Impact of Youth Mentoring as an Academic Service-Learning Experience for

College Students

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Abstract

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This study examined the relationship between mentor characteristics, beliefs about youth, relational communication skills, and the closeness of the mentoring relationship. To evaluate the effect of youth mentoring on college students participating in an academic service learning experience, it is important to examine positive mentoring outcomes that enhance learning for the mentor, and strengthen the mentoring relationship. College women mentors, age 18 to 22 years, were paired with middle school girls, age 11 to 14 years, for weekly one-on-one and group mentoring in an 8-month, school-based youth mentoring program. For the first 4-months of the program, college women mentors participated in an academic service-learning course where curriculum and instruction were aimed at enhancing students' understanding of and ability to relate to adolescent girls. For the sampled 40 college women mentors participating in the program, mentor's self-reported beliefs about youth and relational communication processes were measured in a pretest-posttest design. The mentor's perception of the closeness of the mentoring relationship was also measured. Through multiple regression analysis, the association between the mentors' youth-centered beliefs, relational skills and the closeness of the mentoring relationship were examined.

Although there no were significant changes in neither mentors' beliefs nor mentors' relational communication skills from the beginning to the end of the academic service-learning course, mentors' strong academic standing was positively correlated with both youth-centered beliefs and close mentoring relationships. Finally, higher levels of cultural sensitivity and relational communication skills were positively related to close

mentoring relationships. Implications for mentoring academic service-learning programs

that use college students as youth mentors are discussed.

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APPROVAL OF THE DISSERTATION

This dissertation, "Impact of Mentoring as an Academic Service-Learning Experience," has been approved by the Graduate Faculty of the Curry School of Education in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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For all of my inspirational mentors at every level of education.

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CHAPTER 1
INTRODUCTION

How can the next generation of leaders, educators, and public service workers be trained? This question continues to drive the design and implementation of higher education programs. As colleges and universities seek to provide undergraduates with educational, personal, and social development opportunities, a growing number of institutions worldwide are encouraging their undergraduate students to participate in some form of volunteer service (Astin, Ikeda, Vogelgesang, & Yee, 2000; Cohen & Kinsey, 1994; Eyler, 2010; Levine, 1994; Markus, Howard, & King, 1993; Ngai, 2006; O'Brien, 1993). Community engagement and service are increasingly being incorporated into the curricula of major and general education courses in the form of academic service-learning (Astin, Sax, & Tables, 1999; Campus Contact, 2011; Cohen & Kinsey, 1994; Levine, 1994). As the popularity of college level service-learning programs increases (Campus Contact, 2011; Eyler, 2010), so too does the number of college students engaged in community service, which increased a four-fold from just 2006-2010 (Corporation for National & Community Service, 2010).

By linking theory with practice, academic service-learning programs seek to provide undergraduates the opportunity to apply principles learned in the classroom while serving the local community. There is a strong movement to develop and promote such programs aimed at integrating academic instruction with community service and where the instructional methodology focuses on critical, reflective thinking and civic

responsibility (Rosner-Salazar, 2003). This approach to critical pedagogy trains college students to examine their own biases, work with diverse populations, and have careers in public service (Astin et al., 2000; Rosner-Salazar, 2003). Colleges and universities are promoting academic service-learning in hopes of serving their student body as well as the surrounding community.

Research has shown that academic service-learning has far-reaching benefits for both the participating college students and community member or organization (Astin et al., 2000; Eyler, 2010; Gray, Ondaatje, Fricker, & Geschwind, 2000). In their large national study exploring the comparative effects of academic service-learning on the cognitive and affective development of college undergraduates, Astin et al. (2000) found that service-learning participation showed significant positive effects on the following outcome measures:

- academic performance measured by: GPA, writing skills, critical thinking skills;
- values including the student's commitment to activism and to promoting racial understanding;
- choice of a service career, and plans to participate in service after college.

Other studies point to the empathetic aspects of service-learning and the ways that college students learned to appreciate difference, negotiate difficult conversations, confront controversial issues, and gain cultural competencies (Dardig, 2004; Eifler, Kerssen-Griep & Thacker, 2008; Howard, 2005; Murphy& Rasch, 2008; Spiezio, Baker, & Boland, 2005; Wetig, 2006). Astin et al. found that these affective qualities changed

the most in service-learning programs where undergraduates engaged with diverse populations.

Academic service-learning programs are considered to be effective if both the university course goals and the community service goals are met; thus, both the college students and the participating community members show positive growth in various outcome measures (Astin et al., 2000). Mentoring is one type of academic service-learning model that has been shown to effectively enhance the academic and social development of both the college student and participating mentee (Rhodes & DuBois, 2006). A large body of research examines the specific ways in which mentoring benefits mentees (Hall, 2003). For example, in their meta-analysis of 55 evaluations of the effects of mentoring models, DuBois, Holloway, Valentine, & Cooper (2002) found that these programs do have a significant and measureable effect on the young people who take part in them. Dubois et al. report that the mentees showed improvement in the following outcome measures:

- problem or high-risk behaviors

- academic/educational outcomes

- career/employment outcomes

- social competence

- emotional and psychological adjustment.

Other research studies confirm these findings and affirm the conclusion that mentoring programs benefit the participating mentees in measureable personal, academic, and social ways (DuBois & Karcher, 2005; Rhodes, 2002; Zimmerman, Bingenheimer, & Behrendt, 2005). While these results are encouraging for the community youth, they do not address

the potential benefits for the participating college students. Research is necessary on how academic service-learning programs impact undergraduates in ways that directly help the population they seek to serve.

As Vogelsang and Astin (2000) report, effective academic service-learning takes place when the content-driven academic college course is coupled with mentoring in mentee's own environments because both the content learning and field experience is enhanced in powerful ways for the participating college students. This study shows the powerful impact of a mentoring academic service-learning experience in general ways, but further investigation about the specific ways in which college students learn, change, and grow as a result of the mentoring academic service-learning experience is necessary.

While such thematic studies support the promotion and growth of academic service-learning programs nationwide, there is a need to examine mentoring as a type of academic service-learning program and the college student outcomes specific to this model (Lee, Germain, Lawrence, & Marshall, 2010). After reviewing current literature on academic service-learning and mentoring, these questions remain: What change occurs in the undergraduates' beliefs or communication skills that have been shown to promote positive changes in the youth with whom they work? How are these beliefs and communication skills associated with the college students' perceptions of the mentoring relationship? The current research study examines the impact of one academic service-learning mentoring program on the participating undergraduates and the ways in which these changes are related to the mentoring relationship with the adolescent they seek to serve.

Overview of Mentoring

The term "mentoring" is defined in many ways as it describes various situations in which one person instructs, assists, or guides another person (Michael, 2008). There is a distinction between natural or informal mentoring (Rhodes, 2002; DuBois & Silverthorn, 2005) and mentoring relationships that develop through formal programs (Rhodes & DuBois, 2006). In either case, research shows that mentoring can influence a person's life cycle (Lucas, 2001) and has benefits for both the mentor and the mentee (Rhodes, 2002).

The focus of the mentoring program, and thus the mentoring relationship, varies greatly from site to site. There are many different attributes of mentoring programs including structured or unstructured, volunteer or mandatory, short or long-term commitment, individual or group-based, child-to-child in school settings, and adult-to-child in school or community-based settings, adult-to-adult in workplace settings (Miller, 2002). Some programs focus on the development of academic knowledge, while others focus on social or cognitive skills (Hall, 2003). For the purpose of this study on mentoring programs, adult-to-child in school-based settings will be the focus.

Youth Mentoring Movement

Currently, three million young people are in formal one-to-one mentoring relationships in the United States, which is a sixfold increase in the last decade (Rhodes & DuBois, 2006). Mentoring relationships are deemed "successful" or "effective" if they promote the positive outcomes for the mentee (Rhodes & DuBois, 2006). Recent research studies have found that youth's involvement in mentoring relationships lead to positive developmental outcomes (DuBois & Karcher, 2005; Rhodes, 2002; Zimmerman,

Bingenheimer, & Behrendt, 2005) particularly within the domains of education/work, mental health, problem behavior, risk-taking, decision-making, and health (DuBois & Silverthorn, 2005; Hall, 2003). In particular, youth from backgrounds of environmental risk and social disadvantage are more likely to benefit from participating in a mentoring program than those youth who are not considered "at-risk" (DuBois et al., 2002). In terms of the mentors, research shows that the benefits of mentoring youth include an increase in self-esteem, social insight, empathy, and social and interpersonal skills (Bullen, Farruggia, Gomez, Hebaishi, & Mahmood, 2010; Hall, 2003). While both the benefits for the mentee as an individual and the benefits for the mentor as an individual have been researched thoroughly, there is limited research on the ways in which the benefits to the mentor contribute to the closeness of the mentoring relationship.

  Effect of mentoring on the mentor. Further investigation is needed concerning the specific ways in which the mentor changes over the course of the academic service-learning experience and how this change influences the mentoring relationship. For example, "How does the mentor's change in beliefs about youth affect the mentoring relationship?" Previous research has examined how mentors' general attitudes towards youth change as a result of a mentoring experience, such as whether or not the mentors believe youth should be respectful (Bullen et al., 2010), but further investigation is necessary. There is a gap in the research concerning what mentors specifically believe about youth and how they should be educated. While previous studies examined mentors' general attitudes towards youth (Bullen et al., 2010; Herrera, Baldwin Grossman, Kauh, Feldman, McMaken, & Jucovy, 2007), no research study has investigated what ideas mentors' have about how youth should be taught, nurtured, and allowed to express their

own points of view. These ideas about youth are relevant to the closeness and eventual effectiveness of the mentoring relationship, measured by whether or not it promotes positive youth outcomes (Rhodes & DuBois, 2006).

Research has shown that mentoring relationships that are youth-centered (also referred to as developmental) as opposed to being mentor-centered (also referred to as prescriptive), have been found to predict greater relationship quality and duration (Herrera, Sipe, & McClanahan, 2000; Morrow & Styles, 1995; Rhodes & DuBois, 2006). Adults' beliefs about youth can be classified as traditional and authoritative (adult-centered) or progressive and democratic (youth-centered) (Schaefer & Edgerton, 1986). Very few research studies have evaluated the impact of a mentor training program towards youth-centered relationships. Research provides evidence that beliefs and values are correlated (Schaefer & Edgerton, 1986), so an examination of mentors' beliefs about youth, and whether they are traditional or progressive, can shed light as to whether the mentoring relationship is youth-centered or mentor-centered. Such inquiry merits study because research has shown that mentor-centered relationships lead to positive youth outcomes (Rhodes & DuBois, 2006).

Bullen et al. (2010) found that mentoring had a positive impact on mentors' development of the values and skills necessary to work with youth, but the researchers did not analyze the specific skills sets in great detail. Engaging, relating, and communicating with at-risk youth is a critical component in a successful mentoring relationship that leads to positive youth outcomes (Hall, 2003). The ability to demonstrate cultural sensitivity towards diverse populations is another important aspect of successful mentoring because in some cases the mentoring experience only solidified negative

stereotypes, and the relationship failed as a result (Boyle-Baise, 1998; Rhodes & DuBois, 2006; Thomson & Zand, 2010). There is little research on how the mentoring experience serves as an educative process in these social and cultural domains, and how this change impacts the mentors' perception of the relationship with the at-risk youth. The question remains, "How does the mentor's change in cultural sensitivity and related communication skills affect the mentoring relationship?" By investigating specific aspects of the mentor's development over time, it will inform the training of future mentors. Research of such development must take place within the context of an established and effective youth mentoring program that has been shown to promote positive youth outcomes.

Elements of effective mentoring programs. A meta-analysis of mentoring program evaluations reveals that there are critical components that must be included for the program to be effective and lead to positive youth outcomes (DuBois et al., 2002). Mentoring programs promote positive youth outcomes when the following criteria are met:

- implementation of program is closely monitored
- prospective mentors are screened
- mentors and youth are matched on relevant criteria
- training before the mentoring relationship begins
- on-going training during the mentoring program
- supervision of the mentoring relationship
- support for mentors
- structured activities for mentors and youth

- parents are involved

- opportunities for frequent contact

- there is a sustained relationship over time (Hall, 2003; Rhodes & DuBois, 2006).

These elements provide a structured and positive environment for the mentoring

relationship and equip the mentors with amble support and opportunities to engage with

the mentee (Rhodes & DuBois, 2006; Thomson & Zand, 2010). The empirical evidence

for these practices will be discussed further in Chapter Two. The mentoring program

examined in this study incorporates all of these critical components.

Mentoring as academic service-learning. This research study focuses on the

impact of an academic service-learning mentoring program on its undergraduate

participants. Co-sponsored by the Curry School of Education and the Women's Center at

the University of Virginia, The Young Women Leaders Program (YWLP) is a research-

based mentoring program that has served more than one thousand youth since its

inception in 1997. YWLP matches undergraduate women with at-risk middle school girls

to focus on developing the leadership skills of both groups (Lawrence, Sovik-Johnston,

Roberts, & Thorndike, 2009). Mentors meet with their mentees for a minimum of four

hours a month to spend one-on-one time together participating in various social activities.

In addition, mentors meet for two hours after school each week in a group of eight to ten

mentor-mentee pairs and a facilitator.

In these school-based mentoring group sessions, the facilitators lead the mentor-

mentee pairs through a research-based curriculum of activities and discussion topics

addressing critical aspects of girls' scholastic achievement, self image, social aggression,

and health decision-making (Lawrence et al., 2009). Referred to as the mentoring group

curriculum, this research-based curriculum serves as the content base for weekly group meetings for mentor-mentee pairs. The one-on-one time requirement for mentor-mentee pairs is meant to help the mentoring relationship develop over the course of the academic year. The weekly school-based mentoring group meeting requirement seeks to hold mentors accountable for attendance while also allowing the college women to participate with their peers in a supportive environment. In addition to providing accountability and support, the weekly mentoring group meetings also serve a social and educational purpose in that they provide the opportunity for a diverse set of college women and middle-school girls to interact with one another. In recruiting mentors for the program, YWLP seeks to reach all undergraduate women at the university, especially racial or ethnic-minority women, since approximately half of the mentees are nonwhite.

As a two-semester academic service-learning opportunity, YWLP integrates mentoring with an educational psychology class, *Issues Facing Adolescent Girls,* taught by the program director. Mentors learn about the cognitive, social, and academic issues facing teens today, and ways to work with them collaboratively. Class activities include didactic sessions on adolescent development and brain research, presentations from experts in the educational psychology field, whole class or small group discussions, race-relations dialogue sessions, academic and study skills enhancement, active listening training, cultural competency training, and advice for implementing the theoretically and empirically-based mentoring group curriculum. Undergraduate students are also required to conduct an "Appreciation Interview" with her mentee's parent or guardian, write weekly response papers that reflect on the assigned reading and discussions while seeking

to apply the information specifically to her mentee, and write a final reflection paper at the end of each semester.

During an hour of the two-hour class, mentors have time to meet with the other college women who participate in their school-based group mentoring sessions. The goals for this small group meeting include: adapting the mentoring group curriculum to fit their group's needs, discussing relationship issues within the entire group or specific pairs, and connecting with one another on a peer basis. This meeting time also provides program staff the opportunity to offer support to the mentors as needed. In terms of assessment, course grades for the undergraduates are based on grades from the various writing assignments, participation, and attendance in class mentoring group meetings, and one-on-one time with mentee. This academic service-learning opportunity balances requirements of in-class training and out-of-class time spent mentoring in group or one-on-one settings.

The goal of this research study is to examine the impact that the *Issues Facing Adolescent Girls* course as well as the mentoring experience have on the participating undergraduates. By investigating the ways in which specific outcomes change over time, the study can shed light on how mentoring serves as an educative and impactful academic service-learning experience. In order to examine the ways in which the college students are impacted by this experience, one must first contextualize the experience within relevant theories of social psychology.

Theoretical Framework

The foundational social psychology theories that frame the nature of this research study are self-determination theory, intergroup contact theory, and empowerment theory. All three are central in the YWLP mentoring experience for undergraduates. The course curriculum and mentoring group curriculum are based upon these theories, and the undergraduates are challenged to engage with this material in a meaningful way. The transformational nature of these theories merits the investigation of how the mentoring experience changes the way that undergraduates think about and interact with youth.

Self-Determination Theory

The three tenets of YWLP, competence, autonomy, and connection, are built on self-determination theory (Connell & Wellborn, 1991; Ryan & Deci, 2000). Connell and Wellborn (1991) prioritized the role of social well-being as an academic motivator. Ryan and Deci (2000) asserted that all humans have fundamental needs for competence, autonomy, and relatedness, and that these needs motivate the self to initiate behavior. Connell and Wellborn concluded that the degree to which people can meet these needs within any particular context (school, home, work, social, etc.) will influence their engagement and interaction in that context and ultimately predict their performance. Connell (1990) defined the need for relatedness as "the need to feel securely connected to the social surround and the need to experience oneself as worthy and capable of love and respect" (p. 63). Thus, for the purpose of mentoring, the term relatedness is equated with connectedness within this context. By focusing on competence, autonomy, and connectedness, YWLP anchors the course and mentoring group curriculum in self-determination theory.

Intergroup Contact Theory

The social goals for YWLP are rooted in intergroup contact theory. Allport (1954) theorized that cross-racial contact would produce more tolerant attitudes when members of different groups interact with each other under specific situational conditions. Allport argued that positive effects of intergroup contact occur only in situations characterized by four key conditions: equal group status within the situation, common goals, intergroup cooperation, and the support of relevant authorities. Most research on the impact of intergroup contact supports its efficacy in reducing prejudice and intergroup bias (Pettigrew, 1998; Pettigrew & Tropp, 2006). Both the YWLP class and mentoring group curriculum offer opportunities for intergroup contact between undergraduates as peers as well with the youth they mentor. Research has shown that the YWLP mentoring program provides both mentors and mentees with opportunities for interactions across boundaries of difference (Lee, Germain, Lawrence, & Marshall, 2010).

Empowerment Theory

By employing empowerment theory (Zimmerman, 2000), YWLP also seeks to help give power to individuals and communities that have been marginalized by society. Empowerment theory, research, and intervention link individual well-being and the larger social environment, as well as the development of a responsive community (Zimmerman, 2000). Empowerment-oriented interventions seek to support individual well-being while they also aim to solve problems, provide opportunities for participants to develop knowledge and skills, and engage participants as collaborators in the process (Zimmerman, 2000). The design and implementation of the YWLP mentoring curriculum

offers empowerment opportunities for both mentor and mentee including activities geared

towards improving self-image, leading peers, and serving the school community.

