WHAT AND HOW UNIVERSITY STUDENT LEADERS LEARNED IN ONE PEER EDUCATION PROGRAM

by

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A thesis submitted to the Faculty of Education
in conformity with the requirements for
the degree of Master of Education

Queen’s University
Kingston, Ontario, Canada
(October, 2012)

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Abstract

The purpose of my study was to explore what and how university students learned from their experiences working as peer educators. In my study, I was only interested in investigating peer educators working in formal peer education programs within the post-secondary setting. I defined learning as “a comprehensive, holistic, transformative activity that integrates academic learning and student development” (italics in original, ACPA & NASPA, 2004, p. 2). I used a modified version of the CAS 2009 learning outcomes framework to understand what peer educators learned. Those six CAS learning outcomes are: knowledge acquisition, construction, integration, and application; cognitive complexity; intrapersonal development; interpersonal competence; humanitarianism and civic engagement; and practical competence.

I adopted a qualitative, descriptive, exploratory approach to the study of the content and context of peer educators’ learning. I selected participants for my study from a pool of peer educators of a student affairs’ learning assistance peer education program at a mid-sized Ontario university. I conducted face-to-face, in-depth interviews with seven peer educators.

My research revealed what peer educators in a single peer education program learned; it also provided insight into their experience of learning within the peer education program, i.e., how they learned. This study offers some insight into the potential for learning, as well as potential facilitators of learning, in the university peer educator role. The findings of my research indicate that the peer educators whom I studied learned in each of the six CAS learning outcomes. The facilitators of learning that these peer educators described in their interviews include learning from experience, interactions with others, reflection, and training. The findings of my study suggest that further research could be conducted, at various institutions as well as within and across peer education programs.
Acknowledgements

My graduate student experience was rife with learning experiences, and I am grateful to many who contributed to and supported my learning along the way.

To my supervisor, Dr. Ruth Rees: you are a wealth of knowledge and experience, and I am grateful for all your questions, feedback, and direction. You supported me along the path I wanted to take, and helped me develop my ideas into a thesis.

To my committee member, Dr. Denise Stockley: thank you for your support on my thesis and in so many other development areas of my academic career.

I would like to thank the students and staff involved in the peer education programs I have been involved with, past and present: you were my inspiration. Thank you to those who contributed to my research and who supported me in various ways throughout the process. Specifically, to the six peer educators who make up my study: thank you for generously sharing your experiences, and to others at your institution who made my research possible.

Many members of the Queen’s community—friends and colleagues—encouraged me to pursue this degree and supported me throughout. For this, I am grateful.

To the faculty and staff at the Faculty of Education, thank you for all the educational opportunities and support I received through this program.

To my fellow graduate students, I am so grateful for your community of support—we discussed, collaborated, challenged, commiserated, celebrated, and learned together.

To my family, for your support in so many ways—thank you for helping me pursue this degree, for your patience and support throughout the ebb and flow.

Thank you to all; I could not have done this without you.
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CHAPTER 1 - INTRODUCTION

University students learn both inside and outside of the university classroom. For example, peer education programs have increased dramatically in recent decades, becoming widespread on the majority of college and university campuses in Canada and the US (Newton & Ender, 2010). However, few studies focus on peer education as a source of students’ learning outside of the university classroom (Terenzini, Pascarella, & Blimling, 1996). What kinds of learning do these peer educators, students trained to provide instruction to fellow students, experience? Current trends in student development and learning research contend that research concerning the learning and development of university students should investigate both what and how students learn (Baxter Magolda, 1999; Evans, Forney, Guido, Patton, & Renn, 2010). Thus, in addition to asking what kinds of learning these peer educators experience, we must also ask: what are the circumstances in which this learning occurs? In other words, we need to understand both the content and context of learning of peer educators. The majority of research in the area of student learning as a result of extracurricular activities has been largely quantitative (Pascarella, 2006). In response, many researchers in the field have highlighted the need for more qualitative research to be undertaken (Pascarella & Terenzini, 2005).

Some research literature exists regarding the benefit of peer education for peer educators, and some studies have been conducted which qualitatively assess students’ experiences of extracurricular learning in higher education. As a previous peer educator and peer education program coordinator at one Canadian university, I have a personal interest in the topic of peer educator learning. I have witnessed powerful examples of peer educator learning: as a peer educator myself I learned and developed in a variety of ways, and as a peer education program coordinator I observed the learning experiences of peer educators with whom I worked. My
study begins this inquiry into peer educator learning by qualitatively investigating what and how peer educators learn in a single university peer education program.

Within higher education, a need exists to identify desired student learning outcomes to better understand what students learn (American College Personnel Association & National Association of Student Personnel Administrators, 2006). The latest, most inclusive, and most widely accepted constellation of student learning outcomes is found in a 2009 document, published by the Council for the Advancement of Standards in Higher Education (CAS). The six kinds of learning, also called student learning outcomes, are: knowledge acquisition, construction, integration, and application; cognitive complexity; intrapersonal development; interpersonal competence; humanitarianism and civic engagement; and practical competence (see Appendix A). Recently, the National Peer Educator Survey (NPES) used these CAS learning outcomes to assess the learning of over 1,700 peer educators across the United States (Wawrzynski, LoConte, & Straker, 2011). The NPES revealed that, as a result of experiences attributable to being a peer educator, students learned along each of the CAS 2009 student learning outcomes. I conducted a qualitative, in-depth analysis of the experiences of learning of six peer educators in a single peer education program at one Ontario university, using a revised CAS learning outcomes framework.

**Purpose**

The purpose of my study was to explore *what* and *how* university students learn as an outcome of their experiences working as peer educators. Specifically, I investigated what peer educators learn, i.e., what learning outcomes (knowledge acquisition, construction, integration, and application; cognitive complexity; intrapersonal development; interpersonal competence; humanitarianism and civic engagement; and practical competence) (see Appendix A) they
acquired; and how peer educators learn, i.e., by what means or processes this learning occurs (such as interaction with peers; time and degree of effort invested in a program (Astin, 1993); as well as engaging in active learning, and working cooperatively with peers (Chickering & Gamson, 1987)). My study was an initial attempt to describe and understand the subjective experiences of learning through the eyes of peer educators who are themselves university students.

**Overview of Methodology**

I adopted a qualitative, descriptive, exploratory approach to the study of peer educators’ learning and experiences of learning. The study was a multiple case study, where multiple individual peer educators acted as cases. I selected participants for my study from a pool of peer educators in a student affairs’ learning assistance peer education program at a mid-sized Ontario university. I conducted face-to-face, in-depth interviews with seven peer educators. Two overarching questions guided my interview with participants: What did you experience in terms of learning in the peer educator role as it relates to the six CAS learning outcomes (see Appendix A)?; and How did this learning occur? or In what situations did you experience learning along these six learning outcomes while in the peer educator role? These two central questions correspond to my purpose to understand both what and how peer educators learn. My data analysis included a within-case analysis of the individual peer educator cases as well as a cross-case analysis of all peer educator cases following Yin’s (2009) guidelines. Analysis of what participants learned was facilitated by a modified coding matrix which I developed based on the six CAS 2009 learning outcomes. Furthermore, findings regarding how participants learned emerged from the data.
Definition of Terms

Five terms are integral to my study. They are: student affairs; learning; learning outcomes; peer educators; and Supplemental Instruction. I define each of these terms below.

Student affairs is a profession as well as a professional unit within institutions of higher education that holds the mission of supporting student learning and development. Institutional student affairs departments are traditionally comprised of professional staff supporting the development of the whole student through student affairs’ programs and services. The student affairs’ profession had spawned a number of professional associations as well as publications outlining the mission and future of the field.

I use the same definition of learning as that of a seminal student affairs document published in the past decade: “Learning Reconsidered defines learning as a comprehensive, holistic, transformative activity that integrates academic learning and student development” (italics in original, ACPA & NASPA, 2004, p. 2). This integrated definition has developed in recent years in response to the bringing together of previously disparate theories of student learning and development.

Learning outcomes are the “identifiable competencies and skills that students who complete an undergraduate degree should have” (ACPA & NAPSA, 2004, p. 19). Learning outcomes frameworks that have been developed in the past decade follow the above definition of ‘learning’ as integrating both academic learning and personal development.

Peer educators and peer education programs exist in nearly every area of the higher education landscape. Peer educators are students trained to provide instruction to fellow students--peer educators “counsel, provide information, and conduct outreach programs,” (Badura Brack, Millard, & Shah, 2008, p. 566) for their fellow students on a variety of topics.
ranging from learning strategies to sexual health to career counselling. Although university students can assist other students in many ways, both informal and formal, in my study I am only interested in investigating peer educators working in formal peer education programs within the post-secondary setting.

Supplemental Instruction, or SI, is a type of learning assistance program that employs peer educators to provide academic support to students. Supplemental Instruction:

- increases academic performance and retention through its use of collaborative learning strategies…
- and provides regularly scheduled, out-of-class, peer-facilitated sessions that offer students an opportunity to discuss and process course information.

(Arendale, 1994, p. 11)

The SI model was developed in 1973 at the University of Missouri-Kansas City. It has grown to include hundreds of SI programs in universities and colleges around the world, including Canada and Australia (Arendale, 2009).

**Overview of Thesis Structure**

My thesis is comprised of six chapters. This first chapter has introduced the rationale, purpose, and methodology of my study. I also defined the key terms relevant to my study. I now outline the remaining chapters.

The next chapter, Chapter 2, begins with a literature review of relevant theories and research pertaining to student development and learning; students affairs; what student learning outcomes students are achieving at colleges and universities; theories of how these learning outcomes are being achieved, including general adult education theories; peer education; and the Supplemental Instruction model.
Chapter 3 contains a description of the methodology I used in my study. There I detail the qualitative and case study approach I adhered to in order to answer my research questions. I discuss the ethical procedures that I carried out prior to conducting my study, as well as my selection of participants and then a description of the specific context of my study. I outline the development of my interview questions and then the interview format that I followed. Finally I present my method of data analysis, including the development of a coding matrix based on a learning outcomes framework.

I report the findings of my research in two separate chapters. In Chapter 4, I provide a summary of what each of the six individual peer educators (the seventh participant was not very informative) reported that they learned, before comparing these findings across participant cases, according to the learning outcomes’ framework. Then, in Chapter 5 I document how each of these peer educators said they learned. This chapter also contains a cross-case analysis of how peer educators learned, based on themes that emerged from the data.

Finally, in Chapter 6, I attempt to answer my research question and connect the findings presented in Chapters 4 and 5 to literature on what and how students learn. I discuss what I believe to be the limitations of my study as well as the implications of my findings. I also make recommendations for future research, and end with some concluding reflections.
CHAPTER 2 OVERVIEW OF RELEVANT LITERATURE

In this chapter, I review the literature, consisting of findings and theories, relevant to the fields of student development and student affairs, including literature on: how these fields relate to what students learn; how students learn, including the theory of student involvement and a general theory of adult education; peer education; and the Supplemental Instruction (SI) model. Because understanding the development of peer educators necessitates an understanding of student development in higher education, I review first the theory of student development in higher education as it evolved from a fractured view of development towards an integrated conception of learning. Then I give an overview of the profession of student affairs, setting the profession in the Canadian context, as well as the profession’s relationship to what students learn. Following that, I review theories that apply to how students learn, including student involvement theory and other studies of the activities or types of involvement in college or university that contribute to development and learning. Next, to apply a broader lens to help explain how students learn, I refer to a more general theory of adult learning, Kolb’s model of experiential learning (1984). Then I review the research on peer educators consisting of the definition of peer educators, and then a description of the students who typically work as peer educators (whether paid or unpaid). I also describe a brief review of the research conducted on the benefits of peer education programs to peer educators. Finally, I conclude the literature review with a description of the context in which the peer educators in my study were involved—a learning assistance program following the Supplemental Instruction (SI) model. The benefits of SI programs to SI student leader peer educators are also provided.
Student Development

Although this literature has emerged almost exclusively from research in USA post-secondary institutions, the dynamics identified by these models and frameworks also inform the Canadian context, in that issues and patterns of young adult growth and development are likely to parallel closely across the two cultures. (Strange, 2010, p. 19)

Regarding student development during the university and college years, in Student Development in College (2010), a definitive text on the subject, the document stated, “student development is almost universally viewed as a good thing” (Evans et al., 2010, p. 6). That text used Rodgers’ earlier definition of student development: “the ways that a student grows, progresses, or increases his or her developmental capabilities as a result of enrolment in an institution of higher education” (1990, p. 27). Unfortunately, within the discipline of student development, there is no universal agreement regarding the definition of development: “what development consists of and factors that contribute to it have been contested topics throughout the course of history” (Evans et al., p. 5). Traditionally, theories of student development have focused on one vein of development only, such as, moral development (Kohlberg, 1976), identity development (Chickering & Reisser, 1993), theory of the evolution of self (Kegan, 1982), and epistemological development (King & Kitchener, 1994). The various theories of student development are categorized into four differing schools of thought: two major groups: a) cognitive structural (Kegan; Kohlberg), and b) psychosocial theories, including identity theories (Chickering & Reisser); and two minor groups: c) typological models, and d) ecology theories, also known as person-environment interaction models (Evans et al., 2010; Komives, Woodard, & Associates, 2003; Pascarella & Terenzini, 2005).
Although each theory addresses a different aspect of development and originated from a different foundation, some commonalities exist. Most of these student development theories point to an “emergence during the college years of self-understanding and awareness of self as a participant in learning” (Pascarella & Terenzini, 2005, p. 48). Regarding development theories of university-aged students,

[A] number of progressive developmental sequences is apparent: from cognitive and affective simplicity to complexity, from personal nonresponsibility to responsibility, from dependence through autonomy to interdependence, from impulsiveness to self-control, from immaturity to maturity, from external controls to internal controls and self-determination, from self-interestedness to a sense of fairness and responsibility for others, from instinctual to principled action. (p. 48)

Each developmental theory cited above addressed only a single aspect of development. But as far back as 1999, Baxter Magolda purported that such distinctions were no longer productive, and may even be “destructive” (p. 39).

Contemporary theories of student development must consider the entire student development experience. This has led to new theories of student development categorized as constructive-developmental, which centre on the “growth or transformation of ways people construct meaning of their life experiences” (Evans et al., 2010, p. 176). These new theories of development bring together interpersonal, intrapersonal, and cognitive development, with an understanding that researchers can no longer attend to one aspect of development only; all are intertwined as part of the student experience. Baxter Magolda said that “proponents of constructive-developmental pedagogy emphasize that in addition to knowing what learners experience, educators must know how learners interpret their experience” (2004, p. 30). Thus,
because my study aims to understand what peer educators learned, I contend that I must also seek to determine how they learned from their peer educator role.

**Student Affairs**

The student affairs profession has deep ties to student development theory. Throughout the evolution of the student affairs profession, it has had a “consistent and persistent emphasis on and commitment to the development of the whole person” (Nuss, 2003, p. 65). This focus on the development of the whole student is the fundamental principle of student affairs, she says, and guides student affairs professionals as well as the programs, services, and events they oversee.

The student affairs’ profession has evolved greatly over the past century. Originally, the student affairs unit within post-secondary institutions “was founded to support the academic mission of the college” (Nuss, 2003, p. 65) before a student personnel movement in the first half of the 20th century led to the emergence of the distinct profession of student affairs. Eventually professional associations emerged to “articulate the shared concerns of student affairs’ practitioners” (p. 70). A prominent student affairs’ professional association in North America is the National Association of Student Personnel Administrators (NASPA), established in 1951. The American College Personnel Association (ACPA) is another, established in 1924. In 1979, the Council for the Advancement of Standards in Higher Education (CAS) was established. CAS is a “consortium of professional associations who work collaboratively to develop and promulgate standards and guidelines” (CAS, 2008) within the student affairs’ profession. It exists to promote the improvement of student affairs’ programs and services, in order to enhance the quality of student learning and development (CAS). Since 1986, multiple CAS Standards and Guidelines (first in 1986 and more recently in 2001) have been published, addressing a series of functional areas of higher education programs and services.
In 1973, the Canadian Association of College and University Student Services (CACUSS) was established. It is currently “the premier comprehensive organization of student services professionals in Canada” (Hardy Cox & Strange, 2010b, p. 12). CACUSS is a member of the Council for the Advancement of Standards in Higher Education and has over 1000 members in higher education institutions across Canada. CACUSS’s Statement of Guiding Principles (1999) states that its members “use their knowledge and expertise of student development principles to support and foster…the total growth of the individual through program and services that facilitate students’… development” (p. 12). Indicating that this association is aligned with the larger field of student affairs and student learning in higher education, CACUSS published an earlier document titled The Mission of Student Services:

The primary purpose of Student Services is to develop programs and provide services which support and promote student-centered education. Student Services professionals have expertise in assessing and identifying the factors which can enhance the development of students. (1989, p. 1)

Traditionally within an institution’s administrative landscape, “student affairs has been a stand-alone division with the senior student affairs’ administrator reporting to the president” of the university or college (Dungy, 2003, p. 340). However, student affairs’ divisions on college and university campuses can vary greatly in the scope of programs and services they oversee. The unique constellation of an institution’s student affairs’ division depends on the institutions’ size, reputation, resources, geographic region, and academic specialization: “due to this extraordinary diversity of institutions, student affairs’ divisions have evolved uniquely within each institution” (Dungy, 2003, p. 341). Various functional areas within the student affairs division in higher education may include: academic advising; admissions; assessment, research, and program
evaluation; athletics; campus safety; career development; college or student unions; community service and service learning programs; commuter services and off-campus housing; counseling and psychological services; dean of students’ office; dining and food services; disability support services; enrollment management; financial aid; fundraising and fund development; graduate and professional student services; Greek affairs; health services; international student services; judicial affairs; leadership programs; lesbian, gay, bisexual, and transgendered (LGBT) student services; multicultural student services; orientation and new student programs; recreation and fitness programs; religious programs and services; registration services; residence life and housing; student activities; and women’s centres (Dungy, 2003).

In Canada, a consensus regarding what falls under the purview of a college or university’s student affairs division exists. In perhaps the only book published on Canadian student affairs in higher education, Hardy Cox and Strange (2010a) presented the following organizational chart for the typical Canadian student affairs’ portfolio:
The focus of my research will be on a peer education learning assistance program, which as displayed in the above organizational chart, is traditionally located in an institution’s learning skills department, within the student services portfolio of student affairs. Each of the distinct departments within a traditional student affairs’ portfolio, indicated in the above figure, is meant to design programs and services that support student learning and development.

In the foreword to the above-mentioned book about the Canadian student affairs context, a former CACUSS president commented, “much of [Canada’s] recent professional history has been informed and supported by our USA colleagues” (Patterson, 2010, p. vii). Thus, other than that 1989 CACUSS publication and the recent 2010 book, I only located a few publications that broadly address Canadian student affairs. As a result, I will refer to many seminal American...
documents published in the student affairs’ community to guide me. One such document, *The Student Personnel Point of View* (SPPV) (the American Council on Education), made the following claim about student affairs:

The development of students as whole persons interacting in social institutions is the central concern of student personnel work…The concept of education is broadened to include attention to the students’ well-rounded development – physically, socially, emotionally, and spiritually, as well as intellectually. (1949, p. 10)

**What Students Learn--Student Affairs and Student Learning and Development**

Because of its focus on the development of the whole student, the student affairs’ profession was greatly influenced by the student development movement that occurred in the mid-20th century (Nuss, 2003). For decades, different areas of student affairs adopted different theories of student development (e.g., psychosocial, cognitive, moral) to guide their practice. To illustrate this, Baxter Magolda said:

In a residence hall community, for example, we frame our practice according to theories of psychosocial development. In classroom settings, we are concerned about the student’s cognitive and intellectual development. In a judicial hearing, we focus on the student’s moral development. Each of the theories can be an appropriate way to think about, and plan for, student learning. (1999, p. 37)

Although this approach to addressing student development in residence, classroom, and judicial settings attends to the whole student, it does so in the typically fragmented manner of the time. Indeed, student affairs and higher education even used different language to describe any growth that occurred for students inside as opposed to outside the academic classroom. Traditionally, learning has referred to the cognitive and practical development that occurs due to experiences in
the academic classroom (ACPA, 1994; ACPA & NASPA, 2004). As well, it has been understood and studied as independent from the psychosocial, interpersonal, and intrapersonal development that is (largely viewed as) a result of experiences outside of the academic classroom. In the student affairs’ literature, only cognitive or ‘academic’ development was considered as learning; all the other forms of development were not. However, as Baxter Magolda noted, “this focus on separate aspects of student development can obscure our view of the student as a whole and complex person” (1999, p. 37).

Consequently in the past decade, researchers have strived to break down the distinction between learning and development, and thus addressed the student affairs goal of attending to the development of the whole student. For example, in 2004 a document was published, intended for those involved in student affairs and student development in higher education, calling for a new approach bringing together learning and development. The document, Learning Reconsidered, stated that “understanding and supporting learning and development [should be viewed] as intertwined, inseparable elements of the student experience” (ACPA & NASPA, 2004, p. 1). Included was a definition of learning as “a comprehensive, holistic, transformative activity that integrates academic learning and student development, processes that have often been considered separate, and even independent of each other” (p. 2).

When we say learning, then, we do not mean exclusively or primarily academic instruction, the acquisition of disciplinary content, or classroom learning – though the rich definition of learning we use certainly incorporates and includes all of those things. We do not say learning and development because we do not want to suggest that learning and development are fundamentally different things, or that one does, or could, occur without the other. (italics in original, p. 2)
Furthermore, “the new concept of learning recognizes the essential integration of personal development with learning…student learning produces both educational and developmental outcomes” (p. 3). In 2006, *Learning Reconsidered 2* (ACPA & NASPA), a follow-up edition, was published as a blueprint to guide student affairs practitioners to adopt the holistic view of learning into their practice with students. *Learning Reconsidered 2* stated that “academic learning and personal development are intertwined, reciprocal processes that [can] just be called learning, and indeed, that learning is inherently developmental and personal” (p. 18).

Both these documents have been widely accepted and adopted in Canadian higher education: “[L]ike our USA colleagues we [Canadian student affairs professionals] are refocusing and reshaping our methods and aligning with the commitments and approaches described so well in *Learning Reconsidered …and Learning Reconsidered 2*” (Patterson, 2010, p. viii).

**Learning outcomes.** The next challenge for the student affairs’ community was to specify the desired learning outcomes for students in higher education, i.e., “the need to identify the goals and effects of a college education have produced demands for, and commitments to, specific learning outcomes” (ACPA & NASPA, 2004, p. 3). The field of study around learning outcomes pertained to “clearly identifying the competencies and skills [that students who complete an undergraduate degree should have], describing the context within which they can be acquired and demonstrated, mapping the process through which students will gain them” (p. 19). The increased focus on learning outcomes was a result of a variety of factors, including the need for accountability and assessment in higher education as well as a desire to ensure that a university education prepares students for the increasingly complex post-university world.
Within Canadian student affairs, a similar shift has occurred towards a focus on assessing student learning and development outcomes (Hardy Cox & Strange, 2010a). Several researchers have attempted to identify the competencies and skills, or desired student learning outcomes, of a post-secondary education (ACPA & NASPA, 2004; Baxter Magolda, 1999; CAS, 2009; Kuh, 1993; Pascarella & Terenzini, 2005). In 2004, Learning Reconsidered presented seven broad desired learning outcomes that the student affairs and higher education community could agree on as skills and competencies that students should be acquiring while in higher education. To reiterate, Learning Reconsidered defined learning as a “comprehensive, holistic, transformative activity that incorporates academic learning and student development”.

The seven desired learning outcomes specified in this document were: cognitive complexity, knowledge acquisition, integration, and application, humanitarianism, civic engagement, interpersonal and intrapersonal competence, practical competence, and persistence and academic achievement. Each outcome has an associated context, experiences, and competencies.

Although the seven learning outcomes articulated above have been considered as the standard within student affairs since their release (ACPA & NASPA, 2006), revisions have been made. The latest, most inclusive and most widely accepted constellation of student learning outcomes is found in a 2009 document, published by the Council for the Advancement of Standards (CAS) that integrates an earlier set of CAS learning outcomes with those from Learning Reconsidered. These six student outcomes are: knowledge acquisition, construction, integration, and application; cognitive complexity; intrapersonal development; interpersonal competence; humanitarianism and civic engagement; and practical competence. Each of the six student outcome domains includes associated dimensions as well as examples (see Appendix A).
Although student affairs’ researchers largely spearheaded documents like *Learning Reconsidered* that integrate student learning and personal development, researchers in the constructive-developmental field of student development similarly have supported a holistic, integrated view of learning. Baxter Magolda said:

> [O]ur definition of student learning rests on the assumption that cognitive, intrapersonal and interpersonal dimensions of learning are inextricably related, and the belief that practical outcomes are a result of integrated learning in all three dimensions. Thus, our vision of learning assumes that distinctions among terms such as personal development, student development, and learning are meaningless, if not destructive. (1999, p. 39)

Accordingly, I concur with Baxter Magolda and contend that, in order to understand what happens to students during higher education, researchers must adopt a holistic, integrated conception of student learning. This conception would include the framework presented as the most recent CAS student learning outcomes: knowledge acquisition, construction, integration, and application; cognitive complexity; intrapersonal development; interpersonal competence; humanitarianism and civic engagement; and practical competence.

**How Students Learn**

While the previous section delineated the evolution of student affairs as well as theories and research about what students learn, including conceptions of learning and development in higher education, this section describes theories of how students learn, i.e., by what means or processes this learning occurs, including studies of student involvement theory, extra-curricular or other curriculum learning, and general adult learning theory. In distinguishing between theories of student development and theories of student involvement, Astin wrote:
The theory of student involvement is qualitatively different from the development theories that have received so much attention in the literature of higher education during the past few years…whereas these theories focus primarily on developmental outcomes (the what of student development), the theory of student involvement is more concerned with the behavioural mechanisms or processes that facilitate student development (the how of student development). (italics in original, 1999, p. 522)

I believe that Astin’s theory of student involvement provides a useful framework for understanding the environmental influences on student development and learning, or how student learn. Astin explained, “student involvement refers to the amount of physical and psychological energy that the student devotes to the academic experience” (1999, p. 519). Involvement has both a quantitative aspect (how many hours spent on an activity or task) as well as a qualitative aspect (level of engagement in activity or task). Astin summarized, “the amount of student learning and personal development associated with any educational program is directly proportional to the quality and quantity of student involvement in that program” (1999, p. 519).

During the four critical years of a post-secondary education, students are said to make gains in social, intellectual, and personal development as a result of their participation and involvement in various aspects of their higher education experience (Astin, 1993; Pascarella & Terenzini, 2005). But learning in higher education includes learning both within and outside of the classroom. Kuh called activities outside of the academic classroom as the “other curriculum” (1993; 1995), and referred to the outcomes of these experiences on student development and learning as co-curricular learning. In their extensive review of how college affects students, Pascarella and Terenzini (2005) highlighted the benefits of the other-curriculum to college student co-curricular learning. They summarized that greater involvement in these non-academic
activities led to greater developmental gains. They said that students’ co-curricular learning arises from various aspects of the higher education co-curricular environment, including interactions with one’s peers, membership in a Greek fraternity or sorority, participation in intercollegiate athletics, involvement in service experiences, diversity experiences, and work responsibilities (Pascarella & Terenzini, 2005). Furthermore, Foubert and Grainger (2006) found that students with higher levels of involvement in student clubs and organizations reported greater increases in their psychosocial development. Astin (1993) attested that involvement in student peer groups was one of three most powerful types of involvement, (in addition to academic involvement and involvement with faculty) leading to intense levels of cognitive and affective growth.

