UNIVERSITY OF WISCONSIN-LA CROSSE

GRADUATE STUDIES

FROM INTERNSHIP TO CLASSROOM: A STUDY

OF ACADEMIC SELF-EFFICACY

A Chapter Style Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Science in Education – Student Affairs Administration in Higher Education

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May, 2011
FROM INTERNSHIP TO CLASSROOM: A STUDY OF

ACADEMIC SELF-EFFICACY

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ABSTRACT


This study connects academics and internships by examining the relationship of students who complete internships and their academic self-efficacy. This concept is based on the belief that students are developing into well-rounded, critical thinkers and they should be able to apply their academic knowledge to their internship experiences and then later apply their internship experience to their future academic studies. The research included University of Wisconsin-La Crosse students who participated in internships associated with the Accountancy, Communication Studies, and Political Science Departments during the spring, summer, and fall semesters in 2010. Academic self-efficacy scores from 50 participants were examined and analyzed based on student demographics and internship characteristics.

Results indicated there were no statistically significant differences in academic self-efficacy based on a student’s gender, academic class, or if they took additional credits when they were completing their internship. Additionally, there was no significant difference in academic self-efficacy based on the internship characteristics: salary, hours worked, academic department, and intern credits. Findings suggest possible implications for credit based-internships since there was not a significant difference between academic self-efficacy scores for the number of intern credits earned, including no credit. Other findings and recommendations for future research are also discussed.
ACKNOWLEDGEMENTS

My thesis would not be possible without the support and assistance from many individuals and offices. Thank you to my thesis committee chair, Larry Ringgenberg, Ph.D., for his continuous guidance and encouragement throughout the entire process. I also am very appreciative of the contributions made by my other thesis committee members: Jeannie Hanley, Ed.D., and Ken Winter, Ph.D. I am grateful for your support, knowledge, and the time that you gave throughout the last year.

I would also like to thank the UW-La Crosse Career Services Office for its willingness to let me reach out to students participating in the campus internship program for my research. I truly appreciate the staff’s support throughout the year as I balanced my thesis research, work as a graduate assistant in Career Services, graduate classes, and other commitments.

A special thanks also goes to Sherwin Toribio, Ph. D., director of the UW-La Crosse Statistical Consulting Center, for his assistance in analyzing my data and determining the appropriate statistical tests to use.

Finally, there are not enough words to express my gratitude to my husband Scott for his constant support and understanding not only during my graduate studies and research, but also as I transition into a new career in student affairs and career development.
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CHAPTER I
INTRODUCTION

Most students today enroll in college to gain the proper credentials for entering the job market. The most common credential, a bachelor’s degree, is often considered a basic requirement for many higher paying careers. The U.S. Bureau of Labor Statistics (2008) data show the median weekly earnings for a bachelor’s degree holder is $1,012, compared to a $618 per week (median) for those with a high school diploma. In addition to an increased income, many parents and students expect that a college degree will equal increased employability. However, just because someone has a college degree, does not mean he or she may get his or her desired job. Students still need to build skills and gain experiences in college that have the potential to increase their employability. With the recent economic downturn employers have also decreased plans to hire college graduates. According to the Michigan State University Collegiate Employment Research Institute (CERI), 27% of employers indicated plans to hire college graduates during the 2009-10 academic year, a number that is down 20% from the previous year; additionally, 42% said they were uncertain about hiring decisions (2009). With such a tight job market college students need to, more than ever, focus on developing their “skills and competencies while building solid professional connections” (CERI, 2009, p. 3).

Internships are one way that students can build workplace skills and apply academic knowledge, through a one-time professional work experience, related to an academic major or career goal (National Association of Colleges and Employers, 2010).
However, colleges and universities often struggle with the concept of building vocational skills amongst students. Historically this has been a challenge, as the purpose of higher education has shifted directions based on the philosophical concept of creating well-rounded, critical thinking individuals, with some or little focus on career preparation or “vocational training.” In the early 1800s education reformers were beginning to expand curriculum to include more specialized subject areas. Liberal education supporters took a stand with the Yale Report of 1828 to uphold traditional curricula which focused on the classics and mathematics. The Yale Report reinforced an “ancient psychology of learning which saw the mind as a receptacle and as a muscle with various potentialities waiting to be trained” (Rudolph, 1990, p. 132). Ultimately, the authors viewed higher education as solely a liberal education, which broadened the minds of great leaders to become disciplined, balanced and reasoned individuals. Even though the purpose of higher education has transformed over time, some academics today still question the relationship, validity of learning and even place of vocational-related activities, such as internships, in the academic collegiate environment. However, it could be thought that if students are developing into well-rounded, critical thinkers they may be able to transfer their academic knowledge and skills into their internship experience, as well as, begin to relate workplace situations from their internships to their academic studies.

Research on internships in relationship to academic learning began in the late 1960s and early 1970s. At the time, educators were seeking to build support for students receiving academic credit for internship and cooperative education programs. The Cooperative Education Association (now the Cooperative Education and Internship Association) and the Cooperative Education Division of the American Society for
Engineering Education appointed a joint committee in September 1968 in an effort to
document momentum and provide measures for appropriate conditions to support for-
credit cooperative education programs (Opperman et al., 1971). Now, four decades later,
few studies have touched on this topic. There has been some research on how internship
program structure can guide student learning. In particular, Clark (2003) suggested that
specific academic assignments can help direct student reflection on the internship
learning outcomes, including “understand one’s self and the job context, gather evidence
of experience gained, learn how to learn from experience, and integrate theory and
practice” (p. 472). Additionally, other studies have examined relationships between
internships and academic performance through GPA measurement. English and Koeppen
(1993) found that students completing internships significantly performed better in
accounting courses and in overall GPA, in comparison to non-interns following the
internship semester. The study compared 57 student interns to a control group of 57 non-
interns. Only a few studies have focused on academic-self efficacy (self-perception of
academic abilities) particularly with students participating in cooperative education
programs (similar to internships) in engineering and computer science fields. The study
by Whitman et al. (2008) examined the cooperative education experiences of women in
relationship to three dimensions of self-efficacy: work, academic and, career. Results
indicated that cooperative education students increased their work self-efficacy over the
non-cooperative education control group. Conversely, the control group significantly
increased their academic self-efficacy over the cooperative education students. Further
research in this area has the potential to build stronger support in academia for internship
programs. It may offer more insight on how students incorporate their internship experiences into their academic learning and comprehension processes.

**Statement of Problem**

Current internship research focuses mostly on student benefits, such as career exploration, development and employment opportunities. Research on the academic value of internships and the learning that takes place through internships has been minimal since the late 60s and early 70s when educators were building support for credit for internship and cooperative education experiences. This type of research needs to be revisited and expanded to maintain and build support for internships for credit amongst university faculty. In support of connecting academics and internships, this research will examine the relationship of the college student internship experience and academic self-efficacy.

The research problem is best stated in the form of the following questions:

1. What is the level of academic self-efficacy for students who complete internships?

2. What personal demographics and internship characteristics have a relationship with academic self-efficacy?

**Null Hypotheses**

The null hypotheses for this study include the following:

Ho 1: There is no statistically significant difference in academic self-efficacy based on gender.

Ho 2: There is no statistically significant difference in academic self-efficacy based on salary status.
Ho 3: There is no statistically significant difference in academic self-efficacy based on internship workload.

Ho 4: There is no statistically significant difference in academic self-efficacy based on the academic department where the internship is completed.

Ho 5: There is no statistically significant difference in academic self-efficacy based on the number of credits completed for the internship during the immediate semester completed.

Ho 6: There is no statistically significant difference in academic self-efficacy based on the number of additional credits (non-intern) taken/completed during the semester when the internship is completed.

Ho 7: There is no statistically significant difference in academic self-efficacy based on the student’s academic class during the internship.

**UW-La Crosse Cooperative Education and Internship Program**

The UW-La Crosse Cooperative Education and Internship Program is one of the largest programs of its kind in the University of Wisconsin System (University of Wisconsin-La Crosse Career Services, 2010a). More than 800 students in 33 academic departments participated in the program during the spring, summer and fall semesters of the 2008-09 academic year (University of Wisconsin-La Crosse Career Services, 2009b).

The Career Services Office coordinates most of the University’s internships. Career advisors assist students throughout the application process and supervise the actual internship experience, while faculty advisors approve the academic credit project requirements (if applicable) and award grades by pass/fail or letter (K. Stanek, personal communication, November 19, 2009). Internship requirements vary by academic department including specifications on a minimum GPA and/or major GPA, class standing, total maximum or minimum internship credits toward major, grading (by pass/fail or letter), and project or paper requirements. If a major does not have a specific internship course or a student has exceeded his or her maximum academic department
internship credit, students can choose to receive a university-wide internship credit (University of Wisconsin-La Crosse Career Services, 2009a). Students may also elect to complete internships for no credit, if their major does not require an internship or if they have already completed their internship credit requirements.

Students can search and apply for internships independently or through the UW-La Crosse Eagle Opportunities online job listing system. The UW-La Crosse Career Services Office provides students assistance through Internship Information Sessions, which is offered both in person and online. Additionally, the office also provides assistance with the application and search process, cover letter and resume development, and interview preparation. Once an internship is secured students participate in an Internship Orientation Session, which reviews required paperwork, concerns students may encounter while on the internship and professionalism on the job. The internship paperwork includes a credit approval form, student/employer work agreement, work progress reports, employer evaluations, student evaluation of internship experience, and a paper or project as determined by faculty advisor (University of Wisconsin-La Crosse Career Services, 2010b).

This research focuses on analyzing the relationship of students’ internship experiences and their academic self-efficacy. In particular, this study includes analysis of historically the three largest academic department internship programs: accountancy, communication studies and political science. According to the 2008-09 UW-La Crosse Career Services Annual Report (2009b), student internship placement in these departments included 112 in accountancy, 50 in communication studies and 92 in political science.
Assumptions and Limitations

This study makes several assumptions. It assumes that students’ internship experiences are related to their academic major. It also assumes there is some element of student satisfaction associated with the internship experience.

The research for this study is limited by a number of factors, including:

1. The study only includes students in three academic areas (accountancy, communication studies, and political science) managed by the UW-La Crosse Career Services Office. Therefore, the study may not be representative of other academic internship programs managed by Career Services or any other academic department.

2. The study only assesses undergraduate students returning to the classroom the semester following the internship experience. This does not include students who will be graduating the same semester as their internship experience.

3. This research is based solely on the UW-La Crosse students’ internship experiences. It may not be representative of students at other higher education institutions.

4. The study is based on student-reported perceptions. Each student may interpret his or her experiences in different contexts, as well as scales.

5. There are reliability and validity issues associated with the academic self-efficacy scale constructed by the author of this study. This is the first time this instrument has been utilized. While the instrument was developed based on Bandura’s (2006) guide for constructing self-efficacy scales, extended use would help strengthen the reliability and validity of its use.
Definition of Terms

- **Academic self-efficacy**: An individual’s self-perception of his or her academic abilities.

- **Cooperative education**: A program in which students gain work experience by alternating full-time classroom study with full-time employment related to students’ academic study. Participants will usually work over multiple periods of time, often gaining a year or more of work experience. Most positions are paid and include academic credit (National Association of Colleges and Employers, 2010).

- **Experiential learning**: A theoretical model that links the processes of learning personal development, work and education. It is based on the concept that people learn from experiences (Kolb, 1984).

