

## **Self-Leadership, Academic Self-Efficacy, and Engagement in Peer Mentors vs. a Comparison Group: Does Experience as a Mentor Impact Personal Success?**

### **Introduction and Purpose**

In an effort to bolster retention rates, faculty and administrators have increasingly turned to mentoring programs in order to keep at-risk students engaged. There is significant research that shows that peer mentoring programs are effective for these students and often provides a gateway to academic success (Rodger & Tremblay 2003, Terrion & Leonard, 2007; Jacobi, 1991; Crisp & Cruz, 2007). However, there are few studies that examine how mentoring can bolster students as leaders in their academic, professional, and personal lives. This investigation seeks to understand how peer mentoring can enhance a student mentor's academic experience. Specifically, this investigation explores self-leadership, academic self-efficacy, and academic success outcomes regarding classroom, campus, and community engagement in order to determine if peer mentoring experience has an impact on a student mentor's ability to succeed in an academic environment.

The construct of *Self-Leadership* refers to the idea that successful people are able to regulate and influence themselves to achieve goals by means of cognitive and behavioral strategies (Houghton & Neck, 2002). These include behavior-focused, natural reward, and cognitive strategies. The construct of self-leadership is further broken down into nine subscales including visualizing successful performance, self-goal setting, self-talk, self-reward, evaluating beliefs and assumptions, self-punishment, self-observation, focus on natural rewards, and self-cueing. Although self-leadership was originally designed to evaluate employees in a business context, many of the subscales of self-leadership seem to apply to students in an academic setting. Self-leadership can be used to assess how students can regulate their behavior to enhance their own success.

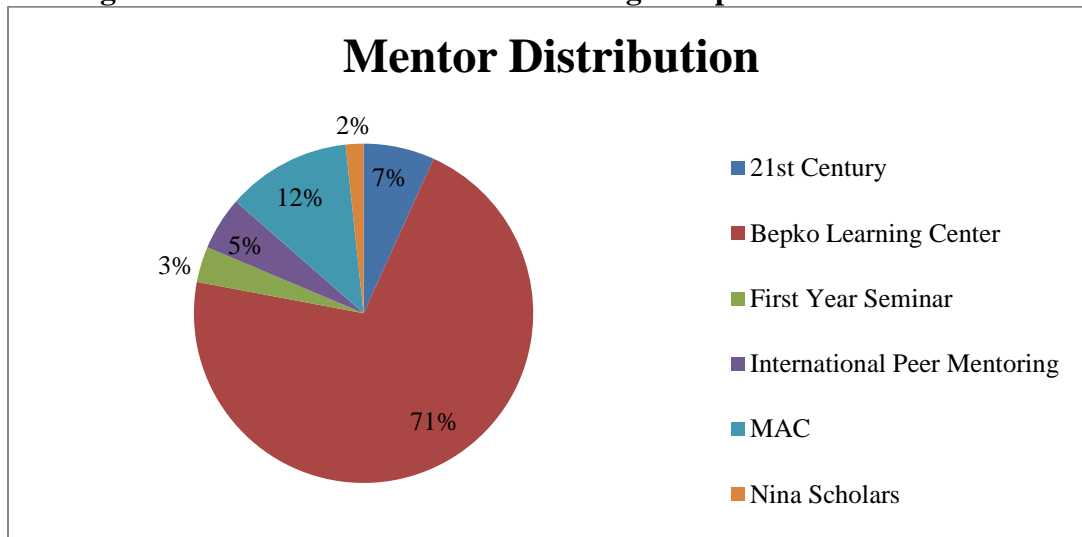
Academic self-efficacy is a measure of a student's confidence about their own ability to perform in an academic setting. A general sense of academic self-efficacy can be determined by individual tasks such as writing papers, interacting with professors, and taking tests. Academic self-efficacy has been consistently shown to predict both grades and persistence in college (Zajacova et al., 2005), which make it a key indicator of student success. In this study, academic self-efficacy is broken down into 4 constructs including interaction at school; academic performance outside of class; academic performance in class; and managing work, family, and school.

Seven supplemental questions were included about to assess *academic success* and the items focused on involvement in classroom, on campus, and in the community. It is believed that students who are engaged in their education have a great advantage when it comes to success in their academic endeavors and beyond. A sense of a student's engagement along with self-leadership and academic self-efficacy provide a comprehensive yet nuanced picture of academic success at the undergraduate level. This investigation seeks to determine if mentors have greater gains in these areas even when compared with students who are similar in terms of the traditional predictors of academic success including gender, first generation, GPA, and class rank.

