Self-Leadership, Self-Efficacy, and Academic Performance in Undergraduate Peer Mentors: Does Experience as a Mentor Impact Personal Success?

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Abstract

This study investigates the role of self-leadership and self-efficacy on the academic performance of students—specifically peer mentors. It investigates if undergraduate academic peer mentors differ from comparable students in terms of self-leadership and self-efficacy as well as in general academic performance and success. Peer mentors and comparable students were given three measures—the Revised Self-Leadership Questionnaire (RSLQ), an academic self-efficacy questionnaire, and original supplemental academic success questions. We found that even when matched on GPA and class rank, students in mentoring positions scored significantly higher on 5 domains of Self-Leadership, cumulative scores of academic self-efficacy and academic success.

Keywords: peer mentoring, self-leadership, self-efficacy, college student development
Self-Leadership, Self-Efficacy, and Academic Performance in Undergraduate Peer Mentors: Does Experience as a Mentor Impact Personal Success?

Although more students than ever are choosing to pursue a college education, only about half of students who begin a degree will graduate (Rhodes, 2008). In an effort to bolster retention rates and academic achievement, faculty and administrators have turned to mentoring programs in hope to keep struggling students engaged (Rodger & Tremblay 2003, Terrion & Leonard, 2007; Jacobi, 1991; Crisp & Cruz, 2007). Although there is no one operational definition for mentoring in the literature, many researchers agree that a mentoring relationship consists of a more experienced person guiding and imparting knowledge and skills to a less experienced protégé (Jacobi 1991; Crisp & Cruz, 2007).

In higher education settings, mentoring relationships can occur with faculty, college staff, graduate students, and undergraduate students (Crisp & Cruz, 2007). Experienced undergraduate students are utilized as peer mentors in diverse areas including residence life, orientation teams, and academic support. As more experienced students, they bridge the gap between faculty and administrators by being able to connect with students on a more personal level (Rhodes 2008).

Even though research on undergraduate peer mentoring is relatively limited, peer mentors have been shown to be effective because they intervene in a way that seems less intimidating than faculty (Rhodes, 2008). Mentoring relationships can also catalyze a student’s involvement in the learning process, which can lead to greater involvement in their undergraduate education (Jacobi, 1991). Rhodes (2008) states that mentoring can increase a mentee’s self-efficacy, which consequently affects their academic performance and retention.

Peer mentors in these positions are often advanced and talented students in their disciplines. Not only do they firmly grasp college material as a student, they are also able to
synthesize and present the information to their less experienced peers (Terrion & Leonard, 2009). Terrion and Leonard (2007) also mention that mentors typically have more university experience which allows them to help their mentees adjust to the demands of their new academic and social environment. Although there is a growing body of research that focuses on the success of the mentee, there is a dearth of investigations that explore the positive effects of mentoring on mentors. There are also few studies focusing on how the experience of being a mentor impacts the mentor’s success. As colleges and universities invest resources in training and supporting mentors, this seems to be an increasingly important topic of investigation.

In addition to retaining at risk students, colleges also have the responsibility to develop future leaders in business, governmental, and professional settings. According to Cress (2001), all students have leadership potential, but they also need sufficient opportunities to engage and grow in order to reach their potential. Research has shown that because the mentoring relationship is reciprocal and personal, mentors benefit from their role as a mentor (Jacobi, 1991; Crisp & Cruz, 2009). Unfortunately, very little research exists about how the mentor benefits. Leidenfrost (2008) concludes that mentoring provides an opportunity for students to develop leadership skills that will be applicable in many different areas of their lives. Undergraduate students who participated in leadership programs such as peer mentoring have also been shown to have superior understanding of leadership theories as well as a heightened sense of civic responsibility (Cress et al., 2001). Cress (2001) also found that participation in leadership affected a student’s acceptance of diversity, decision-making, and willingness to take positive risks. One study examining peer mentors found that mentors grow psychosocially through their work as mentors working with students on academic probation (Jones & Kolko, n.d.).
Although past research has indicated that mentor and mentee have a concurrently beneficial relationship, there is little research indicating specific constructs that are influenced by participating in academic peer mentoring. Because of the nature of academic peer mentoring, it seems as though mentors would grow in their ability to influence themselves toward success in their academic lives. Also, mentors would gain academic confidence and prowess due to their positions helping students with academic skills that they themselves use on a daily basis.