Another article that provides some insight into how students learn within the higher education context is Chickering and Gamson’s Seven Principles for Good Practice in Undergraduate Education (1987). Seven principles based on a summary of research on good teaching and learning in colleges and universities were specified. I used these seven principles as guidelines for my work, indicating how undergraduate students learn. The document, addressed to faculty, academic administrators, and student affairs’ personnel, outlined the researchers’ intent, “we address the how, not the subject-matter what, of good practice in undergraduate education” (italics in original, p. 3). The authors said that learning is “collaborative and social, not competitive and isolated. Working with others often increases involvement in learning” (p. 3). Thus, good practice in undergraduate education develops reciprocity and cooperation among students. Also, good practice encourages active learning and emphasizes time on task: “time plus energy equals learning. There is no substitute for time on task” (p. 4). In addition to engaging in active learning and working cooperatively with peers, good practice communicates high
expectations. Chickering and Gamson gave advice to “expect more and you will get more…expecting students to perform well becomes a self-fulfilling prophecy” (p. 5).

Some studies attempted to further unpack and understand how this co-curricular learning occurs, by identifying the key features or experiences of student involvement in higher education that promote development and learning. Kuh’s (1995) study of other-curriculum experiences indicated that specific leadership responsibilities (such as planning, organizing, managing, and decision making) as well as interactions with peers were mentioned at least once by the greatest number of students and most frequently mentioned as contributing to students’ learning and personal development. Leadership responsibilities were mentioned most frequently in relation to developing practical competence. Peer interactions were most frequently cited as contributing to interpersonal competence and cognitive complexity. In the early 1990’s, Baxter Magolda conducted a four-year longitudinal study of “how students describe the impact of the co-curricular experiences on their development” (1992, p. 204). She found that peer relationships and organizational involvement were among aspects of the co-curricular environment that influenced students’ development.

Unfortunately, the two studies by Kuh and Baxter Magolda are the only examples of qualitative research that I found which investigated how co-curricular learning occurs by focussing understanding on the key features or experiences of student involvement leading to student learning. Many studies since claimed to investigate how student development occurs, but missed the mark. For example, a recent exploratory study intended to “examine those experiences that had a positive development impact on college students” (King, Baxter Magolda, Barber, Brown, & Lindsay, 2009, p. 109). These researchers collected student narratives and identified what they called “developmentally effective experiences” or DEEs. But they did not
clarify or describe what these experiences were; the results reported only the “overarching effects of developmentally effective experiences” (p. 112). Thus, although researchers initially attended to students’ experiences, they treated these students’ experiences as a vehicle through which to understand the effects of the experiences (i.e., they neglected to focus on how the learning happened, in favour of focusing on what learning occurred). I intend to focus on and unpack the experiences of learning in addition to revealing the competencies and skills that the students have acquired.

In addition to these context specific theories and research regarding how students learn, which have been generated on college and university campuses, a general theory of adult learning may also provide valuable insight into the process by which students learn. One prominent adult education learning theory is Kolb’s Experiential Learning Cycle (1984). Kolb believed that “learning is the process whereby knowledge is created through the transformation of experience” (p. 38) and his theory describes how adults learn from experience. He said that learning is a cyclical process, progressing through four stages: experience; reflection on experience; abstract conceptualization and development of new mental models based on the reflection on experience; and testing and experimentation in activities. The testing and experimentation that occur in the final stage provide another example of experience, which begins the cycle anew.

In summary, research into how student learning occurs has revealed that leadership responsibilities, peer interactions and relationships, organizational involvement, and learning from experience have positive influences on student development and learning. However, more research must be carried out to reveal how students’ involvement in a program, such as peer education, influences their own learning.
**Peer Education**

Peer education programs are widely used in a variety of student affairs’ programs in higher education and are an example of a student activity that can promote student involvement. Since the 1980’s, peer educators on college and university campuses have had a dramatically increased presence (Newton & Ender, 2010). Peer educators are students trained to provide instruction to fellow students—“instruction by or guidance from equals” (Gould & Lomax, 1993, p. 235). Generally, “peer educators counsel, provide information, and conduct outreach programs,” (Badura Brack, Millard, & Shah, 2008, p. 566). Peer educators are students who have been “selected, trained, and designated by campus authority to offer educational services to their peers” (p. 6). They are often given the term “paraprofessionals”; peer educators differ from a professional or staff helper in a variety of ways, including their level of training, preparation, experience, and job designation (Newton & Ender, 2010).

Due to the proliferation of peer education into “nearly every aspect of college academic and student services” (Newton & Ender, p. 4), the specific roles and responsibilities of peer educators can vary greatly. Peer educators are involved in a wide variety of outreach and supportive services within student affairs, including:

[P]roviding information, explaining policies and procedures, orienting new students, making referrals, offering specific help strategies for problem-related counselling issues, implementing social and educational programs, enforcing rules, providing academic advising, facilitating community development, offering tutoring, helping with financial management, performing diversity training, and providing crisis intervention services. (Newton & Ender, 2010, p. 3)
Speaking of the benefit and rationale behind peer educators and peer education programs, Williams said, “there is no aspect of the collegiate experience...that cannot benefit from the involvement of a peer who explains, in language often more accessible, a difficult concept” (2011, p. 99). It seems it is the uniquely peer aspect of the peer educator-student relationship that is so effective: “especially for personal and potentially embarrassing issues, students prefer talking to peer rather than professional and may share more information about their concerns” (Badura Brack et al., 2008, p. 566).

What are some attributes of these students who work as peer educators? In order to investigate the degree to which peer educators could truly be considered peers of the students with whom they work, Badura Brack et al. compared self-report surveys of a small group of peer educators to those of average college students. They found that “students who wanted to become peer educators reported higher self-esteem, greater leadership skills, and fewer risky health behaviours than did demographically similar college students” (p. 566). However, they also revealed that, “peer educators appeared similar to their colleagues in terms of personal values and personality temperament” (p. 566). Earlier, another team of researchers (Klein, Sondag, & Drolet, 1994) had investigated the factors motivating students to work in a peer education program. Focus group interviews with peer educators indicated that peer educators’ motivations for working as peer educators could be “altruistic, such as wanting to help others; egoistic, such as wanting job training; or related to self-efficacy beliefs, such as satisfying a personal need for [program specific] education” (p. 126). A 2011 survey of over 1,700 peer educators in the United States (Wawrzynski, LoConte, & Straker, 2011) found that

Peer educators were altruistic in their reasons for becoming peer educators, and indicated that their involvement was greatly influenced by their desire to help others (66
percent). Only 17 percent indicated that their involvement was influenced by their need to add something to their resume. Other reasons that greatly influenced their involvement were their interest in gaining job-related skills (41 percent), desire to acquire additional knowledge (50 percent), and desire to be involved in college (49 percent). (p. 23)

Initially in the 1980’s and 1990’s, anecdotal evidence regarding the benefit of peer education programs to peer educators dominated the peer education literature. For example, one 1993 article described vignettes from professional coordinators of peer education programs, writing that “it seems those who benefit most [from peer education programs] are the peer educators themselves” and that “peer educators benefit the most” (Gould & Lomax, 1993, p. 240).

Countering the wealth of anecdotal evidence at the time, Sawyer, Pinciaro, and Bedwell (1997) wrote, “despite peer education’s having become an extremely common strategy on many college campuses, very few outcome evaluations of these programs, particularly evaluations that focus on peers themselves, have been performed” (p. 211). In response, these researchers conducted a study to measure the change in peer health educators’ self-esteem, personal development, and sexual behaviour over one year in their role as a peer educator. Sixty-five peer sexuality educators in 10 universities were questioned. Objective measures of self-esteem and personal development indicated an increase in all three of the areas of self-esteem, personal development, and sexual behaviour; however, the results were not statistically significant. Still, qualitative measures over the course of the year confirmed that peer educators experienced increased levels of self-esteem and confidence.

Seeking to “address the void in solid outcome research on peer education programs and examine the effects of participating in peer educator training on the peer educators themselves” (Badura, Millard, Peluso, & Ortman, 2000, p. 472), researchers administered pre- and post-
course questionnaires to 30 undergraduate students enrolled in a peer education training course. The questionnaires contained psychometric tests measuring leadership, self-esteem, peer-education-relevant knowledge, and personal health behaviours. Results from the pre- and post-course questionnaires indicated that “after completing a full semester of peer education training, students improved in terms of leadership, peer education-relevant knowledge, and personal health behaviours” (p. 475). Although this study did employ sound quantitative instruments to measure constructs, 30 participants are far from representative.

Since then, a more thorough quantitative survey of more than 1,700 peer educators in the United States was conducted. Developed based on the six learning outcomes set out in Learning Reconsidered and maintained in the latest CAS 2009 standards, the National Peer Educator Survey (Wawrzynski et al., 2011) revealed that peer educators developed in the following student learning outcomes as a result of experiences attributable to being a peer educator: cognitive complexity; practical competence; intrapersonal competence; interpersonal competence; knowledge acquisition, integration, and application; and humanitarianism. Discussed previously in the student learning portion of this chapter, both documents identified outcomes that students should attain when participating in student-affairs-driven initiatives.

The 2011 National Peer Educator Survey study is important to the field of peer education both in scale and scope: it goes “beyond anecdotal evidence to report that students are benefitting from their experiences as peer educators” (p. 25). However, just as important as determining the learning outcomes associated with peer education is an understanding of what learning outcomes are achieved, and how these learning outcomes are achieved for peer educators as well as what experiences in the peer educator role influence these gains. Indeed, addressing the future of peer education, Williams encouraged us to assess the benefits of the program: “We can no longer take
for granted these assumed outcomes, or build our programs on them. It is crucial that all existing programs that use peer educators have ongoing and thorough learning outcomes articulated and assessed. This is a particularly critical need for those programs whose learning benefits have been merely assumed for too long” (2011, p. 98).

**Supplemental Instruction**

One such area that uses peer educators but is not known for assessing them is learning assistance programs: “there has also been a growing use of peer educators in collaborative learning programs” (Wilson & Arendale, 2011, p. 41). Learning assistance programs, “typically housed in a learning centre or learning assistance office, include tutoring and mentoring and often take the form of individual and group support in study skills, note-taking, writing, and math skills” (p. 41).

My study focuses on peer educators from a specific type of learning assistance program known as Supplemental Instruction (SI). The SI model is one of “four commonly implemented and well-validated peer learning models in higher education” (p. 41). Developed at the University of Missouri-Kansas City in 1973, “supplemental instruction (SI) is the largest of the national postsecondary peer learning models” (Wilson & Arendale, p. 43). Supplemental Instruction

[I]s a student academic assistance program that increases academic performance and retention through its use of collaborative learning strategies. The SI program targets traditionally difficult academic courses…and provides regularly scheduled, out-of-class, peer-facilitated sessions that offer students an opportunity to discuss and process course information. (Arendale, 1994, p. 11)
A peer educator who is involved in a Supplemental Instruction programs is called a SI leader. This peer educator SI leader

[I]s a student who has successfully completed the targeted class or a comparable course….the SI leader is trained in proactive learning and study strategies and operates as a ‘model student’, attending all course lectures, taking notes, and reading all assigned materials. The SI leader conducts three or more out-of-class SI sessions per week during which he/she integrates ‘how to learn’ with ‘what to learn’…the role of the leader is to provide structure to the study session…he or she facilitates a process of collaborative learning. (Arendale, 1994, p. 13)

The Canadian National Centre for Supplemental Instruction (SI) Programs is located at the University of Guelph in Ontario. In Canada, SI programs at college and university campuses are often re-titled as Supported Learning Groups (SLG), Peer Assisted Study Sessions (PASS), or Facilitated Study Groups (FA-ST). Throughout this thesis, I refer to this type of learning assistance program using the more general term Supplemental Instruction or SI.

Research on SI programs has largely focused on supporting the academic success of the students who attend the SI sessions, as well as improving the retention rates of institutions that house SI programs (Arendale, 2009). Similar to the growing body of research that is assessing not only peer education programs but also the benefits of these programs for peer educators, some research on the benefits of SI programs for SI leaders has emerged. Researchers at the International Center for Supplemental Instruction, Stout and McDaniel, provided a summary of research on SI leaders (2006). They documented the SI leaders’ gains in academic performance, improved communication and relationship-building skills, and development both personally and
professionally. The authors attested that a “dearth of research on the skills [SI] leaders feel they gain” existed (p. 61).

I located two published articles that focus specifically on the benefits of SI programs for SI leaders. One, Congos and Stout (2003) conducted research on the post-graduation benefits of being a SI leader. Their study presents the findings of open-ended surveys from 27 former SI leaders as to what they perceived to be the benefits of being a SI leader after graduation. These former SI leaders were asked to indicate qualities, skills, attributes, and knowledge that they gained from their time as peer educators in a SI program. Respondents reported gains in interpersonal relations skills such as communication skills and confidence; learning skills such as time management and knowledge of study skills; general leadership skills and improved public speaking ability; work related skills such as teaching and organization skills; and improved content knowledge related to a course. Although these responses provide great breadth of experience, and even though the survey questions were open ended, the depth of what students experienced as well as how and what they experienced were not addressed in this study.

A second and later study by an Australian researcher, Couchman, qualitatively explored the “lived experience” of peer educators in a SI program. Couchman investigated “the full range and depth of what our [SI] leaders gain from their experiences” (2009, p. 88). She collected written narratives of a critical incident from one of their successful SI session from 11 SI leaders. Results included the leaders saying that they increased their collaborative skills while leading sessions; increased empathy and sensitivity to others’ perspectives; promoted an environment of inclusiveness; developed confidence in self; developed communication skills; established friendships; and engaged in reflection. While my study is similar, my study applies a learning
outcomes framework to what students learned, in addition to investigating the situations in which this learning occurs for peer educators.

Within the Canadian context, in a write-up of a larger study of the effectiveness of one SI program in enhancing student academic success at Carleton University in Ottawa, Ontario, a minor section of the report was dedicated to ascertaining the benefits of the SI program for the SI leaders. Based on self-reports from 14 SI leaders, the benefits of the program for leaders were found to be: enhanced knowledge of subject matter; improved leadership skills; gained teaching experience; getting to know a professor or other students well; increased self-confidence; enhanced communication skills; improving own learning and contributing to learning of others (Miles, Polovina-Vukovic, Littlejohn, & Marini, 2010).

**Summary**

I briefly summarize the literature and research that I have addressed in this chapter. Theories of student development in the higher education context have developed from a fractured view of distinct areas of student development towards a more integrated approach that demands consideration of the collective student development experience. The trend towards a holistic understanding of student development has also resulted in a need to understand not only what students learn in institutions of higher education, but also how they learn. In line with this holistic view of student development, the student affairs’ profession has a history of commitment to the development of the whole student. Student affairs has evolved to include a variety of professional associations within North America and has spearheaded the publication of a variety of vision documents that address best practices in supporting student learning in higher education. These student affairs’ seminal documents, such as *Learning Reconsidered* (ACPA &
have broken down the distinction between student learning and student development.

Next, the field of learning outcomes contains a series of competencies and skills, such as the Council for the Advancement of Standards in Higher Education’s (CAS, 2009) six comprehensive learning outcomes, to better understand what undergraduate students learn. Regarding how students learn, the theory of student involvement (Astin, 1999) and other theories of adult learning (Kolb, 1984), and research into student development in higher education (Pascarella & Terenzini, 2005) postulate that time and experience spent in activities outside of the academic classroom also lead to a variety of learning gains for students. However, many studies of student co-curricular learning do not explicitly seek to investigate how this student learning occurs. Finally, formal peer education programs are an example of student involvement in the co-curricular environment. Although the number of peer education programs on university and college campuses has been steadily rising in the past three decades, little empirical evidence exists to indicate what benefits peer educators gain from being peer educators. However, one more recent study indicated that, in a variety of peer education programs across the United States, peer educators learn along each of the six CAS learning outcomes (Wawrzynski et al., 2011). Similarly, literature is slowly beginning to emerge that indicates what students are gaining from participating as peer educators in Supplemental Instruction (SI) learning-assistance programs (Congos & Stout, 2003; Couchman, 2009; Miles et al., 2010). More empirical research needs to be undertaken to understand what these peer educators gain from participating in peer education program such as SI, as well as to understand how this involvement contributes to student learning. The next chapter, Chapter 3, describes my methodology in response to this need.
CHAPTER 3 – METHODOLOGY

This chapter describes the methodology that I used in my study in order to explore what and how university students learned from their experiences working in their role as peer educators. The chapter begins with an overview of the theoretical framework I employ in my study. Next this chapter includes a discussion of the qualitative nature of the study, then provides a brief outline of case study methodology, and concludes with a discussion about the suitability of this methodology to my research purpose. Aspects of the method are then discussed, including participants and instruments. I also discuss how the data were analyzed.

Theoretical Framework

The holistic approach to learning that I adopt in my study is based on a definition of learning as “a comprehensive, holistic, transformative activity that integrates academic learning and student development, processes that have often been considered separate, and even independent of each other” (ACPA & NASPA, 2004, p. 2). Accordingly, I used the six 2009 CAS student learning outcomes (knowledge acquisition, construction, integration, and application; cognitive complexity; intrapersonal development; interpersonal competence; humanitarianism and civic engagement; and practical competence) (see Appendix A), as a framework. It is important to note that the purpose of my research was not to validate the CAS learning outcomes framework; my research did not seek to confirm whether the CAS learning outcomes were met for peer educators in the peer educator role. Instead, I position myself within this CAS learning objectives framework and use this lens to attempt to understand and then describe the learning and learning outcomes of peer educators. I contend that it is not enough to simply ask peer educators what they learned from their role/experience as related to the six CAS learning outcomes. I believe that a contemporary study of what students learn in university must
be concerned both with identifying the competencies and skills (the what) gained from higher education as well as mapping the processes through which students will gain these skills and competencies (the how) (ACPA & NAPSA, 2006). Accordingly, I also asked the peer educators how they as peer educators understand and interpret their experiences that influenced their learning associated with these six learning outcomes, to identify the ‘how’ aspect in addition to the ‘what’.

**A Qualitative Approach**

This research was carried out to study peer educators’ learning and experiences of learning. In order to gain a deeper understanding of peer educators’ experiences of this phenomenon, I used a qualitative study, as qualitative research “facilitate[s] study of issues in depth and detail” (Patton, 2002, p. 14). Qualitative research emphasizes personal interpretation and “relies primarily on human perception and understanding” (Stake, 2010, p. 11). I undertook a descriptive, exploratory study, which McMillan and Schumacher (2010) contend is appropriate in new areas of inquiry in order to examine a little-understood phenomenon.

The phenomenon or issue that I studied is the learning that peer educators undergo in their peer educator role. The focus of my case study was on several peer educators’ experiences of learning in the peer educator role. Stake (2006) explained that “a case is a noun, a thing, an entity; it is seldom a verb, a particle, a functioning” (p. 1). Thus, the case or unit of analysis under study was individual peer educators whom I selected as participants. I focused on the issue of learning in the peer educator role through an investigation of the case of individual peer educators who volunteer in a traditional student affairs program at one Canadian university. I engaged in a multiple case study where multiple individual peer educators acted as cases, to facilitate my understanding of the phenomenon of learning in the peer educator role.
In multi-case study research, the single case is of interest because it belongs to a particular collection of cases. The individual cases share a common characteristic or condition…they may be members of a group, or examples of a phenomenon…let us call this group, category, or phenomenon a ‘quintain’. (Stake, 2006, p. 6)

It is when the focus of inquiry is on this quintain that multiple-case study is recommended. Indeed, the research question in a multi-case study focuses on the “binding concept or idea that holds the cases together. It is a conceptual infrastructure for building the study” (p. 8). In my research, this “binding concept” or quintain among the cases is the learning of peer educators, in terms of both content and process.

Stake attested that an instrumental case study design is used when the purpose of the case study is to go beyond the case itself (2006, p. 8) (as opposed to an intrinsic case study, when the main focus of interest is in the case itself). Because my focus of inquiry was on the learning of peer educators, rather than intrinsically the case of peer educators or a peer educator program, I believe that the study was an instrumental case study.

My study sought to understand both what and how peer educators learned in a university setting. Yin (2009) said that case study research is appropriate when research questions are not just about the what of a phenomenon or issue but also about how and why. Yin also said that case study research is also appropriate when the focus is on a “contemporary phenomenon within some real-life context” (p. 13).

Context and Cases

After compiling data from over 200 peer education programs for the National Peer Educator Survey, Wawrzynski et al. asserted that “peer education programs vary as much as the college campuses where these types of programs can be found” (2011, p. 17). Due to this variety
of peer education programs, I consider it important to describe the context of the peer educator program from which I selected individual peer educators as cases for my study.

The learning assistance program from which I selected my cases was a Supplemental Instruction (SI) program at a mid-sized university in Ontario (which I will refer to herein as Mid-sized U). I became aware of the SI program at Mid-sized U when I was developing a similar Supplemental Instruction program for another Ontario university where I had been working. The SI program at Mid-sized U follows the international Supplemental Instruction (SI) model, which was described in detail in Chapter 2 of this thesis. Although any program that carries the name of Supplemental Instruction has certain core characteristics, SI programs can vary according to institution. In SI programs like that at Mid-sized U,

…the peer educators help students master content while they learn how to use study strategies appropriately…SI leaders are students who have been deemed “course competent”, approved by the course instructor and trained in proactive learning and study strategies. The SI leader is the “model student”, a facilitator who helps students integrate course content and learning/study strategies. (Wilson & Arendale, 2011, p. 43)

Wilson and Arendale described the typical role of the peer educator in SI programs such as the one at Mid-sized U:

[T]he peer educator combines both content and process in a session. The peer educator is not in an evaluatory role, so besides taking attendance, the peer educator is not involved directly in the grading and evaluation of the student. The peer educator’s main concern is helping students learn course material and gain the skills to be able to learn and apply the material again in the future. The peer educator can also provide feedback to the faculty member about the sessions and persistent student difficulties in the content. (p. 48)
At Mid-sized U, students who wish to become SI Leaders must submit an application and undergo a competitive interview process; not all students who apply to the SI program are accepted as SI Leaders. During the 2011-2012 academic year during which I conducted my study, a total of 44 peer educators were involved in the Supplemental Instruction program at Mid-sized U. Among other criteria, successful applicants must have demonstrated high academic achievement in their previous courses. This is a reflection of the fact that SI Leaders are expected to lead content-specific SI sessions for a particular course, and must be knowledgeable in course-specific content. Accordingly, each peer educator in Mid-sized U’s SI program is assigned to be the SI Leader for a historically challenging academic course. The SI Leader spends three hours each week leading SI sessions for students enrolled in that assigned academic course, having prepared and organized collaborative learning activities designed to engage those students with the course content. These SI peer educators spend on average approximately 10 hours each week in their role, which is comprised of attending the lectures for the academic course their SI sessions support, creating handouts and designing activities for students to engage in during the SI session, leading the SI session, and participating in ongoing training and development activities provided by staff members. In order to be assigned to an academic course, the SI leader will have previously taken that course and have received a grade higher than 80%. When advertising for the SI program, SI leaders must make brief promotional announcements to their class, which can vary in size from 80-600 people. Overall, these requirements of the SI leader role at Mid-sized U are common features of a SI leader position that follows the Supplemental Instruction model (University of Missouri-Kansas City, 2006).

The staff-lead training that peer educators in the Mid-sized U Supplemental Instruction program attend includes such topics as: the Supplemental Instruction model; learning styles
theory; facilitation skills; redirecting students’ questions; and developing creative SI activities. In addition, SI leaders complete personal reflection and goal-setting activities. Training is offered at the start of each term, as well as every second week throughout the term. Reflection and goal-setting activities occur during each term, and occur independently, within the SI leader group and with SI staff supervisors.

The SI program at Mid-sized U is one of the more than 20 peer educator programs at that university, and has been in operation for more than a decade. That peer educator program provides a centralized structure and model for the university’s peer education programs, and follows a university-wide framework of peer educator selection, training, supervision, evaluation, and reward. Peer educators within the SI program who meet the training and placement requirements of that peer educator program receive a non-credit academic notation on their university transcript as well as a small honorarium at the end of each term.

The SI program at Mid-sized U has its offices in the main campus library most frequently used by undergraduate students, and is housed with a variety of other learning support programs which the university offers. The two coordinators of the SI program have offices adjacent to a SI leader workspace, dubbed the “workroom”, which is a designated space for SI leaders to use to meet and work on their SI session handouts, to informally debrief their experiences in SI sessions, as well as to socialize and complete their own academic coursework. This space contains computer workstations, printers, inventories of previous SI session handouts, and other resources. The SI sessions for all courses, with the exception of one SI which is run online for one course, are held in group study rooms located around this same library at various times throughout each week.
Ethical Issues

Following the research ethical procedures of Ontario universities, I had my proposal reviewed and then cleared by the Education Research Ethics Board (EREB) in the Faculty of Education at Queen’s University in December 2011. In January 2012, I received ethics clearance for this research from the General Research Ethics Board (GREB) at Queen’s University. That clearance certificate is included in Appendix B. On both these applications, I was listed as the Principal Investigator with my supervisor, Dr. Ruth Rees, listed as a project member. Included in the ethics applications to both EREB and GREB were: the Letter of Information (Appendix C) used in my study to inform participants of the details of participating in my study; a Consent Form which participants signed prior to participating in my study (Appendix D); a copy of the recruitment email I used to initially contact potential participants of my study (Appendix E); and a draft of the interview questions that, at the time of application, I intended to use in my study (Appendix F). Prior to submitting these ethics applications, I completed a series of online tutorials entitled Course in Human Research Participant Protection (CHRPP), which is based on the Canadian Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans. My CHRPP certificate of completion was also included in the ethics applications.

In January of 2012, I received ethics clearance from the university-wide research ethics board at Mid-sized U, a copy of which is included in Appendix G. The ethics application submitted to Mid-sized U contained a duplicate of the application submitted and accepted previously by Queen’s EREB and GREB, and contained an additional standard ethics application that was specific to Mid-sized U. This final ethics application cleared with no comments or revisions. Because I am not a member of Mid-sized U, I was advised (through consultation with a staff person in the research ethics office at Mid-sized U) to have a member of the Mid-sized U
community submit the ethics application on my behalf. For this reason, the ethics application I submitted to Mid-sized U had the peer education program coordinator (who runs the peer education program at Mid-sized U from which I was to select my study participants) listed as the Faculty with Principal Responsibility for the study. I was listed as a Student Investigator with Dr. Ruth Rees, my supervisor, listed as a Faculty Co-Investigator.

**Data Collection**

The following section outlines the participants and instruments (including interviews) used in this instrumental multiple case study of peer educators’ experiences of learning.

**Participants**

The case or unit of analysis in the study was each individual peer educator. I used purposeful sampling to ensure that I selected participants who could be information-rich informants, in order to increase the richness and depth of the data collected (McMillan & Schumacher, 2010). I selected study participants from a pool of 44 peer educators in the SI program at Mid-sized U who met the following criteria: undergraduate student, adult male or female, aged 20-23, who at the time of the interview had participated in the SI program as a SI Leader for a minimum of one academic year and who was working in this role for 10 hours per week. Based on the theory of student involvement (which, as cited earlier, states that increased physical and mental involvement in a program leads to greater learning (Astin, 1999)), these criteria were to ensure that peer educators had spent sufficient time in the role in order to recognize if any learning had occurred, as well as being mature enough to be able to speak to their own learning in the peer educator role. I did not seek participants from any particular area of academic study.
In order to select potential participants, I contacted the SI program coordinator at Mid-sized U via telephone and email and asked her to identify peer educators who met the above criteria. The SI program coordinator then contacted those peer educators and requested their permission before forwarding their contact information (name and university email addresses) to me. Of the 44 SI Leaders involved in the SI program at the time of my study, I received the contact information for 20 SI leaders who met the above criteria. Using this contact information, I then sent a recruitment email (see Appendix D) to all these SI leaders. I asked them to contact me by email, using my Queen’s University email address. I accepted the first seven SI leaders who responded as the participants of my study who met all my criteria. This process ensured that the program coordinator did not know which of the peer educators had agreed to be involved in my study, nor those whom were chosen for my study.

