differences between the means. Descriptive statistics were used because the study investigated an entire population rather than a sample.

#### Discussion

On each scale of the CSEQ studied, including Estimate of Gains, Student Acquaintances, Experience with Faculty, Clubs and Organizations, and Course Learning,



the LC group scored higher than the NLC group. However, the differences in each instance are small.

There is a considerable difference in mean scores between the scales studied. In general the scores are moderate and in one instance the scores are well below moderate, for both the LC and the NLC group. On each of the scales studied, the LC and NLC group score in the same way. In other words, the LC and NLC groups are more similar in scores on the same scale than different.

Both the LC and NLC groups scored the highest on the Course Learning scale of the CSEQ. The Course Learning scale includes specific tasks students are involved in when participating in a college level course such as completing assigned readings, taking notes, contributing to class discussions, and working on group projects. This high score could be associated with the emphasis put on grade point average in selecting the student participants for the scholarship. This could also be related to the completion of a yearlong leadership course by the LC group when participating in the Leadership Community.

Surprisingly, both the LC and NLC groups scored the lowest on the Clubs and Organizations scale of the CSEQ. The Clubs and Organizations scale includes items about students' participation and leadership in clubs and organizations on campus. The mean scores of both the LC and NLC groups indicated that most students in these groups never participate in activities associated with clubs and organizations. This is surprising as involvement in clubs and organizations is the traditional area student affairs practitioners associate with student leadership development.

Both the LC and NLC groups scored moderately low on the Experiences with Faculty scale of the CSEQ. The mean score of both the LC and NLC groups indicates the

students occasionally discuss course material with faculty or socialize with faculty outside of class. This is unexpected, considering both the LC and NLC groups' high scores on the Course Learning scale. This is also surprising with the high faculty contact the students have in the Leadership Community, having faculty teach classes in the residence hall.

A closer look at the gains between the LC and NLC group reveal, the LC group scored higher on gains associated with community orientation and gains related to the leadership development goals of the leadership community. The NLC group scored higher on gains associated with individual or non-community related growth. This justifies support for the Leadership Community despite relatively small overall gains between the two groups.

#### Literature

There have not been any other studies using the CSEQ for the purposes of measuring leadership development. However, there have been studies supporting each scale on the CSEQ including Estimate of Gains, Student Acquaintances, Experiences with Faculty, Clubs and Organizations, and Course Learning, as factors associated in leadership development for students (Astin, 1993; Hernandez, et al., 1999; Kuh, 1995; Kuh, Whitt, & Associates, 1991; Pascarella & Terrenzini, 1991; Sermersheim, 1996; Woo & Bilynsky, 1994). The present study is consistent with the literature findings. The literature would support the finding that the LC group scored higher than the NLC group on the five scales associated with leadership development.

Being part of the Leadership Community affords students more opportunities to interact with peers, interact with faculty, and participate in clubs and organizations. The

research supports that student's involvement on campus is directly related to the extent to which the student connects to a network of people, leadership positions, and a variety of opportunities provided by the college (Hernandez, et al., 1999). By becoming involved in the Leadership Community, students are putting in the initial effort to become involved and gain leadership development. The impact of a student's involvement experience is determined by the amount and quality of the individual student's effort (Astin, 1993; Pankanin, 1995). The amount of time and effort students put into their own achievement and development are important in determining their educational outcomes (Pace, 1987). Therefore, it is consistent with the literature that the LC group scored higher on the scales of the CSEQ associated with leadership development and educational gain in college.

The present study supports the literature pertaining to employers' studies. Employers', who hire students, want students with completed bachelor's degrees and who have a variety of skills. These skills include knowledge skills, technical skills, interpersonal skills, employability skills, and computer literacy skills (Aksoy, 1998). According to the results of this study, the LC group scored higher on the Estimate of Gains section including an item for each of these skills. Other studies included leadership potential and extracurricular activities as employer criteria (Kretovics & McCambridge, 1998; Reardon, Lenz, & Folsom, 1998). If these items are included, the LC group scored higher on these items than the NLC group.