**Literature Review**

*Peer Mentoring and Self-leadership*

Self-leadership asserts that successful people are able to regulate and influence themselves to achieve goals by means of cognitive and behavioral strategies (Manz, 1986; Houghton & Neck, 2002). Houghton and Neck (2002) assert that cognitive strategies, or constructive thought pattern strategies, help leaders maintain positive thinking despite failure or setback. Consequently, these individuals are able to endure and rise above negative experiences without self-criticism. They also assert that individuals who utilize mental imagery are more likely to reach their goals. For many, dysfunctional thinking can often be a major stumbling block to reaching challenging goals. Self-regulation in this realm can also lead to a sense of control over work in addition to enjoyment of the position (Manz, 1986).

Behavior focused strategies center on an awareness of one’s own behavior during both pleasant and unpleasant tasks (Houghton & Neck, 2002). These strategies emphasize an ability to set reasonable goals and carry out the necessary tasks to completion. Because of this, these strategies are useful for an individual’s continual development and improvement in work-related tasks (Houghton & Neck, 2002).
It is no secret even the best positions have aspects that can be considered unpleasant. For this reason, successful individuals often unconsciously use natural reward strategies. That is, they focus on the pleasant aspects of job responsibilities as well as reward themselves for completed tasks and achievements (Manz, 1986; Houghton & Neck, 2002). Natural reward strategies help an individual carry out a task by finding the pleasant aspects of the task or goal. This aspect can foster intrinsic motivation and competence in job tasks, which is beneficial for both the individual as well as the greater organization (Houghton & Neck, 2002).

Self-leadership strategies have specifically been used for business employees and professionals, however, it is believed that self-leadership can be applied to a variety of domains (Neck & Houghton, 2006). Self-leadership has been connected with constructs such as commitment, trust, and psychological empowerment as well as innovation and creativity (DiLello & Houghton, 2004; Neck & Houghton, 2006). It seems then that peer mentoring would be connected with self-leadership as peer mentors are recognized as leaders in the collegiate environment. Peer mentors seek to influence, empower, and teach less experienced students, and as part of that mission, they must model effective strategies academically.

According to Cress (2001), students who participated in leadership positions were more effective at setting goals and implementing programs. This is an example self-leadership theory’s behavior focused strategies. Also, as evidenced in a professional setting, Eby and Lockwood (2004) found that mentoring helped the mentor with managerial skills—which could be applied to many of the domains of self-leadership.

One study also found that as students progress their sense of leadership progresses as well (Komives, 2005). Komives asserts that students gradually developed from having a leader-centric focus to believing that anyone can lead—both themselves and others. One participant
remarked there was a transition from “having a peer mentor and now turning around and being a peer mentor (Komives et al., 2005, p. 607).” Little is known about the transition from mentee to mentor, but there is evidence that this transition involves self-leadership skills as well as the development of self-efficacy.

**Peer Mentoring and Self-efficacy**

Self-efficacy is the belief that an individual has about his or her own capability of performing a task or role successfully (Bandura, 1977). According to Manz (1986), a sense of self-efficacy often arises when an individual has surmounted and developed from challenges. He also concludes that after an individual develops mastery of a domain they have greater feelings of competence as well as intrinsic motivation to continue working in that task or domain.