- **Intern**: An undergraduate college student participating in a one-time work or service experience related to his or her major or career goal.

- **Internship**: A one-time work or service experience related to a major or career goal that involves students working in professional settings under supervision of practicing professionals. These experiences may or may not be paid. Students may or may not receive academic credit (National Association of Colleges and Employers, 2010).

- **Internship characteristics**: The work experience parameters, which includes, but are not limited to, the hours worked per week, academic credit earned and salary received.

- **Internship for credit**: Students receive academic credit for their internship work experience. The amount of credit received depends on the academic department and the hours worked by the student. Students completing internships for credit are often
required to complete progress reports and an academic project. They are assigned a faculty or staff advisor from the university. Typically these internships need to be approved by a career services office or academic department.

- **Non-credit internships:** Students complete an internship experience without receiving academic credit. These experiences do not need to be approved and usually do not require any reports or projects.

- **Self-efficacy:** An individual’s self-perception of his or her capabilities. This should not be interchanged with self-esteem, which reflects personal judgment of self-worth (Bandura, 1997).

- **Vocational skills:** Skills or competencies needed to effectively perform in a specific job or career area.
CHAPTER II
LITERATURE REVIEW

Introduction

Internships are meaningful experiences for college students to apply their academic studies to professional work situations, while gaining professional work experiences. Employers find these experiences to be just as valuable as students’ classroom work. Michigan State University’s annual Recruiting Trends (2004) report indicated that “50 percent of employers’ new hires completed internships or co-ops within the company and additional 40% interned with another organization” (as cited in Collegiate Employment Research Institute [CERI], 2008, p. 3). Some employers have indicated they would not hire a recent graduate who did not complete an internship (CERI, 2008). Given this employer demand, it is natural that college students are seeking internship experiences to complement their academic studies. Nevertheless, some in higher education struggle with the learning component of internship experiences. Part of this challenge is tied to the differing philosophies of higher education – to build vocational skills or to build well-rounded critical thinkers. If students are developing into well-rounded, critical thinkers they may be able to transfer their academic knowledge and skills into their internship experience, and begin to relate real world situations from their internships to their academic studies.
This chapter will examine the literature to provide an overview of internships and cooperative education, a summary of related research topics, review academic learning research relating to internships and cooperative education, and examine the theory and research relating to academic self-efficacy and internships and cooperative education. While this research is focused on internships, the literature review includes studies about cooperative education due to the strong similarities of the two experiential learning programs.

Overview of Internships and Cooperative Education

Just over 50 percent of college graduates have held an internship or cooperative education experience (National Association of Colleges and Employers [NACE], 2010). Both are types of experiential learning, which is a process of learning through personal development, work and education (Kolb, 1984). Cooperative education is a program where students gain work experience by alternating full-time classroom study with full-time employment related to their academic study. Participants often work over multiple periods of time, gaining a year or more of work experience. Most positions are paid and include academic credit (NACE, 2010). While similar, internships are one-time work or service experiences related to a major or career goal that involves students working in professional settings under supervision of practicing professionals. These experiences may or may not be paid. Academic credit may or may not be earned through the experience (NACE, 2010).

History of Internships and Cooperative Education

The beginnings of internships and cooperative education occurred in the early 1900s in the engineering curriculum (Dube & Miller, 1998; Howard, 2004). University
of Cincinnati engineering professor Herman Schneider is credited with founding cooperative education.

He recognized that most students need and/or want to work while attending college. He observed . . . the jobs his student obtained were either menial or unrelated to their career goals. Through cooperative education, Schneider found a way to satisfy students’ financial needs as well as provide them with meaningful experience (as cited in Howard, 2004, p. 4)

Cooperative education and internship programs started to expand in the 1960s as a result of federal funding. Initially, the College and Work Study Program (now known as the Federal Work-Study Program) allowed colleges and universities to use one percent of funds to develop cooperative education programs (Dube & Miller, 1988). Cooperative education advocates were later able to gain legislative support through Title VIII of the Higher Education Act of 1965, which provided new funds for universities to develop their own cooperative education programs. Cooperative education programs continued to grow because of federal funding, from 60 programs in 1965 to 1,012 in 1986. Federal funds gradually decreased and then were discontinued in 1996 (Howard, 2004). While the number of university cooperative education programs decreased, student participation has continued to grow. According to Pettit (1998), about 250,000 students continue to participate in cooperative education experiences annually (as cited in Howard, 2004). The National Association of Colleges and Employers (2010) indicated in a recent study that a little more than 50 percent of college graduates have participated in an internship or cooperative education experience.

Experiential Learning Theory

Internships and cooperative education are rooted in experiential learning theory, which Kolb (1984) describes as a learning process through experiences. The process is a
four-stage cycle (see Figure 1) that individuals move through, beginning at any stage: concrete experience, reflective observation, abstract conceptualization, and active experimentation (Kolb, 1984).

Figure 1. Kolb’s Four-Stage Cycle of Experiential Learning. Individuals move throughout the stages as a part of the continuous learning process (Kolb, 1984).

A stage may be more appealing to different learning style preferences. However, individuals learn more by working through the entire process, which is often the situation when an intern or a cooperative education student takes on a task at their worksite. For example, students have concrete experiences through their internship or cooperative education site; on the job, at school and through class assignments students may reflect on the experience; and this reflection gives students a way to develop abstract concepts, which they will then apply to future experiences at their internship or cooperative education site (Cates & Jones, 1999; Linn, 2004).

**Summary of Research on Internships and Cooperative Education**

Research on internships and cooperative education exists today; however most research was completed in the late 1960s through the 1980s due to federal funding for
such programs. Most research was conducted to build support for students to receive academic credit for internship and cooperative education programs. Research relating to the relationship with academic learning has been minimal since that time (Whitman, Hamann, Raelin, & Reisberg, 2008). Continued research in this area has been emphasized by Cates and Jones (1999), who stated that a “co-op is an educational program. It is imperative that co-op professionals demonstrate that co-op is educational and not simply concerned with employment” (p. 66). Howard (2004) also supports this concept, especially since higher education today is “focus[ed] heavily on student learning outcomes . . . . [and] Just like educators in classroom programs, co-op educators must demonstrate that student learning outcomes are being met” (p. 5).

Other Types of Research

A variety of research has been conducted on the benefits of internships and cooperative education for college students, including knowledge of career options (Bay, 2006; Hergert, 2009; Knowles, 1971); understanding of the workplace environment (Bay, 2006; Cates & Jones, 1999; Knowles, 1971); ability to transition from student to employee (Cates & Jones, 1999); development of soft skills (Cates & Jones, 1999); sense of confidence (Bay, 2006; Knowles, 1971); employability (Hergert, 2009); interest in entrepreneurism (Weible, 2009); and greater compensation over peers without such experience (Gardner, Nixon, & Motschenbacker, 1992). Academic-related research relating to internships and cooperative education will be addressed in more depth in the next section, as it relates to the purpose of this research.
Internships and Cooperative Education and Academic Learning

Academic-related research in relationship to internships and cooperative education focuses around two themes: program structure, and academic performance.

Program Structure

Internships and cooperative education program structure can help guide student learning during these experiences. Literature suggests learning outcomes or objectives should first be established to provide students with a clear understanding that an internship is not just a job, but a learning experience that is tied to academic curriculum (Cates & Jones, 1999). When students are aware of learning outcomes they may be more inclined to work on developing the objectives (Jones, 2002). The Council for the Advancement of Standards in Higher Education (CAS) suggests that learning outcomes for internship programs include the following domains: knowledge acquisition, integration, construction, and application; cognitive complexity; intrapersonal development; interpersonal competence; humanitarianism and civic engagement; and practical competence (Dean, 2009). CAS is a consortium of professional associations which have established “professional standards and guidelines for student learning” (CAS, 2010b, para. 1) for more than 30 professional areas in higher education (CAS, 2010a).

Effective cooperative education and internship programs should include instruments to guide and enhance student learning (Cates & Jones, 1999). Some programs may choose to incorporate the internship experience with a formal classroom experience, in which students can discuss their internship assignments and reflect on the application of their knowledge of academic theories and concepts (Bay, 2006; Cates &
Throughout internship and cooperative education experiences, programs may choose to incorporate one or more assignments to guide student reflection on learning outcomes and application of academic knowledge. Some of these assignments may include a portfolio of work product produced during the internship (Clark, 2003; see also Cates & Jones, 1999); internship and coursework connections paper (Clark, 2003); presentation about the internship to other students (Clark, 2003); organizational structure paper (Clark, 2003); summarization of learning on the internship (Clark, 2003); and evaluate personal and interpersonal competencies (Clark, 2003; see also Cates & Jones, 1999).

A syllabus should be used to communicate cooperative education and internship program components to students, who are familiar with syllabi to find course deadlines and assignments (Cates & Jones, 1999). The CAS Standards suggest an internship course syllabus include such information as the program purpose, learning outcomes, assignments, opportunities to reflect on the internship, evaluation of the internship experience and assessment, and grading criteria if the internship is for credit (Dean, 2009). Cates and Jones (1999) say that programs should also incorporate regular assessment based on program goals and learning outcomes, which may include student and employer evaluations.

**Academic Performance**

Other researchers have examined relationships between internships and academic performance through grade point average (GPA) measurement. English and Koeppen (1993) found that students (n=57) completing internships significantly performed better in accounting courses and in overall GPA following the internship semester as compared
to a control group of 57 non-interns. Both the intern group and the control group were
from the same university. Intern students had higher post-GPAs for all courses (3.398),
accounting courses, (3.485) and business courses (3.365) as compared to non-intern
students: 3.20 for all courses, 3.075 in accounting, and 3.251 for business. Only the
overall GPA and accounting GPAs were significantly different at the .05 level (English &
Koeppen, 1993).

Koehler (1974) conducted a similar study, which evaluated students’ pre-
internship GPA with their GPAs at graduation. The research involved 226 Pennsylvania
State University intern students over a three year period and did not include a control
group. Students showed improvement in academic performance after their internship
(Koehler, 1974). In contrast, Knechel and Snowball (1987) carried out the same study as
Koehler, but included a control group. The study included University of Florida
accounting students: 108 interns and 108 non-interns in the control group. The research
showed an insignificant difference between the groups. There was a drop in overall GPA
after the internship semester for both groups and the difference between the groups was
insignificant (Knechel & Snowball, 1987). Research by Knouse, Tanner, and Harris
(1999) evaluated ACT scores and final GPAs of 1,117 students from a large southern
university who held internships and those who did not hold internships. The study
showed there was no difference in ACT scores between the groups. However, final
GPAs were significantly higher for student who completed internship experiences
(Knouse, Tanner, & Harris, 1999).

Hergert (2009) assessed students’ perceived value of their internship experience.
His findings suggested that students with higher GPAs tend to perceive greater value
from their internship experience. Hergert (2009) believes these students “may be better able to make the cognitive connections between what they have learned in class and what they are experiencing in the workplace” (p. 11).

Analyzing the relationship between GPAs and internships is often an easy way to analyze academic performance because GPA is measurable. However, there are many variables that can contribute to variations of GPA, such as different learning styles and accepted job offers. These variables alone could attribute to the differing research results. Studying academic self-efficacy in relationship to internship experiences allows for a different approach to understand how students may enhance their academic learning as a result of their internship experience. This method has the potential to provide a more comprehensive way to illustrate academic comprehension through measurement of predicted student behaviors after an internship experience.