Graphic Organizer 1
YWLP Theoretical Framework: Competence, Autonomy, Connection

Self-Determination Theory	Intergroup Contact Theory	Empowerment Theory
•Prioritized role of social well-being as academic motivator (Connell & Wellborn, 1991) •All humans have fundamental needs for competence, autonomy, & relatedness (Ryan & Deci, 2000) •Relatedness = connectedness (Connell & Wellborn, 1991)	•Cross-racial contact would produce more tolerant attitudes within members of different groups interact under specific situational conditions (Allport, 1954)	•Linked individual well-being & larger social environment, as well as the development of a responsive community (Zimmerman, 2000) •Empowerment-oriented interventions support individual well-being while solving problems, developing knowledge/ skills, & collaborating

Given this theoretical framework for the mentoring program course and curriculum, the

current research study seeks to examine the impact of this academic service-learning

experience on the undergraduate participants' beliefs about youth, relational

communication skills, and the resulting perception of the mentoring relationship.

Statement of the Problem

Since the goal of an academic service-learning program is to educate the college

student while serving the local community, there is a need for research on whether the

undergraduates are learning or changing in ways that help them grow personally and

prepare them to effectively serve others. In the case of mentoring as an academic service-

learning program, research has revealed significant associations between youth's involvement in mentoring relationships and positive developmental outcomes (DuBois & Karcher, 2005; Rhodes, 2002; Zimmerman et al., 2005). The most critical element that characterizes an effective mentoring relationship is that the two people involved feel connected—that there is mutual trust and a sense that one is understood, liked, and respected (Rhodes & DuBois, 2006). The closeness of this emotional connection also contributes to the success of the mentoring relationship (Herrera et al., 2000). Therefore, the challenge is to train the mentors to learn how to connect with youth in meaningful ways in order to promote positive youth outcomes.

Research shows that there are some key characteristics of mentors that must exist or be developed over time in order for the relationship to flourish. Mentoring relationships show positive outcomes for the youth if the mentors have social skills to connect with and help the youth (DuBois et al., 2002). Mentors also must possess an appreciation of the salient socioeconomic and cultural influences on the youth's life as well as the communication skills necessary to relate to the youth (Rhodes & DuBois, 2006). Developing these traits in college students not only prepares them for effective mentoring but also for the future workforce, particularly in the fields of education, social work, or public service (Astin et al., 1999; Michael, 2008). Finally, the mentor needs to have a sense of efficacy for being able to mentor (DuBois et al., 2002). These traits of the mentor, combined with a youth-centered mentoring relationship, and a close relationship lead to positive outcomes for the youth, particularly within the domains of education/work, mental health, problem behavior, risk-taking, decision-making, and health (DuBois & Silverthorn, 2005; Hall, 2003; Herrera et al., 2000; Leyton-Armakan,

Lawrence, Deutsch, Lee Williams, & Henneberger, 2012). The proposed study seeks to examine whether effective mentoring elements such as youth-centered beliefs, cultural sensitivity and related communication skills are being developed in the college student as a result of the YWLP academic service-learning experience.

Purpose of the Research Study

In light of this research on the positive outcomes of mentoring programs, it is relevant to examine how a mentoring program matching college students with a diverse group of adolescents impacts the undergraduates participating as mentors. The purpose of this study is to explore whether and how college students' beliefs about youth, cultural sensitivity and related communication processes change over the course of a semester-long academic service-learning program and how this change influences the mentoring relationship. Moreover, this research seeks to privilege college students' reflections upon their beliefs, communication processes, and perception of the mentoring relationship throughout the process.

Research Questions

Given these goals, this study endeavors to answer the following research questions:

- **Research Question 1:** Do students who experience mentoring as an academic service-learning experience change their beliefs about youth and relational communication processes from the beginning of the semester to the conclusion of the semester? Among those who demonstrate belief change, what is the nature of that belief change?

- o *Subquestion 1A:* Does this change in beliefs or relational communication processes differ by demographic factors (such as age, ethnicity, expected grade point average, interest in teaching, etc.)?

- o *Subquestion 2A:* Does this change in beliefs or relational communication processes differ based on time spent mentoring?

- **Research Question 2:** How are mentors' beliefs and relational communication processes associated with their perception of the mentoring relationship?

Researching these questions may provide information about how a mentoring relationship can serve as training experience for working with adolescents in regards to the social and cultural domains. This information can contribute to the field of higher education, especially in light of the growing need for experiential learning aimed at promoting cultural sensitivity. These skills are necessary for working in a diverse global society, and more research is needed on how to train college students in these areas (Boyle-Baise, 2005; Milner, Flowers, & Moore, 2003).

Description of the Research study

This study employs multiple quantitative measures to examine the research questions concerning the differences in college students' beliefs about youth, cultural sensitivity, and relational communication processes at the beginning and end of an academic service-learning experience. A timeline detailing the various steps of the research study is included in Appendix A. This quantitative inquiry approach seeks to describe trends that change from the beginning of the program to the end of the first semester and examine possible correlations among the number of hours spent mentoring

and the perceptions of the mentoring relationship. The quantitative analysis procedures compare pretest data to posttest data on the dependent variables of (a) beliefs about youth (traditional or adult-centered versus progressive or youth-centered) and (b) relational communications processes (and related factors: appreciating difference, engaging self, critical self-reflection and alliance-building), before and after participation in an academic service-learning mentoring program. The independent variables are (a) the academic service-learning course and (b) time spent mentoring. By examining both the change in trends over time as well as the within-group differences, the research methodology may allow for findings that can be generalized.

Definition of Terms

Operational definitions of the following terms are provided. These terms are discussed further in Chapter Two in regards to related research literature and their relevance to the study.

Academic service-learning: This is a teaching and learning model which seeks to inform civic service with academic discourse. By scaffolding students' development with training and relevant content information, this teaching approach offers the opportunity for learning and genuine service to the community.

YWLP: The Young Women Leaders Program is an academic service-learning program that matches college undergraduate women with at-risk middle school girls and seeks to promote leadership skills for both groups.

Big Sister: This term refers to the college women who participate in YWLP as mentors.

Little Sister: This term refers to the middle school girls who participate in YWLP and are mentored.

Mentoring group curriculum: This research-based curriculum serves as the content for weekly after school group meetings for mentor-mentee pairs.

Cultural sensitivity: This term reflects an individual's awareness of, comfort with, and sensitivity to issues of cultural diversity.

Beliefs about youth: Adults' beliefs about youth can be classified as traditional and authoritative (adult-centered) or progressive and democratic (youth-centered) (Schaefer & Edgerton, 1986). This study investigates the types of beliefs that college students have about youth, whether or not they change, and how they relate to the mentoring relationship.

Relational communication processes: This term incorporates the cultural and social skills needed to engage with diverse people. Developed by Nagda (2006), the *Communication Processes* survey investigates four factors related to intergroup dialogue: appreciating difference, engaging self, critical self-reflection, and alliance-building. The research instruments are discussed in greater detail in Chapter Three, where the reliability and validity of each instrument is explained.

Significance of the Study

This study seeks to investigate previously unanswered questions about the impact of a mentoring experience on college students' beliefs about youth, cultural sensitivity and related communication skills. Various research studies have identified the need to effectively train future leaders and civil servants how to be culturally sensitive and recognize and respond to the needs of diverse youth (Milner, 2010; Larke, Wiseman, &

Bradley, 1990; Beilke, 2005). Academic service-learning programs address this need for a culturally responsive future workforce by training college students in civic engagement and by providing the space for them to learn important academic skills and knowledge that translates into intergroup competence (Astin et al., 2000).

The current study examines the effectiveness of one academic service-learning program by asking questions related to specific constructs associated with cultural sensitivity (beliefs about youth and relational communication processes). While previous studies have examined the impact of various multicultural educational experiences for college students, such as: contact with diverse families (Lyon, 2009), service-learning experiences (Brown, 2005; Wong, 2008), tutoring (Jones, Stallings & Malone, 2004), group counseling sessions (Arizaga, 2005) and mentoring (Adams, 2005; Michael, 2008), this is the first study to examine the impact of an academic service-learning model that incorporates *all* of these elements.

During the academic service-learning course and mentoring experience, college women in YWLP are required to make contact with diverse families by interviewing an important person in their mentee's life, which Lyon (2009) found to be significant in promoting cultural sensitivity. YWLP mentors are trained in tutoring strategies and academic skill support, which Jones et al. (2004) and Michael (2008) found enhanced undergraduate students' organizational, pedagogical, and communication skills. Finally, the college women participating in YWLP engage in both one-on-one mentoring relationships as well as group counseling sessions, which Arizaga (2005) found to offer support, structure, and accountability for participation in the program. The YWLP class and group supervision enhance college students' mentoring commitment and provide

them with opportunities for interactions across boundaries of difference (Lee, Germain,

Lawrence, & Marshall, 2010). The current research study builds on the research of

previous studies to pose new research questions to address the ways we educate and train

undergraduate students to meet the growing needs of diverse youth.

CHAPTER 2

REVIEW OF THE LITERATURE

In order to effectively examine the influence of an academic service-learning experience on college students' beliefs and communication processes, the prior work of scholars and researchers must be considered. This chapter summarizes recent literature and examines the relevant research implications for studying mentoring as an academic service-learning experience. The literature review considers the purpose of academic service-learning experiences, why they warrant study, and how they impact the participating undergraduates. This discussion is organized into four sections. The first section provides an overview of research related to academic service-learning programs at the collegiate level, including program goals, measurement challenges, impact on college participants, and implications for program design. The second section discusses current research related to youth mentoring programs within the context of academic service-learning. The third section reviews literature related to working with adolescents including research on the impact of mentoring programs on college students' beliefs and communication skills. Finally, the fourth section considers research on the elements of an effective mentoring relationship and how the nature of the relationship leads to positive youth outcomes.

Academic Service-Learning: Purpose and Implications

Academic service-learning combines academic study with community service. Colleges and universities implement such programs to achieve both the personal and academic goals of undergraduate students while also meeting the broader goals of civic responsibility and social justice (Astin et al., 2000; Eyler 2010). According to field experts Eyler and Giles (1999), service-learning should provide participating students with the following:

- course-specific learning in a community setting

- understanding of the importance of personal integrity and ethical conduct

- sensitivity to issues of culture and diversity

- ability to identify community needs and resources

- awareness of social responsibility and active citizenship

- recognition of the value of using career skills to address community needs through civic engagement opportunities.

The programmatic goals of academic service-learning influence its course development, content, and implementation. These goals, and the theories behind them, lead to the social and academic outcomes for program participants. The following section provides an overview of research related to academic service-learning programs at the collegiate level, including program goals, measurement challenges, impact on college participants, and implications for program design that influenced the current study.

The work of Astin et al. (2000), Eyler (2010) and Eyler and Giles (1999) are relevant to the current study in that they lay the groundwork for understanding the academic service-learning model in higher education and show the importance of the theoretical framework behind this model. Astin et al. suggest that outcome measures for

participants should be aligned with academic service-learning programmatic goals. In the case of YWLP, the three relevant social psychological theories include self-determination theory, intergroup contact theory, and empowerment theory (Lawrence et al., 2009). The current study investigates college students' beliefs about youth which directly relates to the self-determination theory tenets of competence, autonomy, and connection (Ryan & Deci, 2000).

For example, a progressive, youth-centered belief system and approach is necessary in order to demonstrate a "competence approach" of looking for healthy intentions in a youth's actions within a mentoring relationship (Lawrence et al., 2009). In addition, a progressive, youth-centered belief system and approach recognizes and respects an adolescent's need for autonomy. The first research question about whether or not there is change in pre- and posttest data concern college students' beliefs about youth addresses two aspects of self-determination theory, competence and autonomy. This research question also investigates the change in communication processes, and in doing so, builds on intergroup contact theory about dialogue between diverse groups. The communication processes survey examines four factors related to intergroup dialogue: appreciating difference, engaging self, critical self-reflection, and alliance-building between diverse groups (Nagda, 2006). The second research question about the influence of change in beliefs or communication processes on the mentoring relationship addresses the final component of self-determination theory, connection. Thus, following the recommendation of Astin et al., the outcome measures for participants in the current research study are aligned with the academic service-learning programmatic goals of YWLP.

Understanding the Academic Service-Learning Model

In order to investigate the ways in which college students benefit from academic service-learning, there must be an understanding of how students engage in these types of programs. In general, academic service-learning programs are built upon the foundational theory of student involvement. Astin (1984) theorized that the benefits (i.e., "value-added") that college students gain as a result of the college experience will be directly proportional to the time and effort that they invest in that experience. In the case of academic service-learning, Astin argued that the student involvement theory applies because the implementation of such programs increases the number of student-faculty interactions because of the field experience supervision required, student-to-student interactions both in class and in the field experience, as well as the amount of time and energy that students invest in an academic service-learning experience. Recently, researchers have examined the specific "value-added" aspects of participating in an academic service-learning program.

In their national mixed-methods study exploring the comparative effects of academic service-learning on the cognitive and affective development of college undergraduates, Astin et al. (2000) collected longitudinal data from 22,236 undergraduates attending a sample of baccalaureate-granting colleges and universities in the U.S. Multivariate controls were used for student characteristics and institutional characteristics before the comparative impact of service-learning was assessed on the student outcomes. The quantitative portion of the study found that service-learning participation showed significant positive effects on eight outcome measures: academic performance (grade point average, writing skills, and critical thinking skills), values

(commitment to activism and to promoting racial understanding), choice of a service career, and plans to participate in service after college. Four out of five service-learning students felt that their service "made a difference," and that they were learning from their service experience. The data revealed that the single most important factor associated with a positive service-learning experience was the student's degree of interest in the subject matter. The second most significant factor in a positive service-learning experience is whether the professor encouraged class discussion.

While this large research study makes a compelling argument for the promotion of academic service-learning programs, there are gaps in this information about skill development that directly relates to the service component. The only skills assessed in the Astin et al. (2000) study, writing and critical thinking skills, were not closely aligned with specific programmatic goals at individual institutions. While it is commendable that four of five service-learning students felt that their service "made a difference," and that they were learning from their service experience, these findings do not concentrate on the specific ways in which students learned from the academic service-learning course to help them "make a difference" in the community setting. The current study addresses the gaps in the literature concerning the way in which change in mentors' beliefs about youth, cultural sensitivity and related communication processes impact the mentoring relationship.

The qualitative portion of the Astin et al. (2000) study involved in-depth case studies of student learning on three different campus including individual and group interviews as well as classroom observations. The qualitative findings suggested that service-learning facilitates four types of outcomes: (a) an increased sense of personal

efficacy, (b) an increased awareness of the world, (c) an increased awareness of one's personal values, and (d) increased engagement in the classroom experience. Qualitative findings also suggested that both faculty and students develop a heightened sense of civic responsibility and self-efficacy through participation in service-learning programs. The qualitative research revealed that the extent to which the service experience was enhanced specifically by the academic course material depended in part upon the amount of training the student received. Both qualitative and quantitative results supported the power of reflection as a means of connecting the service experience to the academic course material; in this study, reflection occurred through peer discussions, professor-led discussions, and written reflection in the form of journals and papers. This study confirmed the centrality of reflection in the academic service-learning experience in general, and for the purpose of the current research study, Astin et al.'s findings supported the selection of YWLP as the program of interest.

In YWLP, reflection also occurs through peer discussions, professor-led discussions, and written reflection in the form of journals and papers. The current research study uses quantitative instruments, such as the *Communication Processes* survey, which are based upon qualitative research and incorporate reflective statements, such as asking participants to rate the ways in which they "Use my mistakes to reconsider my point of view," and "Examine the sources of my biases and assumptions." Both the quantitative and qualitative findings of Astin et al. influenced the selection of the quantitative measurements for the current research study.

Astin et al. (2000) concluded that the quantitative and qualitative research findings supported the argument that academic service-learning courses should be

specifically designed to assist students in making connections between the service experience and the academic material. Based on this large foundational research by Astin et al., future studies could examine how programmatic goals influence the design and implementation of academic service-learning courses, and how student learning is enhanced by the service experience in relation to the programmatic goals. The current study seeks to further the work of Astin et al. by addressing the gaps in the literature concerning the way in which change in mentors' beliefs about youth, cultural sensitivity and related communication processes impact the mentoring relationship. This investigation will further the knowledge base about academic service-learning and inform the ways in which future mentors are trained.

Several studies have found that service-learning had a positive effect on students' interpersonal and personal development. For example, Moely, McFarland, Miron, Mercer, and Illustre (2002) conducted a quantitative a pre- and posttest study on students' various interests, skills, and attitudes between 217 undergraduate students involved in service-learning and 324 students not involved in service-learning. All of the participants were enrolled in the College of Arts and Sciences at a large liberal arts university. These researchers found that students had similar scores at the beginning of the semester, but by the end of the semester, students involved in service-learning scored higher on civic action, social justice attitudes, leadership skills, and problem solving skills than the control group. In addition, Moely et al. assessed service-learning and non-service-learning students' appreciation of the course and their interest in learning about the course content and the field experience, as well as the differences between these two groups' outcomes before and after the service. Members of neither group maintained their initial

optimism by the end of the semester, but service learners maintained their positive view of the course and increased their ratings for learning about the community as well as their interest in a service profession.

The research of Moely et al. (2002) confirm the findings of Astin et al. (2000) that academic service-learning impacts college students in positive ways, but more research is necessary to determine the specific ways in which this impact relates to the community-service component. Thus, this study seeks to build on the previous research focused on the "value-added" aspects of academic service-learning by asking the follow-up question, how are the college students changing in ways that better prepare them to serve the community? One of the key factors that must be considered is how the academic service-learning experience prepares students for the specific needs of the community they seek to serve.

Research on social outcomes has found that service-learning had a favorable effect on students' multicultural competencies and community involvement (Moely et al. 2002; Rockquemore & Schaffer, 2000). For example, Payne (2000) conducted a quantitative pre-post study on exploration, affiliation, experimentation, and assimilation preferences for community involvement for 83 undergraduate students enrolled in four sections of an academic service-learning course. Results of the study revealed that by the end of the semester, students changed their exploration and assimilation preferences for community service. Payne reported that service learners reduced their apprehension levels, indicators measuring their exploration preference for community involvement, and they increased their lifelong commitment to community service, which served as an indicator of their assimilation preference. While this study provided useful information

about student outcomes, further research is necessary on the link between the specific service experience and the outcome measures.