I initially accepted seven participants into my study to ensure that after my data collection was complete, I would have a minimum of five participants. (I allowed for the possibility that, due to unforeseen circumstances such as a participant cancelling an interview or a failure in my audio-recording device, I could end up with fewer participants in my study than initially planned).

Interviews

I conducted in-depth face-to-face interviews with all seven individual peer educators. Although I had scheduled 90 minutes for each interview, six of the seven interviews lasted between 35-50 minutes, with only one interview lasting the full 90 minutes. As Creswell explained, “we conduct qualitative research when we want to empower individuals to share their stories, hear their voices, and minimize the power relationships that often exist between a
researcher and the participants in a study” (2007, p. 40). Yin wrote the following about the use of interviews in case study research:

One type of case study interview is an in-depth interview. You can ask key respondents about the facts of a matter as well as their opinions about events. In some situations, you may even ask the interviewee to propose her or his own insights into certain occurrences.

(italics in original, 2009, p. 107)

The following two overarching questions guided my interviews with participants:

1. What did you learn in the peer educator role as it relates to the six CAS learning outcomes (see Appendix A)?

2. How did this learning occur? Or, in what situations did you experience learning along these six learning outcomes while in the peer educator role?

These two central questions correspond to my research purpose to understand both what and how peer educators learned from their role.

I developed the specific interview questions that I used to shed light on these two overarching questions based on the six CAS learning outcomes; each of the interview questions was designed to elucidate participants’ learning related to each of the six learning outcomes. Questions and probes were developed according to suggested guidelines for qualitative and case study interviews (Creswell, 2007; Patton, 2002; Yin, 2009). My goal in developing the interview questions was to make each question specific to a single CAS learning outcome so that it prompted the participant to talk about their learning related to each learning outcome, and also to make each question broad enough so as not to bias the participants’ responses. After I prompted the participant with each interview question that related to the six CAS learning outcomes, I wanted the participants to talk freely. I found it challenging to reword the theoretical CAS
learning outcomes into colloquial language so that it would resonate with peer educator student participants. I also found it challenging to reduce the complexity of each learning outcome into one core question that encapsulated its essence. Because of these challenges, I went through many drafts of interview questions, each time attempting to make them clearer and more pertinent to their associated learning outcome. I was unable to devise a single question that captured the humanitarianism and civic engagement learning outcome. Instead, I created two interview questions to correspond to this learning outcome.

I field-tested the interview questions and probes with four upper-year peer educators from a comparable program at another Ontario university prior to conducting the actual interviews. Their feedback helped me to clarify the wording of my interview questions and allowed me to gain experience as an interviewer, including monitoring my time during an interview. The result was that the interview questions were clarified and worded in non-academic language. Both aspects helped, I believe, to increase the receptivity of the questions.

Below are the resulting seven interview questions that I developed, along with their associated CAS learning outcome. The full interview script that I used is in Appendix H.

Table 1

*Interview Questions and Associated CAS Learning Outcomes*

<table>
<thead>
<tr>
<th>CAS Learning Outcome</th>
<th>Interview Question</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Practical competence</em></td>
<td>What skills or behaviours or habits have you developed from being a SI leader?</td>
</tr>
<tr>
<td><em>Interpersonal competence</em></td>
<td>How have your interactions with other people changed from being a SI Leader?</td>
</tr>
<tr>
<td><em>Intrapersonal development</em></td>
<td>What have you learned about yourself from being a SI Leader?</td>
</tr>
<tr>
<td><em>Cognitive complexity</em></td>
<td>When you’re faced with something, how has your thinking process changed from being a SI leader?</td>
</tr>
<tr>
<td><em>Knowledge acquisition, construction, integration, and application</em></td>
<td>What are some things that you’ve learned as a SI Leader that have transferred into other parts of your life?</td>
</tr>
</tbody>
</table>
Table 1 cont’d

*Interview Questions and Associated CAS Learning Outcomes*

| Humanitarianism and civic engagement | What have you learned as a SI Leader from interacting with people who are different from you? After being a SI leader, do you feel differently about helping others or being part of a community? |

Because my study sought to understand in depth what peer educators learned, prior to the interviews I also generated a series of general probing statements that I could use to tease out information from participants regarding any learning that they may have experienced in their peer educator role. Furthermore, I developed questions intended to elucidate how participants learned from their peer educator role.

During the interview, I first asked participants what they learned. Then for each form of learning they mentioned, I asked probing questions such as:

- Was there a part of your SI leader role that developed that learning?
- Was there a part of the SI leader experience that contributed to that learning?
- What triggered that learning for you?
- Is there a specific experience that made you aware of this?
- What was the source of that learning for you?

Prior to the interview, participants were asked to give informed consent by reading a Letter of Information (Appendix B) and by signing a Consent Form (Appendix C). I kept one signed copy of the Consent Form, and participants kept a copy of the Letter of Information and Consent Form. I first verbally reminded each participant of the confidentiality and anonymity inherent in their participation in the study, and that they could withdraw from the study at any time without penalty to themselves. I asked each participant not to discuss their interview with
other peer educators in the SI program at Mid-sized U until after all the interviews were completed. I assured participants that their status as a peer educator in the SI program at Mid-sized U would not be influenced by their participation or withdrawal from the study. I then asked that each participant create a pseudonym for themselves, which I used subsequently to identify them in all data and documents. Interviews were audio-recorded to ensure accuracy. Data were kept on an encrypted laptop. Only I had access to the data, although I offered my supervisor access to the file if she needed to access the data, which she did not.

The interviews were conducted over four days during the winter of 2012 on-site at Mid-sized U. Due to a lack of other available space on campus, the interviews were held in a private office in the same library where the SI program is housed. All measures were taken to protect the anonymity of participants, both from each other and from the supervisor. During the interviews, I engaged in member checking (McMillan & Schumacher, 2010) to better understand the complete and subtle meanings of participants’ words and experiences. I transcribed the data from each interview within two months following the interviews.

Data Analysis

The data I included in my study’s qualitative data analysis came from the transcript of six participant’s interview. Using these interview transcripts, I analysed first what each participant learned as well as how they learned as SI leaders in the SI program at Mid-sized U. For the data analysis related to what participants learned, I developed and modified a coding matrix based on the CAS (2009) learning outcomes. The qualitative findings regarding how peer educators learned emerged from the data. I then compared the findings of what and how peer educators learned across participant cases.
I contacted participants via email, to allow them the opportunity to review and validate a transcript of their interview. None of the participants requested any changes, additions, or deletions to their transcripts. The data from one participant’s interview were removed from the data set. In this particular case, the participant had provided information-rich data regarding how they learned as a SI Leader. However, the data they provided regarding what they learned were questionable: during the interview this participant often referred to learning that ‘many SI Leaders experience’ or that ‘a SI Leader could experience’ in the SI program, but was not specific about their learning. Because I felt I could not include this participant’s data regarding what they learned, I felt I also had to discard the data regarding how this participant learned. Hence, data from interviews with just six peer educators were all included for the analysis.

Rather than conducting a holistic analysis of an entire case, i.e., the entire peer educator experience, I conducted an embedded analysis (Yin, 2009) of a specific aspect of the case (the learning that each individual peer educator experienced). Because I undertook an instrumental case study to investigate the quintain or issue of learning across the peer educator cases, my data analysis followed the procedures suggested by Creswell regarding multiple case study analysis:

When multiple cases are chosen, a typical format is to first provide a detailed description of each case and themes within the cases, called a within-case analysis, followed by a thematic analysis across the cases, called a cross-case analysis, as well as assertions or an interpretation of the meaning of the case. (italics in original, 2007, p. 75)

Thus, I performed first a within-case analysis of, respectively, what and how each individual peer educator learned. Second, I conducted a cross-case analysis, which summarized the similarities and differences in what and how the multiple peer educators’ learned. My analysis of what participant cases learned was deductive, as it was “analyzed according to an
existing framework” (Patton, 2002, p. 453), whereas my analysis of how participant cases learned was inductive, because I allowed my findings to emerge from the data (Patton).

**Analyzing What Participants Learned**

I used a pre-determined coding table to analyze what participants learned. Regarding case study analysis, Yin wrote “the first and most preferred strategy is to follow the theoretical propositions that led to your case study…the proposition helps to focus attention on certain data and to ignore other data” (2009, p. 130). Yin further recommended, “making a matrix of categories and placing the evidence within such categories” (2009, p. 129) when analyzing case study data. Because the theoretical propositions that informed my study were the six CAS learning outcomes, these six learning outcomes formed the foundation of the coding matrix I used to analyze my data to understand what peer educators cases learned. However, I believe it is important once again to note that my use of the CAS learning outcomes in a coding matrix was not to validate the CAS learning outcomes; instead my intent was to use these learning outcomes to help me categorize and understand the learning that peer educators experienced.

Within each of the six learning outcomes domains, CAS has identified four to eight *dimensions* of these learning outcomes. For example, the learning outcome domain of interpersonal competence is further divided into the following four dimensions: meaningful relationships, interdependence, collaboration, and effective leadership (CAS, 2009). In total 28 dimensions are associated with the six CAS learning outcomes. To further understand the depth of learning that each peer educator experienced, I divided the six CAS learning outcome codes according to the 28 dimensions of learning outcomes. Thus, the resulting coding matrix contained the six CAS learning outcomes as well as the 28 dimensions of learning. I portray that framework in Table 2 below.
<table>
<thead>
<tr>
<th>Student outcome domain</th>
<th>Dimensions of outcome domain</th>
<th>Examples of learning and development outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Practical competence</strong></td>
<td>Pursuing goals</td>
<td>Sets and pursues individual goals; articulates rationale for personal and educational goals and objectives; articulates and makes plans to achieve long-term goals and objectives; identifies and works to overcome obstacles that hamper goal achievement.</td>
</tr>
<tr>
<td></td>
<td>Communicating effectively</td>
<td>Conveys meaning in a way that others understand by writing and speaking coherently and effectively; writes and speaks after reflection; influences others through writing, speaking or artistic expression; effectively articulates abstract ideas; uses appropriate syntax and grammar; makes and evaluates presentations or performances; listens attentively to others and responds appropriately.</td>
</tr>
<tr>
<td></td>
<td>Technological competence</td>
<td>Demonstrates technological literacy and skills; demonstrates the ethical application of intellectual property and privacy; uses technology ethically and effectively to communicate, solve problems, and complete tasks; stays current with technological innovations.</td>
</tr>
<tr>
<td></td>
<td>Managing personal affairs</td>
<td>Exhibits self-reliant behaviors; manages time effectively; develops strategies for managing finances.</td>
</tr>
<tr>
<td></td>
<td>Managing career development</td>
<td>Takes steps to initiate a job search or seek advanced education; constructs are based on clear job objectives and with evidence of knowledge, skills, and abilities; recognizes the importance of transferable skills.</td>
</tr>
<tr>
<td></td>
<td>Demonstrating professionalism</td>
<td>Accepts supervision and direction as needed; values the contributions of others; holds self accountable for obligations; shows initiative; assesses, critiques, and then improves the quality of one's work and one's work environment.</td>
</tr>
</tbody>
</table>

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Table 2 cont’d

*Original CAS Learning and Developmental Outcomes*

<table>
<thead>
<tr>
<th>Student outcome domain</th>
<th>Dimensions of outcome domain</th>
<th>Examples of learning and development outcomes</th>
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</thead>
<tbody>
<tr>
<td>Maintain health and wellness</td>
<td>Engages in behaviors and contributes to environments that promote health and reduce risk; articulates the relationship between health and wellness in accomplishing goals; exhibits behaviors that advance the health of communities.</td>
<td></td>
</tr>
<tr>
<td>Living and purposeful and satisfying life</td>
<td>Makes purposeful decisions regarding balance among education, work, and leisure time; acts in congruence with personal identity, ethical, spiritual, and moral values.</td>
<td></td>
</tr>
<tr>
<td>Interpersonal competence</td>
<td>Establishes healthy, mutually beneficial relationships with others; treats others with respect; manages interpersonal conflicts effectively; demonstrates appropriately assertive behavior</td>
<td></td>
</tr>
<tr>
<td>Interdependence</td>
<td>Seeks help from others when needed and offers assistance to others; shares a group or organizational goal and works with others to achieve it; learns from the contributions and involvement of others; accepts supervision and direction as needed.</td>
<td></td>
</tr>
<tr>
<td>Collaboration</td>
<td>Works cooperatively with others, including people different from self and/or with different points of view; seeks and values the involvement of others; listens to and considers others' points of view.</td>
<td></td>
</tr>
<tr>
<td>Effective leadership</td>
<td>Demonstrates skill in guiding and assisting a group, organization, or community in meeting its goals; identifies and understands the dynamics of a group; exhibits democratic principles as a leader or group member; communicates a vision, mission, or purpose that encourages commitment and action in others.</td>
<td></td>
</tr>
</tbody>
</table>
### Original CAS Learning and Developmental Outcomes

<table>
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<th>Student outcome domain</th>
<th>Dimensions of outcome domain</th>
<th>Examples of learning and development outcomes</th>
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</thead>
<tbody>
<tr>
<td>Intrapersonal development</td>
<td>Realistic self-appraisal, self-understanding, and self-respect</td>
<td>Assesses, articulates, and acknowledges personal skills, abilities, and growth areas; uses self-knowledge to make decisions such as those related to career choices; articulates rationale for personal behavior; seeks and considers feedback from others; critiques and subsequently learns from past experiences; employs self-reflection to gain insight; functions without need for constant reassurance from others; balances needs of self with needs of others.</td>
</tr>
<tr>
<td>Identity development</td>
<td>Integrates multiple aspects of identity into a coherent whole; recognizes and exhibits interdependence in accordance with environmental, cultural, and personal values; identifies and commits to important aspects of self.</td>
<td></td>
</tr>
<tr>
<td>Commitment to ethics and integrity</td>
<td>Incorporates ethical reasoning into action; explores and articulates the values and principles involved in personal decision-making; acts in congruence with personal values and beliefs; exemplifies dependability, honesty, and trustworthiness; accepts personal accountability.</td>
<td></td>
</tr>
<tr>
<td>Spiritual awareness</td>
<td>Develops and articulates personal belief system; understands roles of spirituality in personal and group values and behaviors; critiques, compares, and contrasts various belief systems; explores issues of purpose, meaning, and faith.</td>
<td></td>
</tr>
<tr>
<td>Cognitive complexity</td>
<td>Critical thinking</td>
<td>Identifies important problems, questions, and issues; analyzes, interprets, and makes judgments of the relevance and quality of information; assesses assumptions and considers alternative perspectives and solutions.</td>
</tr>
<tr>
<td></td>
<td>Reflective thinking</td>
<td>Applies previously understood information concepts and experiences to anew situation or setting; rethinks previous assumptions.</td>
</tr>
</tbody>
</table>
Table 2 cont’d

**Original CAS Learning and Developmental Outcomes**

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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Effective reasoning</td>
<td>Uses complex information from a variety of sources including personal experience and observation to form a decision or opinion; is open to new ideas and perspectives.</td>
</tr>
<tr>
<td></td>
<td>Creativity</td>
<td>Integrates mental, emotional, and creative processes for increased insight; formulates a new approach to a particular problem.</td>
</tr>
<tr>
<td>Knowledge acquisition, construction, integration, and application</td>
<td>Understanding knowledge from a range of disciplines</td>
<td>Possesses knowledge of human cultures and the physical world; possesses knowledge of [a specific] one or more subjects.</td>
</tr>
<tr>
<td></td>
<td>Connecting knowledge to other knowledge, ideas, and experiences</td>
<td>Uses multiple sources of information and their synthesis to solve problems; knows how to access diverse sources of information such as the internet, text observations and databases.</td>
</tr>
<tr>
<td></td>
<td>Constructing knowledge</td>
<td>Personalizes learning; makes meaning from text instruction and experience; uses experience and other sources of information to create new insights; generates new problem-solving approaches based on new insights; recognizes one's own capacity to create new understandings from learning activities and dialogue with others.</td>
</tr>
</tbody>
</table>
Table 2 cont’d

*Original CAS Learning and Developmental Outcomes*

<table>
<thead>
<tr>
<th>Student outcome domain</th>
<th>Dimensions of outcome domain</th>
<th>Examples of learning and development outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relating knowledge to daily life</td>
<td>Seeks new information to solve problems; relates knowledge to major and career decisions; makes connections between classroom and out-of-classroom learning; articulates career choices based on assessment of interests, values, skills, and abilities; provides evidence of knowledge, skills, and accomplishments resulting from formal education, work experience, community service, and volunteer experiences, for example in resumes and portfolios.</td>
<td></td>
</tr>
<tr>
<td>Humanitarianism and civic engagement</td>
<td>Understanding and appreciation of cultural and human differences</td>
<td>Understands one’s own identity and culture; seeks involvement with people different from oneself; articulates the advantages and impact of a diverse society; identifies systematic barriers to equality and inclusiveness, then advocates and justifies means for dismantling them; in interactions with others, exhibits respect and preserves the dignity of others.</td>
</tr>
<tr>
<td>Global perspective</td>
<td>Understands and analyzes the interconnectedness of societies worldwide; demonstrates effective stewardship of human, economic, and environmental resources.</td>
<td></td>
</tr>
<tr>
<td>Social responsibility</td>
<td>Recognizes social systems and their influence on people; appropriately challenges the unfair, unjust, or uncivil behavior of other individuals or groups; participates in service/volunteer activities that are characterized by reciprocity; articulates the values and principles involved in personal decision-making; affirms and values the worth of individuals and communities.</td>
<td></td>
</tr>
<tr>
<td>Sense of civic responsibility</td>
<td>Demonstrates consideration of the welfare of others in decision-making; engages in critical reflection and principled dissent; understands and participates in relevant governance systems; educates and facilitates the civic engagement of others.</td>
<td></td>
</tr>
</tbody>
</table>

Source. The Council for the Advancement of Standards Learning and Developmental Outcomes, 2009, www.cas.edu/
This original 6 x 28 matrix, although comprehensive, seemed to me to be overly complex and cumbersome. Accordingly, I anticipated the possibility that, during my data analysis, this matrix might prove too specific in my attempt to place participants’ quotations into the appropriate cell. I started with this full matrix, but I soon realized that I should reduce this original 6 x 28 matrix to a more manageable size, based on the data that participants had provided.

I began with a within-case analysis of each case’s transcribed interview. I read each transcribed interview and, using the highlighter function in Microsoft Word, I identified quotations in which participants described what they learned from being a peer educator in the SI program at Mid-sized U. Only examples of what peer educator participants learned in their role, and not simply what they did in their role as peer educators, qualified as valid quotations at this stage. For example, a portion of the interview transcript in which a participant described that, as a peer educator, they learned to set better goals for themselves would qualify as a valid quotation; however, if a participant described that in the course of being a peer educator, they simply set goals for themselves (without specific reference to learning or developing in this area), this would not qualify as a valid code at this stage.

After identifying quotations in each of the transcribed interviews in which participants described what they learned, I performed a quick overview analysis of this collection of quotations. It became clear that participants’ responses corresponded to only 14 of the 28 dimensions identified in the original CAS framework. At that point in my data analysis, I reduced the original 6 x 28 matrix. Within five of the learning outcome domains, I only kept those dimensions to which participants’ quotations corresponded, and I excluded the remaining dimensions. Within the cognitive complexity learning outcome domain, I combined three dimensions into one, because many of participants’ quotations applied to all three dimensions.
and because I doubted my ability to attribute participant quotations accurately to any one of these dimensions. The resulting matrix I used contains the six CAS learning outcome domains and 12 dimensions. Table 3 below also identifies descriptors of what falls into each category.
### Revised CAS Learning Outcomes and Dimensions of Learning

<table>
<thead>
<tr>
<th>Learning outcome domain</th>
<th>Dimension of Learning Outcomes Domain</th>
<th>Examples of learning and development outcomes</th>
</tr>
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<tbody>
<tr>
<td>Practical competence</td>
<td>Communicating effectively</td>
<td>Conveys meaning in a way that others understand by writing and speaking coherently and effectively; writes and speaks after reflection; influences others through writing, speaking or artistic expression; effectively articulates abstract ideas; makes and evaluates presentations or performances; listens attentively to others and responds appropriately.</td>
</tr>
<tr>
<td></td>
<td>Managing personal affairs</td>
<td>Exhibits self-reliant behaviors; manages time effectively.</td>
</tr>
<tr>
<td>Interpersonal competence</td>
<td>Interdependence</td>
<td>Seeks help from others when needed and offers assistance to others; shares a group or organizational goal and works with others to achieve it; learns from the contributions and involvement of others.</td>
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<tr>
<td></td>
<td>Collaboration</td>
<td>Works cooperatively with others, including people different from self and/or with different points of view; seeks and values the involvement of others; listens to and considers others' points of view.</td>
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<td></td>
<td>Effective leadership</td>
<td>Demonstrates skill in guiding and assisting a group, organization, or community in meeting its goals; identifies and understands the dynamics of a group; exhibits democratic principles as a leader or group member.</td>
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<tr>
<td>Intrapersonal development</td>
<td>Realistic self-appraisal, self-understanding, and self-respect</td>
<td>Assesses, articulates, and acknowledges personal skills, abilities, and growth areas; uses self-knowledge to make decisions such as those related to career choices; articulates rationale for personal behavior; seeks and considers feedback from others; critiques and subsequently learns from past experiences; employs self-reflection to gain insight; functions without need for constant reassurance from others; balances needs of self with needs of others.</td>
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Revised CAS Learning Outcomes and Dimensions of Learning

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<th>Examples of learning and development outcomes</th>
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</thead>
<tbody>
<tr>
<td><strong>Cognitive complexity</strong></td>
<td>General cognitive complexity (includes critical thinking, reflective thinking, and effective reasoning)</td>
<td>Identifies important problems, questions, and issues; analyzes, interprets, and makes judgments of the relevance and quality of information; assesses assumptions and considers alternative perspectives and solutions. Applies previously understood information concepts and experiences to anew situation or setting; rethinks previous assumptions. Uses complex information from a variety of sources including personal experience and observation to form a decision or opinion; is open to new ideas and perspectives.</td>
</tr>
<tr>
<td><strong>Creativity</strong></td>
<td>Integrates mental, emotional, and creative processes for increased insight; formulates a new approach to a particular problem</td>
<td></td>
</tr>
<tr>
<td><strong>Knowledge acquisition, construction, integration, application</strong></td>
<td>Understanding knowledge from range of disciplines</td>
<td>Possesses knowledge of human cultures and the physical world; possesses knowledge of [a specific] one or more subjects</td>
</tr>
<tr>
<td>Relating knowledge to daily life</td>
<td>Relates knowledge to major and career decisions; makes connections between classroom and out-of-classroom learning; articulates career choices based on assessment of interests, values, skills, and abilities;</td>
<td></td>
</tr>
</tbody>
</table>
Table 3 cont’d

Revised CAS Learning Outcomes and Dimensions of Learning

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<tbody>
<tr>
<td>Humanitarianism and civic engagement</td>
<td>Understanding and appreciation of cultural and human differences</td>
<td>Understands one’s own identity and culture; seeks involvement with people different from oneself; articulates the advantages and impact of a diverse society; in interactions with others, exhibits respect and preserves the dignity of others.</td>
</tr>
<tr>
<td>Social responsibility</td>
<td>Social responsibility</td>
<td>Participates in service/volunteer activities that are characterized by reciprocity; articulates the values and principles involved in personal decision-making; affirms and values the worth of individuals and communities.</td>
</tr>
</tbody>
</table>

*Note. Adapted from the Council for the Advancement of Standards Learning and Developmental Outcomes, 2009, www.cas.edu/
I sought to understand what each peer educator learned in terms of this revised coding framework. I created a copy of this coding matrix for each case in a separate Word document. Then, working with one quotation at a time and with reference to the coding matrix, I identified which of the six CAS learning outcomes and 12 resulting dimension of learning outcomes domains best encompassed each of the selected participant quotations. I then copied and pasted the quotations into the corresponding cell of that participant’s coding matrix Word document. After each case was coded for what the participant had learned and the coding matrix had been completed for each individual, in order to “verify the meaningfulness and accuracy of the categories and the placement of data in categories” (Patton, 2002, p. 466), I created a separate document and summarized the quotations that I had placed within each dimension and for each participant case. This allowed me to judge each of the dimensions for internal homogeneity (i.e., that all quotations within a single dimension hold together in a meaningful way) and external heterogeneity (i.e., that clear and bold differences between quotations in different dimensions existed (Patton)).

**Analyzing How Participants Learned**

The how portion of the within-case analysis focused on understanding how each individual case described their learning in the peer educator role. Thus the how codes were neither created from an existing framework, nor were they applied across cases. Instead, codes relating to how participants learned from being peer educators emerged from the transcribed interview data of each individual unit of analysis, the individual case interview. Although this portion of the data analysis sought to unpack how peer educators learned from their role, I did not make causal inferences about peer educators’ learning. Because my study was exploratory rather than explanatory, the term how relates to that which participants describe and attribute
their learning. As a researcher, I provide no explanations about the reasons for peer educator learning other than those that peer educators described in their own words.

For this part of the within-case data analysis, it was particularly important for me to identify discrepant data. In the previous section pertaining to what participants learned, identifying discrepant data was not a priority because I only identified positive statements of what students learned. However, in the case of how peer educators learned, because the coding emerged from the data, I attended specifically to instances of discrepant data.

I started with a fresh copy of each interview transcript, without any of the highlighting that I had done previously when analyzing what peer educators learned. Using this new document within the Atlas.ti program, I read over a case’s interview transcript and identified quotations in which the participant case described how they had learned in their peer educator role. At this stage I did not code any of the quotations, but instead made notes in a separate research journal in order to get an overview of how that participant described their learning. On a subsequent reading of the interview transcript, I developed codes identifying themes as they emerged related to the source of learning described in each quotation. Finally I wrote a brief description of the codes describing how that case learned. This process was repeated for all the six peer educator cases.

Next I engaged in a cross-case analysis. A cross-case analysis is akin to a meta-analysis of the findings from the individual cases: “at a later point in the analysis, it is possible to compare and contrast cases, but initially each case must be represented and understood as an idiosyncratic manifestation of the phenomenon of interest” (Patton, 2002, p. 450). Cross-case analysis is a technique that “treats each individual case study as a separate study. The technique does not differ from other research syntheses--aggregating findings across a series of individual
Cross-case analysis may take the form of emphasizing individual case findings. Or, when researchers do not place priority on “preserving the situationality” (Stake, 2006, p. 58) of the individual cases, it is appropriate to move towards generalization by merging case findings.

Looking at the coding matrix as well as the brief summary which I developed for each participant, I identified the most frequent of the six learning outcomes and 12 dimensions of learning outcomes that were experienced across participants’ cases; this revealed those common elements regarding what participants learned. Next I analyzed the emergent codes from the individual cases using content analysis. “Content analysis is used to refer to any qualitative data reduction and sense-making effort that takes a volume of qualitative material and attempts to identify core consistencies and meanings. Case studies, for example, can be content analyzed” (Patton, 2002, p. 452). Using content analysis, I identified both patterns (descriptive findings such as ‘many participants reported the workroom as a source of learning’) and themes (categorical meanings such as ‘learning through interactions with others is a major theme’) across participant cases.