**Academic Self-Efficacy**

While not a new theoretical concept, self-efficacy has seen minimal usage in understanding students’ perceived academic performance in relationship to their internship experiences. This section presents the theoretical concept of self-efficacy, as well as the limited research related to internships and cooperative education.

**Theory of Self-Efficacy**

Albert Bandura (1997) developed the concept of self-efficacy, which is an individual’s self-perception of his or her ability to organize and execute given tasks. Academic self-efficacy, which is used in this research, is an individual’s self-perception of his or her academic abilities. Bandura (1997) notes the concept differs from self-esteem, in that self-efficacy is based on “perceived judgments of personal capability,”
while self-esteem is based on “judgments of self-worth” (p. 11). Additionally, self-efficacy is based on the actual ability to execute tasks, whereas outcome expectations are “a judgment of the likely consequences” produced by executing these tasks (Bandura, 1986, p. 291). Self-efficacy is based on four sources of information:

1. Enactive mastery experiences that serve as indicators of capability;

2. Vicarious experiences that alter efficacy beliefs through transmission of competencies and comparison with the attainments of others;

3. Verbal persuasion and allied types of social influences that one possesses certain capabilities; and

4. Physiological and affective states from which people partly judge their capableness, strength and vulnerability to dysfunction (Bandura, 1997, p. 79)

The examination of academic self-efficacy in relationship with internship experiences allows for a deeper understanding of the behaviors and factors that impact students’ academic comprehension. This thought is based on the concept that “self-efficacy theory is often tested on a factor [domain] that exerts only partial influence over the behavior of interest” (Bandura, 1997, p. 62). Within the assessment, tests will examine numerous individual behaviors that predict self-efficacy in the respective domain (Bandura, 1997). One example Bandura (2006) gives is weight management (domain): it can be tested through individual evaluation of specific tasks, such as perceived ability to stick to a healthy diet while watching television, during holidays, or on vacation.
**Research Related to Self-Efficacy and Experiential Learning**

Fletcher (1990) provided a theoretical framework for connecting cooperative education experiences with self-efficacy theory. In particular, the study implied that students’ self-efficacy should increase when they successfully complete tasks during the cooperative education experience. Scheduled feedback from supervisors during the cooperative education experience may also positively attribute to the student’s work performance. These occurrences may create a feedback loop, where the increased self-efficacy improves the student’s work performance, which then continues to strengthen their self-efficacy (Fletcher, 1990).

![Figure 2. The Feedback Loop. Fletcher (1990) provided the theoretical framework for connecting experiential education (through cooperative education) to self-efficacy theory. A feedback loop may occur when a student successfully completes a work task and receives feedback from their supervisor. As a result, the student’s self-efficacy may increase, which then increases work performance and greater self-efficacy. This process would then repeat as the student completes new tasks and receives feedback.]

While the previous study related the theoretical concept of self-efficacy to the cooperative education experience, there is only one research study that has analyzed the
relationship between cooperative education and internship experiences and self-efficacy. The research by Whitman et al. (2008) focuses on cooperative education students in engineering, an academic discipline that has a rich history in experiential learning. Their work examined the relationship between cooperative education experiences and three dimensions of self-efficacy: work, academic, and career. Student demographic characteristics were also assessed in relationship to self-efficacy scores. The data set included female cooperative education students from two universities, with 194 in the cooperative education sample and 92 in the control group. The research methodology comprised of a pre- and post-survey, which utilized three assessment tools: the Work Self-Efficacy inventory, the Self-Efficacy for Academic Milestones and Self-Efficacy for Technical/Scientific Fields surveys, and the Career Decision-Making Self-Efficacy Scale. The study’s findings indicate that cooperative education is a “predictor of change in work self-efficacy” (Whitman et al., 2008, p.7). Cooperative education students’ academic self-efficacy did not increase in comparison with the students in the control group. Results actually show the control group of students had a greater change in academic self-efficacy (Whitman et al., 2008).

**Conclusion**

The literature reviewed in this chapter examined the theoretical concepts and research relating to internship and cooperative education experiences and academic learning. Most of the initial research relating to internships and academic learning began in the late 1960s and early 1970s as educators were seeking to build support for academic-credit-based internships and access federal funding for internship programs. Since that time most research in the area of internships and cooperative education relate
to a variety of career topics. A few studies have examined how internship and cooperative education program structure can enhance student learning. Additionally, research has assessed the relationship between student interns and their academic performance through GPA measurement. Only two studies, Fletcher (1990) and Whitman et al. (2008), have attempted to draw connections between cooperative education experiences and self-efficacy (including the academic domain). These studies are the closest works related to the research conducted in this thesis: an analysis of the relationship between students who complete internships and their academic self-efficacy. Continued research in this area may offer more insight on how students incorporate their internship experiences into their academic learning and comprehension processes.
CHAPTER III
MATERIALS AND METHODS

Introduction

This chapter will review the research materials and methods established to examine the relationship between students who complete internships and their academic self-efficacy. Information presented includes the study’s population, instrumentation, data collection methods, and approach for data analysis.

Population

Data was gathered through the University of Wisconsin-La Crosse Career Services Cooperative Education and Internship Program and targeted the population of students completing accounting, communication studies, and political science internships during the 2010 spring, summer, and fall semesters. This population was chosen because these three academic department internship programs historically have the highest participation levels. A total of 204 internships were completed throughout 2010 in the respective academic departments (see Table 1).
Table 1. Internship Participants by Semester and Academic Department for 2010

<table>
<thead>
<tr>
<th>Department/Semester</th>
<th>Spring</th>
<th>Summer</th>
<th>Fall</th>
<th>Total by Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accountancy</td>
<td>50</td>
<td>28</td>
<td>18</td>
<td>96</td>
</tr>
<tr>
<td>Communication Studies</td>
<td>16</td>
<td>3</td>
<td>11</td>
<td>30</td>
</tr>
<tr>
<td>Political Science</td>
<td>29</td>
<td>22</td>
<td>27</td>
<td>78</td>
</tr>
<tr>
<td>Total by Semester</td>
<td>95</td>
<td>53</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td>Grand Total</td>
<td></td>
<td></td>
<td></td>
<td>204</td>
</tr>
</tbody>
</table>

Note. Accountancy includes students who completed internships may have received credit through the Cooperative Education and Internship (CEI 450). In the results section, a portion of these students may have self-selected “other” as the department associated with their internship. It is possible non-credit interns may have selected “other” as their respective department.

The population included seniors who graduated the same semester during their internship. This segment of the population is irrelevant since the research is examining students’ perceived academic self-efficacy when they return to the classroom after completing an internship. However, it was not possible to extract these individuals from the population prior to the study. These individuals were instructed in the research invitation to disregard the study. If they still completed the instrument and indicated a graduation date that corresponded with the current semester, the researcher removed their responses. The population may also include students who completed internships during multiple semesters, i.e. spring and summer 2010.

Research Design

The research was designed as causal-comparative, in which attempts are made to study cause-effect relationships. The researcher attempted to study the cause-and-effect relationship between several independent variables (student demographics and internship characteristics) and a dependent variable (academic self-efficacy). The independent variables (Table 3) include: gender, salary, internship workload, academic department where the internship was completed, number of credits taken for the internship, number of credits taken in addition to internship credits, and academic class. These cause-and-
effect relationships are examined through quantitative analysis based on participants’ self-reported self-efficacy scores.

**Instrumentation**

The self-efficacy scale is the most commonly used instrument used to measure self-efficacy. There are numerous types of scales that address self-efficacy in specific domains. In reviewing available instruments, the researcher discovered there was no self-efficacy scale that addressed the domain of internship experiences in relationship to academic self-efficacy. A new self-efficacy scale was created based on Bandura’s (2006) *Guide for Constructing Self-Efficacy Scales*, which emphasizes building scale content validity through deliberate item wording in each self-efficacy item. The following sections will address the construction and scoring of the new self-efficacy scale. To study the cause-and-effect relationships discussed in the research design, the instrument also includes a series of questions that address participant demographics and the characteristics of the internship experience.

**Self-Efficacy Scale Construction**

The new self-efficacy scale was constructed by utilizing Bandura’s (2006) guide, which suggests effective self-efficacy scales rely on good conceptual analysis of the domain in which the functions are taking place. For this research, the domain is defined as *students completing an internship experience* (dependent variable) and *the actions they might take to relate that experience to future academic coursework* (independent variables). Further, Bandura (2006) says self-efficacy scales should measure the activity an individual would perform within the defined domain. These activities should also be based on a set of skills that can be self managed (Bandura, 2006). Each question for this
self-efficacy scale is based on a specific action, such as *relating internship experiences to academic theories taught in their classes during in class discussions*. These activities need to focus on what an individual “can do,” rather than “could do” (Bandura, 2006). To ensure each action was addressed in its own question, Table 2 (see below) was created by thoroughly outlining the skill-specific items relating to academic self-efficacy and students who complete internships. The 10 skill-specific questions are included in Appendix C. The self efficacy scale used in the study is titled Internship Appraisal Inventory and does not use the term *self-efficacy* in an effort to reduce biased responses by participants (Bandura, 2006).
Table 2. Skill Specific Self-Efficacy Items

<table>
<thead>
<tr>
<th>Skill Factors Influencing Domain</th>
<th>Definition of Skills</th>
<th>Self-Efficacy Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relate internship experiences to academic theories in future classes</td>
<td>Ability to understand academic theories in applied settings in 1. Core or foundational classes in College 2. Upper level class in major</td>
<td>• Relate your internship experience to the academic context taught in your (1) College of Business core classes, (2) College of Liberal Studies core classes in history, global and multicultural studies/minority cultures, or (3) College of Liberal Studies classes in the language track, humanities track, fine arts track or bachelor’s of science track. • Relate your internship experience to the academic context taught in your major upper level classes next semester.</td>
</tr>
<tr>
<td>Relate internship experiences to class activities and assignments</td>
<td>Incorporate internship experiences into class activities: • In class: discussion, quizzes, tests • Out of class: assignments</td>
<td>• Draw relationships between your internship experience and academic theories/concepts in your major during future in-class discussions or activities. • Draw relationships between your internship experience and academic theories/concepts in your major to help you study. • Draw relationships between your internship experience and academic theories/concepts in your major when completing quizzes or tests for future classes. • Draw relationships between your internship experience and academic theories/concepts in your major when completing future class assignments.</td>
</tr>
<tr>
<td>Related skills and knowledge needed in the workplace to academic coursework</td>
<td>Communicate how major coursework translates into workplace skills/knowledge</td>
<td>• Explain how your internship experience relates to the academic coursework in your major to your roommate or friends. • Explain how your internship experience relates to the academic coursework in your major to your family. • Explain how your internship experience relates to the academic coursework in your major to your professors. • Explain how your internship experience relates to the academic coursework in your major to a future employer in a cover letter, job interview or portfolio.</td>
</tr>
</tbody>
</table>

Note. The table is based on Bong’s (2006) Skill-Specific Self-Concept and Self-Efficacy Items table (p. 292, 2006).
Scale Scoring

The standard methodology for measuring self-efficacy beliefs is normally based on a 100-point scale; sometimes a 0 to 10 range may be used as a simplified version. The scale range begins at 0, indicating “cannot do” and ends at 100, indicating “certain can do.” The scale is scored by adding all self-reported scores for each question. Scales using a few steps should be avoided because they are less sensitive and less reliable (Bandura, 2006). The scale for this research utilizes a 100-point scale, with a maximum score of 1,000 points. Participants were able to indicate their level of confidence between 0 to 100 using a sliding scale, rather than selecting the level from a unit interval (such as 10, 20, 30, and so on). Scales using a few unit interval steps are less sensitive and less reliable (Streiner & Norman, 1989). The initial instrumentation utilized a unit interval scale, as outlined research protocol submitted to the UW-La Crosse Institutional Review Board (see Appendix A). The final instrumentation was updated to use a sliding scale (see Appendix C).