Eyler (2010) suggests that students in service-learning courses gain a greater level of self-knowledge and change their beliefs about the community. Research implications can be characterized by the primary programmatic goal of the academic service-learning program, such as: community action programs that promote civic engagement and programs that seek to teach and promote social justice. Such research on how academic service-learning promotes civic engagement informs the design of current research study.

Promoting civic engagement. Some academic service-learning programs seek to promote civic engagement through the course content and program design. Nagai (2006) conducted a mixed-methods research study examining whether a university service-learning program in Hong Kong was effectively training students in civic responsibility. Using a structured questionnaire administered at the end of the program, the study investigated the impact of service-learning on student outcomes through quantitative measurements. In terms of the community service experiences, they were all aimed at promoting civic engagement; university students provided services to people in need, such as children and youth in disadvantaged circumstances, senior citizens in deprived communities, and new arrivals from Mainland China. Results from the quantitative analysis revealed that approximately 88% of the students reported positive experiences with their agencies, over 90% found the classroom reflection useful for their learning, and over 90% believed that the program enhanced their personal development and social commitment.

The qualitative portion of the study sought to identify converging themes among the open-ended questions on the questionnaires (Nagai, 2006). Students reported that the program gave them insight about themselves and other people, helped them work with diverse populations, and increased their self confidence. Results also revealed that the academic service-learning experience impacted students' desire to participate in future volunteerism or civil servant roles. Nagai concluded that the findings showed the value of service-learning, but the study was limited by self-reporting and by the lack of a pretest to show change over time. The researcher suggests that future studies examine the specific benefits of service-learning in a pre-posttest model and with outcomes that are related to the programmatic goals. Employing Nagai's suggestions, the current study seeks to examine the impact of service-learning on college student participants in a pre-posttest model and with specific outcomes that are related to the programmatic goals of YWLP.

In another study examining the effectiveness of an academic service-learning program aimed at promoting civic engagement, Spiezio, Baker, and Boland (2005) assessed student learning outcomes at four colleges and universities. The researchers sought to evaluate the effects of service-learning and the pedagogy of a "democratic classroom" approach to course management have on student attitudes toward civic engagement. The study involved 1,243 undergraduate students enrolled in 39 courses drawn from diverse academic programs. This research study employed a quasi-experimental research design to contrast the civic attitudes and skills of service-learning students with the attitudes and skills of individuals in the general student population. Comparisons were drawn on the basis of student responses to a civic aptitudes survey

administered at each participating institution at the beginning and the end of each semester.

Results from the analysis between the experimental and control group revealed: (a) an increase in the value and significance that students attach to the principle of civic engagement; (b) a change in the way that students relate to, and interact with, other members of the community; (c) an increase in the degree of confidence that students express in regard to their critical thinking skills; and (d) an increase in the sense of efficacy that students express in regard to their ability to serve as agents of social and political change (Spiezio et al., 2005). While the results of the study support the research hypothesis that democratic pedagogy and academic service-learning promote civic engagement, the study does not address the specific ways in which the program lead to specific student outcomes. The pedagogical implications warrant further study.

In a related study, Gallini and Moely (2003) assessed the community engagement, academic engagement, and interpersonal engagement of students in an academic service-learning program. By comparing end of semester scores for 142 service-learning students and 71 students not involved in service-learning, researchers sought to evaluate the added benefit of the service-learning experience. Quantitative analysis revealed that service-learners reported greater levels of engagement than the control group in all three areas. In general, such investigations provide important documentation on students' learning, social, and personal changes before and after community-oriented service-learning experiences (Gallini & Moely, 2003; Ngai, 2006; Spiezio et al., 2005), but more research is necessary on the specific nature of these changes.

Promoting social justice. In her review of academic service-learning literature, Rosner-Salazar (2003) supported the inclusion of multicultural service-learning in higher education as a way to prepare future professionals to be culturally aware, culturally sensitive, and socially responsive. Examining a variety of case studies where service-learning is used as a form of multicultural education across the disciplines in universities, Rosner-Salazar showed the transformational nature of service-learning on students' personal, academic, and social development. Synthesizing themes from the research, Rosner-Salazar defined multicultural service-learning as a teaching strategy that "is an experiential and reflection-oriented approach that addresses social issues and community needs," and that effective multicultural service-learning "emphasizes reflection, equality, mutual reciprocity, and empowerment" (p. 65). Rosner-Salazar concluded that multicultural service-learning offers students the information, experience, and context necessary for effective learning and skill development to effectively responds to the needs of minority communities; therefore, the case studies reviewed showed the ways in which academic service-learning can promote social justice.

While Rosner-Salazar's (2003) case studies were useful for painting a qualitative picture of multicultural service-learning, more quantitative research on this topic is necessary. The current study addresses the gap in the literature on how service-learning also serves multicultural purposes. This study investigates the ways in which academic service-learning serves as a multicultural education initiative for institutions of higher education by using specific outcome measures that relate to social justice. Items on the *Communication Processes* survey ask participants to rate the ways in which they "Examine the sources of my biases and assumptions," "Understand how privilege and

oppression affect lives," and "Talk about ways to take action on social issues." These specific outcome measures are aligned with the YWLP programmatic goal of promoting empowerment theory, or helping give power to individuals and communities that have been marginalized by society.

Summary. A review of the literature on academic service-learning revealed that college students improve in academic endeavors, values, and desire to participate in service as a result of the experience (Astin et al., 2000). Studies found that academic service-learning also promoted civic engagement (Eyler & Giles, 1999; Moely et al., 2002; Nagai, 2006; Payne, 2000). Other studies reported that service-learning had a favorable effect on students' multicultural competencies and sense of social justice (Moely et al., 2002, Rockquemore & Schaffer, 2000; Rosner-Salazar, 2003). However, there are gaps in the literature concerning the ways in which outcome measures are aligned with programmatic theories and goals. More quantitative analysis is necessary to explore themes examined previously in qualitative ways. While the literature on academic service-learning programs shows how, in general, the programs promote civic engagement and social justice, there are also outcome measures that are unique to mentoring programs that warrant study.

Mentoring as an Academic Service-Learning Experience

A primary goal of the service-learning movement in higher education is to increase students' community involvement and awareness of issues of social justice and societal inequities (Eyler & Giles, 1999). Research suggests that mentoring might be "an ideal vehicle to allow college students engaged in service-learning to expand their awareness of complex social problems" (Hughes, Welsh, Mayer, Bolay, & Southard,

2009, p. 69). As Hughes et al. suggested, mentoring a youth in one-to-one setting challenges the adult mentor to engage in a community environment on a regular basis and establish a relationship with a youth. Through these repeated interactions, the mentor has an opportunity to see beyond stereotypes or initial impressions and gain perspective on the environmental factors influencing youth development (Hughes et al.). The following section discusses current research related to youth mentoring programs within the context of academic service-learning. A few research studies have explored the unique ways in which mentoring serves as an academic service-learning experience, and this body of research informs the design of the current study.

Simons and Cleary (2006) used an explanatory research design to evaluate the influence of a service-learning educational psychology course on learning, personal, and social outcomes for 142 undergraduate students. The study employed quantitative instruments to measure whether or not there were significant changes in learning, social, and personal outcomes post-service for service-learning students, and if there were differences in service-learning outcomes according to the various placement sites and experiences. The second phase of the study used qualitative questionnaires designed to explore the extent, nature, and quality of students' thoughts and feelings about academic service-learning and civic engagement.

In this research study, the types of service-learning experiences varied from school programs to community programs; undergraduate students were trained to work with at-risk children in groups of four for sixteen hours at a public elementary school (grades K-6), public after-school program (grades K-8), or a community learning program (grades K-6) (Simons and Cleary, 2006). College students were trained in either

a mentor or tutor role. Mentors were trained to engage children in a relationship and to read to children using a school district-approved curriculum that consisted of structured and non-structured activities. Tutors were trained to administer a district-approved tutorial curriculum that consisted of semi-structured reading and math exercises, as well as a research-based curriculum that emphasized behavior modification techniques, such as applied behavioral analysis and token economy, for the community learning program.

While the site placements and site experiences varied, the results revealed that across all types of academic service-learning experiences, students showed improvements in diversity and political awareness, community self-efficacy, and civic engagement scores from the beginning to the end of the semester (Simons & Cleary, 2006). Some differences in the results between the types of service-learning experiences included: mentors had higher social justice scores compared to tutors, and mentors also had higher community interest scores than tutors. The findings of this study suggested that service-learning contributes to students' academic learning and personal and social development through social-emotional processes. Simons and Cleary concluded that further research is necessary about the specific types of academic service-learning experiences and the related outcomes. Based on these research findings, the questions remains, how is mentoring a unique academic service-learning model with unique outcomes? .

There is theoretical basis for the research findings about the unique ways in which mentoring impacts participants. Simons and Cleary (2006) explained that in their study,

> Mentors acquired a deeper understanding of social institutions and their influence on community recipients, and the act of mentoring gave students an opportunity to develop relationships with children and administrators of different races, social

classes, and family dynamics, thus increasing the students' interest in learning

about the community and their comprehension of institutional inequities and

injustices. (p. 318).

Simons and Cleary posit that the nature of the service activity may change student

attitudes in specific ways, and that the unique impact of the mentoring experience merits

further examination.

Summary

A review of the literature on mentoring as a type of academic service-learning

revealed the distinctive nature of the experience. Although research has clearly

demonstrated the benefits of mentoring for the mentees, much less is known about how

mentoring impacts the mentors (Rhodes & DuBois, 2006; Bullen et al., 2010). Hughes et

al. (2009) explored the ways in which mentoring helped students gain perspective on the

factors influencing youth development. Further research is necessary on how students'

perspective changed in specific ways, and whether or not this change impacted the

mentoring relationship. One study found that all academic service-learning students

showed improvements in diversity awareness and civic engagement, but students who

participated as mentors had higher social justice and community service scores than those

who participated as tutors (Simons & Cleary, 2006). The current body of research shows

the unique nature of mentoring as service-learning; however, more research is needed on

the ways in which mentors change as a result of the experience.

<div align="center">Impact of the Mentoring Experience on the Mentors</div>

College Students' Attitudes towards Civic Engagement

The following section reviews literature related to working with adolescents including research on the impact of mentoring programs on college students' beliefs and skills. This body of research informed the experimental design and subsequent outcome measures of the current research study. As suggested by Vogelgesang and Astin (2000), effective academic service-learning takes place when the content-driven academic college course is coupled with mentoring in mentees' own environments because both the content learning and field experience is enhanced in powerful ways for the participating college students. YWLP fuses the educational psychology academic college course with mentoring experiences in mentee's own environments (including school-based, social settings, and home life or family events), and Vogelgesang and Astin assert that such programs must be evaluated in academic, social, and cultural ways in order to assess college students' development. The following research study serves as a model for assessing college students' development as a result of an academic service-learning program.

Hughes et al. (2009) conducted a qualitative study to investigate the effects of the mentoring experience on the attitudes and engagement of the participating college students. Hughes et al. are the first researchers to examine the effects of a university-based service-learning program in which participants mentor high-poverty youth in their actual high school environments versus a setting removed from the youths' own schools or communities (e.g., college campus or community center). This particular academic service-learning program couples an elective course entitled "High-Poverty Youth: Improving Outcomes" with a school-based mentoring program. The program seeks to employ mentoring as academic service-learning to improve outcomes for youth enrolled

in high-poverty high schools, while also increasing the college students' awareness of the effects of poverty on youth, and economic disparities across neighborhoods, schools, races, and ethnicities.

The researchers prioritized the voices of the mentors by posing open-ended questions to mentors before and after their mentoring experiences (Hughes et al., 2009). This approach offered the college students the opportunity to create a mentoring contract detailing their commitment to and expectations of the program. After mentoring for one semester, students could also reflect on the experience and articulate the specific ways that they were impacted by the program.

The sample included 32 college students, the majority of whom were undergraduates, none of whom had previous mentoring experience (Hughes et al., 2009). Data was collected before and after the mentoring experience; students were asked to respond in writing to eight open-ended questions related to the mentoring contract at the beginning and end of the semester. Researchers analyzed the data using the constant-comparative method to identify emergent themes. Findings showed that the students were primarily motivated by learning about the effects of poverty and establishing ongoing mentoring relationships. Other conclusions related to attitudes and engagement included: (a) mentors were seeking friendship rather than providing academic support, (b) mentors reported that negative stereotypes about youth and assumptions were challenged and changed, and (c) mentors reported an increase in their civic participation and desire to become actively involved in combating social injustices.

While the unique nature of this program, one aimed at improving student outcomes for high-poverty high school students while also increasing the civic

engagement of college students in combating social inequalities, makes it difficult to generalize the research findings, the content-based methodology is very useful for other research designs. Further research is necessary on the specific ways in which college students perceive their own change as a result of an academic service-learning course, and the Hughes et al. (2009) study serves as a good model. Just as Hughes et al. used an academic course on poverty to supplement the service-learning experience, the YWLP program utilizes an educational psychology course about adolescent girls' development to complement the mentoring experience. The current study builds on the work of Hughes et al. by adding new voices to the examination of how an academic service-learning experience impacts college student participants; the study offers a quantitative investigation of the qualitative themes that emerged in the Hughes et al. study, including beliefs about youth and the skills/processes necessary for engaging diverse youth.

College Students' Beliefs about Child Development

Research shows that mentoring relationships that are youth-centered (also referred to as developmental) as opposed to being adult-centered (also referred to as prescriptive), have been found to predict greater relationship quality and duration (Herrera, Sipe, & McClanahan, 2000; Morrow & Styles, 1995; Rhodes & DuBois, 2006). Very few research studies have evaluated the impact of a mentor training program towards youth-centered outcomes. One research study interested in child-centered practices focuses on college students' belief development. Street, Adler, and Taylor (2006) investigated the beliefs of college students about early childhood development and developmentally appropriate practices, and the researchers sought to determine if these beliefs changed after participating in a specific preschool literacy training and mentoring program. When

research results from the national survey "What Grown-Ups Understand about Child Development" showed the general public's misconceptions and lack of knowledge about developmentally appropriate practices for young children, Americorps responded by creating a new national literacy mentoring program *Jumpstart* and training college student volunteers to be early childhood educators (Street et al.). This quantitative study investigated the impact of *Jumpstart* training and mentoring experience on college students' beliefs about child development and appropriate practices for engaging children.

Drawing from a sample of 1,317 college students from 41 U.S. colleges and universities, Street et al. (2006) analyzed pre-posttest surveys which questioned participants about: demographic information, reflection on attitudes and abilities to be an engaged citizen, early childhood practices, literacy development and practices, communication and leadership skills, satisfaction with the mentoring program, and reasons for participation. The college students' responses before the mentoring experience revealed that they held some beliefs consistent with recognized, research-based practices that promote development among preschoolers. Data collected after the mentoring experience revealed that these research-based beliefs were strengthened and became less skills-based and more child-centered and constructivist.

Street et al. (2006) report that the results of the study provide insight into the nature of the potential for growth toward a constructivist view of child development. The pre-surveys revealed that the mentors were predisposed to the child-centered philosophy, but the researchers explained that the specific training with its constructivist roots as well as the strong ongoing support received in weekly planning sessions and observations

enabled this growth in the mentors' beliefs. Street et al. concluded that these findings suggest that an intensive mentoring experience can positively influence college students' beliefs about early childhood development, and further research is necessary about the correlation between child-centered beliefs and practices.

Summary

A review of the literature on the impact of the mentoring experience on the mentors showed how mentoring improved college students' beliefs about early childhood development (Street et al., 2006), but more the research needs to be expanded to include college students' beliefs about youth or adolescents.

Research revealed that benefits for the mentor include self-esteem, social insight, and interpersonal skills (Hall, 2006). However, further exploration of the change in social and cultural domain is necessary. Allport (1954) theorized that cross-racial contact would produce more tolerant attitudes when members of different groups interact with each other under specific situational conditions. Current research on mentoring has not considered the impact of intergroup contact on mentors' cultural sensitivity and related communication processes. This research can inform the training of future mentors. As Nagda (2006) explained,

> Research in intergroup contact and intergroup education is increasingly focused on the psychological and pedagogical processes to explain the impact of interventions on desired outcomes. This emerging scholarship has enriched our understanding about what types of interventions are effective or not, and how these interventions impact outcomes of prejudice reduction and social inclusion. (p. 553)

The current study addresses the gaps in the literature concerning the way in which change in mentors' beliefs about youth, cultural sensitivity and related communication processes impact the mentoring relationship.

College Students' Perceptions of the Mentoring Relationship

The following section considers research on the elements of an effective mentoring relationship and how the nature of the relationship leads to positive youth outcomes. Communicating empathetically with youth is a key characteristic of an effective mentor (Rhodes & DuBois, 2006). Training college students in communication skills is a necessary component of an academic service-learning course to prepare for the related community service experience, but it also prepares college students for future career paths and for success in living in a diverse society (Astin et al., 2000; Gay & Howard, 2000). A growing body of research suggests that the integration of mentoring into the teacher training process can enrich the preservice teacher with a unique educational experience that promotes personal and professional development (Howard, 2005; McKenna, 2000; Swick, 1999; Wetig, 2006).

In a mixed-methods study in New Zealand, Bullen et al. (2010) investigated whether mentoring youth provided teacher education students the opportunity to develop the values, skills, relationships, and knowledge relevant to the national teacher standards. Quantitative data revealed that there was a significant increase in the attitudes toward youth; qualitative data showed how mentoring youth extended participants' knowledge about youth and teaching, offered opportunities to practice teaching strategies, and enabled them to make "real-life" connections with youth. More research is needed targeting the specific skills gained from the academic service-learning experience and

how they relate to the mentoring relationship (Bullen et al.). Miller (2002) presents three main goals for college students' development as a result of being involved in mentoring programs: (a) development of beliefs and attitudes that promote a positive interpersonal relationship with the mentee that are formed through meaningful dialogue, (b) development of goals and career aspirations for the future, and (c) development and implementation of effective communication skills. One research study examines the ways that a mentoring program for teacher educations students meets all three of these goals.

Michael (2002) sought to investigate the ways in which an academic service-learning course trained future teachers in three areas: (a) the world of teaching, defined as "learning about teaching/learning through the implementation of interpersonal communication and forming of educational attitudes;" (b) the world of the child, defined as, "learning about the child that experiences difficulties and his or her world;" and (c) the world of self, defined as, "learning of the mentors about themselves as teachers, educators, and as human beings" (p. 3). Osguthorpe, Harris, and Black (1995) found that service-learning field experiences contribute to the professional development of preservice teachers as well as facilitating educator preparation, curriculum development, and research practices. Building on the work of Osguthorpe et al., Michael's quantitative study examined the effects of an academic service-learning course for 50 preservice teachers who served as mentors and a control group of 50 preservice teachers who served as mentors but did not enroll in the accompanying support course. Using questionnaires to collect data, the research study explored the college students' perception of mentoring, contribution of mentoring (delineated as academic, social, and personal contributions to the mentee), and use of support resources.