According to Zajacova and colleagues (2005), academic self-efficacy relates to a student’s self-efficacy in an academic context. In turn, academic self-efficacy has been shown to be related to positive outcomes such as college persistence and performance (Bong, 2001; Lent et al., 1984). The reason academic mentors are often selected is because they have persisted to senior status in their discipline in addition to performing well in their particular domain (Terrion & Leonard, 2007).

Also, it can be argued that in order to guide mentees in academic tasks such as content material, study skills, and academic planning, mentors would have to have greater efficacy in these domains. By virtue of the position requirements, student mentors should also have higher academic performance as evidenced by GPA.

**Self-efficacy as Mediator between Self-Leadership and Academic Performance**

There is evidence that there is a link between the constructs of self-leadership and self-efficacy. According to Prussia (1998) self-efficacy is not only related to self-leadership, it is
found to be a mediator between self-leadership and actual performance. In this study, the researchers were able to connect a student’s self-efficacy, or their beliefs about their academic abilities, with self-leadership. They determined that self-leadership was positively correlated with self-efficacy, which resulted in better academic performance (Prussia, 1998). So then, as self-leadership improved, so did self-efficacy, which resulted in better academic results. Zimmerman (1992) also found a link between self-regulated learning, self-efficacy, and academic performance in high school students. Because of this link, students who are higher in these domains should also benefit from better academic performance. If mentors are students who are significantly higher on self-leadership and self-efficacy, there is a strong possibility that they will also have superior academic performance. If this is the case, higher education administrators should be eager to support students in mentoring positions as well as encourage all eligible students to take part in mentoring programs.

Research Questions and Hypotheses

Although self-leadership, self-efficacy, and academic performance have been studied in the college student population, these constructs have not been tested with academic peer mentors. In fact, very few studies have attempted to determine level of success of peer mentors when compared to other students who do not take such positions. The purpose of this study is to understand the benefits of a peer mentoring position on the student’s academic life. In addition, we are interested in finding if peer mentors have higher levels of self-leadership skills and self-efficacy as well as better academic performance. We are also interested in the mediating relationship of self-efficacy on self-leadership and academic performance.

Hypothesis 1: Academic peer mentors will have significantly higher scores on self-leadership and self-efficacy as evidenced by the two questionnaires.
Hypothesis 2: Peer mentors will have higher degrees of academic success compared to a match comparison group.

Hypothesis 3: Self-efficacy will serve as a mediating variable between self-leadership and academic performance in the two groups of students.

Method

Participants

This study was conducted at a large urban Midwestern university enrolling approximately 30,000 students. The university has a large mentoring program, which employs over 60 mentors in a variety of disciplines including specific academic gateway courses and general study skills. Students in the mentoring program have had at least one semester at the university and actively maintain at least a 3.0 GPA. In addition to maintaining a weekly mentoring commitment, these students also enroll in a 1 credit hour mentoring course each semester they participate as a mentor up to 4 semesters.

Participants included 31 students recruited from the peer mentoring program and 39 comparable students from an introductory psychology class. The comparison group was matched from a group of 141 based on grade point average and class rank and had no significant differences in academic background. Peer mentors were compensated with course credit toward their mentoring course grade, and the introductory psychology students were given credit toward their course research requirement.

Measures

All students were given Houghton and Neck’s (2002) Revised Self-Leadership Questionnaire (RSLQ) (Appendix A), The RSLQ is a 35-item questionnaire broken into 7 subscales. Behavior-Focused Strategies is broken down into 5 subscales including self-goal
setting, self-reward, self-punishment, self-observation, and self-cueing. Natural Reward Strategies is comprised of one subscale named focusing thoughts on natural rewards. Last, Constructive Thought Pattern Strategies are broken down into visualizing successful performance, self-talk, and evaluating beliefs and assumptions. Participants must rate the item on a 5-point scale as it applies to their own life and habits (1-Not at all accurate to 5-Completely accurate).