Demographic and Internship Characteristics Information

The null hypotheses for this research are intended to assess the relationship between student academic self-efficacy scores and student demographics and characteristics of the internship experience. These independent variables were collected through the research instrument (see Table 3) and included:

- Demographics: Gender, academic class, number of additional credits taken during the semester the internship is completed
• Internship characteristics: Salary, average workload per week, academic department where internship is completed, number of credits completed for the internship

Table 3. Demographics and Internship Characteristics Categories

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male, Female</td>
</tr>
<tr>
<td>Salary</td>
<td>Unpaid, Paid</td>
</tr>
<tr>
<td>Internship Workload</td>
<td>Full time (40 hours or more a week), Halftime (20-39 hours per week), Part time (10-19 hours per week), Less than 10 hours per week</td>
</tr>
<tr>
<td>Academic Department</td>
<td>Accountancy, Communication Studies, Political Science, Other</td>
</tr>
<tr>
<td>Internship Credits</td>
<td>0, 1-3, 4-6, 10 or more</td>
</tr>
<tr>
<td>Additional Credits</td>
<td>0, 1-9, 10 or more</td>
</tr>
<tr>
<td>Academic Class (Total Credits)</td>
<td>Freshman/Sophomore, Junior/Senior/Senior-Plus</td>
</tr>
</tbody>
</table>

*Note:* Academic Class was determined by the selection of total credits completed at the time of the internship as indicated by individual respondent.

The final inventory includes two updates to the student demographic and internship characteristic questions, as compared to the initial inventory included in the research protocol submitted to the Institutional Review Board (see Appendix C). The following question categories were adapted:

• Major was changed to academic department where internship was completed. Categories include accountancy, communication studies, political science, and other.
• Academic class next semester changed from (a) freshman, sophomore, junior, senior, graduate (student), and I will have graduated, to (b) credit ranges: 0-14, 15-29, 30-44, 45-59, 60-74, 75-89, 90-104, 105 or more.

Ethical Considerations

Ethical issues in this study were taken into consideration to minimize the risks of human subjects. A research protocol was submitted to the UW-La Crosse Institutional Review Board and was approved and declared exempt in accordance with 45CFR46, 46.110(a)(b) (B. Van Voorhis, personal communication, June 1, 2010). The research protocol and Institutional Review Board approval letter are included in Appendix B.

Pilot Study

A pilot study was conducted to enhance the reliability of the self-efficacy scale. The IRB Protocol in Appendix A includes the instrumentation used in the pilot study. Participants included nine UW-La Crosse students in the accounting, communication studies, and political science departments who had previous internship experience. Minor changes were made to the wording in the scale to improve readability and comprehension based on pilot study feedback. The original instrumentation self-efficacy scale included 10 individual questions. The self-efficacy scale formatting was then adapted to combine similar skill factors (see Table 3) to make the scale more concise and appear less repetitious, therefore increasing the readability for research participants. Each skill factor section begins with an opening phrase (see Figure 3). The related self-efficacy items then followed. Each item was still individually rated.
Method of Data Collection

Research subjects received the email invitation (see Appendix D) from the researcher as they were completing their internships during the last few weeks of the respective semester: June 2, 2010, August 19, 2010, and November 29, 2010. The invitation explained the purpose of the research, importance of student involvement, confidentiality of participants, and included a link to the online research instrument, which was created using Qualtrics survey software (see Appendix C). Research subjects were given two weeks to complete the instrument. A reminder was emailed a week (June 9, 2010, August 26, 2010, and December 6, 2010) after each initial invitation was sent
(see Appendix E). While the email invitation was the same each semester, a new research instrument was used to distinguish the difference between respondents by semester. The instrumentation still included the same questions. After all three semesters of data were collected, the researcher combined the data.

Initially the data was to be collected by the UW-La Crosse Career Services Office in conjunction with each semester’s internship evaluation survey, as indicated in the research protocol (see Appendix A). The distribution process needed to be adjusted due to logistical constraints. Instead, the assessment tool was distributed by the researcher through an email invitation as described earlier.

**Method for Data Analysis**

The research includes a mixture of parametric and non-parametric data. Analysis of the data is dependent upon the respective hypothesis data type and number of variables. The tests that will be used include Mann-Whitney, Analysis of Variance (ANOVA), and Kruskal-Wallis. The type of data and test by null hypothesis are listed below.

Ho 1: *There is no statistically significant difference in academic self-efficacy based on gender.*

Analysis of gender only uses two categories, male and female, because there no respondents identified as transgender. The data for this hypothesis is non-parametric because it is not normal. Normality is determined by the Shapiro-Wilk test (see Table 4), which indicates the male data is not normal since it is not statistically significant at the .05 level (.029). Data analysis will be done by using the Mann-Whitney test.
Table 4. Normality Testing for Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Statistic</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>23</td>
<td>.903</td>
<td>23</td>
<td>.029</td>
</tr>
<tr>
<td>Female</td>
<td>27</td>
<td>.938</td>
<td>27</td>
<td>.110</td>
</tr>
</tbody>
</table>

Ho 2: *There is no statistically significant difference in academic self-efficacy based on salary status.*

Analysis of salary status only uses two categories, unpaid and paid.

Categorical data collected was compressed by combining all paid category data. The data for this hypothesis is non-parametric because it is not normal.

Normality is determined by the Shapiro-Wilk test (see Table 5), which indicates the paid data is not normal since it is not statistically significant at the .05 level (.013). Data analysis will be done by using the Mann-Whitney test.

Table 5. Normality Testing for Salary

<table>
<thead>
<tr>
<th>Salary</th>
<th>N</th>
<th>Statistic</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unpaid</td>
<td>20</td>
<td>.934</td>
<td>20</td>
<td>.187</td>
</tr>
<tr>
<td>Paid</td>
<td>30</td>
<td>.908</td>
<td>30</td>
<td>.013</td>
</tr>
</tbody>
</table>

Ho 3: *There is no statistically significant difference in academic self-efficacy based on internship workload.*

The data for this hypothesis is parametric because it is normal. Normality is determined by the Shapiro-Wilk test (see Table 6), which indicates that all data categories are statistically significant at the .05 level. Data analysis will be done by using Analysis of Variance (ANOVA).
Table 6. Normality Testing for Internship Workload

<table>
<thead>
<tr>
<th>Academic Self-Efficacy Score</th>
<th>Workload</th>
<th>N</th>
<th>Shapiro-Wilk Statistic</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Full time</td>
<td>13</td>
<td>.870</td>
<td>13</td>
<td>.052</td>
</tr>
<tr>
<td></td>
<td>Halftime</td>
<td>16</td>
<td>.955</td>
<td>16</td>
<td>.578</td>
</tr>
<tr>
<td></td>
<td>Part time</td>
<td>13</td>
<td>.881</td>
<td>13</td>
<td>.073</td>
</tr>
<tr>
<td></td>
<td>Less than 10 hours per week</td>
<td>8</td>
<td>.897</td>
<td>8</td>
<td>.271</td>
</tr>
</tbody>
</table>

Note. Full time is equivalent to 40 hours or more per week; half time is equivalent to 20-30 hours per week; and part time is equivalent to 10-19 hours per week.

Ho 4: There is no statistically significant difference in academic self-efficacy based on the academic department where the internship is completed.

The data for this hypothesis is non-parametric because it is not normal.

Normality is determined by the Shapiro-Wilk test (see Table 7), which indicates the accountancy data is not normal since it is not statistically significant at the .05 level (.013). Data analysis will be done by using the Kruskal-Wallis test.

Table 7. Normality Testing for Academic Department Where Internship is Completed

<table>
<thead>
<tr>
<th>Academic Department</th>
<th>N</th>
<th>Shapiro-Wilk Statistic</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Self-Efficacy Score</td>
<td>Accountancy</td>
<td>28</td>
<td>.900</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Communication Studies</td>
<td>5</td>
<td>.895</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Political Science</td>
<td>14</td>
<td>.926</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>3</td>
<td>.971</td>
<td>3</td>
</tr>
</tbody>
</table>

Ho 5: There is no statistically significant difference in academic self-efficacy based on the number of credits completed for the internship during the immediate semester completed.
Analysis of credits completed for the internship uses four categories by compressing categorical data into the following groups: 0, 1-3, 4-6, and 10 or more. The data for this hypothesis is parametric because it is normal. Normality is determined by the Shapiro-Wilk test (see Table 8), which indicates that all data categories are statistically significant at the .05 level. Data analysis will be done by using Analysis of Variance (ANOVA).

Table 8. Normality Testing for Credits Completed for Internship

<table>
<thead>
<tr>
<th>Academic Self-Efficacy Score</th>
<th>Credits completed for internship</th>
<th>N</th>
<th>Statistic</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
<td>0</td>
<td>5</td>
<td>.841</td>
<td>5</td>
<td>.169</td>
</tr>
<tr>
<td>Self-Efficacy Score</td>
<td>1-3</td>
<td>27</td>
<td>.939</td>
<td>27</td>
<td>.115</td>
</tr>
<tr>
<td>4-6</td>
<td>11</td>
<td>.960</td>
<td>11</td>
<td>.774</td>
<td></td>
</tr>
<tr>
<td>10 or more</td>
<td>7</td>
<td>.882</td>
<td>7</td>
<td>.234</td>
<td></td>
</tr>
</tbody>
</table>

Ho 6: There is no statistically significant difference in academic self-efficacy based on the number of additional credits (non-intern) taken/completed during the semester when the internship is completed.

Analysis of the number of additional credits three categories by compressing categorical data into the following groups: 0, 1-9, and 10 or more. The data for this hypothesis is non-parametric because it is not normal. Normality is determined by the Shapiro-Wilk test (see Table 9), which indicates the zero additional credits data is not normal since it is not statistically significant at the .05 level (.013). Data analysis will be done by using the Kruskal-Wallis test.
Table 9. Normality Testing for Number of Additional Credits Taken During Internship

<table>
<thead>
<tr>
<th>Academic Self-Efficacy Score</th>
<th>Number of Additional Credits</th>
<th>N</th>
<th>Statistic</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>13</td>
<td>.852</td>
<td>13</td>
<td>.030</td>
<td></td>
</tr>
<tr>
<td>1-9</td>
<td>9</td>
<td>.950</td>
<td>9</td>
<td>.686</td>
<td></td>
</tr>
<tr>
<td>10 or more</td>
<td>28</td>
<td>.919</td>
<td>28</td>
<td>.032</td>
<td></td>
</tr>
</tbody>
</table>

Ho 7: There is no statistically significant difference in academic self-efficacy based on the student’s academic class during the internship.

Analysis of academic class only uses two categories, freshman/sophomore and junior/senior/senior-plus. Categorical data collected was compressed by combining original categorical data into two groups. The data for this hypothesis is non-parametric because it is not normal. Normality is determined by the Shapiro-Wilk test (see Table 10), which indicates the junior/senior/senior-plus data is not normal since it is not statistically significant at the .05 level (.013). Data analysis will be done by using the Mann-Whitney test.