Summary

I conducted a qualitative case study to understand the learning of individual peer educators in the peer educator role. I did this by investigating peer educators who volunteer in a traditional Supplemental Instruction program at Mid-sized U. I engaged in within-case and cross-case analysis to understand what and how peer educators’ learned. I conducted interviews with seven peer educators in the winter 2012 and completed data analysis on six peer educator cases. The interview questions and probes that I developed for the interview are based on the CAS 2009 learning outcomes and were refined in consultation with current peer educators. In order to
analyze what participants learned, I devised a coding matrix adapted from the CAS 2009 dimensions of learning outcomes. I analyzed how participants learned based on what emerged from participant data. The within-case and cross-case findings of what and how participants learned are presented in the next two chapters, Chapters 4 and 5.
CHAPTER 4 – FINDINGS: WHAT PEER EDUCATORS LEARNED

In this chapter, I present my findings regarding what peer educators learned from their role as SI leaders in the SI program at Mid-sized U. I have divided my findings into two sections. Section I contains a within-case analysis of what individual peer educator cases learned. Section II consists of a cross-case analysis of what all peer educator cases learned. My findings are based on in-depth analysis of six participant interviews from SI leaders--Charlotte, Rose, Michelle, Kilgore Trout (K.T.), Laura, and Karin--all pseudonyms. All cases are upper-year undergraduate students, aged 20-23, one male and five female students, who have participated in the SI program at Mid-sized U for a minimum of one academic year. In the next chapter, Chapter 5, I present my findings regarding how these same peer educator participants reported learning from their role as SI leaders.

Section I: Within-Case Analysis of What Peer Educators Learned

In this section, I provide a detailed narrative of what each participant case learned while being a peer educator in the SI program at Mid-sized U. Quotations from participants are included to illustrate the learning they self-identify as experiencing in each of the six student learning outcome domains and 12 dimensions of learning outcomes, according to my revised coding matrix, discussed in detail in Chapter 3. The line number following each participant quotation indicates the location of that quotation within that participant’s interview transcript.
Charlotte

Charlotte is a female fourth-year student who has been a peer educator with the SI program at Mid-sized U for six semesters over three years. She said she learned to handle herself in front of a group, as well as developed confidence and comfort in a variety of communication settings. She learned leadership skills such as organizing groups of people and guiding them through SI sessions. Charlotte described her experience of “coming out of her shell” and developing self-confidence, as well as learning to be more creative and having more fun in her presentations and changing her approach to preparing for SI sessions. She noted that the group facilitation skills she learned as a SI leader transferred to other parts of her life. Finally, being part of the SI program made Charlotte feel more involved on campus and opened her eyes to the diversity of the undergraduate population at Mid-sized U.

Practical competence. Under the CAS learning outcome domain of practical competence, Charlotte reported growth in the dimensions of effective communication and managing personal affairs. “My communication skills are definitely more improved” (281-282). Describing herself as moving from a shy, scared person who lacked confidence, towards someone who was competent in front of a group, Charlotte said that she had learned how to handle herself in group situations:

I’m actually a really shy person, so stepping into the [SI session] room to facilitate the first day, it was pretty scary… and didn’t feel like I should feel confident…. my first mock-midterm session it was huge, I had 60 people and I just felt overwhelmed and I didn’t know what to do and it felt really scary… it’s just gaining the experience to… how to handle yourself. (40-55)
Furthermore, Charlotte explained that now she could “handle myself better in crowds now, just being comfortable with talking to strangers or like initiating conversations” (431-433).

She said that she also learned to speak clearly. Charlotte revealed that at the start of her time as a SI leader, she “needed to sometimes slow down talking” (96-104), and that she needed to organize her thoughts before she spoke. She described how her communication in a group setting has changed now: “taking your time, and being confident when you speak…just really working on what you say” (96-100).

Learning the specific mechanisms of public speaking are connected to Charlotte developing confidence: “you have to sound confident in yourself and not have darting eyes or let the sound at the end of your voice go up…being comfortable in front of large groups of people” (289-291). “I think the first time I did that [classroom announcement] I went beet red, and then the second time I was like ‘oh, I’ve done this before’ like it’s not bad” (395-397). Charlotte indicated that she learned to manage her personal affairs, such as managing her time effectively.

**Interpersonal development.** With regard to developing interpersonal competence as a peer educator in the SI program, the descriptions that Charlotte provided in her interview indicated that she was learning to become an effective leader. According to the CAS learning outcome domains (2009; Appendix A), becoming an effective leader includes demonstrating skill in guiding and leading a group, and understanding the dynamics of a group. Providing specifics about one way she learned to manage group dynamics in a SI session, Charlotte stated the following: “one method is being a float, almost floating and going from one table to table and not staying in one place too long... And then always just keeping the session moving” (72-75). Charlotte went into further detail about strategies she had learned to engage students in her SI group, to get the quieter students involved: “definitely I’m better at breaking the ice. How
you break conversation, how you get someone who’s quiet and in the corner studying, how do you get them to interact” (125-135).

Charlotte said that she learned to organize people, whether its students in her SI sessions or organizing her fellow SI leaders for a social event. Charlotte talked about taking on more responsibility and “taking the next step and being a leader” among her peers to organize a social event at which new and returning SI leaders could interact and bond:

[O]rganizing people…not just in your sessions but…trying to organize [the SI leaders] for little events can be challenging but it also can be fun…taking a more responsibility role….It’s taking it the next step and being a leader. (144-156)

Charlotte learned about the type of leader she is and how she fits into the larger group dynamic. She explained that she can balance the role of leader and follower within a group, “as in I can take a leadership role, but I also know when to step back and be a follower” (414-419).

Intrapersonal development. Charlotte described a great deal of learning related to the intrapersonal development dimension of realistic self-appraisal, self-understanding, and self-respect. Charlotte described herself as initially being a shy person who lacked confidence and felt scared and overwhelmed when leading SI sessions. She said that she developed confidence in herself as it related to public speaking.

Charlotte spoke about “coming out of her shell”: “I’m not as shy as I believed I was. It [the SI program] really like helped me…it taught me that I can take on responsibility…and discovered that I can [do it]” (171-172). Charlotte gained “more confidence in myself a lot” (436-437). Additionally, in her interview Charlotte mentioned a growing pride and learning to be okay with making mistakes. For her, one effect of the SI program is that “it makes me feel proud of myself that I can take on responsibility, that I’m doing a whole bunch of things” (327-328).
Charlotte explained that “being proud of my role at the [SI program], I think it transfers that I know that I’m doing a good thing and that I can do this role, I feel proud that I’m a [SI] leader” (319-324). Finally, Charlotte learned that it was okay to make mistakes while leading a group. She explained that part of leading a group is understanding that “even if you’re wrong, it’s still ok to make mistakes, [and] not embarrassed when you make mistakes…” (102-104).

**Cognitive complexity.** Charlotte noted that one of the benefits of being a SI peer educator is that “I really have to think more and be more creative” (257). Charlotte recounted how she learned to be more creative through designing the in-class announcements she used to promote the SI program:

I used to make these really generic [in-class announcements], like ‘hi guys, I’m [name], come out to [SI], it runs from this time to this time’. And then [now I] make jingles and sing out in front of people to get them more interested or make it more fun... I’ve heard that some leaders did a magic trick, so I thought like, that’s really creative, that’s really interesting, then challenging myself to get out of my box. (293-305)

Charlotte learned to ask herself different kinds of questions and consider different elements when she was preparing for a SI session. Initially she relied on other leader’s SI handouts; then, she began reworking the questions to make the exercise more meaningful to her students.

[Before I would sort of [think] ‘what’s the content we learned in class’….now how I think when…preparing for a session is… ‘so what are my steps [in completing this problem]?”’. So not just “here’s the question, solve it” but how do you solve it …so how can we apply this to the bigger picture, or how can I prep them for what’s coming next lecture. (221-246)
Knowledge acquisition, integration, construction, and application. Charlotte recounted how she transferred the skills she learned in facilitating a study group session and applied it while studying in a group with her friends: “studying with friends is a lot easier. I find that when I’m explaining concepts to friends I treat them just like a [SI session]. I find that I’m redirecting their question back at [my friends]” (275-282).

Humanitarianism and civic engagement. Charlotte described an experience in the SI program in which she learned about the diversity of students enrolled in first year at her institution:

[W]hen I was in first year, I thought everyone who goes to university in first year is right from high school, so you’re all 18, 19 years old… I thought university was for young people, and then I kind of opened my eyes and [realized] no, university is for everyone.

(349-358)

Charlotte described that being a SI leader taught her the value of her own contribution, as well as helped her learn more about engagement and involvement at her university. She explained: “SI groups just make campus a lot more engaged, I’m more involved in campus…just a bit more connected with the university, it’s not just school to me…you realize how your contribution is making a difference in other students” (329-344).

Rose

Rose in an upper year female student who has been a SI leader for six semesters over three years. Rose developed in public speaking and communicating to large audiences, planning and organizing sessions, expressing herself clearly, and personal organization. She learned to seek out help when needed. She learned to adapt to the needs of her group in a SI session, and developed comfort in assuming a leadership role. She also learned to “come out of her shell” and
became more confident in communicating, in addition to developing her self-understanding as a teacher. Her cognitive complexity evolved as it relates to group problem solving, and she developed creativity in preparing group activities. Rose acquired knowledge of learning styles, and transferred this knowledge to her life outside of the SI program. Finally, Rose increased her understanding of the diversity of her SI attendees, and came to be more engaged and involved on campus.

**Practical competence.** From being a SI leader, Rose learned to communicate effectively as well as manage her personal affairs. Rose explained, “you get a little better at communicating with other people, more comfortable communicating with other people in different sorts of ways” (93-94). In addition, Rose indicated that her public speaking improved. She said that initially, making promotional announcements to large classes was nerve-wracking for her, but that “now I have no problem making announcements” (31-35). Rose added that she “had always shied away from public speaking” (48-49) but that now she believes that “public speaking is useful to be comfortable with” (241-242). Rose indicated that interacting with other people and expressing herself clearly as a SI leader was initially challenging. “Communicating more clearly, it’s something I’ve improved on” (160-161). Rose also mentioned generally gaining comfort in communicating with her peers during SI sessions.

Rose learned the value in “organizing the [SI] session, realizing that you can’t just go in without a plan. You kind of have to follow a process” (37-38). She further explained that because she “hadn’t had a lot of experience communicating with other people kind of in a professional way, [the SI program] definitely has helped me fine tune my skills communicating” (74-77).
Rose learned about personal organization and scheduling her time. She also learned about living a balanced life: as a SI leader “you get used to the idea that you can balance school and volunteer and healthy life and you can start taking on more, you’re like ‘oh if I can do this [be an SI leader], I can fit in other things’” (436-438).

**Interpersonal competence.** Rose learned to be more interdependent, which according to CAS, involves seeking help from others when needed. Rose learned to “seek out resources when I need help… in first year I wouldn’t really feel comfortable asking for help from people….Now when I need help I go for help, I don’t suffer in silence, I go to the resources” (226-241). Specifically Rose learned to seek help from her professors, a group from whom she was previously uncomfortable seeking help.

Rose said that her collaboration skills have improved, that “definitely working in groups is something that I’ve improved on” (214-216). As a SI leader, she learned to be “accommodating to everyone…you kind of have to tailor how you’re communicating information” (98-102). “In terms of approaching a problem with other people”, her group collaborative problem solving improved: “in working with groups now I have more experience just kind of taking the problem to the group and working it out as a group and making compromises” (207-210).

Rose developed as a leader, becoming “more comfortable taking the lead on projects” and “assuming a leadership role” (94-116).

**Intrapersonal development.** Rose had more self-understanding. “Sometimes I’m not the most clear communicator” (158). Rose also experienced increased self-knowledge in realizing that she wants to be a teacher. “I think I’ve always kind of known it…but then this really confirmed it and really solidified it” (325-384). She was initially intimidated, “but through
this [SI] experience, I’ve learned that I’ve really enjoyed it” (450-454). Rose said that she “used to be really shy when I was younger; I started to kind of come out of my shell a bit more… I think being part of this program [has helped]” (90-92).

**Cognitive complexity.** Rose mentioned that her role as a SI leader helped her learn different ways to solve problems depending on a variety of course disciplines. Rose also spoke of her increased creativity in developing activities for her SI sessions, that she came to “incorporat[e] games into learning…like making learning fun, getting ideas about games” (269-273). She came to a different understanding about preparing handouts for SI sessions: “you don’t have to make like the hundreds of multiple choice questions by yourself….now I just try and focus on making new activities and new games ” (484-493).

**Knowledge acquisition, construction, integration, and application.** Rose acquired knowledge related to learning strategies and learning theory: “you learn other ways of learning, how other people learn best” (136-138). Knowledge of this learning theory discipline helped Rose in an academic course she was later enrolled in. Similarly, being a SI leader had also helped with Rose’s academic knowledge in her area of study. Finally, Rose said that she was able to apply the presentation and lesson planning abilities that she learned as a SI leader towards other aspects of her daily life, including a job outside of the university setting.

**Humanitarianism and Civic Engagement.** “I wouldn’t have known that other people learn to such a different extent had I not been a [SI] leader” (136-139). Rose also described an experience in which she began to appreciate the different learning styles of mature students in her SI sessions:

I’ve had a couple of mature students in my [SI] sessions…just the different ways that they learn, even finding out their background knowledge about the topic…like some of
the theories that came out in the 70’s and hearing their perspectives is really interesting…. (291-310)

Rose pointed out that the SI program was a starting off point that prompted her to become more involved in the campus community: “I realized I wanted to be part of something, something on campus like with the student community, and being involved with this has kind of reinforced I guess a desire to be involved…. ” (407-412).

Michelle

Michelle is a female undergraduate student who has been a peer educator with the SI program at Mid-sized U for two years. She reported learning to feel more natural and confident in her public speaking, in addition to developing personal organization. She learned to work collaboratively with others, adapting to the needs of the group, as well as learning to be a leader among her peers. From involvement in the SI program, she came to realize that she could indeed facilitate the learning of others, and that she was not as shy as she once thought. Michelle engaged in metacognition as her thinking process evolved related to preparing for SI sessions. In these sessions, she came to appreciate the various cultures and ages of her attendees.

Practical competence. As a SI leader, Michelle became a more effective communicator. She spoke of her increased ability and comfort in speaking to larger groups:

[W]hen I started out I was really shy…going up in front of the class to make an announcement to tell people to come to [SI] was just horrible. It was scary for me, but now, I’m totally comfortable with it. I…feel really natural talking in front of the whole class. (42-46)

Michelle’s increased comfort in public speaking applies across a variety of communication contexts: “confidence and ability to speak to other people, that has impacted every part of my
life. It’s just like every day, every interaction, has been impacted by my comfort level interacting with others” (198-200). Michelle commented that her interview for my study would have gone differently had she not learned to communicate effectively through the SI program. She “might have been a lot more nervous, but it’s just totally comfortable because it’s something I face every week…talking to new people I’ve never met before” (202-205).

In addition, Michelle learned about managing her personal affairs and about time management. She said that she is “so productive now” (37) and that learning to make lists contributed to this increased time management. Michelle explained that these personal management skills she learned as a SI leader have applied to other parts of her life: “I feel like every aspect, everything that I’m involved in, I used the [time management] skills” (206-208).

**Interpersonal competence.** Michelle learned about collaboration, which according to CAS includes learning to work cooperatively with others, especially those who are different from oneself. Michelle realized that, as a SI leader, “you have to be adaptive” (240) in a SI session: [W]orking with a wide variety of people, I have to adapt to different learning styles and to different levels of understanding…It was really challenging to tackle problems in a whole bunch of different ways to help everybody. But I think that that is really an area that I’ve improved on. (47-50)

Michelle also developed her leadership skills. She said that she “had come a long way” (126) in her ability to lead large numbers of students through stressful ‘mock-midterm’ SI sessions, noting that now they ran “smoothly” for her. She had learned to manage the conversation dynamics of the group; she allowed the attendees to work with each other but learned to “jump in when there’s something that I feel needs to be said” (137). The SI program
helped her “to become a leader among my own peers…I’m comfortable helping the newer [SI] leaders to bring some more ideas into their sessions” (111-113).

**Intrapersonal development.** Michelle said that, after being a SI leader, she is “more confident” (286) and that this confidence is tied to her improved ability to speak to others. Initially she “wasn’t sure how well I would be able to extend [my academic knowledge] to others” (120-122) but from the SI program, she learned that she is good at facilitating the learning of others. She also noted that she is able to converse with strangers: “I always thought of myself as being very shy… but in this role I realize now that there is a difference between being quieter and being shy…I’m not afraid to talk to new people and to meet new people” (120-128). As a SI leader, Michelle realized that she can allow herself to pause before she speaks: “I’m able to really think things through more before I need to give an answer….I realized that that’s ok and that’s part of the thinking process” (174-178).

**Cognitive complexity.** Michelle learned creativity in the SI leader role, which she described as “bringing in new ideas into every [SI] session” (50-52), and “bring[ing] in all different visuals and physical activities and games” (70-71). Michelle also developed in her “metacognitive” (172) skills as a SI leader. She evolved in her thinking about allowing herself more time to engage in the thinking process, which includes reflecting on her own approach to problem solving, so that she could better communicate her problem solving thinking process to the SI attendees: “In trying to help other people understand difficult concepts, I really have to analyze how I understood that concept, and then bring it up to them, and try to recreate that. So I’ve definitely had to go through exactly how I understand things” (162-180).

**Knowledge acquisition, construction, integration, and application.** Michelle learned about the discipline of learning theory: “I’ve learned that there are very different approaches you
can take towards learning….some people are very visual, some people need to get up and move and act something out” (236-238). Michelle applies her skills learned in SI towards her tutoring role: “I tutor a lot, and [SI] is directly applicable…I’m tutoring [academic course] now and I learned…the areas other people struggle in and what methods help them to understand, so that’s been I think a total direct relationship” (196-199).

**Humanitarianism and civic engagement.** Michelle learned to appreciate and engage people of various cultures and ages in her SI sessions:

[L]ast week I had a mature student attending my [SI] session, and also an international student, and we just had this amazing discussion…about some cultural differences… It was really enlightening because that was something that I would never be exposed to otherwise. So there is this exposure to different cultures and to different people, to people of different ages [whom] I wouldn’t normally interact with and…it doesn’t faze me at all. (220-226)

**Kilgore Trout**

Kilgore Trout (K.T.) is a male undergraduate student who has been a peer educator with the SI program at Mid-sized U for two years. From his time as a SI leader, K.T. learned about effective communication, including active listening. He also developed his time management skills. He learned to better redirect the flow of energy in a session, understanding how his actions and attitude influence the group. He also came to the realization that he in fact has these leadership and facilitation skills. His problem solving ability developed, as he focused more on understanding and supporting how the students approached problem solving. K.T. learned about learning theory, and that people prefer a variety of different approaches to learning. He was able
to transfer the organization, study skills, and mediation skills he learned in SI to other on-campus activities.

**Practical competence.** K.T. learned to communicate effectively. He mentioned developing his “active listening” skills, “making sure every voice is heard” (250-252), and that from the SI program “you learn the power of silence” (104-108) in communicating and listening to a group.

K.T. “learned a little more just in terms of time management” (68). He explained that, from the SI program, he had improved his ability “to look ahead and plan ahead, and understand what you’re getting yourself into” (96-97).

**Interpersonal competence.** K.T. developed his collaboration skills, which according to CAS, include working cooperatively with others, seeking involvement from others, and listening to the points of view of others. K.T. noted that

[T]he [SI program] has been a great way for me to mediate situations, and so I learned how to get people to create novel situations, novel solutions or just work through problems, without [my] actually directly contributing anything in terms of material, but just kind of being the guy who redirects and makes sure every voice is heard. (200-204)

K.T. has “been learning to read people’s body language” (260) such as understanding “when they have something to say, when they’re really shy and away from it” (260-261). K.T. said that “just learning how to better read people…learning how to flesh out everything that everyone has to offer and creating a really nice working environment” (271-275).

In developing his leadership skills, K.T. learned to recognize and interact in a variety of different groups: “it’s learning how to interact with different people…with [SI supervisors] that’s a different dynamic than let’s say if I was working with my other peer leaders or just with peers
in my session” (111-113). K.T. also learned to “redirect energy” (181) in a group, and that his entrance into the SI session can influence and guide the group:

[T]he way that I walk into the room and the first couple things I say in any encounter in communication can have an effect on the rest of your time in a situation….learning the value in picking your words, and picking the demeanour in which you convey that message. (168-178)

K.T. also “learned how big an effect my attitude can have on other people”, and that “people are really reflective in how they behave, kind of like monkey see monkey do” (360-362).

**Intrapersonal development.** K.T. came to realize all the different interpersonal skills that he possessed, such as his ability to affect others through his arrival and his attitude, as well as his ability to mediate a group. Referring to these leadership and group facilitation skills, K.T. explained that, “the [SI] program has been an excellent way for me to flesh out those skills and really recognize that I have those skills” (282-283).

**Cognitive complexity.** K.T. explained that the SI program “helped my skills in developing problems”. K.T. would initially “grab from the bank of old books” when making weekly SI handouts, whereas now he often creates “novel problems” (70-72). K.T. commented that he is increasingly trying to understand the challenges that his attendees face in problem solving, that “you see people coming into roadblocks and you start to understand the patterns of those roadblocks, is it just a matter of them not doing the reading or is how they’ve been studying, their level of review, the way they look at the material” (81-84).

He also talked of learning to take a holistic approach to problem solving in his SI sessions and not take over. Instead, K.T. learned to think more about how to help the students answer the questions in SI sessions:
I’m learning to be kind of like an outsider, looking at it from somewhat of an objective standpoint, and being like ‘this is the frame we have to build, upon which our answers will come’. And so kind of breaking it down into segments, and learning how to kind of deconstruct problems, by not just rushing in head first into a problem, and learning to kind of take a step back and break down the problem. (225-231)

**Knowledge acquisition, construction, integration, and application.** K.T. learned about the discipline of learning theory: “…more about how people learn…and what are effective ways of getting people to learn and to study” (73-74). K.T. explained that he has transferred the organizational and study habits he learned as an SI leader to his own life:

[I]n my personal life and my personal studying, I’m much better at organizing groups, and even looking at the way that I study…practice what you preach, so I see someone and from that objective standpoint I go “well no you can’t be just studying like that” and then I look at what I’m doing and I’m like “no you just can’t be studying like that”. (238-243)

He also explained that the leadership and mediation skills he has learned in SI sessions have applied to other extra-curricular settings, such as his involvement chairing an on-campus group.

**Humanitarianism and Civic Engagement.** K.T. learned to understand and appreciate the differences in learning styles: “plain and simple people have different learning styles they prefer…you recognize that people do have their own way in a lot of aspects” (316-320).

**Laura**

Laura is a female undergraduate student who has been a SI leader for four semesters over two years. As a SI leader, Laura has become more comfortable and personable in communicating with others. She learned to navigate her leadership role within a group dynamic as well as
developed comfort with herself and confidence in relation to others. She became more efficient and she evolved in her thinking about developing SI handouts. Finally, Laura developed empathy and understanding for people of different academic abilities, and learned to value the desire to be involved.

**Practical competence.** Laura indicated that, from the SI program, she has “become more comfortable talking to other people, holding conversations” (133-134). She has also learned to communicate in more of a personable and fun way with the attendees at her SI sessions: “in terms of interacting with people…at first I think I was a lot more reserved, just kind of like professional, be like ‘alright, I’m [name], I’m your [SI] leader, here’s a handout, go’, where now I try and be more personable” (229-234).

**Interpersonal competence.** Laura developed her leadership abilities, specifically in guiding a group during a SI session and understanding the dynamics of a group. First, she explained that she learned to navigate the role of ‘expert’ in a SI session:

> I’ve never been an expert before, in anything. I’m definitely not, an expert in [SI course topics] but sometimes students come in and kind of want, ‘you’re the expert in this’, and so just kind of being forward with what I do know, like admit ‘this is what I know, this is what I don’t know’. (86-91)

Laura also learned to manage and facilitate the flow of activity in a group setting by “taking a step back” in her SI sessions:

> [I]f nobody was talking in session…I’d want to be saying “ok now we’re moving on” whereas now I’m sort of like “well if they need two extra minutes to figure out what they’re doing, that’s fine”….Just sort of realizing it’s ok that I don’t always have total
control over every conversation that’s going on, every exercise that they’re working on.

(43-51)

**Intrapersonal development.** Laura developed self-understanding in “figure[ing] out my style of running sessions” (160-161) as well as having a better understanding of her own comfort level: “I think I’ve learned my comfort level, my comfort zone…I like knowing things, I don’t like being the one who doesn’t know something in the group” (153-154). Laura explained that she “definitely [has] more confidence” (278) and that, the SI program for her “naturally gives confidence and a sense of belonging” (278-283).

Laura explained that she has come to appreciate that she is different from others and that “it’s ok to be different than other people” (353-354). She further explained how being more comfortable with herself has extended to various parts of her life: “to be more comfortable with myself…I have more comfort with just being sort of ok with who I am, and what my interests are, and what my style is, and just kind of work with that instead of kind of conform” (389-391). Similarly, Laura is now “more comfortable with knowing what I know, not knowing what I know, and letting people know that” (97-104). She is more comfortable admitting “I don’t know” in a SI session, but also asserts herself when she believes she is correct: “I’m ok saying ‘nope, you guys are probably all wrong’, which I think [before] I’d probably be like ‘oh, well then that must be the right answer, like I probably just made a mistake’” (117-120).

**Cognitive complexity.** Laura’s approach to collecting information and preparing for a SI session changed:

I definitely learned to look at the class material differently…The way I grasp information, like what the key information is, what will most likely be a question [on the exam], because I’m going to have to give [the SI student attendees] practice questions. So I’ve
kind of looked at taking notes differently, and guessing what’s going to be on the exam.

(67-74)

Laura said that her mental reasoning has become more efficient. In identifying the critical aspects of the lesson that should be addressed in the SI handout, she has “become faster at pulling out key information and sort of summarizing” (79-84). Finally, she described how her thinking process has evolved regarding the information that needs to be put into the course SI handouts:

[A]nybody can just read off definitions out of the notes, [but] that’s not really beneficial to go over in session…so I try and look more at, like how can they apply that…. I’ve kind of changed on thinking like “what will trip people up”, or “what will they not understand”. (219-225)

**Humanitarianism and civic engagement.** As a SI leader, Laura became more open-minded and developed an appreciation for academic differences:

[S]tudents who aren’t good students….some things just don’t click for them so they have to work a lot harder, but they just generally don’t get the grades they want, or that I would want…but just realizing that not everyone does well at school. (315-324)

Laura explained that, as a SI leader, she has developed an “understanding [of] different backgrounds and different blocks that act against success” (340-342):

[I]t’s kind of showed me a different way that you know, other people do try and they don’t get good marks, people have other blocks in their road…. so just a little more empathy on my end has come out for people who don’t do well in school, and realizing it’s not always their fault. (328-336)
Finally, from the SI program, Laura has come to value involvement in a community. In first year university, she was not involved in school, but later learned that “it’s ok to get involved and get excited about being involved” (378-380).

**Karin**

Karin is a female undergraduate student who has been a SI leader for six semesters over three years. As a SI leader, Karin developed confidence in general communication. She also learned to express herself and her ideas, a skill that she later used while interacting with her professors outside of the SI program. She developed time management skills and learned to be more assertive in a group, which she also applied to her life outside of the SI program. Karin learned to present herself differently to her peers based on the needs of the situation, and came to consider other people’s viewpoints more. She became more skilled at organizing and leading a SI session. She developed confidence and acceptance in herself, and realized her potential, that if she can be a SI leader, she can do other things as well. Karin was better able to judge which course content her SI attendees would likely have difficulty with. In SI sessions, she was exposed to a variety of different people. Finally, from the SI program, Karin discovered her desire to be involved and to help others.