Not consistent with the literature was the finding that the LC and NLC group never or occasionally participated in activities associated with clubs and organizations on campus. Research supports that students involved in organizations and leadership roles on campus throughout their time in college develop leadership skills specifically in the

areas of maturity, commitment, and negotiation (Cooper, Healy, & Simpson, 1994). Involvement in campus clubs and organizations is the traditional avenue of leadership development for students in college. It is surprising to have both the LC and NLC groups score low on this scale, considering their high school leadership experience.

Research also supports that students participating in leadership roles in clubs and organizations on campus increases students preparation for their chosen field, specifically reported by students involved in Greek-letter fraternities and sororities (Sermersheim, 1995). This finding has significance, as the LC group scored lower than the NLC group on two items on the Estimate of Gains scale investigating acquiring skills and knowledge for profession and career information.

#### Recommendations for Further Research

Research on student leadership development initiatives, such as the present study investigating students who participated in a Leadership Community, should be continued. There is relevance that studies like this one investigating student development and advancement towards educational goals, can advance the base of knowledge used by student affairs practitioners in implementing and evaluating their own leadership initiatives and communities.

Research on this group of students should be continued. It is unique to find a population of students with similar entry characteristics into college who differ primarily in whether or not they participated in the Leadership Community. This research should be replicated with this group of students during their senior year before graduation and two years after they have graduated from the institution to investigate the results longitudinally. This research should also be replicated with the next class of students

receiving the same first year scholarship during their sophomore year as well, to investigate further results.

The CSEQ seems to be a promising instrument to measure students gains while attending college and students investment of time while in college. And, given the link between the five scales on the CSEQ used in the present study with leadership development, research should be continued in this direction. In addition to this instrument, student affairs professionals administering a Leadership Community should also use evaluation methods that measure the programs advancement towards specific goals set by the program. In conjunction, these research methods can be helpful in evaluating the success of the Leadership Community.

The specific use of a Leadership Community to advance student leadership development seems to show potential. The investigation of other learning communities would be a promising area of investigation.

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## Appendix A: Consent Form

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY  
Informed Consent for Participants of Investigative Projects  
Title: Student Leadership Development: A Closer Look at Student Gains

Investigator: Kristen Lynn Andersen, Graduate Student Thesis Research

I. The Purpose of this Research

The purpose of this study is to investigate student leadership development at Virginia Tech's campus. This study includes the Pamplin Leaders from the 1998-1999 school year.

II. Risks

There are no known risks associated with participating in this study.

III. Benefits of this Project

This study will benefit educators interested in understanding the effects of the Residential Leadership Program.

IV. Extent of Anonymity and Confidentiality

The identity of the participants will be held confidential and anonymous by the researcher under all circumstances. One year upon completion of the study the research will destroy all materials identifying students who participated in this research.

V. Incentives

The participant will enter in a drawing for two \$75 cash prizes. These prizes will be drawn on the last day of the data collection session.

VI. Freedom from Withdrawal

Subjects are free to withdraw from the study at any time without penalty. Subjects are free to not answer any questions.

VII. Approval of Research

This research project has been approved, as required, by the Institutional Review Board

for Research Involving Human Subjects at Virginia Polytechnic Institute and State University, by the Department of Educational Leadership and Policy Studies.

VIII. Subject's Permission

I have read and understand the Informed Consent and conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent for participation in this project.

If I participate, I may withdraw at any time without penalty. I agree to abide by the rules of the project.

---

Signature

Date

Should I have any questions about this research or its conduct, I may contact:

Investigator: Kristen Andersen  
232-1249  
[kranders@vt.edu](mailto:kranders@vt.edu)

Faculty Advisor: Dr. Don Creamer  
231-9705  
[dc2@vt.edu](mailto:dc2@vt.edu)

IRB Research Division: H.T. Hurd, Chair

**Subjects must be given a complete copy (or duplicate original) of the signed-Informed consent form.**

Appendix B: Participant Instructions

PARTICIPANT INSTRUCTIONS

This research will survey Pamplin Scholars from the 1998-1999 school year. The data collected from this survey will be used in a graduate student thesis investigating student leadership development. The identity of the participants will be held confidential as explained in the informed consent form. Participants may contact the researcher for results of this study.

Upon completing the questionnaire, participants will be asked to enter into a drawing for two \$75 cash awards. Please turn in your questionnaire at the front of the room and enter into the drawing.

Thank you for your participation.