Table 10. Normality Testing for Academic Class

<table>
<thead>
<tr>
<th>Academic Self-Efficacy Score</th>
<th>Academic Class</th>
<th>N</th>
<th>Statistic</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman/Sophomore</td>
<td>10</td>
<td>.875</td>
<td>10</td>
<td>.115</td>
<td></td>
</tr>
<tr>
<td>Junior/Senior/Senior-Plus</td>
<td>40</td>
<td>.934</td>
<td>40</td>
<td>.023</td>
<td></td>
</tr>
</tbody>
</table>

Conclusion

This chapter examined the methodology used in this research. It addressed the study’s population, the development of the new self-efficacy scale, and how the scale is scored. A new scale was developed because none of the existing academic self-efficacy scales addressed internship experiences in relationship to academic self-efficacy. The
new scale was developed using Bandura’s (2006) guide for constructing self-efficacy scales. Participants, former student interns, were invited by email to complete the online assessment, which included the self-efficacy scale and a series of demographic and internship characteristic questions. The next chapter will focus on the analysis of the data collected.
CHAPTER IV
DATA ANALYSIS

Introduction

The purpose of the research was to study the relationship of students who complete internships and their perceived academic self-efficacy. This chapter includes the participant demographics, descriptive statistics, and analysis of data by proposed null hypotheses.

Descriptive Statistics

Descriptive statistics were computed for the study’s demographic information, internship characteristics, and academic self-efficacy by independent variables. This information is presented to set the context for the analysis of the statistical tests conducted for each hypothesis.

Demographic Information

A total of 50 individuals (24.5%) within the population surveyed participated in the research. Demographic information collected included gender, academic class, additional credits completed during the internship, number of additional, and if the current internship was continued from the previous semester. Table 11 breaks down the demographic information by category, illustrating totals and percentages.
Table 11. Demographic Information

<table>
<thead>
<tr>
<th>Demographics by Category</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>23</td>
<td>46%</td>
</tr>
<tr>
<td>Female</td>
<td>27</td>
<td>54%</td>
</tr>
<tr>
<td>Academic Class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freshman/Sophomore</td>
<td>10</td>
<td>20%</td>
</tr>
<tr>
<td>Junior/Senior/Senior-Plus</td>
<td>40</td>
<td>80%</td>
</tr>
<tr>
<td>Additional Credits Completed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>13</td>
<td>26%</td>
</tr>
<tr>
<td>1-9</td>
<td>9</td>
<td>18%</td>
</tr>
<tr>
<td>10 or more</td>
<td>28</td>
<td>56%</td>
</tr>
<tr>
<td>Number of Additional Internships</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>37</td>
<td>74%</td>
</tr>
<tr>
<td>1</td>
<td>8</td>
<td>16%</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>8%</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Continued Internship from Last Semester</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>17</td>
<td>34%</td>
</tr>
<tr>
<td>No</td>
<td>33</td>
<td>66%</td>
</tr>
</tbody>
</table>

**Internship Characteristics**

The data collected also included information about the internships students completed. These characteristics included hours worked, salary, number of credits completed for the internship, and the academic department where the internship was completed. Table 12 breaks down the internship characteristic information by category, illustrating totals and percentages.
Table 12. Internship Characteristics

<table>
<thead>
<tr>
<th>Internship Characteristics by Category</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Workload</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full time (40 hours or more per week)</td>
<td>13</td>
<td>26%</td>
</tr>
<tr>
<td>Halftime (20-39 hours per week)</td>
<td>16</td>
<td>32%</td>
</tr>
<tr>
<td>Part time (10-19 hours per week)</td>
<td>13</td>
<td>26%</td>
</tr>
<tr>
<td>Less than 10 hours per week</td>
<td>8</td>
<td>16%</td>
</tr>
<tr>
<td><strong>Salary</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unpaid</td>
<td>20</td>
<td>40%</td>
</tr>
<tr>
<td>Paid</td>
<td>30</td>
<td>60%</td>
</tr>
<tr>
<td><strong>Internship Credits</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>13</td>
<td>26%</td>
</tr>
<tr>
<td>1-9</td>
<td>9</td>
<td>18%</td>
</tr>
<tr>
<td>10 or more</td>
<td>28</td>
<td>56%</td>
</tr>
<tr>
<td><strong>Academic Department</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accountancy</td>
<td>28</td>
<td>56%</td>
</tr>
<tr>
<td>Communication Studies</td>
<td>5</td>
<td>10%</td>
</tr>
<tr>
<td>Political Science</td>
<td>14</td>
<td>28%</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>6%</td>
</tr>
</tbody>
</table>

*Note.* In the Academic Department variable, the “other” category may include Accountancy includes students who completed internship credits through the Cooperative Education and Internship (CEI 450). These students may have opted to self-select “other” as the department associated with their internship. It is possible non-credit interns may have selected “other” as their respective department.

**Academic Self-Efficacy by Independent Variables**

Academic self-efficacy scores were calculated for each independent variable, which included gender, salary, internship workload, academic department, internship credits, additional credits, and academic class (see Table 13). Overall the mean academic self-efficacy score for all research participants was 724 out of 1,000. Males scored a mean of 751 in comparison to a mean of 702 for females. By salary, paid interns scored higher in self-efficacy ($\overline{x} = 762$), as compared to their unpaid intern peers (mean of 667). Interns who worked part time (10 to 19 hours per week) achieved the highest mean score of 755, while fulltime (40 hours or more per week) and half time (20-39 hours per week) interns mean score were both 741. Student interns working less than 10
hours per week showed a mean score of 614. In terms of academic department, accountancy interns scored the highest with a mean of 744, followed by political science interns ($\bar{x} = 728$), other department interns, ($\bar{x} = 725$), and communication studies ($\bar{x} = 622$), respectively. Students who self-selected the “other” category may include Accountancy students who completed internship credits through the Cooperative Education and Internship (CEI 450) option. It is possible that non-credit interns may have selected this category. Students who completed internships for no credit had the lowest mean score of 631. Mean self-efficacy scores increased as the number of internship credits increased: $\bar{x} = 711$ for 1 to 3 credits, $\bar{x} = 753$ for 4 to 6 credits, and $\bar{x} = 799$ for 10 or more credits. Students with no additional credits ($\bar{x} = 768$) or 1 to 9 additional credits ($\bar{x} = 737$) earned higher academic self-efficacy scores over those students who took 10 or more credits in addition to their internship ($\bar{x} = 700$). Upper class students (junior/senior/senior-plus) also scored slightly higher ($\bar{x} = 736$) over underclass (freshman/sophomore) students ($\bar{x} = 676$).
Table 13. Respondents by Demographics and Internship Characteristics

<table>
<thead>
<tr>
<th>Independent Variables By Category</th>
<th>Mean Academic Self-Efficacy Score</th>
<th>N</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>751</td>
<td>23</td>
<td>152</td>
</tr>
<tr>
<td>Female</td>
<td>702</td>
<td>27</td>
<td>205</td>
</tr>
<tr>
<td><strong>Salary</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unpaid</td>
<td>667</td>
<td>20</td>
<td>197</td>
</tr>
<tr>
<td>Paid</td>
<td>762</td>
<td>30</td>
<td>165</td>
</tr>
<tr>
<td><strong>Internship Workload</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full time (40 hours or more a week)</td>
<td>741</td>
<td>13</td>
<td>209</td>
</tr>
<tr>
<td>Halftime (20-39 hours per week)</td>
<td>741</td>
<td>16</td>
<td>124</td>
</tr>
<tr>
<td>Part time (10-19 hours per week)</td>
<td>755</td>
<td>13</td>
<td>171</td>
</tr>
<tr>
<td>Less than 10 hours per week</td>
<td>614</td>
<td>8</td>
<td>241</td>
</tr>
<tr>
<td><strong>Academic Department</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accountancy</td>
<td>744</td>
<td>28</td>
<td>179</td>
</tr>
<tr>
<td>Communication Studies</td>
<td>622</td>
<td>5</td>
<td>288</td>
</tr>
<tr>
<td>Political Science</td>
<td>728</td>
<td>14</td>
<td>154</td>
</tr>
<tr>
<td>Other</td>
<td>675</td>
<td>3</td>
<td>181</td>
</tr>
<tr>
<td><strong>Internship Credits</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>631</td>
<td>5</td>
<td>283</td>
</tr>
<tr>
<td>1-3</td>
<td>711</td>
<td>27</td>
<td>185</td>
</tr>
<tr>
<td>4-6</td>
<td>753</td>
<td>11</td>
<td>144</td>
</tr>
<tr>
<td>10 or more</td>
<td>799</td>
<td>7</td>
<td>130</td>
</tr>
<tr>
<td><strong>Additional Credits</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>768</td>
<td>13</td>
<td>196</td>
</tr>
<tr>
<td>1-9</td>
<td>737</td>
<td>9</td>
<td>128</td>
</tr>
<tr>
<td>10 or more</td>
<td>700</td>
<td>28</td>
<td>192</td>
</tr>
<tr>
<td><strong>Academic Class (Total Credits)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freshman/Sophomore</td>
<td>676</td>
<td>10</td>
<td>220</td>
</tr>
<tr>
<td>Junior/Senior/Senior-Plus</td>
<td>736</td>
<td>40</td>
<td>173</td>
</tr>
<tr>
<td><strong>All Respondents (Total)</strong></td>
<td>724</td>
<td>50</td>
<td>182</td>
</tr>
</tbody>
</table>

*Note:* Academic Class was determined by the selection of total credits completed at the time of the internship as indicated by individual respondent.

### Analysis by Hypotheses

**Ho 1:** *There is no statistically significant difference in academic self-efficacy based on gender.*

The hypothesis was analyzed using the Mann-Whitney test. The comparison of academic self-efficacy scores failed to attain significance, $P = .477$ (see Table 14).
Table 14. Ho 1: Mann-Whitney Test Results (Gender)

<table>
<thead>
<tr>
<th>Independent Variable: Gender</th>
<th>ASE</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>751</td>
<td>.477</td>
</tr>
<tr>
<td>Female</td>
<td>702</td>
<td></td>
</tr>
</tbody>
</table>

*Note: ASE= Academic Self-Efficacy Score. The significance level is .05.*

Ho 2: *There is no statistically significant difference in academic self-efficacy based on salary status.*

The Mann-Whitney test was used to analyze this hypothesis. The comparison of academic self-efficacy scores failed to attain significance, P=.072. It was determined that the null hypothesis should be retained because the test results are insignificant (.477) at the .05 level (see Table 15).

Table 15. Ho 2: Mann-Whitney Test Results (Salary Status)

<table>
<thead>
<tr>
<th>Independent Variable (salary status)</th>
<th>ASE</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unpaid</td>
<td>667</td>
<td>.072</td>
</tr>
<tr>
<td>Paid</td>
<td>762</td>
<td></td>
</tr>
</tbody>
</table>

*Note: ASE= Academic Self-Efficacy Score. The significance level is .05.*

Ho 3: *There is no statistically significant difference in academic self-efficacy based on internship workload.*

The hypothesis was evaluated by using Analysis of Variance (ANOVA). The comparison of self-efficacy scores failed to attain significance, P = .326 (see Table 16).