Findings revealed that all participants in the study went through a process of change in attitudes and beliefs regarding the role of a mentor (Michael, 2002). However, there were some significant differences between those who participated in the support course and those who did not; support course students responded to the questionnaires with more sophisticated definitions of mentoring, integrating the emotional aspect with the authoritative aspect, and thus showing their understanding of the complexity of the role. The researcher attributed this difference to the exposure to course content and participation in course-related tasks. These results are confirmed by other researchers (Harwood, Fliss, & Goulding, 2006; Vickers, 2007) who found that when preservice teachers engage in service-learning experiences, they are more likely to become sensitive to students' developmental needs, understand the social-emotional learning that can serve to support academic learning for the students, and develop a more realistic view of the teaching profession.

The data from Michael's (2002) study also revealed that mentors who participated in the support course displayed greater satisfaction with their performance in the mentoring role, and they were more satisfied with their personal and social contribution to the mentee than mentors who did not participate in the support course. Those students involved in the support course perceived themselves as more effective communicators and were comfortable engaging their mentees in social ways. Other researchers confirmed these results (Swick, 1999; Wetig, 2006) by concluding that service-learning positively influences preservice teachers by preparing them to effectively engage with diverse students in the social and cultural domains.

The most significant difference between the two groups in Michael's (2002) study is that the students who participated in the support course used more literary sources, university instructors, and peer mentors than those who did not enroll in the support course. The students who participated in the support course displayed skillfulness in integrating diverse support resources, theories, and empirically-based practices. Finally, the students that participated in the support course reported being more satisfied with the experience since their academic and emotional needs were met in the course content and discussions.

The findings of this research study (Michael, 2002) suggest that mentoring in an academic service-learning environment is an effective training exercise for future teachers. According to the college students, the contribution of the mentoring and the related support course are significant both to the mentors and the mentees. Further investigation is needed on which resources were most helpful to the college students and what specific aspects of the class had the greatest impact on students' approach to mentoring. Research has shown that preservice teachers who engage in service-learning become more culturally sensitive (Boyle-Baise, 2005; Brown & Howard, 2005), but more research is needed on the ways in which these changes in cultural sensitivity influence the service-learning experience.

Closeness of the Mentoring Relationship

As Rhodes and DuBois (2006) report, the most critical component for an effective mentoring relationship is that the two people involved feel connected, "that there is mutual trust and a sense that one is understood, liked, and respected" (p. 3). Feelings of "closeness" between mentor and mentee have been found to help other aspects of the

relationship and have predicted favorable outcomes for the youth (Rhodes & DuBois).

The factors that facilitate close emotional connections between youth and mentors are

similar to those identified as important in effective therapeutic relationships, such as

empathy and authenticity (Spencer, 2006), but they are also basic relational

characteristics, such as whether or not the pair have shared interests and enjoy spending

time together (Hall, 2003).

Spencer (2006) conducted a qualitative study examining the process of

establishing a mentoring relationship between adolescents and adults. Researchers

interviewed 24 pairs of adolescents and adults who had been in a mentoring relationship

for at least one year. In these semistructured interviews, the researcher explored the ways

in which the pair communicated and connected. Data findings revealed that four

relational processes are critical in the development of an effective mentoring relationship:

authenticity, empathy, collaboration, and companionship. Spencer found that each of the

four relational processes was present in the mentoring relationships that were

characterized as "emotionally close." Mentors can be trained in all four of these relational

processes through formal programs, but the data showed the complex nature of relational

development. The presence of these processes characterize the closeness of the

relationship, and the specific ways that mentors can be trained in these areas warrants

further study. Building on Spencer's research, the current study examines the closeness of

the mentoring relationship using the *Student-Teacher Relationship Scale* (discussed

further in Chapter Three).

Building effective mentoring relationships that have positive outcomes for both

mentor and mentee is a process (Rhodes & DuBois, 2006). Griffin (1995) describes how

mentors in a university program identified four stages in a successful mentoring experience: (a) foundation (getting acquainted, establishing ground rules and expectations), (b) building (establishing trust), (c) organization (establishing ways of working together), and (d) reflection (reflecting on the experience). Bowlby's (1988) attachment theory, stating that a young child needs to develop a relationship with at least one primary caregiver for social and emotional development to occur normally, serves as the framework for many of the current youth mentoring models. As Rhodes (2005) asserted in her theoretical model of youth mentoring, the experience of an emotionally close relationship with a mentor enables youth to establish positive interpersonal relationships with other adults in their lives (e.g., parents, teachers, coaches, etc.). Thus, the closeness of the mentoring relationship might possibly become a predictor of positive outcomes for the youth, and this is why it merits further examination in the current research study.

Thomson and Zand (2010) investigate the ways in which emotional closeness in a mentoring relationship leads to positive outcomes for the youth. The researchers examined whether the quality of the mentoring relationship uniquely predicts other relationship-based outcomes at two time points. Sampling from a multisite program focusing on the prevention, reduction, and delay of substance abuse among at-risk youth, the research study included 205 adolescent youth who had consistent contact with one mentor for at least eight months. The quasiexperimental study included four quantitative measurements targeting relational qualities: parent attachment, self-disclosure to adults, friendship with adults, and an inventory of the youths' perception of the relationship with their mentors. Each quantitative measurement was administered at two time periods (8

months and 16 months) along with a structured interview. Regression analyses indicated that the quality of the mentoring relationship was significantly correlated with youths' scores in most relationship-based outcomes.

Results from Thomson and Zand's (2010) study validated Spencer's (2006) study findings that when youth perceive their mentors as authentic and empathic companions, they develop a close emotional bond with their mentor and are more likely to have positive relationships with others. This study is significant in that it recognizes the ways in which authenticity, empathy, and companionship are characteristics of successful mentoring relationships, and that these characteristics lead to positive outcomes for the youth. However, further research is necessary to examine specific mentoring behaviors and activities that foster these relational processes to inform the training of future mentors and the development of mentoring intervention programs.

Summary

A review of the literature on the development of the mentoring relationship revealed the closeness between mentor and mentee is the most critical component for an effective mentoring relationship (Rhodes & DuBois, 2006). The factors that facilitate close emotional connections include authenticity and empathy (Spencer, 2006). Emotional closeness in a mentoring relationship leads to positive outcomes (Thomson & Zand, 2010). The current research study seeks to build on the current body of research by investigating how change in the college students beliefs and skills influence the closeness or conflict within a mentoring relationship.

The Challenge for Mentor Training Programs

This body of research examines the purpose of academic service-learning programs and why they warrant study. As suggested by Vogelgesang and Astin (2000), effective academic service-learning takes place when the content-driven academic college course is coupled with mentoring in mentees' own environments because both the content learning and field experience is enhanced in powerful ways for the participating college students. When college students can experience firsthand the effects of poverty, as in the Hughes et al. (2009) study, or when they can consistently interact with at-risk youth, as the in Spencer (2006) study, the real-life experiences coupled with classroom content contribute to students' motivation to address social injustices.

The goals of academic service-learning programs are clear in that they seek to promote civic engagement and social justice alongside the presentation of academic knowledge. However, the ways in which college students' beliefs and skills change as a result of the course content, training, and service experience are not clear and warrant further study. The complex nature of the mentoring relationship and its benefits for mentor and mentee have been thoroughly researched, however, the ways in which the emotional closeness of the relationship is developed and how it relates to mentors' beliefs and relational communication processes needs further investigation. The current study examines the impact of one academic service-learning mentoring program on the participating undergraduates and the ways in which these changes can lead to positive outcomes for adolescents they seek to serve.

CHAPTER 3

RESEARCH DESIGN AND METHODS

This chapter addresses the ways in which the current research study was

conducted. First, the study's purpose and the guiding questions are presented. Second, the

site and sampling methods, data sources, and collections procedures are described. Third,

the instruments used to collect the data are outlined along with a discussion of the

analyses. Fourth and finally, the limitations of the proposed study and potential threats to

the validity of the research are considered.

Purpose

The purpose of this study was to explore how college students' beliefs about

youth, cultural sensitivity, and relational communication processes changed over the

course of a semester-long academic service-learning program and how this change

influenced the mentoring relationship. This research draws upon college students'

reflections upon their beliefs, relational communication skills, and perception of the

mentoring relationship throughout the process.

Research Questions

Specifically, this investigation sought to answer two central research questions.

Subquestions are embedded within each of the main questions.

- **Research Question 1:** Do students who experience mentoring as an academic

    service-learning experience change their beliefs about youth and relational

communication processes from the beginning of the semester to the

conclusion of the semester? Among those who demonstrate belief change,

what is the nature of that belief change?

- o *Subquestion 1A:* Does this change in beliefs or relational

  communication processes differ by demographic factors (such as age,

  ethnicity, expected grade point average major, interest in teaching,

  etc.)?

- o *Subquestion 2A:* Does this change in beliefs or relational

  communication processes differ based on time spent mentoring?

- **Research Question 2:** How are mentors' beliefs and relational

  communication processes associated with their perception of the mentoring

  relationship?

This line of inquiry is justified by a gap in the literature concerning how a

mentoring experience impacts college students' beliefs about youth and relational

communication processes. While the current body of research reveals the benefits of

academic service-learning for the college student, such as academic performance, values,

and community engagement (Astin et al., 2000), few studies have examined how youth-

centered beliefs and effective relational communication processes are developed as a

result of an academic service-learning experience. This research study contributes to

existing literature by examining how these outcomes relate to the closeness within the

mentoring relationship using instrumentation that has been linked with positive youth

outcomes. To address these research questions, a multiple regression analysis was

conducted.

Participants

The participants for this study were students who completed surveys which reside in secondary datasets that maintained the results of surveys conducted before, during, and after a one semester academic service-learning experience. Participants included undergraduate college women who were enrolled in an educational psychology course and served as mentors to at-risk middle school girls through the Young Women Leaders Program (YWLP). The recruitment efforts by YWLP were designed to reach all undergraduate women at the university, especially racial or ethnic minority women, because approximately half the mentees are nonwhite. During the spring semester, potential mentors were interviewed by YWLP staff about their interest in the program, experiences working with youth, and motivation for mentoring. Applicants who were willing to make the time commitment and were judged by staff as potentially excellent mentors after the interview received conditional acceptance to the program, contingent on a satisfactory reference and criminal-history check. According to staff reports, over 90% of applicants were accepted to participate in the program. The reason that very few applicants were turned away is because typically the time commitment and application process narrows the applicant pool. The 53 college women mentors enrolled in the academic service-learning course who completed surveys ranged in age from 18 to 22 years.

<div align="center">

Procedures

</div>

Intervention: Pre-program and In-class Training of Mentors

The pre-program training in August focused on learning about the three main tenets of YWLP: competence, connection, and autonomy. During this summer training

session, YWLP staff presented information about the program's procedures, led the group in team-building exercises, and conducted a discussion aimed at developing cultural competencies. The training session also included panel presentations from former mentors and mentees about what to expect from the mentoring relationship and how to engage adolescents.

As an academic service-learning opportunity, YWLP integrated mentoring with an educational psychology class, *Issues Facing Adolescent Girls,* taught by the program director. Objectives for the class included learning about the psychological, social, cultural issues affecting adolescent girls and applying this understanding through service with YWLP. Course curriculum presented theory and research on adolescent development, effective mentoring practices, and leadership development. Another goal of the course was for students to implement their learned theoretical knowledge and skills by serving as a mentor to an at-risk middle school girl. The class focused on the ways that racial, economic, and ethnic differences affect girls' voice and self-concept during the adolescent developmental phase.

The class met for two hours each week. The first hour included didactic sessions, presentations, whole class or small group discussions, and various mentor training activities. The second hour was the "Big Sister meeting," where mentors had time to meet with the other college women who participate in their school-based group mentoring sessions. Students had the opportunity to divide up group roles or tasks for the upcoming group sessions, share concerns, and support one another. Program staff members were available to support the mentors as needed during this time as well.

This academic service-learning opportunity balanced requirements of in-class training and out-of-class time spent mentoring in group or one-on-one settings. In addition to two hours of class time, the course required students to participate in a weekly two hour mentoring group meeting and spend four hours each month one-on-one with their mentee. There was some variation in college students' attendance in class, Big Sister meetings, mentoring group meetings, and one-on-one time spent with mentees. This variation in mentor consistency is discussed later in the chapter and was measured and analyzed.

Mentoring Experience

Mentors met with their mentees for a minimum of four hours a month to spend one-on-one time together participating in various social activities. In addition, mentors met for two hours after school each week in a group of eight to ten mentor-mentee pairs and a facilitator. In these school-based mentoring group sessions, the facilitators led the mentor-mentee pairs through a research-based curriculum of activities and discussion topics addressing critical aspects of girls' scholastic achievement, self image, social aggression, and health decision-making (Lawrence et al., 2009). Some examples of activities in the mentoring group curriculum included: Gossip Guard, a technique aimed at reducing negative social behavior; Step into the Circle, an exercise aimed at appreciating difference and increasing cultural competency; and, the ABCs of Problem Solving, a step-by-step guide to resolving conflict.

In addition to providing accountability and support, the weekly mentoring group meetings also served a social and educational purpose in that they provide the opportunity for a diverse set of college women and middle-school girls to interact with

one another. While the weekly mentoring group meetings were required, there is some variance in attendance even though none of the college women mentors participating in the program dropped out during the course of the study. The college students' attendance at the meetings were measured and analyzed to explore the potential relationship between time spent mentoring on beliefs, communication processes, and the perception of the mentoring relationship.

Consent and Data Collection

The YWLP Research Team administered various social and psychological measures in a pretest-posttest model and had IRB approval (see Appendix E) for their research studies and program evaluation. All of the participants provided informed consent before participating in the study and completed self-report surveys in program preservice training or class settings during the current fall semester. Surveys were administered during the beginning of the didactic portion of classes. Graduate students who were members of the YWLP Research Team administered the surveys during class, coded the data, entered the data into files, and checked for accuracy. While the primary researcher was a Teaching Assistant in the class at the time, she was not involved in the initial data collection, coding, and entry process.

This research study employed multiple quantitative measures to examine the research questions concerning the differences in college students' beliefs about youth, cultural sensitivity, and communication processes at the beginning and end of a semester-long academic service-learning experience. The study also explored the influence of college students' beliefs and communication processes on the mentoring relationship.

Timeline 1
YWLP In-Class Surveying

Month	Class	Measures
August	8/30	Communication Processes, Ideas About Children
December	12/6	Communication Processes, Ideas About Children, Student-Teacher Relationship Scale

A timeline detailing the various steps of the research study is also included in Appendix A. This quantitative inquiry approach sought to describe trends that change from the beginning of the program to the end of the first semester and examine possible correlations among the number of hours spent mentoring and the perceptions of the mentoring relationship. The quantitative analysis procedures compared pretest data to posttest data on the dependent variables of (a) beliefs about youth and (b) relational communications processes, before and after participation in an academic service-learning mentoring program. The independent variables were (a) the academic service-learning course and (b) time spent mentoring.

The first construct, beliefs about youth, was measured in a pretest-posttest design with the *Ideas about Children* scale (Schaefer & Edgerton, 1986). The second construct, cultural sensitivity and related communication processes, was measured in a pretest-posttest design with the *Communication Processes* scale (Nagda, 2006). Finally, the influence of these two constructs on the mentoring relationship was explored. Using a modified version of the *Student Teacher Relationship Scale,* the closeness and conflict in the mentoring relationship was examined. Three measures were of interest to this study.

Measures

Beliefs about Youth

Ideas about Children. In Schaefer and Edgerton's (1986) scale, traditional, authoritarian (adult-centered) beliefs included statements such as: "Children should be treated the same regardless of differences among them," Children should always obey the teacher," and "The major goal of education is to put basic information into the minds of the children." Progressive, democratic (child-centered) beliefs included statements such as: "Children should be allowed to disagree with their parents if they feel their own ideas are better;" "Children learn best by doing things themselves rather than listening to others;" and "Children have a right to their own point of view and should be allowed to express it." Participants indicated how much they agree or disagree with the statements about children/youth, on a scale from 1 ("strongly disagree") to 5 ("strongly agree"). The scale has evidence of moderate internal consistency ($r = .65$) as well as test-retest reliability for both traditional, authoritarian beliefs ($r = .73$) and progressive, democratic beliefs ($r = 60$). Appendix B includes individual items.

The *Ideas about Children* scale (Schaefer & Edgerton, 1986) reliably identifies traditional (adult-centered) or progressive (child-centered) beliefs about how children or youth should be treated and educated. The scale was originally developed to investigate the similarities between parent and teacher educational philosophy and goals; it measures beliefs and values that show substantial correlations with child academic competence. The description of a progressive democratic ideology is positively related to child academic competence, and the description of traditional authoritarian ideology is negatively related to child competence (Schaefer & Edgerton, 1986).

The scale was included in this study for two reasons. First, it allows for analysis of participants' belief change in general as well as classification of beliefs as either

traditional or progressive. Second, the scale has significant correlations with positive

youth academic outcomes. In other research studies examining family and classroom

predictors of K-12 students' academic outcomes, this scale is incorporated to assess

beliefs about children (Burchinal, Peisner-Feinberg, Pianta, & Howes, 2002; Campbell,

Goldstein, Schaefer, & Ramey, 2004). Burchinal et al. found children tended to show

better academic skills across time if their parents had more education and reported more

progressive parenting beliefs and practices. Burchinal et al. concluded that progressive

beliefs about children and positive social processes towards children are important for

academic competence for children considered at risk for academic problems. Conversely,

Campbell et al. found that traditional parental beliefs negatively correlated with

children's low reading competencies. Since the scale has consistently shown the

correlation between positive beliefs about children and positive academic outcomes, it

was included in this study.

Cultural Sensitivity and Relational Communication Processes

Communication Processes. Nagda's (2006) *Communication Processes* scale was

adapted for this study to measure the impact of the mentoring experience in the cultural

and social domains. In developing the scale, Nagda utilized previous qualitative and

quantitative research on intergroup dialogues as well as on-going practice to create a

survey of communication items. Using a scale of 1 (not at all important) to 4 (very

important), students rated how important each communication process was in their

learning. Statements included: "Talking about ways to take actions on social issues,"

"Addressing difficult issues and questions," and "Sharing my views and experiences."