Sincerely,

Kristen Lynn Andersen

Graduate Thesis Research

## Appendix C: Electronic Mail Message

This message is to all the 1998-1999 Pamplin Leaders!

You have been selected to participate in a research project investigating student leadership development during college. Being identified as a student leader on campus, I am very interested in your ideas and opinions about your experiences at Virginia Tech.

You could win \$100, \$50, or \$25 for participating. All you have to do is fill out a questionnaire about your experiences in college. You will be entered into a drawing for the three cash prizes. Since I am only looking at Pamplin Leaders from your class- your chances of winning are high!

Next week you will be receiving a letter in the mail with more details for participation!

Questionnaires will be distributed the week of Feb. 21-25!

I look forward to your participation! Hopefully you will walk away with \$25, \$50 or even \$100 for just answering questions about yourself.

If you have any questions please feel free to contact Kristen Andersen at 232-1249 or [kranders@vt.edu](mailto:kranders@vt.edu).

Thank you.

Appendix D: Letter 1

February 10, 2000

Dear 1998 Pamplin Leader:

You have been selected to participate in a research project investigating student leadership development during college. Being identified as a student leader on campus, I am very interested in your ideas and opinions about your experiences at Virginia Tech. Your participation is very important and greatly appreciated.

I request your attendance at the data collections section **Monday February 21 in Williams 324**. You will fill out a questionnaire indicating your experiences in college. It will take no more than 20 minutes of your time. Upon completion of the questionnaire you will be entered into a drawing for three **cash awards (\$25, \$50, \$100)**.

You may arrive anytime within the scheduled data collection session, as it will take no more than 20 minutes to complete the questionnaire.

<b>When:</b>	<b>Where:</b>	<b>Why:</b>
Monday Feb. 21	324 Williams Hall Anytime from 4-8pm	Win \$25, \$50, or \$100

If you are unable to attend your scheduled session, you may attend any of the following sessions: Tuesday Feb. 22, Wednesday Feb. 23, Thursday Feb. 24, Friday Feb. 25- Anytime from 4-8pm in 324 Williams Hall.

If you have any questions or will be unable to attend the scheduled sessions please contact Kristen Andersen at 232-1249 or [kranders@vt.edu](mailto:kranders@vt.edu). We can make arrangements that will fit into your schedule.

Thank you for your cooperation and participation. I look forward to seeing you at one of the data collection sessions.

Sincerely,

Kristen Andersen  
Graduate Student – Educational Leadership and Policy Studies

Appendix E: Letter 2

February 10, 2000

Dear 1998 Pamplin Leader:

You have been selected to participate in a research project investigating student leadership development during college. Being identified as a student leader on campus, I am very interested in your ideas and opinions about your experiences at Virginia Tech. Your participation is very important and greatly appreciated.

I request your attendance at the data collections section **Tuesday February 22 in Williams 324**. You will fill out a questionnaire indicating your experiences in college. It will take no more than 20 minutes of your time. Upon completion of the questionnaire you will be entered into a drawing for **cash awards (\$25, \$50, \$100)**.

You may arrive anytime within the scheduled data collection session, as it will take no more than 20 minutes to complete the questionnaire.

<b>When:</b>	<b>Where:</b>	<b>Why:</b>
Tuesday Feb. 22	324 Williams Hall	Win \$25, \$50, \$100
	Anytime from 4-8pm	

If you are unable to attend your scheduled session, you may attend any of the following sessions: Monday Feb. 21, Wednesday Feb. 23, Thursday Feb. 24, Friday Feb. 25- Anytime from 4-8pm in 324 Williams Hall.

I look forward to seeing you at one of the data collection sessions. If you have any questions or will be unable to attend the scheduled sessions please contact Kristen Andersen at 232-1249 or [kranders@vt.edu](mailto:kranders@vt.edu). We can make arrangements that will fit into your schedule.

Thank you for your cooperation and participation.  
Sincerely,

Kristen Andersen  
Graduate Student – Educational Leadership and Policy Studies

## Appendix F: Letter 3

February 10, 2000

Dear 1998 Pamplin Leader:

You have been selected to participate in a research project investigating student leadership development during college. Being identified as a student leader on campus, I am very interested in your ideas and opinions about your experiences at Virginia Tech. Your participation is very important and greatly appreciated.