Tasks for Measuring Stress and Self-Efficacy (Zajacova et al., 2005) includes 34 items, more specifically, academic tasks that are rated on a 10 point confidence scale (1-Not Confident, 10-Extremely Confident). This scale was revised to only include the self-efficacy portion of the measure (Appendix B).

Last, the researchers included 15 supplemental academic success questions (α=.73) that gauged college success beyond GPA. These questions ascertained the participant’s classroom and campus involvement (e.g. I never miss a class; I try to attend as many campus events as possible) attention during class (e.g. I never text during class), and major and career plans (e.g. I have decided on a major; I plan to attend graduate school) (Appendix C).

Procedure

All mentors enrolled in the mentoring center’s courses received an e-mail inviting them to participate in the study via online survey. Permission was obtained from the directors who sent the original emails and reminders inviting them to participate. Two follow up emails were sent to students with in a two-week period. The students in the comparison group also were able to participate in an online survey via their course research site.
Preliminary Results

Independent samples t-tests were used to compare the peer mentors with the comparison group on the 9 self-leadership subscales, academic self-efficacy, and our measure of academic success. There were significant differences found in 5 of the 9 subscales of self-leadership. The first significant difference was found in the first subscale of visualizing successful performance for mentors (M=3.87, SD=.77) and comparison group (M=3.35, SD=.89); t(66)=2.51, p=0.015. There was also a significant difference for self-goal setting for mentors (M=4.30, SD=.55) and comparison group (M=3.87, SD=.79); t(66)=2.53, p=0.01. Self-reward also had significant differences the mentor group (M=3.87, SD=.83) and comparison group (M=3.35, SD=1.20); t(66)=2.014, p=0.05. There was a significant difference found for focusing on natural rewards with mentors (M=4.11, SD=.48) and comparison group (M=3.77, SD=.71); t(65)=2.21, p=0.031. Last, there was a significant difference in self-cueing with mentors (M=4.23, SD=.98) and comparison group (M=3.30, SD=1.43); t(67)=3.08, p=0.00).

Mentors also had greater scores on academic self-Efficacy (M=8.40, SD=1.05) than the comparison group (M=7.47, SD=1.20); t(62)=3.26, p=.00). In addition, mentors also had greater scores on our measure of academic success (M=3.80, SD=.44) than the comparison group (M=3.21, SD=.54); t(57)=4.52, p=.00.

No significant differences were found in the academic background of the students including high school GPA, SAT scores, class rank, or current GPA. The researchers also plan to run a regression analysis in order to determine the mediating relationship of self-leadership and self-efficacy with a greater sample of students.
Discussion

The researchers hoped to find a significant difference in self-Leadership, self-efficacy, and academic success in peer mentors despite controls on many salient predictive variables including high school GPA, SAT scores, and current GPA and class rank. Significant findings on self-leadership included visualizing successful performance, self-goal setting, self-reward, and self-cueing and focusing on natural rewards. Peer mentors also showed superior scores academic self-efficacy as well as academic success on our measure beyond GPA.

Originally, we hypothesized that self-leadership variables would be significantly different due to mentors superior experience managing their own and others academic development. Visualization of successful performance facilitates real successful performance (Driskell et al., 1994). Perhaps mentors have unique insights into academic success because they have experience helping others visualize positive outcomes of academic performance. Mentors are often in the unique position of encouraging students through remembering their own successful performance. This might include explaining to mentees not only what they have learned throughout their mentoring training but also what worked for them. Because of their experience as a mentor, these students may be more apt to visualize themselves succeeding with the strategies they implemented as mentors.

In a similar vain, peer mentors help other students to create and carry out goals related to their college life. In order to help someone else learn the skill of self-goal setting, one must be proficient in creating and implementing their own goals. Self-reward is connected to self-goal setting because it is part of keeping oneself accountable to goal achievements. Mentors may also be significantly better at reaching goals because they allow themselves to celebrate achievements. According to Manz (1986), self-rewards can lead to intrinsic motivation, which is
A hallmark of the self-leadership theory. The last significant behavior-focused difference between mentors and the comparison group was a difference in the ability to self-cue. This might be due to a mentor’s ability to help others stay on track with their studies and achieve their own goals, all while managing their own classwork and activities.