Table 16. Ho 3: ANOVA Test Results for Hypothesis Three (Workload)

<table>
<thead>
<tr>
<th>ASE</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>117499.336</td>
<td>3</td>
<td>39166.445</td>
<td>1.184</td>
<td>.326</td>
</tr>
<tr>
<td>Within Groups</td>
<td>1522113.784</td>
<td>46</td>
<td>33089.430</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1639613.120</td>
<td>49</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: ASE = academic self-efficacy score.*
Ho 4: There is no statistically significant difference in academic self-efficacy based on the academic department where the internship is completed.

The Kruskal-Wallis test was used to analyze this hypothesis. The comparison of self-efficacy scores failed to attain significance, $P = .749$) (see Table 17).

Table 17. Ho 4: Kruskal-Wallis Test Results (Academic Department)

<table>
<thead>
<tr>
<th>Independent Variable: Academic Department</th>
<th>ASE</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accountancy</td>
<td>744</td>
<td>.749</td>
</tr>
<tr>
<td>Communication Studies</td>
<td>622</td>
<td></td>
</tr>
<tr>
<td>Political Science</td>
<td>728</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>675</td>
<td></td>
</tr>
</tbody>
</table>

Note: Asymptotic significances are displayed. The significance level is .05.

Ho 5: There is no statistically significant difference in academic self-efficacy based on the number of credits completed for the internship during the immediate semester completed.

The hypothesis was evaluated by using Analysis of Variance (ANOVA). The comparison of self-efficacy scores failed to attain significance, $P = .417$ (see Table 18).

Table 18. Ho 5: ANOVA Test Results (Internship Credits)

<table>
<thead>
<tr>
<th>ANOVA</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>97197.388</td>
<td>3</td>
<td>32399.129</td>
<td>.966</td>
<td>.417</td>
</tr>
<tr>
<td>Within Groups</td>
<td>1542415.732</td>
<td>46</td>
<td>33530.777</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1639613.120</td>
<td>49</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: ASE= Academic Self-Efficacy Score.

Ho 6: There is no statistically significant difference in academic self-efficacy based on the number of additional credits (non-intern) taken/completed during the semester when the internship is completed.
The Kruskal-Wallis test was used to analyze this hypothesis. The comparison of self-efficacy scores failed to attain significance, $P = .370$ (see Table 19).

Table 19. Ho 6: Kruskal-Wallis Test Results (Additional Credits)

<table>
<thead>
<tr>
<th>Independent Variable: Additional Credits</th>
<th>$T$</th>
<th>ASE</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>768</td>
<td>768</td>
<td>.370</td>
</tr>
<tr>
<td>1-9</td>
<td>737</td>
<td>737</td>
<td></td>
</tr>
<tr>
<td>10 or more</td>
<td>700</td>
<td>700</td>
<td></td>
</tr>
</tbody>
</table>

*Note: ASE= Academic Self-Efficacy Score. The significance level is .05.*

Ho 7: *There is no statistically significant difference in academic self-efficacy based on the student's academic class during the internship.*

This hypothesis was analyzed using the Mann-Whitney test. The comparison of self-efficacy scores failed to attain significance, $P = .396$ (see Table 20).

Table 20. Ho 7: Mann-Whitney Test Results (Academic Class)

<table>
<thead>
<tr>
<th>Independent Variable: Academic Class</th>
<th>$T$</th>
<th>ASE</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman/Sophomore</td>
<td>676</td>
<td>676</td>
<td>.396</td>
</tr>
<tr>
<td>Junior/Senior/Senior-Plus</td>
<td>736</td>
<td>736</td>
<td></td>
</tr>
</tbody>
</table>

*Note: ASE= Academic Self-Efficacy Score. The significance level is .05.*

**Conclusion**

Descriptive statistics suggest there were differences in self-efficacy scores by independent variables, including gender, salary, internship workload, academic department, internship credits, additional credits, and academic class. However, statistical analysis tests indicate these differences were not significantly different. Therefore, all proposed null hypotheses were retained. The next chapter will summarize the research findings and propose recommendations for future research.
CHAPTER V
DISCUSSION OF FINDINGS, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Introduction

The purpose of the research was to examine the relationship between students who complete internships and their academic self-efficacy. The theoretical concept of self-efficacy is defined as an individual’s self-perception of his or her capabilities (Bandura, 1997). In this study, students rate their perceived academic abilities for the semester following their internship experience. Academic self-efficacy scores were analyzed based on the categorical-levels for seven independent variables: gender, academic class, salary, average workload per week, academic department, number of internship credits, and number of additional credits taken during the semester when the internship is completed. Students from the University of Wisconsin-La Crosse who participated in internships associated with the Accountancy, Communication Studies, and Political Science Departments during the 2010 spring, summer, and fall semesters were invited to participate. This chapter will review the study’s findings, draw conclusions on these results, present implications, and address limitations. Recommendations for future research will be also discussed.
Discussion of Findings

There are several findings that can be drawn from this research.

1. The instrumentation included a new self-efficacy scale that addressed the domain of internship experiences in relationship to academic self-efficacy. Few studies have examined internships in the context of self-efficacy.

2. The methodology used in this research allows for greater understanding of how students perceive they will be able to apply their internship experiences into their academic learning and comprehension process when they return to the classroom. This is supported through the concept that self-efficacy assessments measure individual skills that predict future behavior in a specific domain (Bandura, 1997). In this study, the instrumentation measures students perceived individual skills in relation to their internship experience and academic abilities. If the research is replicated or adapted, it has the potential to be more descriptive in how students perform academically as compared to GPA measurement studies.

3. The research results indicate there were no statistical differences in the null hypotheses presented. These results imply the independent variables evaluated do not impact the academic self-efficacy scores of students who complete internships. More specifically, academic self-efficacy scores failed to attain significance amongst the demographics (gender and academic class) and internship characteristics (salary, average workload per week, academic department where internship is completed, number of credits completed for the internship, number of additional credits taken during the semester the internship is completed).
4. A reflection on the descriptive statistics hints that categories of several independent variables could influence academic self-efficacy. This includes interns who are upper class students (junior, senior, or senior-plus), and internship experiences where students are paid and work at least 10 or more hours a week. Academic-self efficacy scores go up as students take fewer classes (additional credits) in addition to the intern credits. It is important to note, again, this reflection is based from descriptive statistics, rather than using statistical analysis tools. As noted earlier, all of the null hypotheses were retained because there was no statistical difference found. These results indicate that none of the of the independent variables influence academic self-efficacy scores.

**Implications**

The research primarily presents implications for internships experiences that are for academic credit. Whether a student completed his or her internship for no credit, three credits or 10 credits, there was not a significant difference in academic self-efficacy scores. One might initially assume there may be a difference between non-credit internships and credit internships. However, research findings suggest there is no difference in academic self-efficacy scores for number of internship credits (non-credit versus for credit):

1. Should internships be offered for credit?
2. Should more interventions be put into place to enhance academic self-efficacy?

To address the first question, the lack of significant difference in this research suggests this form of experiential learning may not merit academic credit. This conclusion is proposed based on the concept that learning should be taking place to have
academic value and to earn credit. If there is no difference in academic-self efficacy scores between a non-credit intern and a credit intern, it could be concluded there is no added-academic value in the internship experience that is for credit. This matter is directly related to the second question. This situation may be occurring because students may not be reflecting (or not enough) on how they are applying their academic knowledge into their internship experience. If students do more reflection on this application, they may be more likely to utilize their internship experience to aid in their comprehension of understanding new academic concepts the semester following their internship. This idea is supported by using Kolb’s (1984) four-stage cycle of experiential learning, in which individuals move throughout the stages as part of the continuous learning process. In the example being discussed, students’ learning cycle stops after the internship (concrete experience). Not enough reflection through internship assignments takes place, so students are unable to move through the rest of the cycle to the abstract conceptualization and active experimentation. These last two stages would be where students are able to then apply their internship experiences back into their academic learning when they are on campus. Figure 3 shows how students may not be moving through Kolb’s experiential learning.
Figure 4. Possible Impact of Limited Reflection in Experiential Learning. Student interns may not be moving through Kolb’s (1984) four-stage cycle of experiential learning. After students complete the internship, they may stop in the cycle due to limited reflection, therefore not moving through the rest of the learning cycle.

More interventions (reflection activities) could be put into place during and after the (for credit) internship experience to help guide students through the entire experiential learning cycle. Currently students completing internships for credit do have the opportunity to reflect on their experience through internship progress reports. Additional reflection experiences vary by the academic department in which the internship is associated. In the Political Science Department, students complete a paper where they reflect on their internship experience in relation to their major coursework and personal career goals (J. Arney, personal communication, March 4, 2011). Students participating in Communication Studies Department internships complete projects; specific requirements vary by the internship faculty supervisor (D. Modaff, personal communication, March 7, 2011). In the Accountancy Department, students are not
required to complete any additional work beyond the internship progress reports (K. Winter, March 5, 2011). Students who completed Accountancy internships still scored the highest in academic self-efficacy ($\bar{x} = 744$), even though this academic department included fewer interventions as compared to Communication Studies ($\bar{x} = 622$) and Political Science ($\bar{x} = 728$). This situation might be occurring because the accountancy major is more closely aligned with a specific occupational area than the other academic disciplines. In an effort to explore this concept, the researcher examined the academic self-efficacy scores for the scale items where students reflected on their confidence to relate their internship experiences to the academic concepts in their (1) respective college’s core classes or track classes, and (2) major upper level classes. This analysis shows that accountancy majors scored the highest in both scale items (see Table 21).

Table 21. Select Self-Efficacy Item Scores by Academic Department

<table>
<thead>
<tr>
<th>Academic Department</th>
<th>Core/Track Classes $\bar{x}$</th>
<th>Major Upper Level Classes $\bar{x}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accountancy</td>
<td>74.9</td>
<td>77.2</td>
</tr>
<tr>
<td>Communication Studies</td>
<td>62</td>
<td>67.8</td>
</tr>
<tr>
<td>Political Science</td>
<td>68.3</td>
<td>75.6</td>
</tr>
<tr>
<td>Other</td>
<td>59.3</td>
<td>62.3</td>
</tr>
</tbody>
</table>

It is important to note that self-efficacy scales are designed to be analyzed by the sum of the scale items, rather than examining individual scale items. Researchers who replicate this study might consider examining academic self-efficacy in academic disciplines that align more closely with occupational areas.

More intentional reflection could enhance self-efficacy scores, therefore helping students better understand the how their academic study relates to their internship and then how the internship then relates back to the classroom. There are a number of ways
to enhance student learning through reflection. A few examples of reflective assignments include weekly or daily journaling (Clark, 2003; see also Bay, 2006; Cates & Jones, 1999); internship and coursework connections paper (Clark, 2003); and summarization of learning on the internship paper (Clark, 2003). A more intensive approach would be to incorporate a formal classroom experience where students can discuss their internship assignments and reflect on the application of their knowledge of academic theories and concepts (Bay, 2006; Cates & Jones, 1999). It is likely that additional reflective activities are not taking place because they tend to be very time intensive to effectively monitor and provide feedback.

**Recommendations for Future Research**

There are several recommendations for future research based on the findings of the study.

1. Repeat the study: Continuing the research would help validate the study’s findings or present new results that challenge the original research. It would also help increase the reliability and validity of the instrumentation.

2. Add more participants: This could be accomplished by adding interns from other academic departments, collecting data over a longer period of time, and/or adding more universities, comparable in size and with similar academic programs.

3. Use a control group: Compare interns with non-intern students.

4. Use different academic departments: Examine academic self-efficacy in academic disciplines that either align closely with occupational areas or those disciplines that broader career opportunities.
5. Explore internship reflection assignments: Enhance the instrumentation by adding a question regarding internship reflection assignments. Another approach would be to select academic departments with different types of internship reflection assignments.