Nagda conducted factor analyses data from a pretest-posttest with a diverse group of 211

undergraduate students. The analysis of communication processes within an intergroup encounter revealed four factors: (1) alliance building, (2) engaging self, (3) critical self-reflection, and (4) appreciating difference. All four factors had high internal consistency: (1) alliance building ($\alpha = .92$), (2) engaging self ($\alpha = .82$) (3) critical self-reflection ($\alpha = .83$), and (4) appreciating difference ($\alpha = .80$). Nagda found that each of the four communication processes were significantly related to bridging differences; the researcher concluded that these processes supported the overall theoretical model of intergroup contact and helped motivate participants to communicate in ways that demonstrated cultural sensitivity. Appendix C includes individual items.

This scale was chosen because it is a reliable measurement of the cultural sensitivity and related communication skills necessary for effective intergroup dialogue. The social goals for YWLP are rooted in intergroup contact theory; both the YWLP course content and mentoring group curriculum offer opportunities for intergroup contact between undergraduates as peers as well as with the youth they mentor. *Communication Processes* (Nagda, 2006) measures the impact of mentoring as an academic service-learning experience on the mentors' relational communication processes and related factors. Because it is also based on intergroup contact theory, this scale serves as an appropriate assessment tool for YWLP. Other research studies have investigated the ways in which mentoring helps college students engage with diverse populations (Hughes et al., 2009; Simons & Cleary, 2006) and navigate difference (Lee, Germain, Lawrence, & Marshall, 2010), but this study fills a gap in the literature by examining mentoring as an extension of intergroup contact theory, exploring concepts related to the theory, and utilizing an instrument based on this theory.

Mentoring Relationship

   Student Teacher Relationship Scale. A modified version of the *Student Teacher*

Relationship Scale (STRS; Pianta, 1992) was incorporated as a measurement of the

closeness and conflict between the Big and Little Sister in the mentoring relationship.

The STRS short form is a 15-item rating scale, using a Likert-type format, designed to

assess teachers' perceptions of their relationships with particular students. Based on a

review of literature on teacher-child interactions, principles of attachment theory, and

structure of the Attachment Q-set (Waters & Deane, 1985), STRS assessed teachers'

feelings and beliefs about their relationships with particular students based on their

interactions with the students.

   In the STRS pilot study with 72 children using the 16-item version, three factors

were derived: secure, improved, and dependent (Pianta & Nimetz, 1991). Alpha

reliability for the total scale was .85, and alphas for the factor based subscales exceeded

.60. When the instrument was developed to its current state (STRS short form), teachers

rated statements in terms of how applicable each statement was to their current

relationship with a particular child (Pianta & Steinberg, 1992). This follow-up study

included 436 children and their 26 teachers; the teachers' responses ranged from a 1

(definitely does not apply) to a 5 (definitely applies). From a factor analysis of the data,

three factors emerged: closeness, conflict, and dependency. Only two factors are included

in the STRS short form and are of interest to the proposed study: closeness and conflict.

The closeness subscale reliably measures the warmth and open communication in the

relationship, including statements such as: "I share an affectionate, warm relationship

with this child," "If upset, this child will seek comfort from me," and "This child

spontaneously shares information about him/herself" ($\alpha = .86$). The conflict subscale reliably indicates the friction in the relationship, reflected by statements such as: "This child and I always seem to be struggling with each other" and "This child easily becomes angry at me" ($\alpha = .93$). Appendix D includes individual items.

Numerous studies have investigated the relationship between the STRS factors and student outcomes. Teachers' perceptions of their relationships with students predict a range of school outcomes (Hamre & Pianta, 2001). Research showed that the teacher-child closeness was positively linked with students' academic performance, as well as teachers' ratings of students' enjoyment in school and self-directedness (Birch & Ladd, 1997). Conversely, Birch and Ladd also found that teacher-child conflict was negatively associated with teacher's ratings of students' enjoyment in school, and closely associated with school avoidance, self-directness, and cooperative participation in the classroom. Burchinal et al. (2002) found that a closer relationship with the teacher was positively related to language skills. The perception of the relationship also has an impact on students' social and cognitive development (Howes, 2001).

As Rhodes and DuBois (2006) report, the most critical component for an effective mentoring relationship is that the two people feel connected. Feelings of closeness between mentor and mentee have been found to help other aspects of the relationship and have predicted favorable outcomes for the youth. However, there is a gap in the literature concerning quantitative measurements of closeness. By including the modified version of STRS as a measurement of closeness in the mentoring relationship, this study offers quantitative analysis about a construct (closeness) that predicts positive youth outcomes via a reliable research tool that that is linked with student achievement.

Time Spent Mentoring

Studies highlight the significance of how often mentors and youth spend time together (Rhodes & DuBois, 2006; DuBois & Silverthorn, 2005; Herrera et al., 2000). Regular contact has been linked to positive youth outcomes. To determine mentor consistency, the total time spent mentoring was calculated for the fall semester. This calculation included time mentoring in the school-based group setting as well as one-on-one time. There was potential variation in three areas: class attendance, Big Sister meeting attendance, mentoring group meeting attendance, and number of hours spent mentoring one-on-one. This total measurement of time spent mentoring allowed for the analysis of within-group differences.

<center>**Analysis Plan**</center>

In this pretest-posttest model, data was collected before and after an academic service-learning experience. The participants ($N = 53$) were undergraduate college women who were enrolled in the *Issues Facing Adolescent Girls* class and served as mentors to at-risk adolescent girls. The current research study used *Ideas about Children* (Schaefer & Edgerton, 1986) to measure pre-post outcomes related to beliefs about youth, *Communication Processes* (Nagda, 2006) to measure pre-post cultural sensitivity and related communication skills, and *Student Teacher Relationship Scale* (Pianta, 1992) to measure the closeness in the mentoring relationship at the end of the semester. The quantitative analysis procedures compared pretest data to posttest data on the dependent variables of (a) beliefs about youth and (b) communications processes, before and after participation in an academic service-learning mentoring program. Initial simple t-tests first examined the change in these variables (beliefs about youth and communication

processes), and a subsequent regression analysis explored the influence of these variables on the mentoring relationship. The independent variables are (a) the academic service-learning course and (b) time spent mentoring. The research study used multiple regression analysis to address the research questions of interest.

Descriptive analysis

Prior to analysis, there was a review of the data in SPSS to ensure that there are no anomalies or entry errors. The secondary data collected from the *Ideas about Children* and *Communication Processes* surveys were used to generate measures of central tendency (mean, median, and mode) and variation (variance, standard deviation) for the pretest and posttest data. Scales were inversed as necessary for consistent analysis across outcome measures. Specifically, the entire IAC scales were inversed so that the constructs could be analyzed correctly and consistently across outcome measures. With this inversion, higher IAC scores reflected youth-centered beliefs just as higher CP scores reflected higher levels of cultural sensitivity.

By examining the means and standard deviations for each variable, coding errors were identified. The minimum and maximum values for each variable were identified to indicate if there were any outliers. Item levels were examined. The shape and distribution for each variable were considered to see if there were any extreme skew or bivariate distribution. Correlation among the predictors were also considered to see if there were any collinearities. This descriptive analysis prepared for the simple t-tests and multiple regression analysis exploring the research questions of interest.

Question One

Research Question 1: Do students who experience mentoring as an academic service-learning experience change their beliefs about youth and relational communication processes from the beginning of the semester to the conclusion of the semester? Among those who demonstrate belief change, what is the nature of that belief change?

- *Subquestion 1A:* Does this change in beliefs or relational communication processes differ by demographic factors (such as age, ethnicity, expected grade point average, interest in teaching, etc.)?

- *Subquestion 2A:* Does this change in beliefs or relational communication processes differ based on time spent mentoring?

The first research question and related subquestions were addressed through multiple regression analyses.

Regression Framework

Data composites were created to answer the first research question. Simple t-tests were conducted with pretest and posttest data from the *Ideas about Children* and *Communication Processes* surveys to see if the mean difference was significant. A simple correlation analysis revealed the direction and strength of the linear relationship between these two variables. A limited number of predictors were then be added into the regression equation according to the small sample size, including available demographic information (ethnicity, expected GPA, interest in teaching, etc.). The final predictor added into the regression equation was the total time spent mentoring (recorded in hours). By conducting a multiple regression analysis, the variation in the posttest data can be explained by the various predictor variables.

Table 1

Research Question 1: Data Composite for T-tests and Regression Framework

	Beliefs about Youth (Posttest Data)	Communication Processes (Posttest Data)
Pretest Data		
Demographic Info		
Time		

Hypotheses. Question one concerns the extent to which undergraduate students change their beliefs about youth and communication processes as a result of an academic service-learning program. The null hypothesis is that there will be no differences in the means and that there will be no relationship between the predictor variables and the outcome measures. The research hypothesis predicts that simple t-tests will reveal that the posttest means will be higher than the pretest means and that the multiple regression model will show a statistically significant relationship between time spent mentoring and outcome measures.

Question Two

Research Question 2: How are these beliefs and relational communication processes associated with the college students' perceptions of the mentoring relationship? The second research question was addressed through multiple regression analyses.

Regression Framework

Data composites were created to answer the second research question. Posttest data from the *Ideas about Children* and *Communication Processes* surveys were entered as predictor variables, and the STRS survey data was the outcome measure. This allowed for analysis of the relationship between these end-of-semester outcomes (beliefs about youth and communication processes) and the STRS data (closeness in the mentoring relationship). A simple correlation analysis revealed the direction and strength of the

linear relationship between these variables. A change variable (pretest-posttest change in

IAC and CP) was then added as a predictor into the regression equation to examine the

relationship between the change outcomes and the STRS data. The covariates from the

first research question were also included in the regression model. By conducting a

multiple regression analysis, the variation in the STRS data can be explained by the

various predictor variables. This allows for exploration of whether the posttest data about

beliefs and communication processes are significantly related to the closeness of the

mentoring relationship or if the change in the pretest-posttest data is significantly related

to the closeness of the mentoring relationship.

Table 2
Research Question 2: Data Composite for Regression Framework

	Ideas about Children (Posttest Data)	*Communication Processes* (Posttest Data)	*STRS*

Posttest Data
  -Pretest *IAC*
  -Pretest *CP*			

Change Variable
  -Pretest *IAC*
  -Posttest *CP*			

Hypotheses. Question two concerns the influence of undergraduate students'

beliefs about youth and communication processes on the mentoring relationship. The null

hypothesis is that there will be no relationship between the predictor variables (*Ideas*

about Children and *Communication Processes* data) and the STRS outcome measures

(closeness of the mentoring relationship). The research hypothesis predicts that the

multiple regression model will show a statistically significant relationship between the

posttest data (*Ideas about Children* and *Communication Processes* data) and the STRS

data (closeness of the mentoring relationship).

Limitations

One limitation of this study was its relatively small sample size. Since the study focuses on the participants in one mentoring program, the data is relatively small in scope compared to multi-site pretest-posttest control group designs. A second limitation was the potential loss of participants due to attrition from the program. Since the study took place over the course of a semester, there was the chance that participants (mentors or mentees) may drop out of the program. This concern was addressed by beginning the study after participants have already applied, interviewed, been accepted, and committed to the program; therefore, loss of participants should be less of an issue. Finally, the self-report nature of these measures is a limitation. However, research has shown that all of the self-report measurement tools selected for this study have been linked with positive youth outcomes.

Threats to Validity

The threats to internal validity include subject characteristics, such as the educational or cultural background of the students and their affinities for working with diverse youth. Another threat to internal validity is the maturation that occurs during the four-month duration of the study wherein students may have matured as mentors because of their natural cognitive development rather than because of the instructional program and mentoring experience. The influence of testing was a potential threat to both internal and external validity. The time that elapses between each test will reduce the pretest and posttest sensitization.

Summary

The current study addressed the gaps in the literature concerning the way in which change in mentors' beliefs about youth, cultural sensitivity and related communication processes impact the mentoring relationship. Using the *Ideas about Children* survey as a primary indicator of college students' beliefs about youth and the *Communication Processes* survey as a measurement of social skills and cultural sensitivity, the study examined these aspects upon entry into an academic service-learning mentoring program and at the conclusion of the semester-long class training. Investigating the degree and direction of change over this semester-long training and mentoring experience was a central concern of this study.

In addition, this research explored the college students' perceptions of the mentoring relationship and its development over the course of the semester: a second line of inquiry examines the nature of the mentoring relationship, the "closeness" of the relationship and the college student's attitude toward the mentoring relationship over time. Utilizing *Student-Teacher Relationship Scale* (modified to reflect mentor/mentee) at the conclusion of the semester, the research study examined the students' perception of the mentoring relationship. Overall, this study sought to provide a description of the change in students' beliefs about youth, communication processes, and the association between this change and the perception of the mentoring relationship over the course of the semester. This investigation furthers the knowledge base about academic service-learning and inform the ways in which future mentors are trained.

CHAPTER FOUR

RESULTS

This chapter will present the results from the current study. The analyses attended to the following general research questions: (a) Do students who experience mentoring as an academic service-learning experience change their beliefs about youth and communication processes from the beginning of the semester to the conclusion of the semester? and (b) How are these beliefs and relational communication processes associated with the college students' perceptions of the mentoring relationship?

Introduction to Analyses

Simple t-tests and multiple regression analyses were used to address the first research question. Specifically, the purpose was to investigate whether or not there was a change in pretest and posttest data from the *Ideas about Children* and *Communication Processes* surveys. The first research question and related subquestions were addressed through simple t-tests and multiple regression analyses:

Research Question 1: Do students who experience mentoring as an academic service-learning experience change their beliefs about youth and relational communication processes from the beginning of the semester to the conclusion of the semester? Among those who demonstrate belief change, what is the nature of that belief change?

o *Subquestion 1A:* Does this change in beliefs or relational communication processes differ by demographic factors (ethnicity, expected grade point average, interest in teaching)?

o *Subquestion 2A:* Does this change in beliefs or relational communication processes differ based on time spent mentoring?

Simple t-tests were conducted on the IAC and CP survey data at the pretest and posttest to see if the mean difference was significant. A subsequent simple correlation analysis was conducted to reveal the direction and strength of the linear relationship between these two variables. A limited number of predictor variables were then added into the regression equation due to the small sample size, including available demographic information (ethnicity, interest in teaching, expected grade point average, etc.). The final predictor added into the regression equation was the time spent mentoring (recorded in hours). By conducting a multiple regression analysis, explanatory variables were analyzed.

Multiple regression analyses were able used to address the second research question:

Research Question 2: How are these beliefs and communication processes associated with the college students' perceptions of the mentoring relationship? Posttest data from the *Ideas about Children* and *Communication Processes* surveys were entered as predictor variables, and the STRS survey data were the outcome measure. The goal of this analysis was to examine the relationship between the end-of-semester outcomes (beliefs about youth and relational communication processes) and the STRS data (closeness and conflict in the mentoring relationship).

Preliminary Analysis Summary

Multiple regression analysis makes several assumptions about the data. Included in these assumptions are aspects of the distribution of scores and the nature of the underlying relationships between the variables. One assumption, *normality*, assumes that the residuals should be normally distributed around the predicted scores. The second assumption, *linearity,* assumes that there is a linear relationship between the independent and dependent variables. The third assumption, *homoscedasticity*, assumes that the variance of the residuals should be the same for all predicted scores. Initial analysis showed that the data met these assumptions after invalid responses to the surveys were removed from the data and outliers taken into consideration. The number of participants who offered valid responses to all of the survey questions shown in Table 3 and Table 4 were 40, a 20% loss of participants from pretest to posttest. As anticipated, this sample of valid responses ($n = 40$) represents fewer than the original number of students enrolled in the class ($N = 53)$ as a result of tardiness, absenteeism, attrition, and human error during the pretest-posttest data collection over the course of a four month academic semester. Therefore, in order to address the research questions using all of the relevant variables in a regression model, the number of observations for estimating the regression was 40.

The descriptive statistics for the criterion and predictor variables are presented in Table 3.

Table 3

Descriptive Statistics for the Quantitative Criterion and Predictor Variables (n=40)

Variables	Minimum	Maximum	Mean	Standard Deviation

Variable	Min	Max	Mean	SD
1. Hours Spent Mentoring	29	51	36.83	4.15
2. Expected GPA	3	4	3.39	.26
3. IAC Pre	2.25	4	2.99	.42
4. IAC Post	2	3.75	3.05	.38
5. IAC Change	-.56	.69	.08	.31
6. CP Pre	3.39	6.78	5.38	.78
7. CP Post	3.61	7	5.39	.87
8. CP Change	-2.17	1.44	.02	.72
9. STRS Post	2.67	4.8	3.85	.39

The predictor variables were added into the regression equation including available demographic information. The predictor variable percentages from the participant sample are presented in Table 4.

Table 4
Descriptive Statistics for the Qualitative Predictor Variables
(n=40)

Variables	Percentage of Participants
1. Ethnicity: Black	41%
2. Ethnicity: White	53%
3. Ethnicity: Other	6%
4. Interested in Career in Teaching: Yes	18%

5. Interested in Career in Teaching: Maybe   35%

6. Interested in Career in Teaching: No   47%

Correlation Analysis of Predictor Variables Summary

To examine the relationship among the predictor variables, Pearson product correlations were calculated. The coefficient provides the strength of the linear relationship between two variables. When the coefficient is positive, the values of the two variables increase together. Conversely, when the coefficient is negative, as values of one variable increase, the values of the other variable decrease. Table 5 shows the correlation among the potential variables for regression analysis.

Table 5

Summary of Correlations among Potential Variables for Regression Analysis
(n = 40), statistical significance noted by * $p < .05$, ** $p < .01$.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Hours Mentoring	--	-.006	.091	-.18	-.021	.111	-.091	-.301*	-.026	-.279*	.004	-.303*	-.081
2. Ethnicity: Black		--	-.887**	-.209	.031	-.034	.009	-.271	-.154	-.093	-.115	.021	-.214
3. Ethnicity: White			--	-.265	.024	-.126	.102	.230	.097	.009	.062	.030	.248
4. Ethnicity: Other				--	-.116	.339*	-.236	.080	.118	.176	.122	-.102	-.079
5. Teaching: Yes					--	-.342*	-.436**	.168	.225	.080	.204	.055	-.081
6. Teaching: Maybe						--	-.696**	.074	-.060	-.133	.039	-.140	-.038
7. Teaching: No							--	-.201	-.115	.066	-.198	.090	.098
8. GPA								--	-.149	.363**	-.082	.363*	.330*
9. IAC Pre									--	-.146	.702**	-.109	-.168
10. CP Pre										--	-.011	.634**	.315*
11. IAC Post											--	.010	-.111
12. CP Post												--	.202
13. STRS Post													--

Correlation among variables was examined to identify explanatory variables that will be entered into the regression equations. In order to interpret regression results, explanatory variables that were highly correlated will not be entered into the regression together.