Focusing on natural rewards was also found to be significantly different in the mentor and comparison group. In their review of the mentoring literature, Terrion and Leonard (2012) found that both enthusiasm and self-enhancement motivation were critical attributes for mentors. This is connected to natural rewards focus because the most effective peer mentors will have an enthusiasm or internal drive to achieve tasks despite any unpleasant aspects. A clearer focus on natural rewards and possible future benefits of their mentoring serve them to persevere through the tougher aspects of their college education.

Although mentors did not score significantly higher on all the domains of self-leadership, they were superior in at least one area of each type of strategy (constructive thought pattern, behavior-focused, and natural reward). We believe this shows that mentors have well rounded self-influence on their own successes when compared to comparable peers.

Self-efficacy was also significantly different in the two conditions. According to Bandura (1977) self-efficacy is enhanced through mastery of a particular domain. It is not surprising then that as mentors help other achieve their academic goals, they are in turn furthering their own self-mastery of the domain as well.

In addition, the mentors also scored significantly higher on our measure of academic success. Perhaps this is an indicator of what Terrion and Leonard (2012) denote as “university experience.” Mentors often serve as peer advocates to help other students acclimate to both classroom expectations and college life.
Despite positive findings, there may be limitations to the current research. Although we believe that mentoring provides a positive experience for college students to grow and develop as leaders, we are unable to determine cause of such developments due to the design of the study. We also tried to control variables (i.e. GPA, class rank) to maintain similar groups (mentor vs. comparison), but there may be other variables at play that we cannot determine.

Future research could employ a pre/post test to determine the change in self-leadership and self-efficacy throughout the mentoring experience. The researchers plan to continue this line of research to determine the mediating role of self-efficacy with a larger sample of both mentors and comparable students.

This study has implications that peer mentoring is far more than simply a cost effective student retention strategy. It provides an avenue for advanced students to continue to gain skills beyond the classroom environment that will influence their development far beyond their four years at college. Most importantly, students can develop as leaders and innovators who know how to influence them as well as their peers.
References


The Revised Self-Leadership Questionnaire
(Houghton & Neck, 2002)

INSTRUCTIONS: Read each of the following items carefully and try to decide how true the statement is describing you.

<table>
<thead>
<tr>
<th>Not at all accurate</th>
<th>Somewhat accurate</th>
<th>A little accurate</th>
<th>Mostly accurate</th>
<th>Completely accurate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

(1) I use my imagination to picture myself performing well on important tasks.

(2) I establish specific goals for my own performance.

(3) Sometimes I find I'm talking to myself (out loud or in my head) to help me deal with difficult problems I face.

(4) When I do an assignment especially well, I like to treat myself to something or activity I especially enjoy.

(5) I think about my own beliefs and assumptions whenever I encounter a difficult situation.

(6) I tend to get down on myself in my mind when I have performed poorly.

(7) I make a point to keep track of how well I'm doing at work (school).

(8) I focus my thinking on the pleasant rather than the unpleasant aspects of my job (school) activities.

(9) I use written notes to remind myself of what I need to accomplish.

(10) I visualize myself successfully performing a task before I do it.

(11) I consciously have goals in mind for my work efforts.

(12) Sometimes I talk to myself (out loud or in my head) to work through difficult situations.

(13) When I do something well, I reward myself with a special event such as a good dinner, movie, shopping trip, etc.

(14) I try to mentally evaluate the accuracy of my own beliefs about situations I am having problems with.

(15) I tend to be tough on myself in my thinking when I have not done well on a task.
(16) I usually am aware of how well I'm doing as I perform an activity.