Summary

Most of today’s research on internships focuses on student benefits related to career exploration, development, and opportunities. Research on the academic value of internships has been minimal since the late 60s and early 70s when educators were trying to gain support for internships earning academic credit. Research in this area should be expanded to maintain and build support for internships for credit amongst university faculty. This study focuses on connecting academics and internships by examining the relationship of students who complete internships and their academic self-efficacy. Two research questions were proposed to explore this problem: (1) what is the level of academic self-efficacy for students who complete internships? and, (2) what demographics and internships have a relationship to academic self-efficacy?

Kolb’s concept of experiential learning serves as the foundational theory for this research. Through experiential learning activities, such as an internship, individuals move through four-stages: concrete experience (the internship), reflective observation (internship assignments or other reflection activities), abstract conceptualization (relating the internship experience to academic knowledge and other life experiences), and active experimentation (applying new knowledge to academics or new internship experiences) (Kolb, 1984).
Research on internships and cooperative education began in the late 1960s as federal funds became available for such programs. Since that time, the focus of research has shifted from the academic value to career benefits. The academic-focused research that does exist concentrates on internship program structure, academic performance, and academic self-efficacy. A number of educators have provided guidance on ways to direct student learning during internship experiences. The use of learning outcomes provides overall direction for the educational experience (Cates & Jones, 1999; Dean 2009). Instruments can then be used to guide and enhance student learning through a variety of activities, such as a supplemental classroom experience to discuss and reflect on internships (Bay, 2006; Cates & Jones, 1999), reflection papers (Clark, 2003), and weekly or daily journaling (Clark, 2003; see also Bay, 2006; Cates & Jones, 1999). The use of a syllabus can help also communicate intern program components (Cates & Jones, 1999; Dean, 2009).

Academic performance in relationship to internship experiences has been measured primarily through grade point average (GPA) (English & Koeppen, 1993; Knechel & Snowball, 1987; Knouse, Tanner, & Harris, 1999; Koehler, 1974). Many of these studies have conflicting results and do not address academic comprehension. GPA can also be influenced by a number of other variables, such as different learning styles and accepted job offers. These variables and others may contribute to the differing results. Studying academic self-efficacy in relationship to internship experiences takes a different approach in understanding how students may enhance their academic learning as a result of their internship experience. The method provides a more comprehensive
way to illustrate academic comprehension through measurement of predicted student behaviors after an internship experience.

Self-efficacy has been used minimally in understanding students’ perceived academic performance in relationship to their internship experiences. The theory of self-efficacy is defined as an individual’s self-perception of his or her capabilities (Bandura, 1997). Fletcher (1990) explored the theoretical framework for connecting cooperative education experiences with the concept of self-efficacy. Only one previous study has focused on the relationship between cooperative education and internship experiences and self-efficacy. The research of Whitman et al. (2008) examined the relationship between cooperative education students in engineering and three dimensions of self-efficacy: work, academic, and career. Results suggest that cooperative education students’ academic self-efficacy did not increase in comparison to the student control group, which did see an increase in academic self-efficacy scores (Whitman et al., 2008).

In this study, University of Wisconsin-La Crosse students rated their perceived academic abilities (academic self-efficacy) for the semester following their internship experience. Participating students completed internship experiences related to three academic departments in accountancy, communication studies, and political science during the spring, summer, and fall semesters in 2010. The instrumentation included a newly created academic self-efficacy scale and questions about student demographics and internship characteristics. Academic self-efficacy scores of 50 respondents were examined based on the categorical-levels for seven independent variables: gender, academic class, salary, average workload per week, academic department, number of internship credits, and number of additional credits taken during the semester when the
internship is completed. Data analysis utilized several statistical tests, including the
Mann-Whitney, Analysis of Variance (ANOVA), and Kruskal-Wallis.

The research results indicate there was not significant differences in self-efficacy scores by any independent variable tested. Specifically, all seven hypotheses were retained suggesting that academic self-efficacy scores for students who complete internships are not influenced by gender, salary, internship workload, academic department, internship credits, additional credits, and academic class.
REFERENCES


APPENDIX A

RESEARCH PROTOCOL SUBMISSION TO IRB
ATTACHMENT A - APPLICATION FOR UNIVERSITY IRB REVIEW
(All submissions must be typewritten)  Date April 29, 2010

1. a. Principal Investigator/Project Director (if thesis or undergraduate research project, student’s name):
   Leslie Svacina
   b. Applicant Status: (Check all that apply)
      □ Faculty
      □ Academic Staff
      X Graduate Student
      □ Undergraduate Student
   c. Investigator/Project Director Local Address:
      127 N. 17th Street, La Crosse, WI 54601
   d. Investigator/Project Director Local Telephone #: 651-261-3073 E-mail: svacina.lesli@students.uwlax.edu

2. a. Title of Proposed Project: A study of internship experiences and academic self-efficacy
   b. Project Period: Begin Date: 5/2010 End Date: 12/2010
   c. If a student project of any type, Faculty Advisor’s Name, Department, and Phone:
      Name: Larry Ringenberg
      Signature
      Department: Student Affairs Administration Phone #: 789-0002 E-Mail: larry.tan@uwlax.edu
   *Names and Signatures of Thesis Committee Members:
      Jeannie Hanley
      Name
      Signature
      Ken Winter
      Name
      Signature

3. If the researcher believes his/her project may be reviewed under expedited procedures (p. 6-9) and/or falls
   within the exemptible category, (p. 4-5) please check the appropriate box(es) below
   □ Expedited
   X Exemptible
   a. If expedited, please indicate the number(s) of the categories listed on pages (6-9)
   b. If exemptible, please indicate the number(s) of the categories listed on pages (4-5)
      2, 3

4. By signing this application, I agree to comply with any decisions made by the University of Wisconsin-La Crosse
   IRB in regard to the above-named research project, and the standards of professional ethics in my field of
   study.
   Signature  Date 12/09/2010
   *The IRB has reviewed the above research project and has determined that:

1. APPROVAL IS GRANTED - as submitted or as modified per attached (check one)
   □ a. the protocol does not contain procedures which place human subjects at risk, or
   □ b. the protocol contains procedures which place human subjects at minimal but acceptable
      risk, or
   □ c. the protocol contains or is likely to contain procedures that may place human subjects at greater than
      minimal risk; however, the risk(s) are outweighed by the sum of the anticipated benefits of the research.

2. APPROVAL NOT GRANTED
   The following IRB members participated in this review:
   ____________________________
   ____________________________

   On behalf of the board:

   IRB Chairperson or Coordinator Signature  Date
Narrative Statement

1. **Purpose:** The thesis research is designed to study the relationship of students who complete internships and their academic self-efficacy, as well as, the environmental factors that may be related.

   The assessment tool will be administered twice in conjunction with Career Services' online student internship evaluation survey:
   a. Mid-Late-May 2010; to assess spring internship participants
   b. Mid-August 2010; to assess summer internship participants
   c. Late-November 2010; to assess fall internship participants

   **Procedures:** Participants will complete an online assessment in conjunction with Career Services' online student internship evaluation survey, which includes:
   d. An appraisal inventory rating their academic self-efficacy in relationship to their internship experience
   e. Demographic information

   Career Services has also given the researcher permission to work in conjunction/cooperation with the office's internship evaluation survey.

2. **Population characteristics:** Students participating in internships coordinated through the UW-La Crosse Career Services Office during the spring, summer and fall 2010 semesters will be included in the research population. The population includes most academic department internships; however, a few departments coordinate their own internships. These programs will not be included in the research.

   The following general population characteristics are based on internship participants during 2007-08 academic year:
   - 893 participants
   - Paid-internship: Yes, 64%; No, 36%
   - Internship-for-credit: Yes, 57%; No, 43%
   - Male, 41%; Female, 59%
   - Special student groups:
     - Non-traditional, 4%
     - Multicultural, 5%

3. **Vulnerable populations:** Not applicable.

4. **Informed consent:** All participants will be provided with information regarding voluntary informed consent before the research questions are presented in the Career Services online student internship evaluation survey. From a technical standpoint the research questions will be built using non-required fields so that participants may finish the Career Services survey without completing the research component. Details of the informed consent are attached to this IRB protocol submission.

5. **Confidentiality:** All research will be conducted in a confidential manner. Participants will complete the research questions anonymously in an independent environment within their control. They will choose the time and location for completing the survey. For example, a student may
Leslie Svacina, IRB Protocol Submission
April 29, 2010

choose complete the survey on a Saturday afternoon at home on a personal computer, while another student may choose to complete the survey on a Tuesday night in a campus computer lab.

Confidentiality will be communicated in conjunction with the voluntary consent information provided before the research questions. Data will be analyzed as a population or by segments of the population, rather than by individual participant.

6. Anticipated risks: There are not any anticipated risks associated with this research.

7. Procedures to minimize risks: Not applicable.

8. Benefits: The knowledge gained from this research may benefit internship programs and participants by understanding the relationship between internships and academic self-efficacy.
Informed Consent

The informed consent statement will be placed before the research questions in the Career Services internship evaluation survey (see attachment at the end of the IRB protocol submission). The Career Services survey content will be listed first, followed by the research survey instrument.

The following section will be used for research purposes to provide greater understanding of internship programs and the potential benefits for students. Participation includes answering a series of questions through this online survey and should take approximately five minutes to complete. There are no known risks associated with this research.

Your participation in this section is voluntary and you may withdraw at any time without penalty. All participants are anonymous. Data collected will be compiled in a confidential manner, be reported only as an entire sample or segment, and may be published in scientific literature or presented at professional meetings using only grouped data.

For more information, contact the graduate student researcher Leslie Svacina at svacina.lesl@students.uwlax.edu, or the thesis chair Dr. Larry Rinneberg at rinneberg.larry@uwlax.edu. Questions regarding the protection of human subjects may be addressed to the UW-La Crosse Institutional Review Board for the Protection of Human Subjects 608-785-8124 or irb@uwlax.edu.

By completing the questions below, you are providing your consent to participate in the study.
Leslie Svacina, IRB Protocol Submission
April 29, 2010

Survey Instruments

This research survey instrument will be administered in conjunction with the Career Services online internship evaluation survey. The research instrument will follow the Career Services survey content.

Internship Program Research
The following section will be used for research purposes to provide greater understanding of internship programs and the potential benefits for students. Participation includes answering a series of questions through this online survey and should take approximately five minutes to complete. There are no known risks associated with this research.

Your participation in this section is voluntary and you may withdraw at any time without penalty. All participants are anonymous. Data collected will be compiled in a confidential manner, be reported only as an entire sample or segment, and may be published in scientific literature or presented at professional meetings using only grouped data.

For more information, contact the graduate student researcher Leslie Svacina at svacina.lesl@students.uwlabx.edu, or the thesis chair Dr. Larry Ringenberg at ringenb.larry@uwlabx.edu. Questions regarding the protection of human subjects may be addressed to the UW-La Crosse Institutional Review board for the Protection of Human Subjects 608-785-8124 or irb@uwlabx.edu.

By completing the questions below, you are providing your consent to participate in the study.