**Practical competence.** Karin learned to communicate more effectively. She “built a lot of confidence” in communication in general, but also specifically learned “how you express yourself…like expressing your ideas” (117-130). She explained how she initially did not feel she expressed herself clearly, but eventually came to express her ideas better: “when I started being a [SI] leader, I found it hard to express a lot of what I was thinking…but I have learned to kind of express myself more, like feelings, thoughts, ideas” (146-148). Karin developed in her time management skills, including being “able to say ‘no’ to some other commitments…you have to
be turning down other commitments, because you already, you made a commitment to doing [SI]” (46-50).

**Interpersonal competence.** Karin’s collaboration skills developed. She learned “how to present myself in front of my peers” (50), and that she “tints” or “orients” (60) herself differently, depending on the needs of the SI group. She summarized her interpersonal development: “as you interact with them you pick up things…you learn how to adjust to being more of what they need from you… so I think it’s just learning how to pick up cues from people” (70-75).

Karin came to “consider other people’s viewpoints more” (224) since becoming a SI leader:

[E]ven though I always thought I was pretty open minded about things…I realize that I was unconsciously being very biased about certain things…I turn my mind to be more thinking “ok, so what’s their kind of point of view, why would they have said that” and from their point of view, like what makes what they said legitimate or right in those ways. (224-232)

Karin developed as a leader, including learning to “run things, being able to organize an entire presentation or an entire session for something” (78). She further explained that she developed her ability to guide a group: she was initially intimidated about having to run a session, wondering “‘what am I going to do, how am I going to fill these hours, and how am I going to deal with students not understanding things, will I be able to get them where we want them to be’” (78-82). However, now Karin has “a really good sense of how long things should be, so now when I run my sessions…we always leave some flexibility but most of the time, we’re right at the end [of scheduled time]” (82-98).
**Intrapersonal development.** Karin came to develop more confidence in herself: “I think being a [SI] leader built a lot of confidence…I’ve got more confident in myself…so it’s kind of like learning to accept yourself” (111-115). Karin clarified that

[N]ow I’m a lot more comfortable with who I am, I have a lot more confidence in the type of person I am, and I’m more aware of who I am, as well, like what kind of things I’m prone to doing…even things that I like or things that I’d be willing to sacrifice to do other things, and what kind of values sometimes that are more important to me than others. (269-276)

Karin came to understand that she does not always have a ‘check’ on what she says, that often she “say[s] things without meaning to, or it doesn’t come out exactly the right way” (162). Karin noted this is something she found out about herself, but that this is something she has been working on as a SI leader. Karin also noted developing what she calls “potential”:

[J]ust the feeling that I can do more things than I’m limiting myself to doing now, like not being afraid to join more, like reaching out, like go search for opportunity rather than waiting for it to come to me… doing [SI] kind of made me feel more like “ok, I can do these things, I can go out and find opportunities and go volunteer”. (197-206)

**Cognitive complexity.** Karin learned to better judge situations that arose for her as a SI leader: “judgment, learning how to judge, where people are… I’ve seen a lot of different profs go through the material and depending on how fast they go, I can judge now how confused the students might be about a certain topic, or a certain concept” (100-103).

**Knowledge acquisition, construction, integration, and application.** Karin indicated that her new-found ability to express herself more clearly transferred to her life outside of the SI program: “with my other friends…I find that like now I can say more of what I wanted to say,
whereas before I might have been like ‘ok you guys you want to do that, sure why not’” (148-152). Karin’s ability to express herself clearly and communicate effectively transferred over to her communication with her professors as well:

> [W]hen I volunteer with my prof, it’s easier to communicate my ideas now, where before I was a little too timid…and now I’m like more open about like “ok, I don’t understand this, could you explain that again”, or, “I’d really like to take you up on this opportunity, is there any way you can give that to me”. (257-266)

**Humanitarianism and civic engagement.** The SI program allowed Karin to be exposed to the a variety of human differences: “it really opens your eyes to the different kinds of people there are, and learning to kind of interact with them and like accept people, it’s been an eye-opener” (147-154). Karin described her new understanding of the diversity of life paths of the people who attend her SI sessions: “I think everybody kind of has this baseline that they default to that “everybody is like me”…we just kind of assume that everybody entered [university] at the same time, but people come in from all different years and so many different experiences…this has really kind of opened my eyes” (292-307).

As a SI leader, Karin discovered her desire to help others: “every time I [help people] I think ‘ok, I really want to help people more’ because it’s really great to be able to like make an impact on someone else” (311-314). Karin also acknowledged, “as for being in a community, I think it’s just a great feeling to be part of something” (318-319).

**Summary**

Based on their interview transcripts, five of the whom SI leaders I interviewed experienced learning in at least nine of the 12 learning outcome domains specified in my coding matrix, while one SI leader experienced learning in only six of the 12 identified dimensions. I
categorized participants’ responses about the learning they had experienced according to the 12 dimensions of learning outcomes within the coding matrix discussed in Chapter 3. The following in Table 4 is a summary of what participants learned, according to my analysis of their interview transcript. It is quite probable that the participant cases learned more from their participation as SI leaders than what they revealed in their interviews, as a result of inadequate probing or a lack of specific questions on my part or a lack of willingness to reveal more on the participants’ part. Thus, my findings are undoubtedly not an exhaustive account of what participant cases learned, but rather a reporting of what SI leaders shared in their one interview.
Table 4

*What Peer Educator Cases Learned From Their Role As SI Leaders*

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Dimension of Learning Outcome</th>
<th>Charlotte</th>
<th>Rose</th>
<th>Michelle</th>
<th>K.T.</th>
<th>Laura</th>
<th>Karin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practical competence</td>
<td>Communicating effectively</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td></td>
<td>Managing personal affairs</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Interpersonal competence</td>
<td>Interdependence</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Collaboration</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td></td>
<td>Effective leadership</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Intrapersonal development</td>
<td>Realistic self-appraisal, self-understanding, and self-respect</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Cognitive complexity</td>
<td>General cognitive complexity</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td></td>
<td>Creativity</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge acquisition, construction, integration, application</td>
<td>Understanding knowledge from range of disciplines</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Relating knowledge to daily life</td>
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<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Humanitarianism and civic engagement</td>
<td>Understanding and appreciation of cultural and human differences</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td></td>
<td>Social responsibility</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>
Section II: Cross-Case Analysis of What Peer Educators Learned

The following is a comparison of what the collective peer educators I interviewed said they learned as SI leaders. Commonalities across peer educator cases within each of the six CAS learning outcomes, which were previously summarized in Table 4, are described in detail below.

Practical Competence

All five female SI leaders said they developed comfort and confidence in their general communication. Three SI leaders (Charlotte, Rose, Michelle) described instances in which they developed their communication, either related to their leading SI sessions or related to making large in-class announcements. They described themselves as being initially shy, scared, quiet, and going beet-red during sessions or in-class announcement, describing the experience as nerve-wracking, scary, and horrible. After some time however, all three SI leaders reported increased confidence and feeling comfortable and natural in their SI sessions and/or in-class announcements. One SI leader whose path of learning to communicate differed from this pattern was Laura. She expressed that, initially in a group her communication was reserved and professional, whereas later it became more fun and personable.

Overall the six SI leaders reported increased comfort and confidence in communication on a smaller scale, such as handling themselves in groups and interacting with peers in a SI session, as well as communication on a larger scale, such as being able to make promotional announcement to hundreds of students. From the SI program, three SI leaders (Karin, Charlotte, Rose) mentioned learning to speak, communicate, or express themselves and their ideas more clearly, including learning to allow them time to think before they speak. Four SI leaders (Charlotte, Rose, Michelle, and Laura) said they were more comfortable meeting and interacting with people whom they had not ever met. However, one SI leader, Laura, expressed doubt that
she could carry this comfort in talking with strangers beyond the SI setting. K.T. was the only SI leader to mention developing his active listening skills. Although other SI leaders mentioned listening and responding to their student attendees during SI sessions, only K.T. explicitly talked about learning the power of silence and making sure that all voices were heard in the SI session.

Five SI leaders (all but Laura) made reference to learning about time management in their SI leader role, although the specific type of time management learning varied—generally managing time effectively (Charlotte); leading a balanced life (Rose); being more productive, including making lists (Michelle); looking ahead and planning ahead (K.T.); and learning to say ‘no’ to other commitments because of commitment to SI (Karin).

**Interpersonal Competence**

Only one of the SI leaders’ comments was linked to the dimension of interdependence: Rose mentioned feeling more comfortable seeking out help from others when needed, and she spoke of seeking resources on campus for herself, specifically asking her professors for help. Four SI leaders (K.T., Rose, Michelle, and Karin) reported developed their collaborative skills. Three of these cases mentioned adapting to the group they were in; they used words such as accommodate, tailor, tint, orient, present self, adapt, adjust to describe their interactions. They talked about adapting in communicating information to attendees, according to what attendees need, and based on attendees different learning styles and levels of understanding. K.T. described his increased collaborative skills by indicating that he learned to mediate the events of the group. Two SI leaders (K.T. and Karin) mentioned learning to read people, including reading body language and reading cues from people. Other things that individual cases reported learning relating to collaboration is group problem solving (Rose) and learning to consider other people’s points of view more explicitly (Karin).
Regarding developing as leaders, all six SI leaders generally learned to manage the flow of their SI session and to guide a group through a session. However, the specific skills they reported learning in this area varied. The skills which the SI leaders reported learning that relate to leading a group including breaking the ice, managing the flow of conversation and energy within the group, understanding of how one’s own actions influence the group, learning to step back from a defined plan, and managing the time of the group through the various activities. Two SI leaders (Charlotte and Michelle) mentioned learning to be a leader among their peers, in one instance organizing a social event for fellow SI leaders. Finally, three SI leaders (Charlotte, Rose, and Laura) said they learned to navigate or assume a leadership role, amongst their peers but also as SI leaders among attendees. Two said they learned to ‘take the next step’, take responsibility and be comfortable assuming the leadership role. One SI leader talked about learning to navigate the role of supposed ‘expert’ in a SI session.

**Intrapersonal Development**

Five out of six SI leaders consisting of all five of the female SI leaders interviewed, mentioned developing their increased confidence. Two leaders (Karin and Laura) mentioned not only developing confidence but specifically developing confidence in self, which they described as learning to be comfortable with oneself and learning to accept oneself. Two SI leaders (Charlotte and Rose) described ‘coming out of their shell’ in their SI leader role. Two leaders (Charlotte and Michelle) indicated that they realized that they are in fact not as shy as they once thought themselves to be. Two leaders (Karin and Charlotte) expressed confidence in the form of realizing that ‘I can do this’, referring to the SI leader role. Two leaders (Charlotte and Laura) mentioned that in the SI leader role they learned that it is okay to make mistakes and to admit that the leader does not know something.
All six SI leaders described experiencing some form of increased self-understanding, but the content of these self-realizations varied. They include an awareness of personal leadership style, future career aspirations, one’s own abilities and style in facilitation and communication, and one’s own comfort zone.

**Cognitive Complexity**

Three of the six SI leaders said that they developed and exercised their creative skills as SI leaders. One leader (Charlotte) mentioned that she came to use more creativity in her in-class promotional announcements; two other SI leaders (Rose and Michelle) mentioned bringing in new and fun games and activities into the SI sessions. Although other SI leaders interviewed mentioned using creative activities and games in their SI sessions, only three SI leaders indicated explicitly that this was something they learned or developed from their SI leader role.

Three SI leaders explicitly mentioned evolving in the way they thought about preparing their SI handouts. They all described an earlier reliance on using questions from previous SI handouts, and focusing on multiple choice questions or definitions. For all three SI leaders, this gave way to more sophisticated and complex thinking, including thinking about how to apply questions and stimulating more questions and discussion in SI sessions. Two SI leaders (Charlotte and Michelle) noted reflecting on their own approach to solving problems in order to better help SI attendees. Individual cases also mentioned thinking about how to communicate their own thinking about problem solving to students, figuring out how to help students solve problems, and thinking about how to facilitate the students going through the different activities.

Additionally, two SI leaders (Karin and Laura) noted that they became better at collecting information from SI course lectures and processing this information onto their SI session
handout. They were able to better identify key information and with which concepts the students were likely to have difficulty.

**Knowledge Acquisition, Construction, Integration, and Application**

Three SI leaders mentioned acquiring knowledge related to the discipline of learning theory, including knowledge of how people learn and that different people have different learning preferences. The leaders made reference to the use of visuals, kinaesthetic activities, and mnemonic devices.

Regarding transferring skills learned as a SI leader to their daily lives, four SI leaders (Charlotte, Rose, Michelle, and K.T.) mentioned using the group facilitation and leadership skills that they learned as SI leaders in other extra-curricular activities in which they were involved or other jobs they held. Two SI leaders reported transferring knowledge to their academic lives: one leader transferred the study habits learned in SI towards his own studying, and her knowledge of the learning discipline theory helped another SI leader in one of her academic courses.

**Humanitarianism and Civic Engagement**

All six SI leaders described having an experience during a SI session that they lead increased their understanding and appreciation of cultural and human differences. Several SI leaders described their experiences as “eye-opening” and “enlightening”, and mentioned that they were “exposed to things” as SI leaders. All of these experiences occurred while leading a SI session; however, the human differences that the SI leaders came to understand were different. SI leaders reported learning about people of different ages, including mature students; people with different learning preferences and academic abilities; international students and students of a variety of cultures; and first-year students who had taken time off before starting their undergraduate degree.
Four out of six SI leaders mentioned learning about involvement and engagement from their SI leader role. Two leaders (Charlotte and Karin) reported feeling engaged and involved on campus, and feeling part of a community. For two SI leaders (Karin and Rose), the SI leader role helped them realize their desire to be involved and to help others. In addition, Laura specifically mentioned learning that it is ok to be involved and to want to be involved in things. Rose noted that the SI program was a great starting-off point; she was prompted to become more involved in other extra-curricular activities.

**Summary of Chapter**

Overall there are some commonalities regarding *what* peer educators in the SI program at Mid-sized U reported learning. Based on my analysis of their interview transcripts and summarized in Table 4, all six SI leaders whom I interviewed experienced learning in the learning outcome dimensions of communicating effectively; effective leadership; realistic self-appraisal, self-understanding, and self-respect; general cognitive complexity; and understanding and appreciation of cultural and human differences. However, only one SI leader, Rose, experienced learning related to the interpersonal competence dimension on interdependence, while only three SI leaders expressed learning related to each of the learning outcomes dimension of creativity, and understanding knowledge from range of disciplines. In the next chapter, Chapter 5, I present my findings regarding *how* this group of peer educator participants learned from their role as SI leaders.
CHAPTER 5 – FINDINGS: HOW PEER EDUCATORS LEARNED

In this chapter, I present my findings regarding how these peer educators learned from their role as SI leaders. I have divided this chapter into two sections. Section I contains a within-case analysis of how peer educators learned from their SI leader role. In Section II, I provide a cross-case analysis, and identify patterns and themes across peer educator cases of how peer educator cases learned from their SI leader role.

Section I: Within-Case Analysis of How Peer Educators Learned

Here I present the data revealing how individual peer educator participants said they learned. Participants shared how they learned in the peer educator role after being prompted in the interview. No coding framework was used to analyze this data; instead, the findings emerged from the data using the qualitative data analysis techniques described in Chapter 3.

Charlotte

Through the experience of performing SI duties such as in-class promotional announcements, Charlotte improved her ability in these tasks. Charlotte learned from observing a senior SI leader’s SI session, and from interacting with a variety of people in her own SI sessions. Both formal and self-initiated informal reflection allowed Charlotte to learn as a SI leader. Charlotte also credited some of the training she received as a SI leader as contributing to her learning. However, Charlotte did explain that some of the learning she experienced as a SI leader, specifically her ‘coming out of her shell’, was at least partly attributable to her own personal motivation, rather aspects of being a SI leader.

Charlotte explained, “it’s just gaining the experience…it’s experience most of the time” (53-70) that allowed her to learn in her SI leader role. For example, the first time Charlotte made
an in-class announcement for the SI program, she was nervous, but “then the 2nd time I was like ‘oh, I’ve done this before’ like it’s not bad” (332). Furthermore, she explained that it was “trial and error” (274) that helped her in developing her SI handouts, and that regarding learning how to organize and lead people, “that just came from actually doing it” (189).

Many of the communication and leadership skills that Charlotte learned arose from “see[ing] other [SI] leaders and how they do things” (238-239). Regarding learning to better lead her group through a mock-midterm SI session, Charlotte “attended someone else’s mock midterm and...saw how they did it and...took some of their methods” (71-72). In addition to attending the session of another SI leader, Charlotte learned from having “an older [SI] leader came in” (89) to her session and helped her with it. Charlotte learned a lot from “older [SI] leaders...they can share some of their ideas” (88-90). Charlotte shared one example in which she had heard of other SI leaders doing fun and creative things for their in-class promotional announcements, and that once she heard that other leaders had done this, she decided to do it as well.

Charlotte learned about the variety of people at her university through interacting with people who are different from her during her SI sessions: “I thought university was for young people, and then I kind of opened my eyes and [realized] university is for everyone...[in SI] you get to interact with people of various age groups and coming from like different things” (352-354).

Charlotte engaged in a variety of reflective activities as a SI leader. After leading a mock-midterm session, Charlotte “looked back on it and [asked] ‘how could I improve that’” (70-71). She also reflected on her ability related to a specific skill: “I knew that in the sessions I needed to sometimes slow down talking...so I’ve been really, just the past year really reflecting on how I
talk and communicate” (104-106). She said that she also reflected at the end of the year on her entire SI experience.

To explain her learning, Charlotte also mentioned the formal reflection that forms part of the SI program: with the supervisors of the SI program, “we have just like 10 minutes of ‘how’s the [SI] program fitting for you’” (202). Charlotte explained that “sometimes we have to write…reflections or how sessions went or…your role in it, how you personally feel about stuff…sit and think like ‘what are you doing’ or ‘how are you making an impact on others’, and how is that influencing or affecting your life personally” (423-426).

Charlotte recognizes the value of this reflection in the SI program, and indicates that she has adopted this reflective practice: “it’s helpful because I believe people don’t look at themselves a lot at times…you go through life and then you don’t really think, you think of situations or how you can make them better, but why did you do that situation, or like now I consider like ‘am I a shy person?’” (428-430). Charlotte included goal setting in her discussion of the reflective aspects of the SI program that contributed to her learning:

[T]he [SI] program was a lot of self-reflection…at the beginning of the semester we always have to set goals, and they can be like [SI] goals like “I hope to run a good [SI] session” or “use more games” but often times they can be personal too, like “I hope to complete all my assignments on time” or like “I hope to be able to [meet personal goal].” (408-411)

Charlotte explained that she learned to organize a social event for her fellow SI leaders, and “that was one of my goals…to host an [SI] party” (154-156).

Some of Charlotte’s learning came from realizations and affirmations of her own ability. Regarding different experiences as a SI leader, Charlotte made such statements as “I know that
I’m doing a good thing and that I can do this role” (358) and “‘oh, I’ve done this before’…it’s not bad” (332).

Charlotte explained that the formal training she received as part of the SI program helped her learn to effectively lead her SI sessions: “we discuss it [how to lead sessions] very briefly at the beginning of the semester, and then we have meetings every other week and in one of those we’ll talk about it, during the meetings, and like how you like prepare for it” (85-86).

Although Charlotte indicated numerous ways that she learned as a SI leader, some of the learning that she experienced Charlotte does not necessarily credit to an event or person in the SI program. She explained that sometimes learning arose from within her, from “challenging myself to get out of my box” (341). She further explained, “[C]oming out of my shell…it’s more a personal thing, there wasn’t like an event or someone who broke me out of my shell, it was always pushing myself…like I want to get myself outside of my comfort zone and try things…it made me kind of take the plunge” (213-217).

Rose

Rose spoke often of the automatic nature of the SI program and how she was put into situations as a SI leader that required her to learn certain things. Experience in the program over time helped Rose learn a variety of things, but most significantly it confirmed her desire to pursue a career as a teacher. Rose credited a large portion of her learning as a SI leader to interactions with other SI leaders, regarding both SI-related and non-SI topics. She described the workroom as a common site of this type of learning for her. Finally Rose mentioned SI team training and meetings as helping her learn.

Rose mentioned that one thing that helped her learn in the SI leader role was “realizing ‘oh, it’s not that bad’” (456) and realizing “‘oh if I can do this, I can fit in other things’” (438).
Rose explained that “through being in the [SI] program and being put into these different
situations” (97), a lot of learning occurs. For example, Rose was “thrown into” (33) a large
lecture hall to make a promotional announcement for SI. On six different occasions during her
interview Rose made reference to being ‘put into situations’ as a SI leader and explained that this
contributed to a variety of learning outcomes related to developing communication, leadership,
and knowledge of different disciplines.

Rose also talked about the requirements of the SI leader position contributing to her
learning. Regarding learning to better communicate to large groups, Rose explained that “it was
a requirement for being a [SI] leader, so you’re kind of forced to become comfortable with things
like that pretty quickly” (47-48). Regarding other communication and leadership abilities, Rose
used the following language to describe experience she attributes as the source of her learning:
“[it] comes with the job” (61); “being part of this program where you’re constantly required” to
develop these skills; and “through the program you’re automatically put into” (113-114) different
roles.

Rose said that she believed that “experience in the program, over time” (79) contributed
to her developing her communication skills, and she feels more comfortable communicating
because of “exposure and experience” (121). Rose described an example of the way in which she
learned to communicate through experience in the SI program:

[S]peaking to groups of people, when you don’t have a lot of experience doing something
it kind of goes unnoticed…that you’re not saying things in the clearest way that you
possibly could…[but] being put in front of a group of people and trying to explain a
concept and then you’re like ‘oh no’ like, ‘are people understanding what I’m saying’.
So then just kind of going back and trying to rework the ways I’m communicating different types of information. (185-190)

It was experience in the SI program that made Rose realize that she wanted to pursue a career as a teacher. Although she always knew she wanted to be a teacher, learning about her own abilities and experiencing different things as a SI leader “confirmed” and “solidified” (382) that for her.

Rose credited much of her learning to the people she worked with in the SI program: “I’ve really enjoyed working with all the other leaders, and I’ve learned almost as much from them as I have [in other parts of the SI program]” (391).

Rose learned much from her fellow SI leaders regarding learning to lead a SI session and different activities to use in a session: “you get to learn from each other and when everyone is doing such cool things [in their SI session] you kind of bring their ideas and kind of incorporate them into your [SI] session” (468-469). Rose also noted, “everyone makes games [for their SI sessions] and everyone talks about the games they made” (283).

In addition to learning about SI-specific content, Rose learned about other topics from her fellow SI leaders, such as tips for her own academics, future career tips, applying to graduate school, and help with professors. Rose learned from “hearing about it from other leaders” (244) and “hearing about other leaders having experiences” (247). This learning arose because “all these other people who are so knowledgeable about different areas, they…helped me go through my university career” (395).

Another type of learning that Rose acquired from her fellow SI leaders related to her wanting to be more involved on campus:

[E]veryone else you work with is so involved in so many different initiatives that you hear about different things then you want to be a part of them and it’s really helped I
guess augment all my volunteer experience at university like, hearing about other people being involved in other things…I wouldn’t have known about it if [I wasn’t in SI]. (412-420)

Rose learned from the diversity of people she met as a SI leader, amongst both her fellow SI leaders and the students in her SI sessions. As a SI leader “interacting with people from different disciplines as a [SI] leader team” (221), Rose learned “how to approach different course material” (223). Due to the academic diversity of the SI leaders, Rose was able to “go to the members of my team as a resource” (224). Due to the diverse make-up of students who attended SI sessions, Rose interacted with mature students as well as international exchange students. She said, “it’s interesting just the entire range of people you come into contact with” (310).

The ‘workroom’ is a specific space within the SI program offices that Rose explained facilitated her ability to learn from others. Rose spoke of a variety of formal and informal mechanisms in the workroom that allowed her to learn from her fellow SI leaders. Rose described the informal information-sharing that happened in the workroom: “in our workspace…during breaks in classes everyone usually goes there and we do our own personal work, or work on our [SI] handouts and then you can kind of talk to other people about what they’re doing in their [SI] session, and they ‘oh they’re applying to grad school, oh, like what’s grad school how do you get in’” (253-256).

Regarding the workroom, Rose said “it’s good that way, in terms of transferring resources between us [SI leaders]” (470). Rose also mentioned big clear bins “full of like games and stuff, and when you make a game you put them in the…discipline related bin and then other leaders can go through them and be like ‘oh, someone made Wheel of Fortune, oh I can play this in my session’” (470-472). Rose also talked about a shared drive or “S drive”, a “common hard
drive” (477) located on the computers in the SI workroom, onto which leaders save their own handouts and can search for older SI handouts created by other SI leaders. Finally, a binder ring with cue cards “colour coded depending on what kind of activity is it…that is there for us to refer to” (275-277) helps with preparing activities for sessions.

During one SI leader training session, Rose was paired up with another SI leader to design and perform a practice in-class promotional announcement. This training helped her learn to present to a large group, and “makes it a little better for when you actually have to do [the in-class announcement]” (52).

Rose also referenced team meetings and goal-setting activities as contributing to her learning, although she did not go into detail. Regarding learning about the discipline of learning theory, Rose explained that “we cover that in training and we cover that on an ongoing basis in our team meetings” (142-143). Rose also mentioned that it was the team building exercises that occurred during SI leader training that helped her improve her ability to work in a group.

**Michelle**

Michelle learned from interacting with a diverse student population in her SI sessions. Michelle developed a variety of SI-related skills from experience and practice. She learned through goal setting and also from her fellow SI leaders. The requirements of the SI leader role helped Michelle develop her time management skills, although this was something that she acknowledged she learned partly on her own.

It was exposure to and discussion with students of different cultural backgrounds and different ages during a SI session that helped Michelle develop an understanding of different populations. She described “an amazing discussion” (220) she had with a mature student and an international student during a SI session: “it was enlightening because that was something that I
would never be exposed to otherwise….exposure to different cultures and…to people of different ages that I wouldn’t normally interact with” (224-226).

When Michelle explained how she developed her “metacognitive” (166) skills, including thinking differently about developing SI handouts and leading her attendees through the session, she said that experience ‘in practice’ is a large part of this learning: “when we are in practice when we are coming up with our handouts, or when we’re in session, you really…have to think about how you think and how you come to those ideas” (225-227). Indeed, learning “in session” (180) was mentioned often by Michelle, commenting that SI sessions helped her become a skilled facilitator.

It was experience and practice in making promotional announcements repeatedly that helped Michelle become comfortable in this type of communication: “you have to make the announcements…and my first time I wasn’t very good, but as I practiced, like I’ve done it semester to semester, it’s been something that I’ve become more comfortable with” (70-72).

Michelle attributed the activity of goal setting as helping her manage her personal affairs and time management:

[A]t the beginning of every semester we set goals for ourselves…one of the sections that we have to make goals for was managing yourself. So that made me start to think about how am I going to get through this semester with this big commitment and once I started to create my own goals, I would really incorporate that into my day-to-day life. (59-65)

Regarding her SI sessions, Michelle learned a lot through hearing the experiences of other SI leaders:

[I]n terms of sessions you hear about all these amazing creative ideas that people have come up with in the past and have really worked in their sessions…people say ‘I just had
the best experience this worked so well’ and then you can take that idea and put it
towards your own sessions. And if it works for you, then again you come back and say
‘this was a great idea’. (267-270)

Michelle also learned about topics unrelated to the SI program from her fellow SI leaders,
including hearing about their experiences with academics and developing one’s research
competence.

Michelle indicated that in teaching her SI student attendees, she herself learned. Michelle
became aware of and developed her cognitive complexity in guiding SI attendees through SI
sessions because “in trying to help other people understand difficult concepts, I really have to
analyze how I understood that concept, and then bring it up to them, and try to recreate that. So
I’ve definitely had to go through exactly how I understand things” (178-180).