I request your attendance at the data collections section **Wednesday February 23 in Williams 324**. You will fill out a questionnaire indicating your experiences in college. It will take no more than 20 minutes of your time. Upon completion of the questionnaire you will be entered into a drawing for **cash awards (\$25, \$50, \$100)**.

You may arrive anytime within the scheduled data collection session, as it will take no more than 20 minutes to complete the questionnaire.

<b>When:</b>	<b>Where:</b>	<b>Why:</b>
Wednesday Feb. 23	342 Williams Hall	Win \$25, \$50, \$100
	Anytime from 4-8pm	

If you are unable to attend your scheduled session, you may attend any of the following sessions: Monday Feb. 21, Tuesday Feb. 22, Thursday Feb. 24, Friday Feb. 25- Anytime from 4-8pm in 324 Williams Hall.

If you have any questions or will be unable to attend the scheduled sessions please contact Kristen Andersen at 232-1249 or [kranders@vt.edu](mailto:kranders@vt.edu). We can make arrangements that will fit into your schedule.

Thank you for your cooperation and participation. I look forward to seeing you at one of the data collection sessions.

Sincerely,

Kristen Andersen  
Graduate Student – Educational Leadership and Policy Studies



## Appendix G: Letter 4

February 10, 2000

Dear 1998 Pamplin Leader:

You have been selected to participate in a research project investigating student leadership development during college. Being identified as a student leader on campus, I am very interested in your ideas and opinions about your experiences at Virginia Tech. Your participation is very important and greatly appreciated.

I request your attendance at the data collections section **Thursday February 24 in Williams 324**. You will fill out a questionnaire indicating your experiences in college. It will take no more than 20 minutes of your time. Upon completion of the questionnaire you will be entered into a drawing for **cash awards (\$25, \$50, \$100)**.

You may arrive anytime within the scheduled data collection session, as it will take no more than 20 minutes to complete the questionnaire.

<b>When:</b>	<b>Where:</b>	<b>Why:</b>
Thursday Feb. 24	324 Williams Hall Anytime from 4-8pm	Win \$25, \$50, \$100

If you are unable to attend your scheduled session, you may attend any of the following sessions: Monday Feb. 21, Tuesday Feb. 22, Wednesday Feb. 23, Friday Feb. 25- Anytime from 4-8pm in 324 Williams Hall.

If you have any questions or will be unable to attend the scheduled sessions please contact Kristen Andersen at 232-1249 or [kranders@vt.edu](mailto:kranders@vt.edu). We can make arrangements that will fit into your schedule.

Thank you for your cooperation and participation. I look forward to seeing you at one of the data collection sessions.

Sincerely,

Kristen Andersen  
Graduate Student – Educational Leadership and Policy Studies

## Appendix H: Letter 5

February 10, 2000

Dear 1998 Pamplin Leader:

You have been selected to participate in a research project investigating student leadership development during college. Being identified as a student leader on campus, I am very interested in your ideas and opinions about your experiences at Virginia Tech. Your participation is very important and greatly appreciated.

I request your attendance at the data collections section **Friday February 25 in Williams 324**. You will fill out a questionnaire indicating your experiences in college. It will take no more than 20 minutes of your time. Upon completion of the questionnaire you will be entered into a drawing for **cash awards (\$25, \$50, \$100)**.

You may arrive anytime within the scheduled data collection session, as it will take no more than 20 minutes to complete the questionnaire.

<b>When:</b>	<b>Where:</b>	<b>Why:</b>
Friday Feb. 25	342 Williams Hall	Win \$25, \$50, \$100
	Anytime from 4-8pm	

If you are unable to attend your scheduled session, you may attend any of the following sessions: Monday Feb. 21, Tuesday Feb. 22, Wednesday Feb. 23, Thursday Feb. 24- Anytime from 4-8pm in 324 Williams Hall.

If you have any questions or will be unable to attend the scheduled sessions please contact Kristen Andersen at 232-1249 or [kranders@vt.edu](mailto:kranders@vt.edu). We can make arrangements that will fit into your schedule.

Thank you for your cooperation and participation. I look forward to seeing you at one of the data collection sessions.