**Method**

All University College student mentors were invited to participate in a survey that included The Revised Self-Leadership Questionnaire (Houghton & Neck, 2002), Tasks for Measuring Stress and Self-Efficacy (Zajacova et al., 2005), and seven supplemental questions that gauged classroom, campus, and community engagement. Figure 1 illustrates the distribution of all mentors who participated.

**Figure 1: Total Distribution of Mentoring Components**



To form the comparison group, the questionnaires were administered to the B110 psychology subject pool. After gleaning 450 responses, the comparison group was narrowed to 60 students who were similar in terms of GPA, class rank, gender, and first generation status. All students in the comparison group had a GPA of 3.0 or higher. Careful consideration was given to craft a comparable group without bias of selecting individual cases for benefit of the results. Due to the majority of underclassman in the introductory psychology subject pool, it was difficult to fully match seniors in the comparison group. However, the differences of first generation, gender, and GPA were all non-significant. Table 1 shows the characteristics of both the mentor and comparison groups.

**Table 1: Characteristics of Mentor vs. Comparison Group**

	Mentor	Comparison	Sig (2-tailed)
% First Generation	28%	28%	1.0
% Female	78%	72%	.528
GPA Average	3.50	3.56	.265
# of Seniors	26	13	-

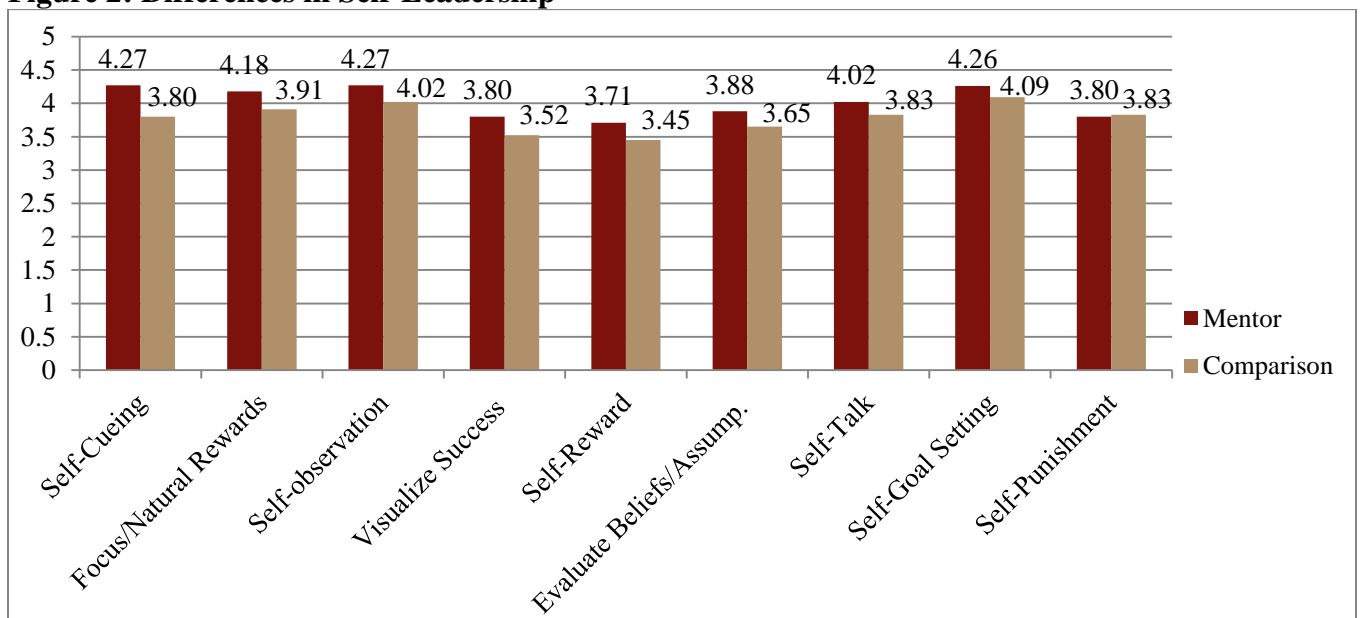
**Results**

Four significant differences in self-leadership constructs were found. The first notable difference was in **self-cueing**,  $t(112)=2.33, p<.05$ , which is described as a behavior focused strategy. Self-cueing helps students to identify tasks and assignments as well as complete the desired assignments on time. Next, mentors scored significantly higher on **focus on natural rewards**,  $t(113)=2.28, p<.05$ . This construct relates to a student’s ability to accomplish tasks—both pleasant and unpleasant by focusing on the desirable aspects of the task or job. Mentors also scored higher in **self-observation**,  $t(109)=2.26, p<.05$ , another behavior focused construct that helps students maintain awareness about their behavior. Awareness or self-observation of behavior can help a student recognize and eliminate ineffective or unhealthy behavior while also developing new and better habits related to work or school. Last, mentors scored significantly higher on **visualizing successful performance**,  $t(113)=2.00, p<.05$ , a thought focused strategy based on mental imagery that leads to greater competence and success. Table 2 shows the mean differences in the constructs, and figure 2 further illustrates these differences.

**Table 2: Self-Leadership Constructs**

Construct	Mean (Mentor)	Mean (Comparison)	Mean Difference	Reliability	Effect Size	Sig (2-tailed)
<b>Self-cueing</b>	<b>4.27</b>	<b>3.80</b>	<b>.47</b>	<b>.886</b>	<b>.21</b>	<b>.022</b>
<b>Focus on Natural Rewards</b>	<b>4.17</b>	<b>3.91</b>	<b>.27</b>	<b>.728</b>	<b>.21</b>	<b>.024</b>