Related to the theme of learning from other SI leaders, Michelle explained that “more
formalized sharing” (272) occurs during SI leader training: “we have training every other week
for an hour, and usually part of that hour is somehow spent discussing really good things that
have gone on in our own sessions, so we hear about the great ideas that other people have” (85-
88). Training also helped Michelle learn about managing her personal affairs and time
management, as well as learning to be more creative and bring fun games into the SI session.

In contrast to the learning that arises from ‘more formalized sharing’ that occurs between
SI leaders during SI leader training, “it also happens naturally in the workroom…we’re always
together and if you have a really good session you come in and you say ‘I just had this great
session, and we played this awesome game, and it worked really well’ and that kind of inspires
the other people” (88-90). Michelle explained that this type of interaction is commonplace in the
SI leader workroom: “the fact that we have shared space means that there’s just a really natural interaction between all of us” (260-261).

Michelle noted that one aspect that allowed her to learn in the SI leader role is the attitude that the SI supervisors held toward the SI student leaders: “I think their attitude towards us and the fact that they give us so much responsibility and freedom, that is kind of the aspect that makes me feel…responsible for my own work” (107).

Michelle indicated, through the language she used, that a lot of learning arose from the general nature of the SI program. For example, it was “a natural skill that just kind of came out from the program…I think more of a natural development from the nature of the program” (69-73) that required her to continually make promotional announcements semester after semester. Michelle also said that, as a SI leader, “suddenly I had to schedule all my things that need to get done” (37), and that in another instance, difficulties in-group problem solving experience in a SI session “forced me to work on it from different aspects and figure out how different people got to the solution” (244).

Michelle made a very insightful statement regarding her learning in the SI leader role: [T]he experience is ongoing, and you can continue to develop, like there is no limit, it doesn’t reach a point where you’re the best, because there’s always areas of improvement…we’re always reminded of that…so the learning doesn’t stop…it’s motivating because I want to continue, I want to keep growing in this role no matter what. (298-302)

Regarding learning about time management and organizing, Michelle explained that a bit of that learning for her came from goal-setting activities and training as a SI leader, but not exclusively from the SI program. Michelle commented: “it’s also something that really came
naturally … something I figured out on my own” (64-65). Michelle used feedback as an activity in one of her sessions. She noted that, although “we’ve talked about getting formal and informal feedback during our [SI] training” (157), the idea of using feedback in her session was something that she “picked up” (158) from an academic lecture outside of the SI program.

**Kilgore Trout**

K.T. most commonly cited experience or learning by doing as the source of his learning as a SI leader. He learned a variety of interpersonal and leadership skills from interacting with students in his SI sessions, and also noted that the training and goal-setting activities that form part of the SI program helped him learn. However, K.T. frequently noted in his interview that that all the skills he possessed at the end of his time as a SI leader could be entirely attributable to his experiences as a SI leader.

In the SI leader role, K.T. learned about people’s various learning styles from interacting with a variety of people: “getting in an environment where you have a lot of people from – if not just different backgrounds, different learning styles…you see a lot of different learning styles” (388-391). For the majority of the learning that K.T. experienced in the SI leader role, it was “definitely learning by doing” (262). K.T. cited being in the SI sessions and practicing during training sessions as contributing to his learning in communication and leadership. K.T. said that the SI program “is an excellent place to exercise” (296) a variety of skills.

K.T. also said that he learned by teaching others: “in my session… if you’re teaching somebody, then you’re learning as well, it’s not just a one way street and so when I’m facilitating these sessions, and making explicit what will help these students, it’s also making that very clear in my mind as to what will help me as a student” (75-77).
Learning from others specifically helped K.T. develop his study habits. He referenced on two occasions the idea that “you practice what you preach”. He described a situation where “I see someone and from that objective standpoint I go ‘well no you can’t be just studying like that’ and then I look at what I’m doing and I’m like ‘no you just can’t be studying like that’” (240-243).

K.T. mentioned training sessions and goal-setting as other facets of the SI program that contributed to his learning. He said that during training sessions the supervisors will “highlight” and “help push” a variety of skills needed in the SI program. One skill in leading SI sessions is redirecting students’ responses back to them. K.T. described a scenario during one of the training sessions in which new and returning SI leaders practiced and modelled this skill; he noted this was especially helpful.

K.T.’s overall perspective on learning from the SI program differed from that of the other SI leaders I interviewed. He said that he believed that many of his skills as a SI leader in practical and interpersonal competence he had already initially acquired and developed from outside jobs before becoming as SI leader. Regarding a number of skills, he explained that “it’s been developed and the [SI] program has helped, though it’s definitely not the root for myself that I think other people have had a development through the [SI] program” (122-123). He also said that he believed that a number of the skills he learned during the time he was a SI leader came from the fact that as human beings “we’re always working on” these skills and abilities. “It’s something that we all develop over time… [SI] it’s definitely not the first place where I learned that…but the [SI] program has been an excellent way for me to flesh out those skills” (278-282).
Laura

Laura learned from interacting with students during her SI sessions and from interacting with her fellow SI leaders. She learned from repeatedly enacting her training as a SI leader into practice and well as from SI leader training. However, Laura expressed doubt that some of the skills she learned as a SI leader were applicable to her life outside of the SI program.

Regarding to her own intrapersonal development, Laura credited the SI learning environment for some of her learning: “the environment that they set up…the supervisors make a big effort to do interactions and getting to know people and kind of showing your personality and kind of moving beyond just “what’s the right answer” but like, [taking] different spins on things” (363-367). Laura explained that she felt a “sense of freedom” (396) as a SI leader: “freedom to do what you want…you put the involvement in that you want…to be who you want to be, it’s, there’s not a specific attitude you have to have or a specific thing you need to do…place you need to be” (397-399).

Knowing that she has a “role in the university” (278) has contributed to Laura’s confidence. “You kind of have…a role to play in the university…that naturally gives confidence and a sense of belonging…that probably transfers indirectly to other parts of my life” (282-283). Laura said she feels more comfortable because “I know why I’m there…knowing that I’m doing the right thing…just knowing that it works, makes me more comfortable” (193-195).

Laura explained that in her SI sessions she “interact[ed] with students who aren’t good students” (316), different from her and the people with whom she normally interacts. Laura said that she reached a new understanding about these students from this SI leader experience. However, she clarified that this increased understanding is “much more superficial than ‘oh I’ve learned to accept people’” (149-150).
Laura explained that although she was taught facilitation skills during SI leader training, she did not actually learn these skills until she was using them in SI sessions. As an example, Laura noted, “I was told to be flexible but I didn’t really become more flexible until I was in session” (64-65).

Laura also explained her belief that, although the SI leaders are encouraged to create fun games for their SI sessions, the drive has to come from within the individual. She noted that learning for her was a mixture of being told in addition to taking it on personally:

[T]hey always encourage crazy new exciting ways of presenting material…they could show you every fun thing you can possible do, but you kind of have to come from inside….so you know it’s kind of on you, whether you want to make it more fun and enjoyable and just laid back…it’s a mix of both. (250-259)

Laura also experienced a time when she provided an incorrect answer to her SI group, but then after having gone through that experience, she realized “that wasn’t so bad” (111). Indicating that she learned from this experience, Laura said, “you win some you lose some…I just think experience just makes me more comfortable with anything” (195-197).

Much of the learning that Laura experienced in the SI leader role arose from interacting with her fellow SI leaders: “I wasn’t expecting when I joined [SI]…the sort of wealth of information and knowledge that you get from being around other [SI] leaders” (265-267). Laura explained that much learning occurred in the SI leader workroom:

I knew about the workroom, but I thought that would be pretty much [SI] talk… but conversations [about] internet sites…information about what courses to take, what master’s programs you want to do, what’s going on in the news, what else is going on on-
campus, events, like everything you could ever possibly want to know about university life and beyond, someone knows about it or talks about it or is involved with. (268-274)

Laura commented that the shared hard drive or ‘S drive’ which contains old SI handouts and the bulletin board in the work room, “mak[es] us aware of what else…what other people are doing” (165).

In SI leader training, she learned about a variety of activities and games she could bring to her SI session: “we get winter training …they always encourage crazy new exciting ways of presenting material… so I mean that’s definitely encouraged” (248-253). Laura explained that she was uncertain whether her increased comfort in talked to people arose exclusively from her experiences as a SI leader: “I don’t know if I’m just getting older and more mature, or if it’s this [SI], or if it’s just other interactions [like] living off campus…I can’t point it down” (126-127). Laura also expressed doubt as to whether the increased comfort she felt talking to new people within the SI program would extend to her life outside of the SI program: “I don’t know how much of that I took out of the [SI] program, like I probably wouldn’t go out and sit somewhere in the library and just start up a conversation with someone like I would here [at SI]” (142-143).

Karin

Karin learned from interacting with a variety of people in her SI sessions. She noted that the reflection activities that form part of the SI program, as well as experience as a SI leader, contributed to her learning. It was the responsibility of the SI leader role that also allowed Karin to learn.

“Whether it’s from interacting with…fellow [SI] leaders or from…students who come to sessions” (225), she learned a variety of things from interacting with people who are different from her. Through “being in the [SI] program and being exposed to everyone [who attends]”
Karin realized that she “was unconsciously being very biased about certain things” (226). Karin believes being a SI leader made her better able to consider other people’s viewpoints more: she explained that in the SI session “there’s a lot more differences and viewpoints in there, that triggers this kind of thinking process” (249-250). Karin summarized her experience learning from those who are different from her: “interacting with other people you realize ‘ok, these things are ok’. There are a lot of things you don’t think of, just because you’re so enclosed in your ideas and presumptions and things like that, that this has really kind of opened my eyes” (305-307).

Related to her developing confidence in herself, Karin attributed some of the learning she experienced as a SI leader to her realization of her own abilities: “it’s the fact that I was pretty successful as a [SI] leader I think…the positive results of me being in this program really made me [realize] ‘ok, I can do things’” (341-348). These types of realizations also came about after leading a SI session: “you do it [lead a SI session] and you’re like ‘oh, that wasn’t half bad’, ‘ok, I can do this’” (191).

Karin referred to the fact that, as a SI leader, “we have to do a lot of these reflective pieces” (120) as helping her learn to express herself more clearly:

[Y]ou do a lot of reflecting …we do goal-setting every semester so that really gives you time to think about yourself and what kinds of things you want to build on which are lacking, and what you might be really good at kind….we’re generally asked constantly to be reflecting on ourselves, and I think after a while, you just kind of start naturally doing it... (279-284)

Karin explained that, as a SI leader, she received a lot of training regarding reflection, indicating that the SI supervisors are “continuously training us to write up self-reflections and set goals…I
think there is a component to them training us to do these kinds of things better” (133-136).

Karin commented, “I think that [learning how to facilitate a session] kind of comes with a lot of experience dealing with that” (40-41). Karin said that it was the repetition of activities such as leading presentations and SI session which forced her to learn these skills.

The SI program for Karin had a certain environment that contributed to her learning:

[T]he workroom is a really friendly kind of environment, so you can build that confidence, it allows you to be yourself more and be like “ok, people will accept me, even if I’m like weird or crazy in some way or aspects”, so it’s kind of like learning to accept yourself more. (113-116)

Karin thought it was “the responsibility itself of being a [SI] leader” (46) that helped her learn specifically about time management.

Karin explained that she could not entirely attribute learning to express herself to her role as a SI leader: “in part…they are continuously training us to write up self-reflections and set goals…I think there is a component to them training us to do these kinds of things better, but also I think it’s something [that] I strive to do, it’s something I’ve been working on since forever, [because] I’m not very good at it” (133-135). Karin observed that her increased ability to consider different viewpoints, which she did say that she developed as a SI leader, could also be in part attributed to her habit of writing stories in her spare time.

Summary

Each of the six SI leaders whom I interviewed for my study reported different elements of the SI leader experience as facilitating their learning. See Table 5 below. Some commonalities existed, to be discussed in the following section. Each participant also mentioned
that not all the learning experienced in the SI leader role could actually be attributed to an experience associated specifically with the SI program at Mid-sized U.

Table 5

*Summary of Findings Regarding How Individual SI Leaders Learned*

<table>
<thead>
<tr>
<th>SI Leader</th>
<th>How Individual SI Leaders Learned</th>
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| Charlotte | • performing SI Leader duties  
  • observing a senior SI leader’s SI session  
  • interacting with a variety of people in SI sessions  
  • formal and self-initiated informal reflection  
  • SI Leader training |
| Rose      | • the nature of the SI program; being put into situations as a SI leader that required certain things to be learned  
  • experience in the SI program over time  
  • interactions with other SI leaders  
  • the workroom  
  • SI team training and meetings |
| Michelle  | • interacting with a diverse student population in SI sessions  
  • experience and practice  
  • goal setting activities  
  • interacting with fellow SI leaders  
  • the requirements of the SI leader role |
| K. T.     | • experience or learning by doing  
  • interacting with students in SI sessions  
  • training and goal-setting activities that form part of the SI program |
| Laura     | • interacting with students during her SI sessions  
  • interacting with fellow SI leaders  
  • repeatedly enacting training into practice as a SI leader  
  • SI leader training |
| Karin     | • interacting with a variety of people in SI sessions  
  • reflection activities that form part of the SI program  
  • experience as a SI leader  
  • the responsibility of the SI leader role |
Section II: Cross-Case Analysis of How Peer Educators Learned

SI leaders indicated that three aspects facilitate their learning in the SI program: learning from experience, learning from others, and learning through reflection. These leaders noted three sites of this learning: ‘in session’, in the workspace, and in training. That aspect which facilitated learning cited most often by the majority of SI learning was learning from experience. Learning from experience occurred largely ‘in session’, which included during a SI session, preparing handouts for the SI session, and making promotional in-class announcements for the SI session. The second aspect that facilitated SI leaders’ learning was learning from others, both from their fellow SI leaders (which occurred in the workspace) as well as from people who are different from themselves (which occurred during SI sessions). The third aspect facilitating their learning was informal and formal reflection. Formal reflection was tied to the training portion of being a SI leader. Regarding the sites or locations of learning, SI leaders mentioned being ‘in practice’ and ‘in session’ as the main sources of their learning through experience. The largest source of learning from other SI leaders occurred in the common workspace, and the most learning from different others occurred during SI sessions. Finally, SI leader training was the third most cited site of learning for SI leaders, and incorporated learning through experience, from others, and through reflection. I expand on each of these findings below.

Learning Through Experience

All six SI leaders mentioned experience as a large contributor to their learning in the SI leader role. Words used to describe this phenomenon of learning through experience were “gaining the experience” (Charlotte, 53); “trial and error” (Charlotte, 274); “exposure and experience” (Rose, 121); and “learning by doing” (K.T., 262).
Four SI leaders interviewed further noted that it was the active nature of experience, “actually doing it” (Charlotte, 189), that allowed them to learn. Another leader often referred to her learning as occurring while she was “in practice” (Michelle, 225), and K.T. spoke of “exercising” (296) his skills in the SI program. It was also mentioned by two SI leaders that, although there were told and encouraged to perform certain skills, neither actually learned these skills until they actively performed these skills themselves.

Three of the SI leaders noted that it was the time and repetition of experience that contributed to their learning. For example, they said they learned from “experience in the program, over time” (Rose, 79); doing something repeatedly “semester to semester” (Michelle, 71); or “doing it over and over again” (Karin, 100).

In line with the idea of repetition over time, the majority of SI leaders described at least one experience where there was a marked increase in their ability to perform a duty (for example, leading a session or making a promotional announcement) between the first and second time they had to perform that duty.

Finally, all five female leaders specifically discussed the realizations that experience and doing something repeatedly can produce. These realizations came in the form of ‘I’ve done this before, it’s not bad, I can do this’ statements (comments made by Charlotte, Rose, Karin, and Laura). The participants also mentioned other realizations as a result of repeated experience that related to their own abilities as well as future career paths.

**Learning From Others, Including Different Others**

One SI leader said that she learned almost as much from her fellow SI leaders as she did through other parts of the SI program. This was also true for the majority of SI leaders. Four of the SI leaders (Charlotte, Rose, Michelle, and Laura) described countless SI-related things that
they learned from their fellow SI leaders, such as different activities and games to lead during their SI sessions. Three SI leaders (Rose, Michelle, and Laura) made reference to not only learning SI-related content from their fellow SI leaders, but also learning about topics unrelated to the SI program, such as navigating the university landscape, including courses and professors; careers and education post-graduation; and getting involved elsewhere on campus. All the learning from others described above occurred through informal discussions between SI leaders. Additionally, one SI leader (Charlotte) mentioned learning from another SI leader when she observed that leader’s SI session; another SI leader (K.T.) mentioned learning from SI leaders while practicing a specific skill during a training session. Finally, two SI leaders (Michelle and K.T.) noted that, in the process of teaching others as a SI leader, they themselves learned, specifically about effective study methods that they used in their own studies.

Learning from others or learning from people who are different in some way from oneself was a facilitator of learning that was mentioned by all six SI leaders. Every SI leader interviewed described an experience where, while leading a SI session, they interacted with student attendees who were different in some way from themselves. Multiple leaders described this experience using words such as being “exposed” to a variety of people, and that it was an “enlightening” and “eye-opening’ experience for them. Three SI leaders mentioned interacting with people of different ages; two mentioned interacting with people of different cultural backgrounds. SI leaders also mentioned interacting with people of different learning styles as well as academic ability and achievement. Finally, two leaders (Rose and Karin) said they learned from those diverse SI leaders who comprised the SI leader team. For example, one leader mentioned learning about a variety of academic disciplines that reflected the various fields of study of her fellow SI leaders.
Learning Through Reflection

SI leaders noted both formal and informal reflection as facilitating their learning in the SI leader role. The majority of SI leaders mentioned the formal reflective pieces that form part of the SI program at Mid-sized U (such as written reflections and individual meetings with SI supervisors) as facilitating their learning. Four SI leaders (Charlotte, Karin, K.T., and Michelle) said that goal setting as a particular aspect of the reflection process contributed to their learning. Two SI leaders (Charlotte and Karin) made reference to their use of self-initiated, informal reflective practices that helped them to learn in the SI leader role. One SI leader, Karin, specifically hinted that, due to the large amount of training that the SI supervisors dedicate to reflective thinking, she has naturally started to reflect on her own, without prompt.

Learning ‘In Session’

All six leaders described a significant amount of learning that occurred while they were carrying out their SI leader duties of facilitating a SI session. Two SI leaders dubbed this learning “in session” (Michelle, 180; Laura, 65). The skills and abilities that SI leaders said they learned from experience where overwhelmingly learned during the SI session, including communication, leadership and facilitation skills, as well as self-confidence and self-understanding of one’s own abilities and future career aspirations.

Three leaders mentioned creating SI session handouts as a source of learning, mostly related to general cognitive complexity and creativity. Two SI leaders also mentioned the act of delivering in-class promotional announcements for their SI sessions as a site of learning from experience regarding communication and confidence.
Learning In The Workroom

Three SI leaders mentioned a shared workspace utilized by all SI leaders, sometimes called the workroom, as a site of learning as a SI leader. All leaders who mentioned the workroom described it as a site of learning from others. One leader explained, “the fact that we have the shared space means that there’s just a really natural interaction between all of us” (Rose 260-261). Another leader acknowledged that this was a space that SI leaders visit throughout the day to complete both SI-related and academic course work. The topic of discussion between SI leaders varied from SI specific experiences and skills to more broad university or life topics.

In addition to being a location of learning through informal discussion between SI leaders, the workroom was also a site of “transferring resources” (Rose, 470) between SI leaders. Three SI leaders mentioned various aspects of the workroom that facilitate the sharing of SI-specific knowledge. For example, a shared hard drive or “S drive” located on the computers in the workroom contains previous SI handouts that leaders have created. Prompting SI leaders to store their SI session materials on the workroom’s common hard drive, as well as in a series of clear plastic bins also located in the workroom, allows for the sharing of SI session materials and ideas between SI leaders.

Learning In Training

Five SI leaders mentioned training as contributing to their learning as a SI leader, including training sessions at the beginning of each term and team meetings that occurred bi-weekly. The following was included in details of training: at training they “encourage” creative ways of presenting material in SI sessions (Laura, 253); they receive educational programing that “highlights” and “helps push” (K.T) a variety of skills related to facilitating a SI session. Also during the bi-weekly meetings, “formalized sharing” occurs between all the SI leaders during
which they often discuss what has worked for them in session. The discipline of learning theory and learning styles was presented in training and covered “on an ongoing basis in team meetings” (Rose, 143). Another leader mentioned that a specific activity, getting to practice a skill during a training session, helped him learn that skill of redirecting questions.

**Learning From Role and Responsibilities**

One element of learning mentioned by SI leaders existed outside of the previously mentioned facilitators or sites of learning. Three SI leaders commented on the role and responsibilities of being a SI leader as well as the nature of the SI program as contributing to their learning. For example, Karin noted that it was the “responsibility itself” (46) of being a SI leader that helped her learn about time management. Similarly, Michelle said that being a SI leader “forced” (244) her to develop time management abilities, because “suddenly I had to schedule all my things that need to get done” (37). Rose used the most overt language to indicate that the SI leader role itself promotes learning: she continually made reference to being “put into situations” (97) and being “thrown into” (33) situations as a SI leader, such as interacting with different people and making in-class promotional announcements, which contributed to her learning. She commented that these were requirements for a being a SI leader, “so you’re kind of forced to become comfortable with things like that pretty quickly” (48).

**Discrepant Data**

Although each SI leader whom I interviewed spoke in great length about the ways in which the SI program at Mid-sized U contributed to their learning, each SI leader acknowledged that being a SI leader in the SI program was not the sole source of their learning. On the rare occasions when the SI leaders I interviewed did not attribute the learning they described
specifically to being a SI leader, they attributed their learning to either some form of self-motivation, or to the natural growth and development that humans experience as they mature.

Three SI leaders made reference to some learning in the SI leader role that did not arise necessarily from an event or experience in the SI leader role, but as something that was self-initiated. Charlotte said that some of her learning to develop self-confidence being a “personal thing” (215) where she pushed and challenged herself to do something as a SI leader. Michelle said that she learned personal organization somewhat naturally, “figured out on [her] own” (65); Karin noted that she learned to express herself more clearly due to the fact that it was something that she personally strives to do, and was something that she has been working on for a long time. Each leader acknowledged that the particular learning they were referring to was a combination of the elements of being a SI leader as well as something they personally initiated or were driven to do.

Two SI leaders said that the learning they experienced regarding interpersonal competence and interacting with others as a SI leader had the potential to be developed over time during the natural course of one’s life. K.T. spoke most to this belief that “we’re always working on” (278) interacting with other throughout our lives and that “it’s something that we all develop over time” (280). Laura said that her learning to be more comfortable interacting with other could have arisen from her “getting older and more mature” (126).

**Summary of Chapter**

The SI leaders whom I interviewed identified three common aspects which facilitated their learning in the SI program: learning from experience, learning from others, and learning through reflection. The three ‘sites’ of this learning mentioned by SI leaders were learning during SI sessions, in the SI leader workspace, and in training.
In this chapter, I have presented the findings of my research study regarding both what and how peer educators learned from their involvement as SI leaders in the SI program at Mid-sized U. Although each individual peer educator had a unique learning experience in the SI leader role, some learning outcome dimensions that the majority of SI leaders were similarly identified as learning (such as effective communication and leadership, and understanding and appreciating human and cultural differences); as well as some common elements of the SI leader experience that the majority of SI leaders identified as facilitating their learning (such as learning from experience and learning from others).

In the next chapter, Chapter 6, I relate the findings of my research regarding what and how SI leaders learned to the relevant theories and research literature. I end with some conclusions and a summary statement.
CHAPTER 6 – DISCUSSION

In this chapter, I attempt to answer my research questions, and connect the findings of my study to relevant literature on what and how students learn. I then discuss what I believe to be the limitations of my study, as well as the implications of my findings. I then make recommendations for future research and some concluding reflections.

The purpose of my study was to explore what and how university students learn from their experiences working in their role as peer educators. Specifically, I investigated what peer educators learn, i.e., what learning outcomes (knowledge acquisition, construction, integration, and application; cognitive complexity; intrapersonal development; interpersonal competence; humanitarianism and civic engagement; and practical competence) (see Appendix A) they acquire. As well, I investigated how peer educators learn, i.e., by what means or processes this learning occurs (such as interaction with peers; time and degree of effort invested in a program (Astin, 1993) as well as engaging in active learning, and working cooperatively with peers (Chickering & Gamson, 1987)). My study was an exploration of university students’ learning while in their peer educator role, and was an initial attempt to describe and understand the subjective experiences of learning through the eyes of university students who are themselves peer educators.

Review of Findings

I review the findings from the two previous chapters related to what and how peer educators learn. In each instance, I refer only to the learning experienced by the six SI leaders who were participants in my study. I do not generalize these findings to include all peer educators in SI programs, nor do I generalize to all the SI leaders in the SI program at Mid-sized U.
Summary of What Peer Educators Learned

Here I answer my study’s first research question--what did peer educators learn in the peer educator role as it relates to the six CAS learning outcomes? Overall, the six SI leaders in the SI program at Mid-sized U developed in each of the learning outcomes I investigated (knowledge acquisition, construction, integration, and application; cognitive complexity; intrapersonal development; interpersonal development; humanitarianism and civic engagement; and practical competence). Specifically, the six SI leaders participants developed comfort and confidence in general communication to large and small groups, including speaking and expressing themselves and their ideas more clearly. They also learned about time management. These participants learned to seek out help from others when needed, developed collaborative skills, and learned to adapt and accommodate to the needs of a group. Developing as leaders in a variety of ways, included leading a SI session, and being a leader amongst peers was another area of learning for these peer educators. They developed general confidence in themselves as well as in their abilities in certain tasks, and experienced increased self-understanding related to a myriad of personal topics. The SI program allowed the SI leaders to develop and exercise their creative skills as well as evolve in their thinking process regarding a number of behaviours, such as developing handouts for SI sessions. Many SI leaders learned about the discipline of learning theory, and applied many of the leadership and facilitation skills they learned as SI leaders to their lives and jobs outside of the SI program. Each SI leader gained a better understanding of and appreciation for cultural and human differences. They learned about involvement and engagement in the SI leader role, including feeling involved in a campus community, and also increased their desire to be engaged in other extra-curricular activities. Table 6 summarizes these findings.
Table 6

Summary of Findings Regarding What SI Leaders Learned

<table>
<thead>
<tr>
<th>Learning outcome domain</th>
<th>Dimension of Learning Outcomes Domain</th>
<th>Learning experienced by SI leaders at Mid-sized U</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practical competence</td>
<td>Communicating effectively</td>
<td>• Comfort and confidence in speaking to large groups (such as during SI sessions), and one-on-one • Expressing self more clearly</td>
</tr>
<tr>
<td></td>
<td>Managing personal affairs</td>
<td>• Time management • Living a balanced life</td>
</tr>
<tr>
<td>Interpersonal competence</td>
<td>Interdependence</td>
<td>• Seeking help when needed</td>
</tr>
<tr>
<td></td>
<td>Collaboration</td>
<td>• Group problem solving • Accommodating and tailoring to group needs</td>
</tr>
<tr>
<td></td>
<td>Effective leadership</td>
<td>• Leading and guiding a group through an activity • Comfort in assuming a leadership role • Facilitating discussions and direction of energy in a group</td>
</tr>
<tr>
<td>Intrapersonal development</td>
<td>Realistic self-appraisal, self-understanding, and self-respect</td>
<td>• Self-confidence and comfort in communication (no longer nervous or shy) • ‘Coming out of shell’ • Recognizing one’s own skills as well as future career aspirations • Acceptance of mistakes</td>
</tr>
<tr>
<td>Cognitive complexity</td>
<td>General cognitive complexity (includes critical thinking, reflective thinking, and effective reasoning)</td>
<td>• Adopting a new approach to problem solving and developing handouts for SI session activities</td>
</tr>
<tr>
<td></td>
<td>Creativity</td>
<td>• Incorporating games and fun into SI activities</td>
</tr>
<tr>
<td>Knowledge acquisition, construction, integration, application</td>
<td>Understanding knowledge from range of disciplines</td>
<td>• Knowledge of learning theory (different learning styles)</td>
</tr>
</tbody>
</table>
Table 6 cont’d

Summary of Findings Regarding What Peer Educators Learned

<table>
<thead>
<tr>
<th>Learning outcome domain</th>
<th>Dimension of Learning Outcomes Domain</th>
<th>• Learning experienced by SI leaders at Mid-sized U</th>
</tr>
</thead>
</table>
|                         | Relating knowledge to daily life      | • Facilitation and leadership skills apply to group activities outside of SI program  
|                         |                                      | • Improvement of personal study habits            |
| Humanitarianism and civic engagement | Understanding and appreciation of cultural and human differences | • Understanding of diversity of university student population  
|                         |                                      | • ‘enlightening’ or ‘eye-opening’ experience       |
|                         | Social responsibility                 | • Feelings of involvement in the campus community; desire to be engaged elsewhere as well  
|                         |                                      | • Seeing the value of one’s contribution           |

Summary of How Peer Educators Learned

Here I answer my study’s second research question--how did the learning the peer educators experienced occur, or, in what situations did peer educators experience learning along the six CAS learning outcomes while in the peer educator role? The six peer educators in the SI program at Mid-sized U reported that they learned through experience, specifically experience in leading SI sessions. These participants learned much from each other, often facilitated by the existence of the SI leader workroom. The SI leaders reported learning from interacting with people from whom they were different, as well as through both informal and formal reflection, and structured training activities within the SI program. The role and responsibilities inherent in their SI leader role also promoted learning among SI leaders at Mid-sized U.