(17) I try to surround myself with objects and people that bring out my desirable behaviors.

(18) I use concrete reminders (e.g., notes and lists) to help me focus on things I need to accomplish.

(19) Sometimes I picture in my mind a successful performance before I actually do a task.

(20) I work toward specific goals I have set for myself.

(21) When I'm in difficult situations I will sometimes talk to myself (out loud or in my head) to help me get through it.

(22) When I have successfully completed a task, I often reward myself with something I like.

(23) I openly articulate and evaluate my own assumptions when I have a disagreement with someone else.

(24) I feel guilt when I perform a task poorly.

(25) I pay attention to how well I'm doing in my work.

(26) When I have a choice, I try to do my work in ways that I enjoy rather than just trying to get it over with.

(27) I purposefully visualize myself overcoming the challenges I face.

(28) I think about the goals that I intend to achieve in the future.

(29) I think about and evaluate the beliefs and assumptions I hold.

(30) I sometimes openly express displeasure with myself when I have not done well.

(31) I keep track of my progress on projects I'm working on.

(32) I seek out activities in my work that I enjoy doing.

(33) I often mentally rehearse the way I plan to deal with a challenge before I actually face the challenge.

(34) I write specific goals for my own performance.

(35) I find my own favorite ways to get things done.
(Appendix B)

Tasks for Measuring Stress and Self-Efficacy
(Adapted from Zajacova, Lynch & Espenshade, 2005)

**Directions:** Answer how confident you are that you can successfully complete the tasks.

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Not Confident</th>
<th>Extremely Confident</th>
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<tbody>
<tr>
<td></td>
<td>0 1 2 3 4 5 6 7 8 9 10</td>
<td></td>
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<tr>
<td>Studying</td>
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<tr>
<td>Asking questions in class</td>
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<tr>
<td>Keeping up with required readings</td>
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<tr>
<td>Understanding my professors</td>
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<td>Meeting my parents' expectations of my grades</td>
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<tr>
<td>Making friends at school</td>
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<td>Doing well on exams</td>
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<td>Getting papers done on time</td>
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<tr>
<td>Having more tests in the same week</td>
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<tr>
<td>Taking good class notes</td>
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<tr>
<td>Managing both school and work</td>
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<tr>
<td>Preparing for exams</td>
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<tr>
<td>Managing time efficiently</td>
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<tr>
<td>Getting along with family members</td>
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<tr>
<td>Improving my reading and writing skills</td>
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<tr>
<td>Researching term papers</td>
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<tr>
<td>Getting the grades I want</td>
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<td>Having enough money</td>
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<tr>
<td>Talking to my professors</td>
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<td>Getting help and information at school</td>
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<tr>
<td>Doing well in my toughest class</td>
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<tr>
<td>Talking to college staff</td>
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<tr>
<td>Finding time to study</td>
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<tr>
<td>Understanding my textbooks</td>
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<tr>
<td>Participating in class discussions</td>
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<tr>
<td>Understanding college policies</td>
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(Appendix C)

**Supplemental Academic Success Measure**  
*(Bouchard & Hansen)*

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

1. I have maintained a cumulative GPA above a 2.75 during my college years.
2. I have decided on a major or future career.
3. I will graduate with a degree in a four-year time period from when I began college.
4. I plan to attend graduate or professional school (e.g. law, medical, dental) after earning my degree.
5. I have accomplished the academic goals that I have set for myself so far.
6. I have completed an internship in my field of study or intended career.
7. I have conducted an undergraduate research project or have participated in faculty research in my major.
8. I have done volunteer work related to my intended major or career.
9. I have done community service or volunteer work while in college.
10. I am actively involved in student organizations and groups.
11. I try to attend as many campus activities as possible.
12. I never miss a class.
13. I never use Facebook or other social media (including texting) during class.
14. I am actively engaged and ask questions during class.
15. I am always on time for my classes.