<b>Self-Observation</b>	<b>4.27</b>	<b>4.02</b>	<b>.25</b>	<b>.735</b>	<b>.20</b>	<b>.026</b>
<b>Visualize Successful Performance</b>	<b>3.80</b>	<b>3.52</b>	<b>.28</b>	<b>.796</b>	<b>.18</b>	<b>.048</b>
Self-Reward	3.71	3.45	.26	.945	ns	.256
Evaluate Beliefs/Assumptions	3.88	3.65	.23	.752	ns	.074
Self-Talk	4.02	3.83	.19	.922	ns	.341
Self-Goal Setting	4.26	4.09	.17	.707	ns	.110
Self-Punishment	3.80	3.83	.03	.803	ns	.854

**Figure 2: Differences in Self-Leadership**



**Results**

Table 3 shows a further breakdown of the nine self-leadership constructs as well as individual items.

**Table 3: Self-Leadership Construct Breakdown and Individual Items**

<b>Self-Cueing (<math>\alpha=.886</math>)</b>						
	Mean (Mentor)	Standard Deviation	Mean (Comparison)	Standard Deviation	Effect Size	Sig (2-tailed)
<b>9. I use written notes to remind myself of what I need to accomplish</b>	<b>4.25</b>	<b>1.10</b>	<b>3.68</b>	<b>1.27</b>	<b>.23</b>	<b>.010</b>
18. I use concrete reminders (e.g. notes and lists) to help me focus on the things I need to accomplish	4.31	.94	3.92	1.27	ns	.057
<b>Focusing on Natural Rewards (<math>\alpha=.728</math>)</b>						
<b>8. I focus my thinking on the pleasant rather than unpleasant aspects of my job (school) activities</b>	<b>3.86</b>	<b>.97</b>	<b>3.43</b>	<b>1.13</b>	<b>.20</b>	<b>.027</b>
17. I try to surround myself with the objects and people that bring out my desirable behaviors.	4.31	.79	4.07	.80	ns	.105
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	4.21	.84	3.90	.97	ns	.066
<b>32. I seek out activities in my work that I enjoy doing.</b>	<b>4.29</b>	<b>.65</b>	<b>3.98</b>	<b>.81</b>	<b>.20</b>	<b>.024</b>
35. I find my own favorite way to get things done.	4.25	.81	4.18	.85	ns	.686
<b>Self-Observation (<math>\alpha=.735</math>)</b>						
7. I make a point to keep track of how well I'm doing at work (school)	4.36	.83	4.22	.92	ns	.387
<b>16. I usually am aware of how well I'm doing as I perform an activity.</b>	<b>4.14</b>	<b>.730</b>	<b>3.85</b>	<b>.78</b>	<b>.19</b>	<b>.041</b>
<b>25. I pay attention to how well I'm doing in my work.</b>	<b>4.49</b>	<b>.60</b>	<b>4.15</b>	<b>.81</b>	<b>.23</b>	<b>.011</b>
<b>31. I keep track of my progress on projects I'm working on</b>	<b>4.19</b>	<b>.83</b>	<b>3.87</b>	<b>.89</b>	<b>.18</b>	<b>.043</b>
<b>Visualizing Successful Performance (<math>\alpha=.796</math>)</b>						
1. I use my imagination to picture myself performing well on important tasks	3.73	1.07	3.52	1.05	ns	.265
10. I visualize myself successfully performing a task before I do it	3.59	1.13	3.36	1.06	ns	.243
19. Sometimes I picture in my mind a successful performance before I actually do a task	3.74	1.02	3.37	1.11	ns	.064
<b>27. I purposefully visualize myself overcoming the challenges I face</b>	<b>3.84</b>	<b>.99</b>	<b>3.47</b>	<b>1.11</b>	<b>.17</b>	<b>.053</b>
33. I often mentally rehearse the way I plan to deal with a challenge before I actually face the challenge	4.10	.93	3.92	.98	ns	.290
<b>Self-Reward (<math>\alpha=.945</math>)</b>						