Overall the peer educators in my study were involved in experiential learning, which includes learning through experience as well as learning while performing certain activities related to leading SI sessions. All six SI leaders mentioned experience as a large contributor to
their learning in the SI leader role, and that exposure, actually performing a task rather than learning about it, and exercising skills in practice helped them learn. Repeating an activity multiple times contributed to their experiential learning for peer educators at Mid-sized U.

The six SI leader participants described a significant amount of learning that occurred while they were performing SI leader duties: facilitating a SI session, communicating, showing leadership as well as self-confidence and self-understanding of one’s own abilities and future career aspirations. Repetition in preparing SI session handouts as well as delivering in-class announcements also increased learning.

Five SI leaders I interviewed said that they learned from their fellow SI leaders, in both informal interactions and formal settings. They learned SI-related things from their fellow SI leaders, such as different activities and games to lead during their SI sessions, but also learned about topics unrelated to the SI program, such as navigating the university landscape and getting involved elsewhere on campus.

All the learning as a result of interactions with others described above occurred through informal discussions between SI leaders at Mid-sized U. Learning in the workroom is an example of learning from others that has both spontaneous and structured elements. Three SI leaders mentioned a workspace shared by all SI leaders, sometimes called the workroom, as a site of learning as a SI leader. All leaders who mentioned the workroom described it as a site of “natural interaction” (260) and learning from others. The SI leaders said that the topic of discussion between SI leaders varied from SI specific experiences and skills to more broad university or life topics. In addition to being a location of learning through informal discussion between SI leaders, the workroom was also a site of “transferring resources” (Rose, 470) between SI leaders. Three SI leaders mentioned a variety of aspects that form part of the
workspace that are structured intentionally to facilitate the sharing of SI-specific knowledge, including a shared hard drive and bins where SI leaders can store records of the SI session activities they have created.

Learning from fellow SI leaders in a formal setting as part of the SI program included observing SI sessions, learning during training, and learning about oneself while teaching others. Five SI leaders at Mid-sized U mentioned training as contributing to their learning as a SI leader, including training sessions at the beginning of each term, and team meetings that occurred bi-weekly. This is an example of learning that combines learning by doing as well as learning from others.

Another example of SI leaders at Mid-sized U learning from interactions with others in a somewhat informal environment is their learning from people who are different in some way from themselves during SI sessions. This interaction with different others was a facilitator of learning that was mentioned by all six SI leaders. Every SI leader whom I interviewed described an experience where, while leading a SI session, they interacted with student attendees who were different in some way from themselves--culturally, academically, or age-related. Multiple leaders described this experience using words such as being ‘exposed’ to a variety of people, and that it was an ‘enlightening’ and ‘eye-opening’ experience for them. These SI leaders noted both formal and informal reflection as facilitating their learning in the SI leader role. Formal reflective pieces that form part of the SI program at Mid-sized U are written reflections and individual meetings with SI supervisors. Goal-setting activities were also part of this structured reflection within the SI program. Two SI leaders noted their use of self-initiated, informal reflective practices that allowed them to learn in the SI leader role.
Three SI leaders mentioned the role and responsibility of being a SI leader as well as the nature of the SI program as contributing to their learning, such as learning time management. Also, responsibilities like the expectation to interact with a variety of people and make in-class promotional announcements created conditions that “forced [SI leaders] to become comfortable” (Rose, 48) with the things that were requirements of the SI leader role.

**Comparison of Findings to Literature**

Here I connect the findings of my research regarding what and how SI leaders learned to the current research literature. Studies that have been conducted on the benefits to peer educators of participating in peer education programs are compared to the findings of my study regarding what SI leaders learned. I also connect the findings of my study regarding how SI leaders learned to the adult education theories that were previously mentioned in my literature review, in addition to other findings.

**What Peer Educators Learn**

Rather than addressing each of the findings of what each peer educator reported learning as individuals, I address these findings as a whole. Overall, the findings of my study confirm assertions made by researchers like Baxter Magolda (1999) and in documents like *Learning Reconsidered* (ACPA & NASPA, 2004) that learning in the extra-curricular higher education environment is holistic and integrated. Indeed, all participants learned and developed across a myriad of learning outcome domains, all of which they attribute to one experience--being a peer educator.

I first compare the findings of my study with those of Wawrzynski et al.’s 2011 National Peer Educator Survey (NPES), a study from which my research evolved. Similar to those of
Wawrzynski et al., the findings of my study indicate that SI leaders learned in each of the six CAS learning outcome domains. The NPES found “statistically significant and practical gains along each of [the six CAS] learning domains” (p. 24) for the more than 1700 peer educators surveyed. However, the NPES study does not comment on which of the dimensions of learning outcomes within these six CAS learning domains it is that peer educators learn. My research revealed that learning in only 12 of the possible 28 CAS dimensions of learning outcomes were experienced by peer educators in the SI program at Mid-sized U. These findings, that the peer educators I interviewed did not learn across all of CAS’s 28 possible learning outcome dimensions, may reflect some of the limitations of my research or the lack of openness of the participants. The CAS learning outcomes are numerous; it is not expected for all students (or all programs) to achieve all learning outcomes.

The findings of my research are similar to that of the more specific research that has been conducted on SI leaders, the specific sub-set of peer educators on which my study is based. First, Congos and Stout’s (2003) survey of post-graduate former SI leaders who, when asked to indicate the qualities, skills, attributes, and knowledge that they gained from their time as SI leaders, reported gains in interpersonal skills, communication skills, confidence, time management, knowledge of study skills, leadership skills, public speaking ability, teaching and organization skills; their work supports my findings. Each of these learning gains corresponds to a CAS learning outcome dimension that SI leaders in my study identified as learning. The findings of my research also correspond to Couchman’s (2009) more recent study of SI leaders’ reflective narratives, in which leaders reported increased collaborative skills, confidence in self, and communication skills.
How Peer Educators Learn

Here I discuss the adult education literature that corresponds to the findings of my study regarding how peer educators reported they learned. I address the findings and corresponding literature in sequence according to the themes that emerged from the data. First I briefly re-state the findings of my study related to the theme.

Experiential learning. All SI leaders mentioned experience as a large contributor to their learning in the SI leader role. For example, repeating an activity multiple times within and across semesters, and learning while performing SI leader duties such as facilitating a SI session, preparing SI session handouts, or delivering in-class promotion announcements, contributed to learning.

Learning through experience is a common feature of many theories of adult learning, and is included in a number of works by a variety authors. For example, Kolb’s Experiential Learning Cycle (1984) described how adults learn from experience. Kolb said that learning is a cyclical process, progressing through four stages: experience; reflection on experience; abstract conceptualization and development of new mental models based on the reflection on experience; and testing and experimentation in activities. The testing and experimentation in the final stage are another example of experience, thus beginning the cycle anew. The SI leaders whom I interviewed often mentioned the cyclical process of learning from experience that came from repeatedly performing duties related to preparing for and learning SI sessions; they improved in their abilities related to these tasks through learning from past experience on each subsequent attempt.

Time spent performing an activity, also known as time-on-task, has been shown to lead to learning. Astin’s (1999) theory of student involvement involved a quantitative and qualitative
measure of involvement. The quantitative measure of involvement is the amount of physical and psychological energy, measured in time that a student devotes to a task. Similarly, Chickering and Gamson (1987), in their theory of the factors that influence student learning in higher education, asserted that conditions that support learning encourage active learning and emphasize time on task. Put simply, “time plus energy equals learning. There is no substitute for time on task” (p. 4). The aspects of time and repetition were often mentioned by the six SI leaders in my study as contributing to their learning, in that they had to perform the same tasks week after week and semester after semester.

How Learning Works: Seven Research-Based Principles for Smart Teaching (Ambrose, Bridges, DiPietro, Lovett, & Norman, 2010) summarized a series of research findings and literature on adult learning within the higher education context. Although this book focused on the processes and factors that contribute to classroom learning, I believe it can be useful to understand learning that occurs outside of the classroom as well. In a chapter addressing how students develop mastery, the authors present the concept of novice-level knowledge and ability vs. expertise. One of the differences between a novice (who is lacking competence in a particular domain) and an expert (who has developed competence or ‘mastery’ in that domain or skill) is time spent practicing or exercising that skill (Ambrose et al., 2010). This provides another perspective to explain how SI leaders developed mastery and competence in their SI leader duties through time and experience.

I believe that it is also important to connect the findings of my study related to how SI leaders learned from experience with the student engagement literature that is so prevalent in higher education today. Perhaps the most comprehensive (or at least the most recent) account of how students learn from experience lies in the construct of engagement. Kuh (2009) said,
“engagement is the term usually used to represent constructs such as quality of effort and involvement in productive learning activities” (italics in original, p. 6). The “engagement premise has been in the literature for more than seventy years, with the meaning of the construct evolving over time” (p. 6). The literature that Kuh cited as precursor to student engagement theory includes many of the authors and ideas that I have previously cited in this thesis: student involvement (Astin, 1999); principles of good practice in undergraduate education (Chickering & Gamson, 1987); and student learning outcomes. The National Survey of Student Engagement (NSSE; Kuh, 2009) has been used broadly across higher education institutions in the United States and Canada to assess students’ engagement in a variety of educational activities. The aspect of the NSSE that applies specifically to my research study is the part of the instrument that asks students about the amount of time they spend on “educationally purposeful activities” (p. 11) or “enriching educational experiences” (p. 18) such as participating in co-curricular activities like peer education programs (Kuh, 2009). I consider involvement in the SI program an “enriching educational experience” that contributes to a wide array of learning outcomes for students.

Learning through reflection. SI leaders noted engaging in formal, written reflections and meetings with supervisors as facilitating their learning in the SI leader role. Two SI leaders also mentioned their use of self-initiated, informal reflective practices that allowed them to learn in the SI leader role.

An extension of learning from experience is learning from reflection on experience. Reflection also plays a major role in many theories of adult learning—it is one of four stages in Kolb’s previously mentioned Experiential Learning Cycle (1984), and is a major component of transformative learning (Mezirow, 1991). Students can engage in different forms of reflection:
“we may reflect on the content or description of a problem…the process or method of our problem solving, or the premise(s) upon which the problem is predicated” (italics in original, Mezirow, 1991, p. 177). These different levels of reflection correspond to the different types of reflection that SI students reported engaging in. For example, after leading a SI session, some students reflected on their abilities to communicate with others and lead SI sessions. The majority of SI leaders reported reflecting on and reassessing the information they included and the problems they considered when designing their SI sessions handouts, to accommodate more cognitive complexity. And finally, all six participants mentioned some form of ‘enlightening’ reflection that arose from interactions with people who were different from them during SI sessions.

Learning from others. The majority of the participating SI leaders admitted to learning from their fellow SI leaders, in both informal interactions and formal settings. From each other, SI leaders learned about SI-related things, such as different activities and games to lead during their SI sessions, as well as topics unrelated to the SI program, such as navigating the university landscape and getting involved elsewhere on campus.

Chickering and Gamson’s seven principles for undergraduate learning included the importance of social interactions in learning: learning is “collaborative and social, not competitive and isolated. Working with others often increases involvement in learning” (1987, p. 3). Furthermore, in a survey of what factors in college affect student learning and development, Astin (1993) found that involvement in student peer groups was one of three most powerful types of involvement that contribute to learning in a variety of dimensions (in addition to academic involvement and involvement with faculty).
Sometimes learning from others occurs in a structured setting, and sometimes through unstructured, informal interactions. In discussion of how students learn in a variety of contexts within and throughout a university, the authors of *Learning Reconsidered 2* explained, “all of these contexts provide opportunities for students to learn, some by design and some because of events that occur spontaneously” (ACPA & NASPA, 2006, p. 6). The SI program at Mid-sized U has some designed processes that encourage sharing, but also encourages learning through spontaneous interactions.

I next discuss the findings of my study that relate to learning in the workroom, as well as learning through SI leader training, as they relate to formal and informal interactions with others.

**Learning in the workroom.** Three SI leader participants noted the SI leader workroom as a site of learning from interactions with others through informal discussions between SI leaders. All leaders who mentioned the workroom described it as a site of natural interaction in addition to a site of “transferring resources” (Rose, 470) between SI leaders.

Strange and Banning (2001) discussed how the design and layout of college and university spaces could influence the behaviours, emotions, and interactions of the people using that space. They described that the theory of environmental probalism explains that “although features of the physical environment lend themselves theoretically to all possibilities, the layout, location, and arrangement of space and facilities render some behaviours much more likely, and thus more probable, than others” (pp. 14-15). For example, a communal space could be designed to “contribute to college student learning and development in…important ways…the actual features of the physical environment can encourage or discourage the processes of learning and development” (p. 31). In addition to promoting learning, some spaces can specifically promote social interactions: “spaces that encourage individuals to spend time interacting with others are
described as “sociopetal” or “socially catalytic” spaces. Intentionally planned or not, these designs support the social qualities of campus life” (p. 145).

The SI leader workroom at Mid-sized U is designed as a central location for SI-related work but also as a meeting place for SI leader, complete with tables and computers as a communal space. It also supports the sharing of SI resources through a shared computer drive and bins full of previous SI session materials. I believe that the features of the SI workroom that support the sharing of SI resources contribute to the knowledge management of the SI program. Rowden wrote, “Knowledge is often undocumented. It can easily be lost if an individual who has certain knowledge is unavailable or leaves the organization” (2007, p. 92). The knowledge and experience of previous SI leaders that are stored and shared through ‘databases’ found in the SI leader workroom allow the “collective knowledge, information and experience of the organization available to individual employees for their use, and [inspire] them to contribute their knowledge to the collective” (p. 93).

**Learning through training.** Five SI leaders mentioned training as contributing to their learning as a SI leader, including training sessions at the beginning of each term, and team meetings that occurred bi-weekly. During these training sessions, SI leaders received educational programing that “highlights” and “helps push” (K.T.) a variety of skills and knowledge related to preparing for and facilitating SI sessions, such as developing creative in-session activities, redirecting students’ questions, and knowledge of learning styles theory.)

Rowden (2007) defined on-the-job training as “discrete planned events” (p. 7) that have the “main goal or purpose to improve knowledge, skills, and abilities” (p. 9) to allow individuals to be successful in their work. This description of training correlates to the structured training sessions of the SI program at Mid-sized U. However, perhaps it is the specific content of SI
leader training that it is constantly applicable to and enacted in the SI leader role, that facilitates learning through training:

Training can be a valuable tool in [learning] but is insufficient alone…Training can only provide information. The information can only be converted to knowledge if workers are capable of applying it to their jobs. When the person applies these skills through practice and reinforcement, learning takes place. (Rowden, 2007, pp. 2-3)

**Learning from different others.** Another example of SI leaders learning from interactions with others is learning from interactions with *different* others, a facilitator of learning that was mentioned by all six SI leaders. Every SI leader whom I interviewed described an ‘enlightening’ experience in which they interacted with students who were different from them culturally, academically, or of a significantly different age.

The concept of learning from interactions with people who are different from oneself has support in the literature. Pascarella and Terenzini (2005) noted that diversity experiences such as “socializing with someone from a different racial-ethnic group” (p. 194) contribute to a variety of learning outcomes for college students. Having discussions with students whose race is different from one’s own background can lead to learning. This supports the findings of my study indicating that some SI leaders reported learning from students of a different cultural background, such as international students, who attended their SI sessions. However, the literature does not seem to account for a broader definition of ‘diversity experiences’, as the SI leaders in my study indicated that they also learned from interacting with students who were different from them in terms of age, program of study, and academic achievement.

**Learning from role and responsibilities.** Three SI leaders mentioned the role and responsibility of being a SI leader as well as the expectations inherent in the nature of the SI
program as contributing to their learning. One of Chickering and Gamson’s (1987) seven principles of undergraduate teaching was that, when a program communicates high expectations for students, such as the high level of role responsibility that SI leaders reported in the SI program, this contributes to learning. Chickering and Gamson advised those educating undergraduate students to “expect more and you will get more…expecting students to perform well becomes a self-fulfilling prophecy” (p. 5). In the response data from another survey of student co-curricular involvement, students indicated that specific leadership responsibilities (such as planning, organizing, managing, and decision making) contributed to their learning and personal development (Kuh, 1995).

**Limitations**

In addition to me being a novice researcher, I have identified four limitations to my study. They relate to sample size and selection, the sample cases, self-reported data, and data analysis. Each is discussed below.

I recognize that my sample size is small, as I only interviewed seven peer educator participants, using the data from six in my data analysis. However, Patton said

[T]here are no rules for sample size in qualitative inquiry. Sample size depends on what you want to know…. [the] insights generated from qualitative inquiry have more to do with the information richness of the cases selected and the observational/analytical capabilities of the researcher than with sample size. (2002, pp. 244-245)

For my study, I believe I selected information-rich cases. My detailed selection criteria enabled me to purposefully select peer educators who had considerable experience (more than one year as a peer educator and working 10 hours per week in their role).
My use of purposeful sampling, rather than randomization, in participant selection allowed for a potential self-selection bias on behalf of those students who opted to participate in my study. When I sent out a recruitment email asking peer educators to participate in a study of what they had learned as peer educators, it is possible that the 50% of peer educators who responded to my study believed that they had learned, while those who did not respond believed they had nothing to contribute. Another limitation of the study relates to the sex of the sample under study. Peer education programs seem to be populated largely by female students; in a 2011 national study of peer educators, 83% of the sample was female (Wawrzynski et al.). It is possible that the female majority in my data set (five out of six peer educator participants were female) might bias the data slightly.

A third limitation is the use of student self-reported narratives. For example, in relying on self-reports in my study, I assume that the students whom I interviewed were able to reflect accurately on their experiences and were truthful in describing and attributing their experiences of learning. It is unrealistic to assume that the examples of learning that SI leaders provided in their interviews was an exhaustive list, and thus I must acknowledge that more learning occurred for these peer educators than they revealed in their interview. However, due to the purpose and focus of my study, I believe that self-reported narrative data are still ideal, in order to obtain the kind of in-depth, rich data of student learning that the study seeks (Pascarella, 2006; Stake 2010).

Finally, another limitation of my study is related to what I believe to be the limitations of the CAS learning outcomes framework I used in my data analysis of what participants learned. As I have already mentioned in Chapter 3, in my discussion of my interview questions, I found it challenging to re-word the theoretical language used in the CAS learning outcomes into colloquial language that would resonate with student participants. Furthermore, if I turn a
skeptical eye to the CAS learning outcomes framework, I must admit that, after conducting my study, I have become aware of some limitations to the external heterogeneity of the dimensions of learning outcomes; I believe that in some instances there are not ‘clear and bold’ differences between the categories. For example, I have already discussed the difficulty I had in discerning between three dimensions of the cognitive complexity learning outcome domain--critical thinking, reflective thinking, and effective reasoning--and that I felt I needed to condense these three dimensions into one general category of cognitive complexity. Similarly, I feel that students’ experience of developing confidence can be included in more than one CAS learning outcomes dimension, which is problematic: developing general confidence in self corresponds to the realistic self-appraisal, self-understanding, and self-respect learning outcome dimension, yet developing confidence specifically in communication corresponds to the communicating effectively learning outcome dimension. Furthermore, the description associated with the effective leadership learning outcome dimension is, I believe, in consideration of current leadership scholarship (Northhouse, 2010), a narrow definition of leadership.

Even after consideration of the limitations addressed above, the qualitative case study addressing my research questions is intended to provide greater understanding into not only what university students as peer educators learn, but how they learn in their peer educator role.

**Implications and Significance of My Research and Findings**

The findings of my research have implications for the SI program at Mid-sized U, where my study was conducted, in addition to contributing to a broader body of knowledge relating to peer educators and co-curricular learning. Furthermore, my research has the potential to contribute to the methodology for future research regarding the CAS learning outcomes.
The SI Program at Mid-sized U

Despite the small sample size, I contend that the findings of my study increase our understanding of learning (and the potential for learning) of SI leaders in the SI program at Mid-sized U. Based on the knowledge that the SI leaders surveyed for my study learned from experience, from interacting with others, and from reflection, program coordinators might consider more opportunities for their peer educators learning in these areas. Other SI leaders may learn differently. I recognize that I have provided a snapshot of the learning experience of one select group of SI leaders in one SI program in one university only.

Contribution to Research Literature

The findings of my study contribute to the growing body of research literature (for example, Wawrzynski et al., 2011, and Couchman, 2009) that provides empirical, rather than anecdotal, data revealing what student peer educators learn from participating in peer education programs. My study provided specific detail about student learning beyond the broad categories of learning outcomes that framed learning in previous studies. Many studies report on between six to 10 student learning outcomes, whereas my study further discerns learning into 12 dimensions of six learning outcomes, with multiple examples within each dimension. The findings of my study also increase our understanding of how students learn at university. Literature on co-curricular learning in higher education previously cited in my literature review (ACPA & NAPSA, 2006) explained the need for understanding how students are learning outside of the university academic classroom. My study provides an example of one such case of learning in the co-curricular environment, where many learning opportunities existed for peer educators.
In addition to contributing to the body of knowledge regarding peer educators and co-curricular learning, my research adds to the literature regarding the use of learning outcomes to qualitatively assess student learning in higher education. I developed qualitative interview questions (Appendix H) based on the CAS (2009) learning outcomes and modified the CAS learning outcomes framework into a data analysis coding matrix. Both of these aspects of the methods that I developed for my study could be used by other researchers who wish to examine student learning in terms of learning outcomes.

**Contribution to Methodology**

Williams, in an article about the future of peer education programs, noted, “It is crucial that all existing programs that use peer educators have ongoing and thorough learning outcomes articulated and assessed. This is a particularly critical need for those programs whose learning benefits have been merely assumed for too long” (2011, p. 98). I have developed a learning outcomes coding matrix that could contribute to the methodology of future research, conducted on other peer education programs, which assesses the learning outcomes that peer educators achieve. The coding matrix that I used (Table 3) is based on the 2009 CAS learning outcomes framework, albeit modified and condensed into what I believe to be a more accessible coding matrix to assess student learning outcomes. The original CAS learning outcomes framework contained a series of 28 learning outcome domains that were complex, theoretical, and often challenging to distinguish between. Based on the data I collected from participants, I reduced the number of learning outcome dimensions from 28 to 12. I believe this modified version of the CAS learning outcomes framework more easily facilitates the data analysis process of matching participant data to the appropriate learning outcome within the matrix.
Future Research

Based on the findings of my research and other issues that arose throughout the process of conducting my study, I propose a number of avenues for further research. First I have some suggestions if I were to conduct the same study again. Then, I present recommendations for anyone conducting generally the same study as mine but with some changes to either the theoretical framework or sample. Next, I suggest future research that generally has the same research questions as my study, but investigates it in a different way, through a different method. Finally, I propose further research that investigates a peer educator population, but tries to understand different elements of the peer educator experience by asking different research questions.

If I were to conduct the same research study again, I would make changes to the study methodology, first to the learning outcomes coding matrix that formed part of my data analysis. In my study, I used the 2009 CAS learning outcomes in a data analysis coding matrix which I subsequently reduced to be more useful to me (Tables 2 and 3). However, I am not completely satisfied with that coding matrix that I developed. This CAS framework uses theoretical language to describe and categorize learning. At times, I often found it difficult to match participant quotations with the learning dimensions identified by the CAS framework. Realizing that the theoretical nature of the CAS learning outcomes presents a challenge, CAS also published a complementary document entitled Frameworks for Assessing Learning and Development Outcomes (FALDOs; CAS, 2006), which help place the CAS learning outcomes into accessible language and guide student affairs practitioners in the assessment of these CAS learning outcomes. However, the FALDOs, published in 2006, are based on an earlier version of the CAS learning outcomes. That earlier CAS set is comprised of 16 learning outcomes, and has
since been revised into the six learning outcomes framework, published in 2009, which I use in my study. However, the FALDOs have not been revised to match the latest constellation of six CAS learning outcomes from 2009.

The content of the FALDOs cover an array of learning outcomes that are extremely similar to the 2009 CAS learning outcomes; the difference lies in that fact that the learning outcomes found in the FALDOs are categorized in a different arrangement and in some cases are given greater weighting than in the 2009 CAS framework. Thus, although the learning outcomes content is relatively similar between the 2009 CAS and 2006 FALDOs frameworks, the arrangement and weighting of the learning outcomes vary in the two models. Unfortunately, I became aware of the FALDOs after I had developed my research methods based on the CAS 2009 framework of six learning outcomes. Because my interview questions and coding matrix were already arranged according to the CAS 2009 framework, I decided that the learning outcomes assessment framework that the FALDOs provide would not be appropriate for use in my current study, because of the misalignment previously stated. It is my hope that CAS will soon publish a new Framework for Assessing Learning and Development Outcomes based on the latest six CAS learning outcomes. Ideally any further research would be based on these new FALDOs.

Focusing on a different (or broader) aspect of the peer educator experience is the second aspect of my research study that I would consider altering if I were to conduct the same study over again. Framing my research study to investigate the learning that peer educators experienced, rather than their general peer educator experience or different elements of their experience, had its challenges. Framing my study and research questions in terms of a detailed description of learning according to the CAS framework provided great detail and a defined
scope to my research, but it was limiting in terms of what constituted student learning. As a result, during my data analysis, I discarded some information-rich data because they did not fit within the framework of learning I used in my study. For example, some participants spoke in great details about developing confidence in the SI leader role, or mentioned the sense of community they felt in the SI leader role. Although I mentioned some of these findings as they relate to the CAS learning outcomes, there was much more of peer educators’ experience related to developing confidence and a sense of community in the SI leader role than was captured by the CAS learning outcomes framework. But because these responses did not fall within any of the categories of CAS learning outcomes, I had to consider these data extraneous to my research questions. In a future study, I would like to explore some of these other factors like developing confidence and a sense of belonging.