Internship Appraisal Inventory

<table>
<thead>
<tr>
<th>Reflect on your internship experience:</th>
<th>How much confidence do you have in your ability to</th>
<th>□</th>
<th>□</th>
<th>□</th>
<th>□</th>
<th>□</th>
<th>□</th>
<th>□</th>
<th>□</th>
<th>□</th>
<th>□</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Relate your internship experience to the academic theories taught in your major upper level classes major next semester.</td>
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<tr>
<td>2. Relate your internship experience to the academic content taught in your general education classes next semester.</td>
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</tr>
<tr>
<td>3. Relate your internship experience to the academic context taught in your major’s core classes next semester.</td>
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<td></td>
</tr>
<tr>
<td>4. Use your internship experience to demonstrate your understanding of how academic theories/concepts can be applied in the workplace during future in-class discussions or activities (in your major).</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>5. Use your internship experience to help you study academic concepts and theories in your major academic coursework next semester.</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>6. Draw relationships between your</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Leslie Svacina, IRB Protocol Submission
April 29, 2010

7. Use examples from your internship experience in future class assignments (in your major) to demonstrate your understanding of how academic theories and concepts might apply in the workplace.

8. Explain to your roommate or friends how your internship experience relates to the academic coursework in your major.

9. Explain to your family how your internship experience relates to the academic coursework in your major.

10. Explain to your advisor or professors how your internship experience relates to the academic coursework in your major.

11. Explain to a future employer in a cover letter, job interview or portfolio how your academic coursework in your major relates to skills and knowledge needed in the workplace.

Internship Participant Information

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Option</th>
</tr>
</thead>
</table>
| 1. Internship work load | Fulltime (40 hours or more per week)  
| | Halftime (20 hours-39 hours per week)  
| | Part time (10-19) hours per week  
| | Less than 10 hours per week  
| 2. Internship salary | Paid  
| | Unpaid  
| 3. If you are paid, select the salary range you earn: | Drop box with numerical options (0-15)  
| | Unpaid  
| | $7.25-$9  
| | $10-12  
| | $13-15  
| | $16-18  
| | $19-21  
| | $21 or higher  
| 4. Internship credit option | Drop box with numerical options (0-21)  
| 5. Amount of additional credits taken while completing your internship (does not include your internship credits) | Drop box with numerical options (0-21)  
| 6. Number of internships completed prior to your current internship | Drop box with numerical options (0-1)  

66
Leslie Svacina, IRB Protocol Submission  
April 29, 2010

<table>
<thead>
<tr>
<th>7. Did you hold this same internship last semester as well?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Gender</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>9. Major</td>
<td>Drop box by academic majors alphabetically</td>
<td></td>
</tr>
<tr>
<td>10. Class next semester</td>
<td>Freshman</td>
<td>Sophomore</td>
</tr>
<tr>
<td>11. Anticipated graduation date</td>
<td>Summer 2010</td>
<td>Fall 2010</td>
</tr>
</tbody>
</table>

Thank you for your participation. If you have questions regarding this study, contact the graduate student researcher Leslie Svacina at svacina.leslie@students.washington.edu.
Appendix

UW-La Crosse Career Services Internship Evaluation Survey
1. What is the name of the organization you interned with this semester?

2. Please rate the following statements about your internship:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The internship was related to the agreed upon position description.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>The internship was related to your field of study or career interest.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Training appropriate to you and the position was provided.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>The supervisor established and communicated clear expectations.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>The supervisor provided regular, constructive feedback on your performance and progress.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>The position provided the opportunity to meet/network with other professionals.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
**STUDENT EVALUATION OF INTERNSHIP EXPERIENCE - Summer**

* 3. Please rate the following statements about your internship:

As a result of my internship experience...

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have a better understanding of how to apply the knowledge and skills</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>gained through my academic study.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have a better understanding of the importance of written and oral</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>communication skills in a work environment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I understand how critical thinking and problem solving skills are utilized</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>in a work environment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have a better understanding of ethical practices and behavior in a work</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>environment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have a better understanding of diversity in a work environment.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I have learned more about career options.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I have a better understanding of my career goals.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

* 4. Would you recommend this internship to other students? 
  ○ Yes 
  ○ No 

* 5. Will you be continuing on in this internship? 
  ○ Yes 
  ○ No
**STUDENT EVALUATION OF INTERNSHIP EXPERIENCE - Summer**

6. Did this internship employer offer you employment (post-graduation) at the completion of the internship?
   - ☐ Yes
   - ☐ No

7. Have you participated in prior internships with OTHER ORGANIZATIONS?
   - ☐ Yes
   - ☐ No

8. How did you utilize Career Services in your internship search?
   - Eagle Opportunities ☐ Yes ☐ No
   - Career Fairs ☐
   - Appointments with staff for cover letter, resume, interview strategy ☐
   - Perfect Interview ☐
   - On-Campus Interview ☐
   - Web resources/links ☐

9. Please comment on other resources you used in your internship search.


10. Please provide us with any additional comments you have about your internship experience.


Certificate of Completion

The National Institutes of Health (NIH) Office of Extramural Research certifies that Leslie Svacina successfully completed the NIH Web-based training course "Protecting Human Research Participants".

Date of completion: 02/21/2010
Certification Number: 401717
APPENDIX B

RESEARCH PROTOCOL APPROVAL MEMO FROM IRB
UNIVERSITY OF WISCONSIN
LA CROSSE

To:  Leslie Svecina

From:  Pat Van Voorhis, Coordinator
Institutional Review Board (IRB) for the
Protection of Human Subjects

Date:  June 1, 2010

Re:  RESEARCH PROTOCOL SUBMITTED TO IRB

The IRB Executive Committee has reviewed your proposed research project entitled:
"A Study of Internship Experiences and Academic Self-Efficacy."

The Committee has determined that your research protocol will not place human subjects at risk
The protocol has been approved under expedited review procedures, and declared exempt
from further review in accordance with 45CFR46.46110(a)(6). However, it is strongly
suggested that informed consent always be used. Remember to provide participants a copy of
the consent form and to keep a copy for your records. Consent documentation and IRB records
should be retained for at least 3 years after completion of the project.

Since you are not seeking federal funding for this research, the review process is complete and
you may proceed with your project.

Good luck with your project.

cc  IRB File
Larry Ringgenberg, Faculty Advisor

Graduate Studies and Research & Sponsored Program
220 Morris Hall, University of Wisconsin-La Crosse
1725 State Street, La Crosse, WI 54601
Phone (608) 785-8124 and (608) 785-8007
An affirmative action/equal opportunity employer
APPENDIX C

INSTRUMENTATION
Internship Program Research

This research will provide greater understanding of internship programs and the potential benefits for students. Participation includes answering a series of questions through this online survey and should take approximately five to seven minutes to complete. There are no known risks associated with this research.

Your participation in this section is voluntary and you may withdraw at any time without penalty. All participants are anonymous. Data collected will be compiled in a confidential manner, be reported only as an entire sample or segment, and may be published in scientific literature or presented at professional meetings using only grouped data.

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By completing the questions below, you are providing your consent to participate in the study.

Through my internship I have a better understanding of how to apply the knowledge and skills I have gained through my academic study.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

% [Bar Graph] 100%

Through my internship I have a better understanding of how to apply the knowledge and skills I have gained through my academic study.
Internship Appraisal Inventory

How much confidence do you have in your ability to relate your internship experience to the academic context taught in your:

<table>
<thead>
<tr>
<th>no confidence</th>
<th>some confidence</th>
<th>complete confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>30</td>
<td>40</td>
<td>50</td>
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<tr>
<td>60</td>
<td>70</td>
<td>80</td>
</tr>
<tr>
<td>90</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

1. College of Business core classes or CD
2. College of Liberal Studies core classes in history, global and multicultural studies, minority cultures, or multicultural studies in women’s studies; self and society, and humanistic studies; or CD.
3. College of Liberal Studies classes in the language track, humanities track, fine arts track or bachelor’s of sciences track.

Major upper level classes next semester:

%
How much confidence do you have in your ability to draw relationships between your internship experience and academic theories/concepts in your major?

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>During future in-class discussions or activities</strong></td>
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<td></td>
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</tr>
<tr>
<td><strong>To help you study</strong></td>
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* Scale: 0% to 100%
How much confidence do you have in your ability to explain how your internship experience relates to the academic coursework in your major to:

- Your roommate or friends
- Your family
- Your professors
- A future employer in a cover letter, job interview or portfolio

Drop down box categories: Full time (40 hours or more per week), halftime (20-39 hours per week), part time (10-19 hours per week), less than 10 hours per week

Internship Participant Information

- Internship workload:
  - Drop down box categories: Unpaid, stipend, $7.25-$10, $11-$13, $14-$16, $17-$19, $20 or higher

- Select the hourly-pay range you earn:
  - Drop down box categories: Unpaid, stipend, $7.25-$10, $11-$13, $14-$16, $17-$19, $20 or higher

- Did you hold this same internship last semester as well?
  - Yes
  - No

- Drop down box categories: No choice
Gender

Drop down box categories: Male, Female, Transgender

Have you taken the BUS 350 Career Preparation class or the CST 491 Special Topics in Communication Studies: Career Preparation class?

Yes ☐

No ☐

Please share any comments regarding your internship experience.

We thank you for your time spent taking this survey. Your response has been recorded.
APPENDIX D

EMAIL INVITATION
Svacina Leslie C to bcc: Brehmer, bcc: Buttles, bcc: brockb2204, bcc: Ciri

Spring 2010 interns:

You are invited to participate in a graduate thesis research survey regarding your recent internship experience. Findings will help provide greater understanding of internship programs and the potential benefits for students.

The survey is supported by the Career Services office and is conducted by graduate student Leslie Svacina for her master’s thesis in the Student Affairs Administration in Higher Education program. The brief online survey will take about 5 minutes to complete and will need to be taken by June 14. May 2010 graduates do not need to complete the survey. Participation is voluntarily and data collected will be confidential.

Link to the survey:
https://uwlacrosse.qualtrics.com/SE?SID=SV_77fo8vuWhtg8xrRa

For more information, contact Leslie Svacina at svacina.lesl@students.uwlax.edu or the thesis chair Dr. Larry Ringgenberg at ringgenb.lam@uwlax.edu. Questions regarding the protection of human subjects may be addressed to the UW-La Crosse Institutional Review Board for the Protection of Human Subjects at 608-785-8124 or irb@uwlax.edu.

Thank you,

Leslie Svacina, graduate student
Student Affairs Administration in Higher Education
APPENDIX E

REMINDER EMAIL
Reminder: Internship research survey

Svacina, Leslie to bcc: brehmar.matt, bcc: but show details 6/9/10

Spring 2010 interns:

This is a reminder to remember to participate in a graduate thesis research survey regarding your recent internship experience. You received an email invitation last week. If you already completed the survey, please disregard this email.

The survey is supported by the Career Services office and is conducted by graduate student Leslie Svacina for her masters thesis in the Student Affairs Administration in Higher Education program.

The brief online survey will take about 5 minutes to complete and will need to be taken by June 14. May 2010 graduates do not need to complete the survey. Participation is voluntary and data collected will be confidential.

Link to the survey: https://ultracourseeclassencompass.ceTex22988895

For more information, contact Leslie Svacina at svacina.leslie@students.uwlax.edu or the thesis chair Dr. Larry Ringgenberg at ringgenb.larry@uwlax.edu. Questions regarding the protection of human subjects may be addressed to the UW-La Crosse Institutional Review Board for the Protection of Human Subjects at 608-785-6124 or irb@uwlax.edu.

Thank you,

Leslie Svacina, graduate student
Student Affairs Administration in Higher Education