Correlation among variables that were created from the same variable of the original file, such as demographic information created through ethnicity variables were not relevant (i.e. white and black were correlated because a student is mostly likely to be white if not black). As anticipated, the pretests were highly correlated with the corresponding pottests as the beliefs pre-survey (IAC Pre) correlated positively with the beliefs post-survey (IAC Post) with a high correlation coefficient ($r = .702$, $p < .01$), and similarly, the communications processes pre-survey (CP Pre) correlated positively with the communication processes post-survey (CP Post) ($r = .634$, $p < .01$).

Since the variables IAC Post, CP Post, and STRS Post serve as the dependent variables, explanatory variables that are highly correlated with them represent potentially good predictors for the regression equation. The participants' expected GPA was positively correlated with STRS Post ($r = .330$, $p < .05$), and CP Pre was positively correlated with STRS Post ($r = .315$, $p < .05$). On the other hand, the number of hours spent mentoring that participants reported were negatively correlated with expected GPA ($r = -.301$, $p < .05$), CP Pre ($r = -.279$, $p < .05$), and CP Post ($r = -.303$, $p < .05$). Although correlation coefficients are not large, the number of observations in the data is small ($n = 40$) and the small sample size should be considered when analyzing multicollinearity. No other significant correlations were found between mentor demographics and dependent variables.

Regression Analysis Summary

A series of multiple regressions were conducted to investigate exploration of whether the posttest data about beliefs (IAC) and communication processes (CP) are significantly related to the closeness of the mentoring relationship (STRS). The assumptions of linearity, multicollinearity, and independent normally distributed errors were checked and met for each model. Mentor's scores on the posttest surveys and demographic information were separately regressed on each of the self-reported outcome measures (IAC post, CP post, and STRS post). Mentor's characteristics and scores on the predictor variables were separately regressed on each of the three outcome variables. Table 6 provides a summary of the multiple regression analyses.

Table 6

Summary of Regression Analyses of Mentor Variables and Self-Reported Outcome Measures
(n = 40), statistical significance noted by * *p* < .05, ** *p* < .01, R^2 = significant effect sizes.

Predictor Variables	IAC Post				CP Post				STRS			
	B	*(SEB)*	*β*	R^2	*B*	*(SEB)*	*β*	R^2	*B*	*(SEB)*	*β*	R^2
1. Mentoring Hours	-.002	.004	-1.007		-.091	.035	-.411*	.319	.005	.003	3.93	
2. Ethnicity: Black	-.24	.125	-.305*	.271	.112	.195	.065		-.246	.133	-.317*	.396
3. Ethnicity: Other	.181	.287	.1		-.912	.405	-.271		.077	.274	.044	
4. Teaching: Yes & Maybe (combined)	-.206	.173	-.247		.131	.270	.075		.104	.167	.132	
5. Teaching: No	-.318	.156	-.419**	.271	.121	.245	.072		.108	.157	.143	
6. GPA	.845	.475	3.85*	.65	-.305	1.08	-.643	-.282	1.89	.8	8.23**	.396
7. IAC Pre	.634	.091	.702**	.492	--	--	--	--	--	--	--	
8. CP Pre	--	--	--		.688	.118	.634**	.402	--	--	--	
9. IAC Post	--	--	--		--	--	--		-.102	.152	-.097	
10. CP Post	--	--	--		--	--	--		.132	.065	.29**	.305

Measurement Predictors: Answering Research Question 1

Analysis of simple t-tests answered the first research question, "Do students who experience mentoring as an academic service-learning experience change their beliefs about youth and communication processes from the beginning of the semester to the conclusion of the semester?" The secondary data collected from the *Ideas about Children* and *Communication Processes* surveys were used to generate measures of central tendency (mean, median, and mode) and variation (variance, standard deviation) for the pretest and posttest data. Scales were inversed as necessary for consistent analysis across outcome measures. Specifically, the entire IAC scales were inversed so that the constructs could be analyzed correctly and consistently across outcome measures. With this inversion, higher IAC scores reflected youth-centered beliefs just as higher CP scores reflected higher levels of cultural sensitivity.

Simple t-tests were conducted on IAC and CP at the pretest and posttest to see if the mean difference was significant. T-test results revealed that there was not a statistically significant change in neither IAC pretest to posttest (IAC Change Δ) nor in CP pretest to posttest (CP Change Δ). The t-test results for IAC pretest-posttest were t (51) = 6.96, p >.05. The t-test results for CP pretest-posttest were t (52) = 5.85, p >.05. These findings reject the research hypothesis that there would be positive change in both the IAC and CP pretest-posttest survey results.

A regression analysis was conducted to examine the relationship between the pretests and posttests. As anticipated, the pretests were statistically significant predictors for the corresponding posttests. For example, an increase in the *Ideas About Children* pre-survey score (IAC Pre) by one unit is predicted to result in 0.634 unit increase in the

post-survey (IAC Post). Likewise, a one-unit increase in the *Communications Processes* score (CP Pre) is associated with 0.688 unit increase in post-survey score (CP Post).

Factor analysis. A factor analysis of the CP posttest items examined how participants responded in regards to the four aspects of relational communication processes outlined by Nagda (2006) including: (1) alliance building, (2) engaging self, (3) critical self-reflection, and (4) appreciating difference. A principal component analysis with a varimax rotation was conducted to determine how participants' responses reflected the four related factors identified by Nagda. The analysis produced a four-component solution conforming to the Kaiser rule of retaining factors with *eigen* value greater than 1. The four components explained 66.89% of the total variance in the original variables.

The four-factor solution shows how the participants constructed the relational communication processes reflected in the CP survey items. The social, cultural, and relational nature of each one of the four communication processes are described below, including a report on the reliability and descriptive information for scales (constructed as mean scores for the items) from this the findings in this research study.

1. Alliance building = Cronbach's $\alpha = 0.82$; $M = 5.26$; $SD = 0.31$. "Alliance building involves relating to and thinking about collaborating with others in taking action towards social justice" (Nagda, 2006, p.563).

2. Engaging self = Cronbach's $\alpha = 0.71$; $M = 5.27$; $SD = 0.47$. "Engaging self is the involvement of oneself as a participant in interactions with others. Engagement is active, not passive; one brings one's own experiences and ideas through personal sharing, inquiry, and reconsideration of perspectives" (Nagda, 2006, p.563).

3. Critical self-reflection = Cronbach's $\alpha = 0.83$; $M = 5.38$; $SD = 0.25$. "Critical self-reflection refers to the examination of one's ideas, experiences and perspectives as located in the context of inequality, privilege, and oppression" (Nagda, 2006, p.563).

4. Appreciating difference = Cronbach's $\alpha = 0.72$; $M = 5.84$; $SD = 0.31$. "Appreciating difference is learning about others, hearing personal stories, and hearing about different points of view in face-to-face encounters" (Nagda, 2006, p.563).

Mentors demonstrated high levels of cultural sensitivity on all of the items in the CP posttest with means exceeding 5.0, reflecting that participants felt they "very much" sought to build alliances, engage themselves, critically self-reflect, and appreciate differences in their everyday interactions with other people. These results support the overall theoretical model of YWLP (Graphic Organizer 1) and are discussed further in the following chapter.

Predictors and IAC and CP Posttest Scores: Answering Research Subquestion 1A:

Predictor variables were analyzed to answer Research Question 1 Subquestion 1A: "Does this change in beliefs or communication processes differ by demographic factors (such as ethnicity, expected grade point average, interest in teaching)?" In regards to the ethnicity variables, white was the base ethnicity of comparison, meaning that the variable white was excluded from the model so interpretation of other ethnicity variables should be in reference to white. While the variable "other" ethnicities (neither white nor black) did not have a statistically significant association with any of the outcome variables, however, as seen in Table 6, being black was associated with lower IAC Post

score by 0.24 unit compared to a white student all else being equal ($B = -.24$, $p < 0.1$). A

mentor who was not considering a teaching career was associated with 0.318 lower IAC

Post score than a mentor considering a career in teaching ($B = -.318$, $p < 0.05$). The

relationship between mentor's expected GPA and IAC Post was also statistically

significant ($B = .845$, $p < 0.1$), however, the relationship has little practical impact as

demonstrated in Figure 2.

Figure 2
Relationship Between Expected GPA and IAC score
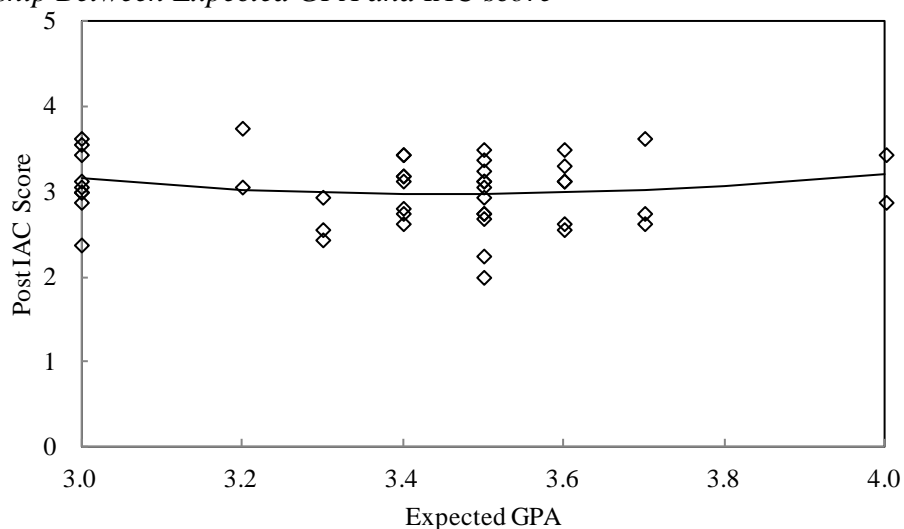
The number of hours spent mentoring was a nonsignificant predictor of IAC Post.

The only statistically significant predictor of CP Post was the number of hours

spent mentoring ($B = -.091$, $p < 0.05$). However, considering that one more hour (or unit)

of mentoring was associated with 0.091 point decrease in CP_post score, the effect is

very small. In regards to CP Post scores, nonsignificant mentor characteristic predictors

of mentor self-reported outcomes included ethnicity, expected GPA, and interest in a

teaching career.

Accounting for Outliers: Answering Research Question 1 Subquestion 2A

Further examination of the regression analysis was necessary to address the

related Research Question 1 Subquestion 2A: "Does this change in beliefs or

communication processes differ based on time spent mentoring?" The predictor variables

in the multiple regression analysis required further data analysis. For example, the effect

of hours spent mentoring was unclear due to the quadratic form. Thus, to visualize the

effect and look for outliers, Figure 1 was created under the following assumptions: that

the subject is white, considers teacher career, and expects 3.5 GPA. As seen in Figure 1,

as hours spent mentoring increases, the IAC Post score tends to decrease first and

increase after passing about 38 mentoring hours while all other variables remain fixed.

Figure 1

Relationship between mentoring hours and post IAC score
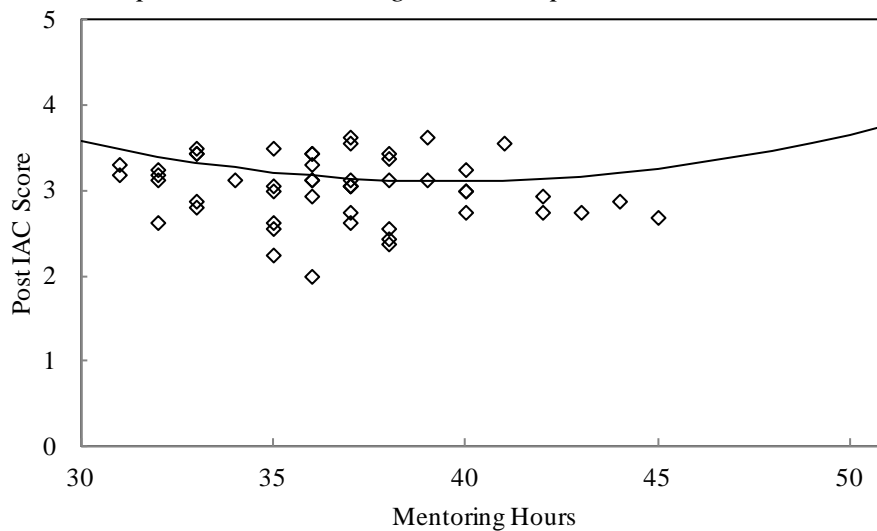
However, there was one outlying data point that was influential in the relationship, an

individual participant with 51 mentoring hours. It was suspected that the quadratic

relationship was found to be statistical significant because of the individual participant,

thus the data point was an influential outlier. To confirm this, the regression model was

re-estimated with excluding the student with 51 mentoring hours, and thus, hours spent

mentoring were not longer statistically significant. This analysis was necessary in order to answer Research Question 1 Subquestion 2A: "Does this change in beliefs or communication processes differ based on time spent mentoring?" This outlier exclusion was applied to the other regression models as well.

Conclusions from the "time spent mentoring" variable analysis are limited due to the inconsistent collection of data for this variable. With a minimum requirement 2 hours of weekly group mentoring sessions in addition to 4 hours per month spent mentoring one-on-one, there was little variance in the recorded number of hours for "time spent mentoring." The YWLP data collection team also noted errors in the reporting of recorded number of hours for "time spent mentoring." These data collection and data entry errors limit the implications of the research findings on the relationship between "time spent mentoring" and mentoring outcomes.

Predictors and Student Teacher Relationship Scale Scores: Research Question 2

The second research question, "How are these beliefs and relational communication processes associated with the college students' perceptions of the mentoring relationship?" were addressed through multiple regression analyses. The *Student Teacher Relationship Scale* is intended to measure the mentor's perception of the "closeness" of the mentoring relationship. The composite scores of "closeness" items on the STRS Post was positively associated with CP Post as one unit increase in the score of CP Post was associated with 0.132 unit increase in score of STRS Post ($B = 0.132$, $p < 0.05$) (Table 6). Other significant initial mentor characteristic predictors of the STRS outcome measure include ethnicity and expected GPA. Being black is negatively associated with an STRS Post score ($B = 0.317$, $p < 0.1$) (Table 6). On the other hand, a

mentor's expected GPA is positively associated with STRS Post ($B = 1.89$, $p < 0.05$) (Table 6).

In the overall sample, effect sizes (R^2) for all significant relationships ranged from 0.27 to 0.61, which are considered medium to large effects by statistical standards (Cohen, 1988; see Table 6). However, the small sample size ($n = 40$) limits the generalizability of these findings regardless of the statistical significance.

In summary, simple t-tests were conducted to address the first research question as to whether or not there was a change in the pretest and posttest data from the *Ideas about Children* and *Communication Processes* surveys and whether or not the mean difference was significant. A simple correlation analysis was conducted to reveal the direction and strength of the linear relationship between these two variables. Predictors were then be added into the regression equation including available demographic information, and the final predictor added into the regression equation was the time spent mentoring. By conducting a multiple regression analysis, explanatory variables were analyzed.

Multiple regression analyses were used to address the second research question to see if these beliefs and communication processes were associated with the college students' perceptions of the mentoring relationship. Posttest data from the *Ideas about Children* and *Communication Processes* surveys were entered as predictor variables, and the STRS survey data were the outcome measure. The goal of this analysis was to examine the relationship between the end-of-semester outcomes and the STRS. The following discussion will address the implications of this research and areas of further study in the future.

CHAPTER FIVE

DISCUSSION

How can the next generation of leaders, civil servants, and community-focused workers be trained? As colleges and universities seek to provide undergraduates with educational, personal, and social development opportunities, a growing number of institutions worldwide are encouraging their undergraduate students to participate in some form of volunteer service (Astin, et al., 2000; Cohen & Kinsey, 1994; Eyler, 2010; Levine, 1994; Markus, Howard, & King, 1993; Ngai, 2006; O'Brien, 1993). Community engagement and service are increasingly being incorporated into the curricula of major and general education courses in the form of academic service-learning (Astin, Sax, & Tables, 1999; Campus Contact, 2011; Cohen & Kinsey, 1994; Levine, 1994).

In addition to academic endeavors, colleges and universities seek to provide undergraduates with opportunities for growth in the social and cultural domains; there is a growing body of research on the empathetic aspects of service-learning and the ways that college students learned to appreciate difference, negotiate difficult conversations, confront controversial issues, and gain cultural competencies (Dardig, 2004; Eifler, Kerssen-Griep & Thacker, 2008; Howard, 2005; Murphy& Rasch, 2008; Spiezio, Baker, & Boland, 2005; Wetig, 2006). Astin et al. (2000) found that these affective qualities changed the most in service-learning programs where undergraduates engaged with

diverse populations. The question remains, "How do these undergraduates change, learn, and grow as a result of these experiences?" This study sought to examine the effect of youth mentoring on college students participating in an academic service-learning experience.

As a first step to understanding the impact of mentoring on college student mentors' beliefs about youth and ability to relate to at-risk youth, findings of this study suggest that mentor characteristics relate to the way mentors view adolescents. As hypothesized, a higher self-reported score on the *Communications Processes* survey was associated with a closer mentoring relationship. Surprisingly, the mentors' beliefs about youth were not associated with the closeness of the mentoring relationship, and there were no significant changes in pretest-posttest outcome measures over the course of the semester.

Summary of Findings

The current body of research on mentoring suggests that mentoring might be "an ideal vehicle to allow college students engaged in service-learning to expand their awareness of complex social problems" (Hughes et al., 2009, p.69). Other research studies report an increase in mentors' social insight, empathy, cultural sensitivity, and interpersonal skills as a result of mentoring (Bullen et al., 2003; Boyle-Baise, 2005; Hall, 2003; Leyton-Armakan et al., 2012; Marshall et al., 2013). Table 7 summarizes the previous findings on college student outcome measures as a result of mentoring.