Finally, if I were to conduct another study of peer educators’ learning, I would like to frame learning in terms other than through learning outcomes. My interview questions and data analysis were both guided by the CAS learning outcomes’ framework. But what if I conceptualized the learning of peer educators according to a different learning framework? For example, if I sought to understand what and how peer educators learn through the lens of transformative learning theory (Mezirow, 1991), what new findings and insight would that elicit?

Next, I discuss potential studies that could be conducted by other researchers. Future studies of peer educators’ learning could conduct essentially the same study as I did but with a different population sample. An obvious change would be to broaden the sample, both within a single peer educator program and then across programs. Another change might be to investigate if any gender differences exist. Based on the findings from my research, I wonder whether the single male peer educator whom I interviewed had a different learning experience from the five
females. Future research could look at potential gender differences by interviewing more male peer educators and by comparing the two subpopulations.

Future research could still look at the learning that peer educators experience, but could combine different assessment methods to expand beyond my use of only qualitative interviews. For example, a mixed-methods study could combine a variety of methods that have been used in previous study of peer educators. Peer educators could be asked to complete the NPES (Wawrzynski et al., 2011) quantitative questionnaire, both pre- and post-involvement as peer educators. In addition, peer educators could also complete narrative reflections at the end of select experiences (such as was used Couchman’s 2009 study); an end of year reflective interview similar to that which I used in my study; and finally a post-graduation reflection of what skills they learned as a peer educator are most applicable to their lives after graduate (similar to that used by Congos and Stout, 2003). This would be a massive undertaking with vast amounts of data for any future researcher, but it would be fascinating to track learning through a variety of methods. Other changes to the method of assessment could improve upon the collection of data regarding how peer educators learn. Asking someone what they learned from an experience is relatively accessible to most people; whereas asking someone how they learned can often be difficult to access and explain to an interviewer. Future researchers could develop methods to further access peer educators’ understanding of how they learned. This could occur through developing different interview probes, or from developing an entirely different research method.

Future research might also involve the repetition of the methods used in my study, but with multiple groups of peer educators within a single institution, or with a certain type of peer educator group across multiple institutions. I would like to see this type of larger-scale peer
educator assessment conducted first within Ontario post-secondary institutions, and then perhaps across Canada, collecting data on different peer educator programs within and across institutions. These larger-scale studies would provide a level of understanding and benchmarking regarding peer educators and peer education programs similar to what Wawrzynski et al. (2011) carried out when they surveyed over 1700 peer educators in the United States.

Finally, the findings from my research study prompted me to wonder about a variety of other research questions that might merit investigation to further understand the peer educator experience. Seeking to understand peer educators’ motivations for being peer educators is a research question that could be investigated in a peer educator population. Some questions are: what were students’ goals in joining a peer education program, and what are they hoping to get out of the experience? Do students’ motivations to become peer educators influence the learning that is experienced (or sought out) in that peer educator role? Future research questions could also investigate how a sense of community is developed or promoted in peer education programs (if at all), or the experiences of female SI leaders developing confidence and coming out of their shell in the SI leader role.

**Concluding Reflections**

Although the CAS learning outcomes can be considered an ideal towards which we aspire undergraduate students to learn, it is impractical to imagine that any single co-curricular program could address or promote learning in all of the 28 dimensions of learning outcomes identified by CAS. The learning outcomes that one would expect students to learn from a learning-assistance peer education program--such as communication, leadership, self-awareness, and diversity--were developed by SI leaders in the SI program at Mid-sized U. But the SI leaders
whom I interviewed did not mention experiencing quite a number of the CAS dimensions of learning.

Based on the findings of my research, I think that some areas of training and professional development could be changed in the SI program at Mid-sized U to address learning in certain learning outcomes. For example, although relating knowledge to daily life was experienced by many of the participants, no one mentioned it as an example of significant learning in the SI leader role. Perhaps the SI program could develop a professional development activity that focuses on the transfer of learning from the SI leader role to outside of the SI program, one that promotes those SI leaders making connections between what they are learning as SI leaders to their lives outside of the program. For example, after asking students to reflect on what they have learned and how they have developed as SI leaders, it might be useful to get them to think about how these newly developed skills, attitudes, and abilities can and do apply to their lives outside of the SI program.

Also, based on what the participants responded as how they learned from the program, the supervisors could harness the identified learning potential in already-existing support and activities that are part of the SI program to enhance these aspects of the program to promote even more learning for peer educators. For example, while learning from experience is clearly a robust aspect of the SI program, the SI program coordinators could further develop opportunities for peer educators to learn from each other—in the workroom, in training, and perhaps during SI sessions. The reflective piece also seemed to be an important contributor to learning for some SI leaders, so continuing to promote this avenue would be beneficial to SI leaders’ learning.

On a more personal note, I believe that my research will be useful for some peer educators and peer education program coordinators by giving them a better understanding of the
learning that they may have experienced or witnessed in others. Although I cannot generalize my findings beyond the SI program at Mid-sized U, I believe the experiences of the select peer educators described in these cases could resonate with other peer educators and provide them with a point of comparison or commonality to their own experience as a peer educator. This has been the case for myself, a former peer educator and peer education program coordinator.

The descriptions that the peer educators whom I interviewed provided about where and how their learning occurred within the peer educator role has confirmed for me that peer education programs can be rife with student learning opportunities. My participants reported learning most from doing—from leading a SI session, from sharing with a fellow leader, from interacting with a student, and from practicing their skills. For the majority of students whom I interviewed, structured training sessions were mentioned much less frequently as sources of learning. Reflecting on when I was a peer education program coordinator, I realize now that I spent much of my time leading structured training for my peer educators. If I were to ever lead a peer education program again, I would definitely consider facilitating more less structured or experiential learning opportunities for my peer educators.

The literature discussed in this thesis has indicated that involvement in co-curricular programs can have a profound impact on students (Pascarella & Terenzini, 2005); this was certainly true for my involvement as a peer educator during my undergraduate degree. Most of the students whom I interviewed for my study also said that being a peer educator was an impactful experience for them. They described learning in the areas of becoming more confident and self-assured, understanding one’s career passion, and having a better understanding of how vastly different human beings can be from each other. I think often we think of co-curricular opportunities in terms of skills for students to put on their resume. While learning these skills is
important, these peer education programs can also be “a life-changing experience” (Rose, 461). One peer educator, Michelle, summed this up:

I think that this experience [as a SI leader] has definitely been the most formative one of my university career, for sure. And I know when I look back, I can’t imagine what my experience would have been here without doing this. Because it’s helped me develop in so many ways…I’ve just taken so much away from the experience. (282-290)
REFERENCES


APPENDICES

APPENDIX A

Council for the Advancement of Standards in Higher Education

Learning and Developmental Outcomes

<table>
<thead>
<tr>
<th>Student learning outcome</th>
<th>Dimensions of learning outcome</th>
<th>Examples of learning outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge acquisition, construction, integration, and application</td>
<td>Understanding knowledge from a range of disciplines</td>
<td>Possesses knowledge of human cultures and the physical world; possesses knowledge of [a specific] one or more subjects</td>
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<tr>
<td>Connecting knowledge to other knowledge, ideas, and experiences</td>
<td>Uses multiple sources of information and their synthesis to solve problems; knows how to access diverse sources of information such as the internet, text observations. And data bases</td>
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<tr>
<td>Constructing knowledge</td>
<td>Personalizes learning; makes meaning from text instruction and experience; uses experience and other sources of information to create new insights; generates new problem-solving approaches based on new insights; recognizes one's own capacity to create new understandings from learning activities and dialogue with others</td>
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<tr>
<td>Relating knowledge to daily life</td>
<td>Seeks new information to solve problems; relates knowledge to major and career decisions; makes connections between classroom and out-of-classroom learning; articulates career choices based on assessment of interests, values, skills, and abilities; provides evidence of knowledge, skills, and accomplishments resulting from formal education, work experience, community service, and volunteer experiences, for example in resumes and portfolios</td>
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<tr>
<td>Cognitive complexity</td>
<td>Critical thinking</td>
<td>Identifies important problems, questions, and issues; analyzes, interprets, and makes judgments of the relevance and quality of information; assesses assumptions and considers alternative perspectives and solutions</td>
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<tr>
<td>Reflective thinking</td>
<td>Applies previously understood information concepts and experiences to a new situation or setting; rethinks previous assumptions</td>
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<tr>
<td>Effective reasoning</td>
<td>Uses complex information from a variety of sources including personal experience and observation to form a decision or opinion; is open to new ideas and perspectives</td>
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<tr>
<td>Creativity</td>
<td>Integrates mental, emotional, and creative processes for increased insight; formulates a new approach to a particular problem</td>
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<tr>
<td>Intrapersonal development</td>
<td>Realistic self-appraisal, self-understanding, and self-respect</td>
<td>Assesses, articulates, and acknowledges personal skills, abilities, and growth areas; uses self-knowledge to make decisions such as those related to career choices; articulates rationale for personal behavior; seeks and considers feedback from others; critiques and subsequently learns from past experiences; employs self-reflection to gain insight; functions without need for constant reassurance from others; balances needs of self with needs of others</td>
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<tr>
<td>Identity development</td>
<td></td>
<td>Integrates multiple aspects of identity into a coherent whole; recognizes and exhibits interdependence in accordance with environmental, cultural, and personal values; identifies and commits to important aspects of self</td>
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<tr>
<td>Commitment to ethics and integrity</td>
<td>Incorporates ethical reasoning into action; explores and articulates the values and principles involved in personal decision-making; acts in congruence with personal values and beliefs; exemplifies dependability, honesty, and trustworthiness; accepts personal accountability</td>
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<tr>
<td>Spiritual awareness</td>
<td>Develops and articulates personal belief system; understands roles of spirituality in personal and group values and behaviors; critiques, compares, and contrasts various belief systems; explores issues of purpose, meaning, and faith</td>
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<tr>
<td>Interpersonal competence</td>
<td>Establishes healthy, mutually beneficial relationships with others; treats others with respect: manages interpersonal conflicts effectively; demonstrates appropriately assertive behavior</td>
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<tr>
<td>Interdependence</td>
<td>Seeks help from others when needed and offers assistance to others; shares a group or organizational goal and works with others to achieve it; learns from the contributions and involvement of others; accepts supervision and direction as needed</td>
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<tr>
<td>Collaboration</td>
<td>Works cooperatively with others, including people different from self and/or with different points of view; seeks and values the involvement of others; listens to and considers others' points of view</td>
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<tr>
<td>Effective leadership</td>
<td>Demonstrates skill in guiding and assisting a group, organization, or community in meeting its goals; identifies and understands the dynamics of a group; exhibits democratic principles as a leader or group member; communicates a vision, mission, or purpose that encourages commitment and action in others</td>
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<tr>
<td>Humanitarianism and civic engagement</td>
<td>Understands one's own identity and culture; seeks involvement with people different from oneself; articulates the advantages and impact of a diverse society; identifies systematic barriers to equality and inclusiveness, then advocates and justifies means for dismantling them; in interactions with others, exhibits respect and preserves the dignity of others</td>
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<tr>
<td>Characteristics</td>
<td>Description</td>
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<tr>
<td>Global perspective</td>
<td>Understands and analyzes the interconnectedness of societies worldwide; demonstrates effective stewardship of human, economic, and environmental resources.</td>
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<td>Social responsibility</td>
<td>Recognizes social systems and their influence on people; appropriately challenges the unfair, unjust, or uncivil behavior of other individuals or groups; participates in service/volunteer activities that are characterized by reciprocity; articulates the values and principles involved in personal decision-making; affirms and values the worth of individuals and communities.</td>
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<tr>
<td>Sense of civic responsibility</td>
<td>Demonstrates consideration of the welfare of others in decision-making; engages in critical reflection and principled dissent; understands and participates in relevant governance systems; educates and facilitates the civic engagement of others.</td>
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<tr>
<td>Practical competence</td>
<td><strong>Pursuing goals</strong> Sets and pursues individual goals; articulates rationale for personal and educational goals and objectives; articulates and makes plans to achieve long-term goals and objectives; identifies and works to overcome obstacles that hamper goal achievement.</td>
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<td><strong>Communicating effectively</strong> Conveys meaning in a way that others understand by writing and speaking coherently and effectively; writes and speaks after reflection; influences others through writing, speaking or artistic expression; effectively articulates abstract ideas; uses appropriate syntax and grammar; makes and evaluates presentations or performances; listens attentively to others and responds appropriately.</td>
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<td></td>
<td><strong>Technological competence</strong> Demonstrates technological literacy and skills; demonstrates the ethical application of intellectual property and privacy; uses technology ethically and effectively to communicate, solve problems, and complete tasks; stays current with technological innovations.</td>
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<td><strong>Managing personal affairs</strong> Exhibits self-reliant behaviors; manages time effectively; develops strategies for managing finances.</td>
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<tr>
<td>Managing career development</td>
<td>Takes steps to initiate a job search or seek advanced education; constructs are based on clear job objectives and with evidence of knowledge, skills, and abilities; recognizes the importance of transferrable skills</td>
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<tr>
<td>Demonstrating professionalism</td>
<td>Accepts supervision and direction as needed; values the contributions of others; holds self accountable for obligations; shows initiative; assesses, critiques, and then improves the quality of one's work and one's work environment</td>
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<tr>
<td>Maintaining health and wellness</td>
<td>Engages in behaviors and contributes to environments that promote health and reduce risk; articulates the relationship between health and wellness in accomplishng goals; exhibits behaviors that advance the health of communities</td>
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<tr>
<td>Living and purposeful and satisfying life</td>
<td>Makes purposeful decisions regarding balance among education, work, and leisure time; acts in congruence with personal identity, ethical, spiritual, and moral values</td>
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</tbody>
</table>

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APPENDIX B

Ethics approval for General Research Ethics Board at Queen’s University

January 13, 2012

Ms. Elizabeth Parsons
Master’s Student
Faculty of Education
Duncan McArthur Hall
Queen’s University
511 Union Street
Kingston, ON K7M 5R7

GREB Ref #: GEDUC-594-11; Romeo # 606490
Title: "GEDUC-594-11 The "what" and "how" of peer educators' learning"

Dear Ms. Parsons:

The General Research Ethics Board (GREB), by means of a delegated board review, has cleared your proposal entitled "GEDUC-594-11 The "what" and "how" of peer educators' learning" for ethical compliance with the Tri-Council Guidelines (TCPs) and Queen’s ethics policies. In accordance with the Tri-Council Guidelines (article D.1.6) and Senate Terms of Reference (article G), your project has been cleared for one year. At the end of each year, the GREB will ask if your project has been completed and if not, what changes have occurred or will occur in the next year.

You are reminded of your obligation to advise the GREB, with a copy to your unit REB, of any adverse event(s) that occur during this one year period (access this form at https://services.queensu.ca/romeo_researcher and click Events - GREB Adverse Event Report). An adverse event includes, but is not limited to, a complaint, a change or unexpected event that alters the level of risk for the researcher or participants or situation that requires a substantial change in approach to a participant(s). You are also advised that all adverse events must be reported to the GREB within 48 hours.

You are also reminded that all changes that might affect human participants must be cleared by the GREB. For example you must report changes to the level of risk, applicant characteristics, and implementation of new procedures. To make an amendment, access the application at https://services.queensu.ca/romeo_researcher and click Events - GREB Amendment to Approved Study Form. These changes will automatically be sent to the Ethics Coordinator, Gail Irving, at the Office of Research Services or irvingg@queensu.ca for further review and clearance by the GREB or GREB Chair.

On behalf of the General Research Ethics Board, I wish you continued success in your research.

Yours sincerely,

Joan Stevenson, Ph.D.
Professor and Chair
General Research Ethics Board

cc: Dr. Ruth Rees, Faculty Supervisor
    Dr. Leslie Wade-Woolley, Chair, Unit REB
    Erin Wicklum, c/o Graduate Studies and Bureau of Research
APPENDIX C

Letter of Information

The “what” and “how” of peer educators’ learning

I invite you to participate in a research study, named above. The purpose of this study is to understand what and how undergraduate university students learn from their role as peer educators. This study has been granted clearance according to the recommended principles of Canadian ethics guidelines, and Queen's policies. The study has also been reviewed and received ethics clearance through the [name of institution] Research Ethics Board.

I am asking for your participation in one face-to-face interview lasting no more than 90 minutes. After the interview, I will transcribe the interview and send it to you for validation. I may be contacting you about one month later with some further questions for clarification. This will be accomplished by email and/or a telephone call. I would like to complete all interviews early in the Winter 2012 term. Your time commitment to this study will be no more than 4 hours.

During the interview, I will ask you to reflect on what you have learned from working as a [SI] Leader in the [Supplemental Instruction] program at [name of institution], and to describe the situations in which this learning has occurred in your [SI] Leader role. You have the right to decline to answer any interview question that you find objectionable or discomforting. The interview will be conducted in a quiet room at [name of institution]. I will audio-record the interview using a digital recording device. Your responses to interview questions will be kept confidential to the extent possible. Your participation in this study is completely voluntary, and you may withdraw from the study at any time without penalty. Your status as a [SI] Leader in the [Supplemental Instruction] program will in no way be influenced by your participation or withdrawal from the study. Should you choose to withdraw from the study, you can email me, Elizabeth Parsons, at parsonse@queensu.ca to request removal of all or part of your data from the study. I do not anticipate any harm to you from participating in this study.

Only I and my thesis supervisor, Dr. Ruth Rees, will have access to the study data. The results of the study may be disseminated at conferences and for publication; however, all personal identifiers (such as the name of your program and university) will be removed from the data, and you will be assigned a fictitious name. Data will be retained for a minimum of five years, after which the data will be destroyed. If these data are used for secondary analysis (for example, if requested by another researcher), no identifying information will be given.

Any questions about study participation may be directed to me, Elizabeth Parsons, at parsonse@queensu.ca or my thesis supervisor Dr. Ruth Rees at ruth.rees@queensu.ca or 613 533 3022. Any ethical concerns about the study may be directed to the Chair of the General Research Ethics Board at Queen’s University, 613-533-6081 or chair.GREB@queensu.ca; or to [name, job title, and contact information, including email address and phone number, for the Research Ethics Coordinator] at [name of institution ].
APPENDIX D

Consent Form

The “what” and “how” of peer educators’ learning

If you agree to participate in this research study, please read and sign one copy of this Consent Form and return it to Elizabeth Parsons. Retain the second copy for your records.

I have read and retained a copy of the Letter of Information concerning the study, named above, and have had my questions answered regarding this study. I understand that the purpose of this study is to understand what and how undergraduate university students learn from their role as peer educators.

I understand that my participation in this study is completely voluntary, and that I may withdraw from the study at any time without penalty. I understand that my status as a [SI Leader] in the [Supplemental Instruction] program will in no way be influenced by my participation or withdrawal from the study. I understand that if I want to withdraw from the study, I can email Elizabeth Parsons at parsonse@queensu.ca and ask her to remove all or part of my data from the study.

I understand that my participation in this study involves one face-to-face interview lasting no more than 90 minutes. After the interview, a transcription of the interview will be sent to me for validation. I understand that I may be contacted about one month after the initial interview to answer some further questions for clarification. This will be accomplished by email and/or a telephone call, all during the Winter 2012 term. I understand that my time commitment to this study will be no more than 4 hours.

I understand that during the face-to-face interview, I will be asked to reflect on what I have learned from being a [SI Leader] in the [Supplemental Instruction] program, and describe the situations in which this learning has occurred in my [SI Leader] role. I understand that I have the right to decline to answer any interview question that I find objectionable or discomfiting. I understand that the interview will be audio-recorded using a digital recording device, and that my responses to interview questions will be kept confidential to the extent possible.

Any questions about study participation may be directed to me, Elizabeth Parsons, at parsonse@queensu.ca or my thesis supervisor Dr. Ruth Rees at ruth.rees@queensu.ca or 613 533 3022. Any ethical concerns about the study may be directed to the Chair of the General Research Ethics Board at Queen’s, 613-533-6081 or chair.GREB@queensu.ca; or to [name, job title, and contact information, including email address and phone number, for the Research Ethics Coordinator] at [name of institution].

Participant’s name (please print): _________________________________
Please provide an email address at which I can contact you to review your interview transcript.

Email: ________________________________

I would like to request a copy of the results of the study:  __Yes, please.  __No, thank you.
APPENDIX E

Recruitment Email

Dear [individual peer educator’s name]

The “what” and “how” of peer educators’ learning

I am writing to invite you to participate in a research study, named above. The purpose of the study is to understand what and how undergraduate university students learn from their role as peer educators.

You are invited to participate in this study because of your position as a [SI Leader] in the [Supplemental Instruction] program at [name of institution]. A have consulted with [name of program coordinator], and you are one [SI Leader] that [he/she] recommended I contact to invite to participate in this study.

I am asking for your participation in one face-to-face interview (to be arranged at your convenience) and lasting no more than 90 minutes. After the interview, I will transcribe the interview and send it to you for validation. I may be contacting you about one month later with some further questions for clarification. This will be accomplished by email and/or a telephone call. I would like to complete all interviews early in the Winter 2012 term. I will take up no more than 4 hours of your time.

During the face-to-face interview, I will ask you to reflect on what you have learned from working as a [SI Leader] in the [Supplemental Instruction] program, and describe the situations in which this learning has occurred in your [peer educator] role. Your responses to interview questions will be kept confidential to the extent possible. Your participation in this study is completely voluntary, and you may withdraw from the study at any time without penalty. Your status as a [SI Leader] in the [Supplemental Instruction] program will in no way be influenced by your participation or withdrawal from the study.

This research study is being conducted by me, Elizabeth Parsons, a Master’s of Education student at Queen’s University in Kingston, Ontario, under the supervision of Dr. Ruth Rees, Professor in the Faculty of Education at Queen’s University. This study has been granted clearance according to the recommended principles of Canadian ethics guidelines, and Queen's policies. The study has also been reviewed and received ethics clearance through the [name of institution] Research Ethics Board.

Please reply to me, Elizabeth Parsons, at parsonse@queensu.ca by [date] if you wish to participate in this study or have any questions.

Thank you for your time and consideration. Kind regards,

Elizabeth Parsons
APPENDIX F

Sample interview questions submitted for ethics approval

The “what” and “how” of peer educators’ learning:

Practical learning
Please give me examples of the practical skills, if any, that you have acquired since working as a [peer educator].
(After PEs provide examples, I will then go back and name them, and ask PEs to describe how they learned/used these skills.)

Interpersonal learning
As a [peer educator] you must work with and through other people. Describe some of the ways that you successfully do this, and what you learned about dealing with people through your role as a [peer educator].
(Probe: interacting with students; working with other PEs in your program; facilitating a study session)

Intrapersonal learning
Being a [peer educator], you might have learned some things about yourself. Can you describe the things you learned about yourself from being a [peer educator]? Please indicate when and where you noticed this about yourself.

Cognitive complexity
Being a [peer educator] may have changed or helped you develop your thinking skills, or the way you think about things. Describe how your thinking/cognitive skills have developed from being a [peer educator]? Give an example. How did that change happen?
Give an example of how you might deal with something or think about something differently now, having been a [peer educator]. What experiences as a peer educator allowed you to learn these new cognitive skills?

Knowledge acquisition, construction, integration, and application
What kind of knowledge or new insights did you gain from being a [peer educator]?
Sometime [peer educators] make connections between what they learn from their experiences as [peer educators] with their daily lives. In what ways did you experience this from being a [peer educator]? Please explain/provide an example. What parts of being a [peer educator] helped with this type of learning?

Humanitarianism and civic engagement
As a [peer educator] it is likely that you interacted with students who are similar to you, and those who are different from you, both socially and culturally. From your time as a [peer educator], in what ways have you understood or recognized differences between your own social or cultural group, and people from different social or cultural backgrounds than your own? When and how did this come about? What triggered this? Please provide an example.
APPENDIX G

Ethics approval from Research Ethics Board at institution of study

**RESEARCH ETHICS BOARD**
Certification of Ethical Acceptability of Research Involving Human Participants

<table>
<thead>
<tr>
<th>APPROVAL PERIOD:</th>
<th>January 25, 2012 to January 25, 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>REB NUMBER:</td>
<td>12JA022</td>
</tr>
<tr>
<td>TYPE OF REVIEW:</td>
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</tr>
<tr>
<td>TITLE OF PROJECT:</td>
<td>The “what” and “how” of peer educators’ learning</td>
</tr>
</tbody>
</table>

The members of the Research Ethics Board have examined the protocol which describes the participation of the human subjects in the above-named research project and considers the procedures, as described by the applicant, to conform to the University’s ethical standards and the Tri-Council Policy Statement.

The REB requires that you adhere to the protocol as last reviewed and approved by the REB. The REB must approve any modifications before they can be implemented. If you wish to modify your research project, please complete the Change Request Form. If there is a change in your source of funding, or a previously unfunded project receives funding, you must report this as a change to the protocol.

Adverse or unexpected events must be reported to the REB as soon as possible with an indication of how these events affect, in the view of the Responsible Faculty, the safety of the participants, and the continuation of the protocol.

If research participants are in the care of a health facility, at a school, or other institution or community organization, it is the responsibility of the Principal Investigator to ensure that the ethical guidelines and approvals of those facilities or institutions are obtained and filed with the REB prior to the initiation of any research protocols.

The Tri-council Policy Statement requires that ongoing research be monitored by, at a minimum, a final report and, if the approval period is longer than one year, annual reports. Continued approval is contingent on timely submission of reports.

Membership of the Research Ethics Board:

Approved: per Chair, Research Ethics Board

Date: ___________________
Interview Protocol

At the beginning of the interview:

1. Interviewer thanks participant for taking time to participate in the interview.
2. Participant reads LOI and asks if they have any questions. (Interviewer answers participant questions.)
3. Participant reads CF; signs both copies of the CF, interviewer retains one copy.
4. Interviewer verbally summarizes the details of the study and how the interview will proceed.
5. Interviewer reminds participant of their right to ask questions and decline to answer any questions posed to them.
6. Interviewer reminds participant of the confidentiality of what they say during the interview. Asks participant not to discuss the interview with others until all interviews have been completed.
7. Participant is prompted to create a pseudonym for themselves.
8. Participant is asked if they have any questions for the interviewer before the interview begins. (Interviewer answers participant questions).
9. Interviewer begins recording device.

Interview questions:

Roles and Responsibilities

For how many semesters have you been a SI leader with this program? ____

List for me 3 or 4 highlights or favourite experiences from your time as a SI Leader.

Practical learning

From your time as a SI Leader you’ve probably become better at some things. What skills or behaviours or habits have you developed from being an SI leader?

Interpersonal learning

As a SI Leader you have to work with and interact with a lot of different people – students, other SI leaders, your supervisors, etc. How have your interactions with other people changed from being a SI Leader?
Intrapersonal learning

From your experiences as an SI leader, you may have learned some things about yourself. What have you learned about yourself from being an SI leader?

Cognitive complexity

This is a question about your thinking process, about the steps you go through when you’re thinking about something. This is a question about how you analyze a situation, how you contemplate or consider a situation. This is a question about how your thinking process may have matured or evolved from your time as an SI leader. When you’re faced with something, how has your thinking process changed from being a SI Leader?

Knowledge acquisition, construction, integration, and application

Sometimes SI leaders make connections between what they learn from their experiences as SI Leader and their daily lives. What are some things that you’ve learned as a SI Leader that have transferred into other parts of your life?

Humanitarianism and civic engagement

As an SI leader it is likely that you have interacted with people from many different backgrounds. What have you learned as an SI Leader from interacting with people who are different from you?

A big part of being a SI leader is helping others and being part of a community. After being a SI leader, do you feel differently about helping others or being part of a community?

Final Question

I want to give you a chance to share anything that you want to share - what have you learned from your time as a SLG Leader?