4. When I do an assignment especially well, I like to treat myself to some thing or activity I especially enjoy	3.83	1.04	3.58	1.23	ns	.234
13. When I do something well, I reward myself with a special event such as a good dinner, movie, shopping trip, etc.	3.66	1.08	3.38	1.33	ns	.213
22. When I have successfully completed a task, I often reward myself with something I like	3.74	1.01	3.47	1.17	ns	.188
<b>Evaluating Beliefs and Assumptions (<math>\alpha=.752</math>)</b>						
5. I think about my own beliefs and assumptions whenever I encounter a difficult situation.	3.85	.954	3.88	.98	ns	.850
<b>14. I try to mentally evaluate the accuracy of my own beliefs about situations I am having problems with</b>	<b>3.90</b>	<b>.852</b>	<b>3.53</b>	<b>.87</b>	<b>.21</b>	<b>.024</b>
<b>23. I openly articulate and evaluate my own assumptions when I have a disagreement with someone else</b>	<b>3.72</b>	<b>.978</b>	<b>3.30</b>	<b>1.03</b>	<b>.20</b>	<b>.026</b>
29. I think about and evaluate the beliefs and assumptions that I hold	4.02	.783	3.86	.955	ns	.346
<b>Self-Talk (<math>\alpha=.922</math>)</b>						
3. Sometimes I find I'm talking to myself (out loud or in my head) to help me deal with difficult problems I face.	3.97	1.16	3.87	1.20	ns	.644
12. Sometimes I talk to myself (out loud or in my head) to work through difficult situations.	4.03	.97	3.76	1.21	ns	.183
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.	4.00	1.18	3.84	1.11	ns	.456
<b>Self-Goal Setting (.707)</b>						
2. I establish specific goals for my own performance.	4.40	.62	4.28	.80	ns	.374
11. I consciously have goals in mind for my work efforts.	4.26	.720	4.12	.84	ns	.316
20. I work toward specific goals I have set for myself	4.29	.756	4.23	.72	ns	.704
28. I think about the goals that I intend to achieve in my future.	4.46	.66	4.20	.798	ns	.060
34. I write specific goals for my own performance.	3.95	1.10	3.63	1.18	ns	.136
<b>Self-Punishment (<math>\alpha=.803</math>)</b>						
6. I tend to get down on myself in my mind when I have performed poorly	3.93	1.03	3.98	1.15	ns	.802
15. I tend to be tough on myself in my thinking when I have not done well on a task.	3.86	1.03	3.93	.97	ns	.701
24. I feel guilt when I perform a task poorly.	3.83	1.09	3.87	1.10	ns	.847
30. I sometimes openly express displeasure with myself when I have not done well.	3.59	1.06	3.48	1.20	ns	.622

**Results**

Academic self-efficacy is a construct that examines a student’s belief in their own ability to complete tasks in their academic life. Mentors scored significantly higher in the measure of **academic self-efficacy**  $t(102)=3.51, p<.001$ . Academic self-efficacy was further broken down into four constructs. Mentors rated themselves higher on their **interaction at school**  $t(104)=4.43, p<.001$ , **academic performance outside of class**  $t(108)=3.00, p<.05$ , **academic performance in class**  $t(112)=2.6, p<.05$ , and **managing work, family, and school**  $t(115)=2.6, p<.05$ . A detailed breakdown of the items comprised in this questionnaire is located in Table 4.