Sincerely,

Kristen Andersen  
Graduate Student – Educational Leadership and Policy Studies

## Appendix I: Reminder Electronic Mail Message

Hi 1998 Pamplin Leaders!

This is a reminder that you have been selected to participate in a leadership study. Please stop by Williams room 324 between the hours of 4-8pm (Monday-Friday this week) to complete an inventory about your experiences in college.

It will only take about 20 minutes of your time. You will also be entered into a drawing to win \$25, \$50, or \$100.

You have been mailed a letter with more information. Please contact me if you have any questions or need to reschedule an additional time to complete the questionnaire. It is important that I have everyone's participation.

Thank you for your time. I look forward to seeing you this week at one of the data collection sessions.

Sincerely,

Kristen Andersen

kranders@vt.edu

231-1249

Graduate Student

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**Kristen Lynn Andersen**

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262 A Slusher Wing  
Blacksburg, VA 24060-0015  
540.232.1249  
[kranders@vt.edu](mailto:kranders@vt.edu)

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**EDUCATION**

**Master of Education**, Educational Leadership and Policy Studies, May 2000.

Virginia Polytechnic Institute and State University, Blacksburg, VA.

Concentration: Higher Education and Student Affairs.

Thesis: *Student Leadership Development: A Closer Look at Student Gains*

**Bachelor of Science**, Marketing Management, May 1998

Virginia Polytechnic Institute and State University, Blacksburg, VA

EXPERIENCE

**Graduate Hall Director**, Slusher Wing- First Year Experience Program, Residential and Dining Programs at Virginia Tech (August 1999-2000).

Responsibilities include supervising staff of six resident advisors, advising student hall council, maintaining learning environment in the residence hall, managing overall operations of day-to-day resident hall activities and programs, accounts manager for the resident advisor and hall council funds.

**Co-Facilitator**, First Year Experience Program, FYE Course at Virginia Tech (August 1999-December 1999).

Responsibilities include facilitation of class, creation and implementation of course outline, evaluation course material.

**Co-Facilitator**, Summer Leadership Seminar, University Unions and Student Activities at Virginia Tech (May 1999-July 1999).

Responsibilities include facilitation of class, creation of course outline, evaluation of student gains from course.

**Teaching Assistant**, Praxis for Residential Leadership Community, Learning Community Proposal Course (January 1999-May 1999).

Responsibilities include facilitation of class, leading student discussions, weekly meetings to design lesson plan with supervisor, chaperon for students at Learning Communities Conference.

**Program Assistant**, First Year Experience Program, Residential and Dining Programs at Virginia Tech (June 1998- May 1999).

Responsibilities include supervising, advising and training a staff of undergraduate students, conducting weekly meetings, coordinating activities that enhance staff performance, co-facilitating and instructing freshman course, defining the logistics of the First Year Experience Program, coordinating programming schedule with staff, publishing monthly newsletter for WING residents.

HONORS/AFFILIATIONS

**Kappa Delta Pi**, Education Honor Society

**Virginia Tech Learning Communities Task Force**, Graduate Student Representative

**First Year Experience Task Force**

**Advisor of the Month**, Special Housing Programs, National Residence Hall Honorary

**Graduate Student Faculty Forum**, Presenter

**Association for Student Development**, Executive Secretary

**American College Personnel Association**, Member

**National Association of Student Personnel Administrators**, Member

**Chi Omega Fraternity**, Graduate Advisor, Panhellenic Vice President of Recruitment, Chi Omega House Manager, Chi Omega Rush Director, Junior Panhellenic Delegate

**Greek Women of the Year**, Finalist, 1998

**YMCA Student Programs**, High School Leadership Program Director

#### INTERNSHIPS

**Town of Blacksburg Intern**, Marketing/Support for the Assistant Town Manager (January-May 1998)

**Quality Technical Service Intern**, Marketing/Office Administration (May-August 1997)

#### EMPLOYMENT

**Instructor**, Blacksburg Aquatic Center, Blacksburg, VA  
Red Cross Swimming Lessons Instructor  
Professional Rescuing Lifeguard Certification Instructor  
CPR Instructor  
Water Aerobics Instructor

**Lifeguard**, Little Creek Amphibious Base, Morale Welfare and Recreation Department, Virginia Beach, VA.