Table 7
Summary of Previous Research Findings

Comparison of College Student Outcomes from Mentoring Research

Outcomes	Bullen et al. (2003)	Boyle-Baise (2005)	Hall (2003)	Hughes et al. (2009)	Lee et al. (2010)	Michael (2002)	Simons & Cleary (2006)	Street, Adler, & Taylor (2006)
Beliefs & Attitudes	Self-esteem		Self-esteem	Factors in youth development	Increased tolerance Community engagement	Self-efficacy	Civic engagement Desire for social justice	Beliefs & knowledge about early-childhood development
Social Domain	Empathy Social Insight		Social Insight		Intergroup friendships	Social engagement		
Cultural Domain		Cultural Sensitivity			Intercultural knowledge			
Work-related Skills	Interpersonal Skills		Interpersonal Skills		Interpersonal skills	Academic skills Teaching skills		

Another study of the YWLP mentoring program found that at the conclusion of 8 months of mentoring, the college women in YWLP were significantly more likely than a comparison group of college women to report positive changes in their ability to listen to and interact with people with views different from their own (Lee et al., 2010). However, as the researchers point out, further study is needed to determine how much the YWLP mentoring experience versus required coursework contributes to the mentors' views on diversity (Lee et al., 2010). In summary, the data analysis revealed that mentors' ethnicity, academic standing, and potential career choice are associated with their beliefs about youth.

Theoretical Framework

The work of Astin et al. (2000), Eyler (2010) and Eyler and Giles (1999) are relevant to the current study in that they lay the groundwork for understanding the academic service-learning model in higher education and show the importance of the theoretical framework behind this model. Astin et al. suggest that outcome measures for participants should be aligned with academic service-learning programmatic goals. In the case of YWLP, the three relevant social psychological theories include self-determination theory, intergroup contact theory, and empowerment theory (Lawrence et al., 2009). The current study investigates college students' beliefs about youth, which directly relates to the self-determination theory tenets of competence, autonomy, and connection (Ryan & Deci, 2000).

For example, a progressive, youth-centered belief system and approach is necessary in order to demonstrate a "competence approach" of looking for healthy intentions in a youth's actions within a mentoring relationship (Lawrence et al., 2009). In

addition, a progressive, youth-centered belief system and approach recognizes and respects an adolescent's need for autonomy. The first research question about whether or not there was a change in pre- and posttest data concerning college students' beliefs about youth addresses two aspects of self-determination theory, competence and autonomy. This research question also investigated the change in relational communication processes, and in doing so, built on intergroup contact theory about dialogue between diverse groups.

The communication processes survey examined four factors related to intergroup dialogue: (1) appreciating difference, (2) engaging self, (3) critical self-reflection, and (4) alliance-building between diverse groups (Nagda, 2006). The second research question about the influence of change in beliefs or relational communication processes on the mentoring relationship addresseed the final component of self-determination theory, connection. Thus, following the recommendation of Astin et al. (2000), the outcome measures for participants in the current research study were aligned with the academic service-learning programmatic goals of YWLP. The findings of the current research study support the theoretical framework behind the YWLP program design and curriculum (summarized in Graphic Organizer 2).

Graphic Organizer 2
YWLP Theoretical Framework in Action: Research Findings Support Theories

Self-Determination Theory	Intergroup Contact Theory	Empowerment Theory
Theory: Prioritized role of social well-being as academic motivator (Connell & Wellborn, 1991)	Theory: Cross-racial contact would produce more tolerant attitudes within members of different groups interact under specific situational	Theory: Linked individual well-being & larger social environment, as well as the development of a responsive community (Zimmerman, 2000)
Theory: All humans have		

fundamental needs for competence, autonomy, & relatedness (Ryan & Deci, 2000) Findings: Academically strong mentors and youth-centered mentors reported closer mentoring relationships	conditions (Allport, 1954) Findings: Mentors demonstrated high levels of cultural sensitivity in CP posttest scores after mentoring academic service-learning experience	Theory: Empowerment-oriented interventions support individual well-being while solving problems, developing knowledge/ skills, & collaborating Findings: Mentors who demonstrated high levels of cultural sensitivity had closer mentoring relationships

Mentor Characteristics

Other research findings reflect the association between college student mentors' characteristics and mentoring outcomes. Being black was associated with a more adult-centered, prescriptive set of beliefs about children rather than a child-centered, developmental approach, which was more prevalent amongst the mentors as a whole. This association may be due to some of the tension found in same race mentor-mentee pairings. There may be tensions between the mentor's and mentee's expectations for the mentoring relationship. There are mixed findings in the field about same-race versus cross-race mentoring, however, findings from another study on the YWLP mentoring program indicated that there was a stronger positive relationship between mentor cultural empathy and mentee satisfaction with relationship connection for cross-race versus same-race pairings (Leyton-Armakan et al., 2012).

Research shows that mentoring relationships that are youth-centered (also referred to as developmental) as opposed to being adult-centered (also referred to as prescriptive) have been found to predict greater relationship quality and duration (Herrera, Sipe, & McClanahan, 2000; Morrow & Styles, 1995, Rhodes & DuBois, 2006). Previous research suggests that a mentoring experience can strengthen a mentor's child-centered and

constructivist views (Street et al., 2006). However, the pre-surveys revealed that the

YWLP mentors were predisposed to the child-centered philosophy. The college student

mentors were likely already youth-focused when they applied for the program. The

progressively skewed nature of the IAC scores confirms findings from other studies that

college students seeking mentoring opportunities are already child-centered (Lee, et al.,

2010). For example, on the developmental survey items, an overwhelming number of

mentors agreed with youth-centered philosophy statements. Of the sample, 84% of

mentors agreed or strongly agreed with the statement, "Youth learn best by doing things

themselves rather than listening to others," and 97% of mentors agreed or strongly agreed

with the statement, "Youth have a right to their own point of view and should be allowed

to express it." Since the quantitative data did not capture the nuances of "lessons learned"

on adolescent development and cultural sensitivity from the coursework in the *Issues*

Facing Adolescent Girls class, longitudinal qualitative research is necessary to examine

the ways that mentors' beliefs about youth develop over time through document review,

observations, focus groups, and semi-structured interviews.

Course Related Elements

Surprisingly, the amount of time spent mentoring was only significantly

associated with one outcome measure: *Communication Processes* composite scores.

However, considering the course requirements for time spent mentoring (weekly

mentoring group meeting attendance and four hours a month spent mentoring one-on-

one), there was little variance amongst the data once the outlier was removed. Another

study of the program found that the structure of the YLWP mentoring model, including

the course requirements for time spent mentoring, supports the longevity of mentor-

mentee relationships, which is a critical aspect of effective mentoring (Lee et al., 2010). The researchers assert that the "combination of one-on-one and group mentoring helps hold the mentors accountable and provides group support as mentoring relationships develop" (Lee et al., p. 44).

The impact of peer support, which is a critical component of the YWLP mentoring model and *Issues Facing Adolescent Girls* class structure, has been shown to increase college women's sense of competence, relatedness, and autonomy (Marshall et al., 2013). The researchers found that the YWLP program effectively supports college women participants, however, they concur that more research is necessary on the program elements influence mentor outcomes and "how service-learning can be optimized as a strategy to increase mentor competence, ultimately translating into mentee benefits" (Marshall et al., 2013, p. 20). The current study builds on this research base by linking mentors' communication processes with the closeness of the mentoring relationship. Further research is needed on the specific ways in which mentors grow as a result of mentor support and training, and what aspects of the mentor's support lead to positive youth outcomes.

In terms of academic success, findings from the current study indicate that a mentor's strong academic standing (measured by expected grade point average) is associated with youth-centered beliefs and a close mentoring relationship. This is consistent with prior research which found that college women who feel academically competent and have high self-efficacy beliefs prior to mentoring are more likely to have positive mentor-mentee relationship development and youth outcomes (Parra et al., 2002).

A recent study of the YWLP program that examined the association between mentors' mental health characteristics and mentee satisfaction and outcomes found that college women's academic self-worth, rather than their more general sense of worth, was associated with mentee relationship satisfaction regarding sense of connection (Leyton-Armakan et al., 2012). The researchers postulated, "Although it may be that feeling academically successful makes college mentors more emotionally available for their mentee, it could also be that their academic success, in particular, frees up more time to spend with their mentee" (Leyton-Armakan, et al., p. 916). Both the work of Leyton-Armakan, et al., and the findings of the current study suggest that mentors with higher grade point averages are ultimately more effective mentors. Possibly the confidence, self-discipline, or free time that come from academic success (as measured by a higher GPA) empower the college mentor to sufficiently support and engage with the youth mentee. Further research is needed on the specific reasons that mentors' academic success is linked with close mentoring relationships and positive youth outcomes and how a mentoring program can effectively support mentors' academic success.

Cultural Sensitivity and the Mentoring Relationship

As hypothesized, a higher self-reported score on the *Communications Processes* posttest was associated with a closer mentoring relationship. This extends prior research which suggested that mentoring improves the mentors' ability to interact with others across boundaries of difference, and that YWLP, specifically, offers optimal intergroup-contact conditions suggested by Allport (1954) (Lee et al., 2010). The *Communication Processes* scale was adapted for this study to measure the impact of the mentoring experience in the cultural and social domains; prior research established that these

processes supported the overall theoretical model of intergroup contact theory and helped

motivate participants to communicate in ways that demonstrated cultural sensitivity

(Nagda, 2006).

As with the *Ideas about Children* scale, the *Communication Processes* pre-

surveys revealed that the YWLP mentors were culturally sensitive and motivated to

engage with diverse people/ideas (Lee et al., 2010), which may account for the lack of

significant change in outcome measures over the course of the semester (Nagda, 2006).

For example, 87% of mentors reported that they very much "appreciated different points

of view," and 84% stated that they were comfortable "working cooperatively with people

from different racial/ethnic/gender backgrounds." These findings confirm prior research

that revealed increased cultural sensitivity, intergroup interaction, and tolerance among

mentors (Lee et al., 2010); however, the current study extends the body of mentoring

research by linking increased cultural sensitivity to the closeness of the mentoring

relationship.

The field of mentoring research reports that the most critical component for an

effective mentoring relationship is that the two people involved feel connected; feelings

of "closeness" between mentor and mentee have been found to help other aspects of the

relationship and have predicted favorable outcomes for the youth (Rhodes & DuBois,

2006; Spencer, 2006; Hall, 2003). In terms of "closeness," 82% of mentors reported that

they "share an affectionate, warm relationship" with their mentee, and 74% of mentors

reported that their mentee "openly shares her feelings and experiences with me." Further

investigation on what aspects of the program foster and support the development of

cultural sensitivity and social interactions which ultimately lead to the "closeness" of the mentoring relationships reported in this study.

Limitations of the Study

Although the data reveals that there are positive associations between a mentor's communication processes and the closeness of the mentoring relationship, this study has notable limitations. First, the generalizability of the results of this study is limited by the sample size and that participants were engaged in one academic service-learning experience, the YWLP mentoring program. The number of invalid responses or missing data as a result of absenteeism, tardiness, and human error led to a smaller sample ($n = 40$) for the regression equation.

Secondly, it is likely that students who volunteer to be mentors are more child-centered and motivated to engage with diverse groups of people as other studies have shown (Lee et al., 2010; Street et al., 2006). Thus, the data may be skewed towards high levels of progressive or developmental viewpoints that are not representative of broader college student populations. All of the measurements involved self-report surveys, which are inherently subject to both bias and social desirability.

Finally, since this study examined association, not causality, between predictor and outcome variables, fewer conclusions can be drawn. Future long-term studies on mentor characteristics and outcome measures might consider a mixed-methods approach to further examine the developmental or child-centered nature of mentors' beliefs through qualitative measures such as interviews, focus groups, document review or observations of mentoring sessions. Longitudinal studies might examine workforce applications of "lessons learned" from the YLWP mentoring experience and related coursework.

Future Research Implications

Various research studies have identified the need to effectively train future leaders and civil servants how to be culturally sensitive and recognize and respond to the needs of diverse youth (Milner, 2010; Larke, Wiseman, & Bradley, 1990; Beilke, 2005). As colleges and universities seek to provide undergraduates with educational, personal, and social development opportunities, a growing number of institutions worldwide are encouraging their undergraduate students to participate in some form of volunteer service (Campus Contact, 2011). Academic service-learning programs address this need for a culturally responsive future workforce (Eyler, 2010) by training college students in civic engagement and by providing the space for them to learn important academic skills and knowledge that translates into intergroup competence (Astin et al., 2000, Lee et al., 2010). This study extends current research by reporting that mentors' ethnicity, academic standing, and potential career choice are associated with their beliefs about youth and relate to the closeness of the mentoring relationship. However, questions remain about the impact of such service-learning experiences on the college participants in ways that ultimately help the populations they seek to serve.

In the case of mentoring, youth-centered beliefs and high levels of interpersonal skills relate to positive mentoring experiences for both the mentor and the mentee (Rhodes & Dubois, 2006). Interestingly, the results of the current research study reveal that a higher self-reported score on the *Communications Processes* posttest was associated with a closer mentoring relationship, however, there was not a significant relationship between the mentor's beliefs (adult-centered = prescriptive versus youth-centered = developmental) and the closeness of the mentoring relationship. A subsequent

study could examine the difference between beliefs mentors hold about youth and the ways in which mentors interact with youth.

The current study focused on change in beliefs and relational communication processes over the course of a service-learning experience and laid the groundwork for future studies on the ways in which the mentors develop skills for effectively relating to and connecting with at-risk youth. Emerging from this research are the timely questions: "How do service-leaning experiences equip mentors to work with diverse youth?" "What specific interpersonal skills and culturally empathetic relational readiness do mentors gain from a service-learning experience?"

In conclusion, this research study reports that mentors' characteristics (ethnicity, academic standing, and potential career choice) are associated with their beliefs about youth, that higher levels of relational communication processes are associated with a closer mentoring relationship, and that mentors who are considering teaching as a career choice have a youth-centered belief system. The findings of the current study lay the groundwork for future research addressing the imperative question posed by universities: "How can the next generation of leaders, educators, and public service workers be effectively trained?"

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Appendix A
Study Timeline

YWLP In-Class Surveying

Measures:
Communication Processes (CP)
Ideas about Children (IAB)
Student-Teacher Relationship Scale (STRS)

Month	Class	Measures
August	8/30	CP, IAB
September		
October		
November		
December	12/6	STRS, CP, IAB

Appendix B
Ideas about Children Items

Use the scale below to indicate how much you agree or disagree with the following statements about youth.
Strongly disagree | Mildly disagree | Not sure | Mildly agree | Strongly agree

1. Since parents lack special training in education, they should not question the teacher's teaching methods.
2. Youth should be treated the same regardless of differences among them.
3. Youth should always obey the teacher.
4. Preparing for the future is more important for a youth than enjoying today.
5. Youth will not do the right thing unless they must.
6. Youth should be allowed to disagree with their parents if they feel their own ideas are better.
7. Youth should be kept busy with work and study at home and at school.
8. The major goal of education is to put basic information into the minds of the youth.
9. In order to be fair, a teacher must treat all youth alike.
10. The most important thing to teach youth is absolute obedience to whoever is in authority.
11. Youth learn best by doing things themselves rather than listening to others.
12. Youth must be carefully trained early in life or their natural impulses will make them unmanageable.
13. Youth have a right to their own point of view and should be allowed to express it.
14. Youth's learning results mainly from being presented basic information again and again.
15. Youth like to teach other youth.
16. The most important thing to teach youth is absolute obedience to parents.

Appendix C
Communication Processes Items

We have a variety of ways of relating with each other. To what extent do you use each of the following in your everyday life?

Circle the number that corresponds with how you feel:

1= Not at all   2   3   4   5   6   7= Very Much So

1. Being able to disagree with others

2. Sharing my views and experiences

3. Addressing difficult issues

4. Speaking openly without feeling judged

5. Appreciating different points of view

6. Being open to having my views challenged

7. Trying to see the world from someone else's perspective

8. Working through disagreements and conflicts

9. Examining the sources of my biases and assumptions

10. Using my mistakes to reconsider my point of view

11. Appreciating experiences different from my own

12. Discussing and negotiating controversial issues

13. Expressing emotions such as affection and caring in my relations with others

14. Understanding how privilege and oppression affect lives

15. Expressing emotions such as fear and sadness in my relations with others

16. Talking about ways to take action on social issues

17. Sharing ways to collaborate with other groups to take action

18. Working cooperatively with people from different racial/ethnic/gender backgrounds

Appendix D

Student Teacher Relationship Items

Please reflect on the degree to which each of the following statements currently applies to your relationship with your Little Sister.
Rating Scale:
definitely does not apply | not really | neutral/not sure | applies somewhat | definitely applies

| 1 | 2 | 3 | 4 | 5 |

1. I share an affectionate, warm relationship with this child.
2. This child and I always seem to be struggling with one another.
3. If upset, this child will seek comfort from me.
4. This child is uncomfortable with physical affection or touch from me.
5. This child values her relationship with me.
6. When I praise this child, she beams with pride.
7. This child spontaneously shares information about herself.
8. This child easily becomes angry at me.
9. It is easy to be in tune with what this child is feeling.
10. This child remains angry or is resistant after being disciplined.
11. Dealing with this child drains my energy.
12. When this child arrives in a bad mood, I know that we are in for a long and difficult day.
13. This child's feelings towards me can be unpredictable or can change suddenly.
14. This child is sneaky or manipulative with me.
15. This child openly shares her feelings and experience with me.

Appendix E

IRB Approval and Consent Forms

This study is utilizing archival data from the Young Women Leaders Program

Research Team which has IRB approval for data collection and analysis. A copy of the

IRB approval and Consent Forms for participants is included in the pages that follow.