**Table 4: Differences in Academic Self-Efficacy**

<b>Interaction at School</b>						
	Mean (Mentor)	Standard Deviation	Mean (Comparison)	Standard Deviation	Effect Size	Sig (2-tailed)
<b>Asking questions in class**</b>	<b>7.80</b>	<b>2.21</b>	<b>6.29</b>	<b>2.65</b>	<b>.30</b>	<b>.001</b>
<b>Making friends at school**</b>	<b>8.51</b>	<b>1.81</b>	<b>7.05</b>	<b>2.40</b>	<b>.32</b>	<b>.000</b>
<b>Talking to my professors**</b>	<b>8.36</b>	<b>1.96</b>	<b>6.98</b>	<b>2.38</b>	<b>.30</b>	<b>.001</b>
<b>Getting help and information at school**</b>	<b>8.44</b>	<b>1.76</b>	<b>6.76</b>	<b>2.23</b>	<b>.39</b>	<b>.000</b>
<b>Talking to college staff**</b>	<b>8.57</b>	<b>1.66</b>	<b>6.79</b>	<b>2.23</b>	<b>.41</b>	<b>.000</b>
<b>Participating in class discussions**</b>	<b>8.31</b>	<b>1.92</b>	<b>6.91</b>	<b>2.58</b>	<b>.29</b>	<b>.001</b>
Understanding college policies	8.80	1.48	8.46	1.78	ns	.264
<b>Academic Performance Outside of Class</b>						
<b>Studying</b>	<b>8.31</b>	<b>1.87</b>	<b>7.53</b>	<b>2.02</b>	<b>.20</b>	<b>.032</b>
<b>Keeping up with required readings</b>	<b>7.33</b>	<b>2.21</b>	<b>6.23</b>	<b>2.12</b>	<b>.25</b>	<b>.008</b>
Getting papers done on time	9.02	1.60	9.02	1.35	ns	1.00
<b>Preparing for exams</b>	<b>8.07</b>	<b>1.85</b>	<b>7.12</b>	<b>1.98</b>	<b>.24</b>	<b>.009</b>
<b>Improving my reading and writing skills</b>	<b>8.31</b>	<b>1.59</b>	<b>7.51</b>	<b>1.69</b>	<b>.24</b>	<b>.010</b>
<b>Researching term papers**</b>	<b>8.03</b>	<b>1.78</b>	<b>6.69</b>	<b>2.26</b>	<b>.31</b>	<b>.001</b>
Understanding my textbooks	8.03	1.96	7.47	1.89	ns	.119
<b>Academic Performance in Class</b>						
<b>Doing well on exams</b>	<b>8.12</b>	<b>1.77</b>	<b>7.33</b>	<b>1.95</b>	<b>.24</b>	<b>.024</b>
<b>Having more tests in the same week</b>	<b>7.95</b>	<b>2.01</b>	<b>6.93</b>	<b>2.12</b>	<b>.24</b>	<b>.009</b>
Getting the grades I want	8.31	1.68	7.78	1.77	ns	.100
<b>Doing well in my toughest class</b>	<b>7.97</b>	<b>1.82</b>	<b>6.88</b>	<b>2.21</b>	<b>.26</b>	<b>.004</b>
<b>Managing Work, Family, and School</b>						
Managing both school and work	8.34	1.96	7.66	1.95	ns	.062
<b>Managing time efficiently</b>	<b>7.83</b>	<b>2.10</b>	<b>6.95</b>	<b>2.05</b>	<b>.20</b>	<b>.023</b>
Getting along with family members	8.98	1.24	8.51	1.77	ns	.094
<b>Finding time to study</b>	<b>7.83</b>	<b>2.16</b>	<b>7.00</b>	<b>1.95</b>	<b>.20</b>	<b>.030</b>

**Bold indicates significance of .05**

\*\*indicates significance of .001

**Results**

Finally, we asked peer mentors and students in the comparison group about their classroom, campus and community involvement. Although mentors did not report being more engaged in their classroom experience, they were significantly more engaged both on **campus and in the community**,  $t(116)=3.88, p<.001$ . A detailed breakdown of item responses can be found in Table 5.

**Table 5: Differences in Classroom, Campus, and Community Engagement**

Classroom Engagement ( $\alpha=.793$ )						
	Mean (Mentor)	Standard Deviation	Mean (Comparison)	Standard Deviation	Effect Size	Sig (2-tailed)
I never miss a class	3.69	1.24	3.58	1.95	ns	.710
<b>I am actively engaged and ask questions during class</b>	<b>3.83</b>	<b>1.00</b>	<b>3.13</b>	<b>1.88</b>	<b>.23</b>	<b>.013</b>
I am always on time for my classes	4.38	.933	4.32	1.86	ns	.063
Campus and Community Involvement ( $\alpha=.706$ )						
I have done volunteer work related to my intended major or career	3.22	2.15	2.88	2.23	ns	.403
<b>I have done community service or volunteer work while in college</b>	<b>4.72</b>	<b>.586</b>	<b>3.93</b>	<b>2.16</b>	<b>.24</b>	<b>.008</b>
<b>I am actively involved in student organizations and groups**</b>	<b>3.75</b>	<b>1.52</b>	<b>2.28</b>	<b>1.45</b>	<b>.44</b>	<b>.000</b>
<b>I try to attend as many campus activities as possible**</b>	<b>2.85</b>	<b>1.30</b>	<b>2.07</b>	<b>1.25</b>	<b>.29</b>	<b>.001</b>

**Bold indicates significance of .05**

\*\*indicates significance of .001

**Conclusion**

Much research is devoted to how mentors impact mentees’ success, but few studies examine the benefits of mentoring for mentors. Peer mentors in this study had greater competency in key areas related to academic success compared to a matched group of students based on traditional predictors such as GPA and gender.

Peer mentors scored significantly higher in four areas of self-leadership including self-cueing, focus on natural rewards, self-observation, and visualizing successful performance. These areas are vital to the functioning of students as leaders of both themselves and others. Students who can track assignments, regulate their own behavior, visualize success, and focus on the pleasant aspects of their jobs will continually reach new heights in their careers both as a student and beyond.

Perhaps more striking is the contrast in academic self-efficacy between students who serve as peer mentors and their counterparts. Peer mentors are drastically more confident in their academic abilities both inside and outside of the classroom as well as in their interaction at school. In addition they report being more confident in balancing their work, family, and school responsibilities—a point of stress for all undergraduates. Mentors feel more self-assured in areas including studying, asking questions, preparing for exams, and talking to professors and staff. This could be related to their own

responsibilities as mentors in helping student mentees transition to college, complete coursework, and communicate with professors and other resources on campus.

Although mentors did not score significantly higher on the construct of classroom engagement, they did report being notably more involved on campus and in the community. According to Schreiner (2010), students who engage in the opportunities that universities have to offer thrive in the academic environment rather than students who simply survive their years in college. Mentors not only have the ability to lead themselves and confidence to complete academic responsibilities, they also engage in campus and community events that will provide richness to their college experience. This demonstrates that mentoring is not only an effective intervention for at-risk students, but a worthwhile endeavor to enhance student leadership development.



### References

- Crisp , G., & Cruz, I. (2009). Mentoring college students: A critical review of the literature between 1990 and 2007. *Research in Higher Education, 50* , 525-545
- Houghton, J. D., & Neck, C. P. (2002). The revised self-leadership questionnaire: Testing a hierarchical factor structure for self-leadership. *Journal of Managerial Psychology, 17*(8), 672-691
- Jacobi, M. (1991). Mentoring and undergraduate academic success: A literature review. *Review of Educational Research, 61*(4), 505-53
- Rodger, S., & Tremblay, P. F. (2003). The effects of a peer mentoring program on academic success among first year university students. *The Canadian Journal of Higher Education, 33*(3), 1-18
- Schreiner, L. A. (2010). The "thriving quotient". *Wiley Interscience, 2-10*. doi: 10.1002/abc.20016
- Terrion, J. L., & Leonard, D. (2007). A taxonomy of the characteristics of student peer mentors in higher education: Findings from a literature review. *Mentoring and Tutoring: Partnership in Learning, 15*(2), 149-164
- Zajacova, A., Lynch, S. M., & Espenshade, T. J. (2005). Self-efficacy, stress, and academic success in college. *Research in Higher Education, 46*(6), 677-704