Protocol Form

Institutional Review Board for the Social and Behavioral Sciences
University of Virginia

- To submit a protocol, complete this form and email it and any accompanying materials (i.e. consent forms and instruments) to irbsbs@virginia.edu. For more information on what to submit and how, please see our website at: http://www.virginia.edu/vprgs/irb/sbs_submit.html. Please note that we can only accept our forms in Microsoft Word format.
- Please submit one signed copy of the first four pages of the protocol form, including the Investigator's Agreement. Signed materials can be submitted by mail, fax (434-924-1992), or email (scanned document to irbsbs@virginia.edu). Signed materials can also be submitted in person to our office.
- In order to not delay your review, make sure that you (and any researcher listed on the protocol) have completed the CITI training in human subjects research. Please see: http://www.virginia.edu/vprgs/irb/training_citi.html
- You will be contacted in 3-7 business days regarding your submission (depending on the protocol queue). For more information on the review process, please see: http://www.virginia.edu/vprgs/irb/sbs_submit.html

Protocol Information

IRB-SBS Protocol Number (assigned by SBS office, leave blank):	2000024200
IRB-SBS Grant Approval number (If you received a Grant Approval prior to submitting a protocol, please include the number issued by our office. If you did not submit a Grant Approval Form, please leave this line blank.)	
Submission Type (delete all those that don't apply):	Updated protocol form (includes all previous modifications)
Protocol Title:	The Young Women Leaders Program: Study of College Women
Principal Investigator:	Edith C. Lawrence/ Nancy L. Deutsch / Joanna M. Lee
Professional Title:	Professor, Department of Human Services/ Associate Professor, EDLF/ Assistant Professor. EDLF
School, Department or Center:	Curry School of Education
Division (if applicable):	

Messenger Mail Address:	Curry School of Education – 405 Emmet Street
Mailing Address (only if messenger mail address is not available):	
Telephone:	434-924-7034/ 434-924-0815/ 434- 924-7841
UVA e mail address (no aliases, please): *Your computing ID is used for tracking your IRB CITI training.*	ecl2t@virginia.edu, nld7a@virginia.edu, jml4bw@virginia.edu
Preferred e-mail address for correspondence (if applicable):	nld7a@virginia.edu
You are (delete all those that don't apply):	**Faculty**
This research is for (delete all those that don't apply):	**Doctoral Dissertation** **Faculty Research**
Primary contact for the protocol (if other than the principal investigator):	Nancy L. Deutsch
Contact's Email:	Nld7a@virginia.edu
Contact's Phone:	434-924-0815/
Principal Investigator's Signature	

Faculty Advisor:

School, Department or Center:	
Division (if applicable):	
Messenger Mail Address:	
Telephone:	
UVA e mail address (no aliases, please): *Your computing ID is used for tracking on-line human subjects training.*	

Faculty Advisor, please note. In signing this document, you verify that you have reviewed the protocol and approve of the procedures described therein. Also, in order to act as the Faculty Advisor for this student, you must complete the IRB CITI Training. If you have any question about your training status, please contact our office (irbsbshelp@virginia.edu). Training is valid for three years.

Faculty Advisor's Signature

Other Researchers*:

Please list all other researchers in this study that are associated with UVA.* Please provide the following information for each researcher: Name, UVA email address (no aliases, please.)

Angela K. Henneberger (akh5z@virginia.edu), Lauren J. Germain (ljg9b@virginia.edu), Ellen Markowitz (em2ee@virginia.edu), Afi Wiggins (ayw8s@virginia.edu), Melissa Levy (mkl7j@virginia.edu), Jennifer Merritt (jac8b@virginia.edu), Amanda Sovik (afs2t@virgina.edu), Jennifer Leyton (jl2gs@virginia.edu), Jenna Marshall (jm5ru@virginia.edu), Erika Lee (esl3kz@virginia.edu), Clare Vierbuchen (cgv9b@virginia.edu), Sasha Rehm (slw6t@virginia.edu), Samantha Kirch (smk6b@virginia.edu), Rakinya Raveendran (rr3xm@virginia.edu), Christine Patton (cls7s@virginia.edu), Marla Capper (mec4y@virginia.edu), Lynn Nichols (lmn3b@virginia.edu), Janelle Summerville (jss3sg@virginia.edu)

Please list all other researchers not associated with UVA.* Please provide the following information for each researcher: Name, Institution, Phone Number, Mailing Address, Email Address.

Anindita Das (ad4wf@virginia.edu) – note: Anindita was the YWLP post-doctoral fellow from 2008-2010 and, though her term has ended, will continue to work with some program data. She does not currently have an institutional affiliation and retains her UVA email address

Funding Source: If research is funded, please provide the following:

grant name (or name of the funding source):

United States Department of Education, William T. Grant Foundation, University of Virginia's Commission on the Future of the University, University of Virginia's Jefferson Public Citizens Program, University of Virginia's Office of the Provost, ALCOA Foundation

funding period (month/year):

DOE: 2007-December, 2010
WT Grant: 2008-June 2011
COFU, JPC, Provost: 2010-spring 2011
ALCOA 2008-10:

grant number:

Anticipated start and completion dates for collecting and analyzing data:

Start: 09/1/2010 – Complete: 09/1/2013

INVESTIGATOR AGREEMENT

BY SIGNING THIS DOCUMENT, THE INVESTIGATOR AGREES:

1. That no participants will be recruited or entered under the protocol until the Investigator has received the final approval or exemption letter signed by the Chair of the Institutional Review Board for the Social and Behavioral Sciences (IRB-SBS) or designee.
2. That no participants will be recruited or entered under the protocol until all key personnel for the project have completed their yearly human investigation educational requirement.
3. That any modifications of the protocol or consent form will not be initiated without prior written approval from the Chair of the IRB-SBS, except when necessary to eliminate immediate hazards to the participants.
4. That any deviation from the protocol and/or consent form, adverse events that are serious, unexpected and related to the study or a death occurring during the study will be reported promptly to the SBS Review Board in writing.
5. That all protocol forms for continuations of this protocol will be completed and returned within the time limit stated on the renewal notification letter.
6. That if this study involves any funding or resources from a source outside UVA, the Investigator will contact the Office of Sponsored Programs regarding the need for a contract and letter of indemnification. If it is determined that either a contract or letter of indemnification is needed, participants cannot be enrolled until these documents are complete.
7. That all participants will be recruited and consented as stated in the protocol approved or exempted by the IRB-SBS board. If written consent is required, all participants will be consented by signing a copy of the consent form that has a non-expired IRB approval stamp.
8. That the IRB-SBS office will be notified within 30 days of a change in the Principal Investigator for the study.
9. That the IRB-SBS office will be notified within 30 days of the closure of this study.
10. **That all researchers involved in the protocol including the Principal Investigator and the Faculty Advisor have completed the Online Training module and are certified to conduct this study.**

Nancy Deutsch, Edith Lawrence
Joanne Lee

| Principal Investigator (Name Printed) | Principal Investigator (Signature) | Date 6/30/10 |

FOR STUDENT AND STAFF PROPOSALS ONLY
BY SIGNING THIS DOCUMENT, THE FACULTY ADVISOR AGREES:

1. To assume overall responsibility for the conduct of this investigator.
2. To work with the investigator, and with the SBS Review Board, as needed, in maintaining compliance with this agreement.
3. That the Principal Investigator is qualified to perform this study.

| Faculty Advisor (Name Printed) | Faculty Advisor (Signature) | Date |

The SBS Review Board reserves the right to terminate this study at any time if, in its opinion, (1) the risks of further experimentation are prohibitive, or (2) the above agreement is breached.

Informed Consent Agreement - Interview
Please read this consent agreement carefully before you decide to participate in the study

Purpose of the research study: This study evaluates the effectiveness of the Young Women Leaders Program.

What you will do: For this part of the study, you will be interviewed by a member of the YWLP research team. We will ask you questions about yourself and your experiences in YWLP. All information you give us will be kept confidential.

Kinds of questions you will be asked: The interview will ask you about your experiences in YWLP, including what you have learned, your experiences in the group, and your relationship with your Little Sister.

Time required: The interview will take approximately 45 minutes.

Risks: Some of the questions we ask may make you uncomfortable. You can skip any questions that you do not want to answer.

Benefits: There are no direct benefits to you for participating in this study. This study may help us improve YWLP in the future.

Confidentiality: All the information that you give in the study will be completely confidential. We will not tell your Little Sisters or other members of the YWLP group what you say. You will be assigned a code number and pseudonym so that your name will not be used in any report.

So that we can contact you in the future, we will keep your name, address, and subject ID number on a separate sheet of paper. The list connecting your name to this number will be kept in a locked file.

To help us protect your privacy, we have obtained a Certificate of Confidentiality from the National Institutes of Health. With this certificate, we cannot be forced to disclose information that may identify you, even by a court subpoena, in any federal, state, or local civil, criminal, administrative, legislative, or other proceedings. We will use the Certificate to resist any demands for information that would identify you, except as explained below.

The Certificate cannot be used to resist a demand for information from personnel of the United States Government that is used for auditing or evaluation of federally funded projects or for information that must be disclosed in order to meet the requirements of the Food and Drug Administration.

You should understand that a Certificate of Confidentiality does not prevent you or a member of your family from voluntarily releasing information about yourself or your involvement in this research. If an insurer, employer, or other person obtains your written consent to receive this information, then researchers may not use the Certificate to withhold that information.

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Protocol #	**2000-0242**	
Approved SBS Staff	from: 8-9-10	to: 8-8-11

There is one exception to our confidentiality agreement with you: If you indicate to us that you feel so depressed that you might hurt yourself, we will want, and are required, to ensure that you are safe. We will talk to you about possible counseling referrals and help you connect with them or the emergency room.

Voluntary participation: Your participation in the study is completely voluntary.

Right to withdraw from the study: You have the right to withdraw from the research study at any time without penalty.

How to withdraw from the study: If you want to withdraw from the study (not be interviewed) tell Dr. Edith Lawrence, Dr. Nancy Deutsch, Dr. Joanna Lee, Lauren Germain, or the person who is conducting your interview. There is no penalty for withdrawing and withdrawing does not affect your participation in YWLP or in the YWLP class in any way.

Payment: You will not receive a payment for participating in the study.

Who to contact if you have questions about the study: Sometimes after participating in a study like this, people have questions or things they would like to talk about with someone. If you have any questions or concerns, please feel free to call Edith C. Lawrence, Ph.D., Dr. Nancy L. Deutsch, Dr. Joanna Lee, or Lauren Germain, Curry School of Education, University of Virginia, 405 Emmet Street, Charlottesville, VA, 22904.
Telephone: (434) 924-7034/(434) 924-0815/(434) 924-7841

Faculty advisors:
Edith C. Lawrence, Ph.D., Nancy L. Deutsch, Ph.D., Joanna Lee, Ph.D.
Curry School of Education, University of Virginia, 405 Emmet Street, Charlottesville, VA, 22904.
Telephone: (434) 924-7034/(434) 924-0815/(434) 924-7841

If you have questions about your rights in the study, contact:
Tonya R. Moon, Ph.D.,
Chair, Institutional Review Board for the Social and Behavioral Sciences
One Morton Dr Suite 500
University of Virginia, P.O. Box 800392
Charlottesville, VA 22908-0392
Telephone: (434) 924-5999
Email: irbsbshelp@virginia.edu
Website: www.virginia.edu/vprgs/irb

Agreement: I agree to participate in the interview.

Your Name (Please Print): _____

Your Signature: _____ **Date:** _____
You will receive a copy of this form for your records.

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Approved SBS Staff	from: 8-9-10	to: 8-8-11

Informed Consent Agreement

Please read this consent agreement carefully before you decide to participate in the study.

Purpose of the research study: The purpose of this study is to learn more about college women and how they think of themselves during this phase of their lives. This study will also evaluate the effectiveness of the Young Women Leaders Program.

What you will do in the study:
You will complete online questionnaires **once** at the beginning of first semester and **once** at the end of second semester **(Total = 2 times)**. The questionnaires ask about several aspects of your life as college women, including your academic, social and emotional adjustment at college. For example, they will ask about your feelings about yourself, friends, family and school, and your scholastic performance. All information on the questionnaires will be kept strictly confidential, with the exception noted below in the confidentiality section. You may skip any items that you do not feel comfortable answering.

Researchers from the YWLP research team (graduate students, advanced undergraduates, or faculty from UVA) will observe your YWLP group from time to time during the year. The researchers will not be changing the group in any way, but are interested in what happens in the group to help us improve the program in the future. With your permission, the research team will collect the written work you produce and the surveys that you take in the YWLP class, training and mentoring group this year. With your permission, the research team will also collect your attendance and Little Sister contact hours data. This information will help us better understand how the program has influenced you and how we could make improvements in future years. You may be asked by the researchers to participate in an interview. If you are, you will be given a separate consent form at that time and you will have the right to refuse to participate in the interview.

Time required: You will spend approximately 30 minutes completing each online questionnaire (Total 1 hour).

Risks: There are no direct risks to you of participating in this study. However, whenever people think about themselves and their relationships, there is always the possibility that the information they choose to discuss will be unpleasant or hard to think about. We appreciate that you might be sharing information that is very important to you. If requested by you, we would be glad to give you a referral for counseling. We also understand that having someone observe your YWLP group may at times make you uncomfortable. If members of the group do not want to be observed, the researcher will leave

Benefits: There are no direct benefits to you for participating in this study.

Confidentiality: The information that you give in the study will be handled confidentially. Your information will be assigned a code number. The list connecting your name to this code

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will be kept in a password protected file on a secure server. When the study is completed and the data have been analyzed, this list will be destroyed. Your name will not be used in any report.

The researchers observing the group promise to maintain the same confidentiality you do in terms of discussing what happens inside the YWLP group by changing the names and identifying information of the participants before sharing their notes with anyone not on the research team.

There is one exception to our confidentiality agreement with you: If you indicate to us that you feel so depressed that you might hurt yourself, we will want, and are required, to ensure that you are safe. We will talk to you about possible counseling referrals and help you connect with them or the emergency room.

To help us to protect your privacy, we have obtained a Certificate of Confidentiality from the National Institutes of Health. With this certificate, we cannot be forced to disclose information that may identify you, even by a court subpoena, in any federal, state, or local civil, criminal, administrative, legislative or other proceedings. We will use the Certificate to resist any demands for information that would identify you, except as explained below.

The Certificate of Confidentiality cannot be used to resist a demand for information from personnel of the United States government that is used for auditing or evaluation of Federally funded projects or for information that must be disclosed in order to meet the requirements of the Food and Drug Administration. You should understand that a Certificate of Confidentiality does not prevent you or a member of your family from voluntarily releasing information about yourself or your involvement in this research. If an insurer, employer, or other person obtains your written consent to receive this information, then researchers may not use the Certificate to withhold that information.

Voluntary participation: Your participation in the study is completely voluntary. Participation in the Young Women Leaders Program is considered separate from participation in the study. Whether or not you participate in the study will not impact your YWLP participation or your grade in the training or class. Materials collected for research purposes from the class, program, and training will not be used until you have completed and received a grade in the class.

Right to withdraw from the study: You have the right to withdraw from the study at any time without penalty.

How to withdraw from the study: If you want to withdraw from the study tell the research facilitator. If you are uncomfortable with the person observing your group, tell the group facilitator, Dr. Edith Lawrence, Dr. Nancy Deutsch, Dr. Joanna Lee, or Lauren Germain and they will ask the observer to stop observing the group. As discussed above, participation in YWLP is considered

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separate from participation in the study and you may still participate in the program. There is no penalty for withdrawing.

If you elect to withdraw from the study your survey data will be deleted and your name and any information about you appearing in field notes will be removed.

Payment: You will receive no payment for participating in the study.

If you have questions about the study, contact:
Edith C. Lawrence, Ph.D., Dr. Nancy L. Deutsch, Dr. Joanna Lee, or Lauren Germain
Curry School of Education, University of Virginia
405 Emmet Street, Ruffner Hall 147, Charlottesville, VA, 22903.
Telephone: (434) 924-7034/(434) 924-0815/(434) 924-7841

Faculty advisors:
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Chair, Institutional Review Board for the Social and Behavioral Sciences
One Morton Dr Suite 500
University of Virginia, P.O. Box 800392
Charlottesville, VA 22908-0392
Telephone: (434) 924-5999
Email: irbsbshelp@virginia.edu
Website: www.virginia.edu/vprgs/irb

Agreement:
I agree to participate in the research study described above.

Signature: _____ Date: _____

You will receive a copy of this form for your records.

Revision Date: 09/01/07

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Materials Release Form
Project Title: The Young Women Leaders Program Study of College Women

During the research study, you might produce artistic and written work and surveys during the YWLP class, training and mentoring group. We would like to ask permission to use these data for future research studies. For example, these data may be compiled for research projects and presentations. If you agree to have your data used in subsequent research, the program materials will be handled confidentially. Your information will be assigned a code number. The list connecting your name and/ or your name to this code will be kept in a locked file. When the study is completed and the data have been analyzed, this list will be destroyed. Your name will not be used in any report. When the project is complete the program materials will also be destroyed.

If you choose not to give us permission to use your materials, there is no penalty. It will not affect your participation in YWLP or your grade in the training or class.

In the future, if you wish to change the status of your materials, you may contact:

Dr. Edith Lawrence, Dr. Nancy Deutsch, Dr. Joanna Lee, or Lauren Germain at (434) 924-7034 or (434) 924-0815 or (434) 924-7841

____   I give permission for my materials to be used for future research.

____   I do NOT give permission for my materials to be used for future research. Please destroy it once this study is complete.

Signature: _____

Date: _____

You will receive a copy of this form for your records.

Revision Date: 07/01/10

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Protocol #	**2000-0242**	
Approved SBS Staff	from: 8-9-10	to: 8-8-11

The Certificate of Confidentiality cannot be used to resist a demand for information from personnel of the United States government that is used for auditing or evaluation of Federally funded projects or for information that must be disclosed in order to meet the requirements of the Food and Drug Administration. You should understand that a Certificate of Confidentiality does not prevent you or a member of your family from voluntarily releasing information about yourself or your involvement in this research. If an insurer, employer, or other person obtains your written consent to receive this information, then researchers may not use the Certificate to withhold that information.

Voluntary participation: Your participation in the study is completely voluntary. Participation in the Young Women Leaders Program is considered separate from participation in the study. Whether or not you participate in the study will not impact your YWLP participation or your grade in the training or class.

Right to withdraw from the study: You have the right to withdraw from the study at any time without penalty.

How to withdraw from the study: If you want to withdraw from the study tell the research facilitator or Dr. Edith Lawrence, Dr. Nancy Deutsch, Dr. Joanna Lee, or Lauren Germain. As discussed above, participation in YWLP is considered separate from participation in the study and you may still participate in the program. There is no penalty for withdrawing. If you elect to withdraw from the study your survey data will be deleted.

Payment: You will receive no payment for participating in the study.

If you have questions about the study, contact:
Edith C. Lawrence, Ph.D., Dr. Nancy L. Deutsch, Dr. Joanna Lee, or Lauren Germain
Curry School of Education, University of Virginia
405 Emmet Street, Ruffner Hall 147, Charlottesville, VA, 22903.
Telephone: (434) 924-7034/(434) 924-0815/(434) 924-7841

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Charlottesville, VA 22908-0392
Telephone: (434) 924-5999
Email: irbsbshelp@virginia.edu
Website: www.virginia.edu/vprgs/irb

Agreement:
By clicking on the button below and beginning the survey, you are consenting to participating in this study. You may print out this page to keep for your records.

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