

3-2007

# Self-Efficacy of First-Generation College Students and the Relationship to Academic Performance and College Adjustment

Lucila Ramos-Sánchez

Laura Nichols

*Santa Clara University*, [lnichols@scu.edu](mailto:lnichols@scu.edu)

Follow this and additional works at: <https://scholarcommons.scu.edu/soc>

 Part of the [Sociology Commons](#)

---

## Recommended Citation

Ramos-Sánchez, L., & Nichols, L. (2007). Self-Efficacy of First-Generation and Non-First-Generation College Students: The Relationship With Academic Performance and College Adjustment. *Journal of College Counseling*, 10(1), 6–18.

This is the peer reviewed version of the following article: Ramos-Sánchez, L., & Nichols, L. (2007). Self-Efficacy of First-Generation and Non-First-Generation College Students: The Relationship With Academic Performance and College Adjustment. *Journal of College Counseling*, 10(1), 6–18, which has been published in final form at <https://doi.org/10.1002/j.2161-1882.2007.tb00002.x>. This article may be used for non-commercial purposes in accordance With Wiley Terms and Conditions for self-archiving.

This Article is brought to you for free and open access by the College of Arts & Sciences at Scholar Commons. It has been accepted for inclusion in Sociology by an authorized administrator of Scholar Commons. For more information, please contact [rscroggin@scu.edu](mailto:rscroggin@scu.edu).

Running head: SELF-EFFICACY AND FIRST-GENERATION COLLEGE

Self-Efficacy of First-Generation and Non-First Generation College Students:

The Relationship With Academic Performance and College Adjustment

Lucila Ramos-Sánchez, Ph.D.  
Department of Counseling Psychology  
Bannan Hall 226  
500 El Camino Real  
Santa Clara University  
Santa Clara, CA 95053  
Telephone: 408-554-2398  
Facsimile: 408-554-2392

Laura Nichols, Ph.D.  
Department of Sociology  
O'Connor Hall 329  
500 El Camino Real  
Santa Clara University  
Santa Clara, CA 95053  
Telephone: 408-551-7131  
Facsimile: 408-554-4189

Santa Clara University

### Abstract

The present study examined whether self-efficacy mediated the relationship between generational status and two academic outcome indicators of one hundred ninety-two college students. Self-efficacy did not mediate the relationship between generational status and academic performance or college adjustment. However, self-efficacy was a significant predictor of college adjustment. High self-efficacy at the beginning of the year predicted better college adjustment at the end of the first year, regardless of generational status. Between group comparisons indicated that first-generation college students had significantly lower self-efficacy than non-first generation college students. Findings suggest that for college students in general, self-efficacy seems to be related to better college adjustment, which in turn, could increase persistence toward graduation. Recommendations for counselors are discussed.

## Self-Efficacy of First-Generation and Non-First Generation College Students:

### The Relationship With Academic Performance and College Adjustment

Universities and researchers have expressed a growing concern regarding the experiences of first-generation college students in the literature (Bui, 2002; Hertel, 2002; London, 1989; Olenchak & Hebert, 2002; Strage, 1999; Pascarella, Wolniak, Pierson, & Terenzini, 2003; Pike & Kuh, 2005; York-Anderson & Bowman, 1991). Billson and Terry (1982) defined first-generation college students as those whose parents did not attend college, whereas second and non-first generation (traditional college students) have at least one parent who graduated from a four-year university. For the purpose of this study, the term non-first generation college student will be used generally to refer to participants who had at least one parent complete a college degree. The term traditional college student will only be used to maintain the integrity of studies reviewed in the literature.

Comparative studies (Bui, 2002; Riehel, 1994) indicate that first-generation college students often encounter more challenges than their peers. This body of research indicates that first-generation college students experience difficulties prior to and during their college experience leaving them vulnerable to lower academic performance (Bui, 2002) and problematic transitions as they adjust to college (Terenzini, Springer, Yeager, Pascarella, & Nora, 1996). Bui (2002) found that a significant portion of first-generation college students encountered challenges with respect to being over-represented in the lower socioeconomic strata, coming from an under-represented ethnic group and speaking a language other than English in the home (Bui, 2002). Less familial support to attend college was also evident (Fallon, 1997; York & Bowman, 1991; Zalaquett, 1999). Fallon (1997) hypothesized that parents who did not attend college were often unable to provide their children with the guidance and mentoring needed in

the college admissions process. This was corroborated by Warburton, Bugarin, and Nunez (2001) who reported that first-generation college students perceived themselves as less prepared, lacked basic knowledge about post-secondary education, and worried more about financial concerns (Bui, 2002; Fallon, 1997) compared to traditional college students. These challenges often translated to a different set of experiences once in college.

Differential college experiences between first-generation students and non-first generation college students were evident throughout their academic careers. Terenzini et al. (1996) found that compared to traditional college students, first-generation college students took fewer humanities courses, studied fewer hours, took fewer credits, worked more hours, and were less likely to participate in honors programs. Pascarella et al. (2003) reported similar findings for first-generation college students in a community college setting. Other studies have found that first-generation college students had lower academic performance (Mitchell, 1997; Riehl, 1994), more problematic transitions (Terenzini et al., 1996), and higher levels of attrition (Brooks-Terry, 1988; Thayer, 2000; York-Anderson & Bowman, 1991) than traditional college students. Overall, the body of evidence indicates that first-generation college students encounter more obstacles in college than their peers. The focus on academic performance (e.g., GPA) and college adjustment are particularly relevant, as they have been linked to persistence and attrition in college (Cone, 1992; Gerdes & Mallinckrodt, 1994), problematic issues for first-generation college students (Brooks-Terry, 1988; Thayer, 2000; York-Anderson & Bowman, 1991). However, not all evidence with regard to GPA has been consistent.

Contrary to previous findings, Zalaquett (1999) found no difference in GPA between first-generation and traditional college students. This could suggest that other factors could be influencing academic performance. The author hypothesized that students' similar comfort level

with the college environment accounted for the similarity in GPA between the two groups (first-generation vs. non-first generation college students). Thus, students' internal experience mediated the relationship with their generational status and their academic performance. It would follow that if comfort level mediated the association between generational status and GPA for first-generation college students, then other internal factors may mediate generational status as well. In addition, despite the obstacles many first-generation college students encounter, many do persist toward graduation. Therefore, examining other possible internal factors that mediate external challenges deserves further study. Unfortunately, little attention has been given to internal resources that may be related to academic performance and college adjustment of first-generation college students (McGregor, Mayleben, Buzzanga, Davis, & Becker, 1991).

In one of the only studies that addressed internal resources of first-generation college students, McGregor et al. (1991) found that traditional college students had higher self-esteem scores than the first-generation comparison group. The authors indicated that having had parents who completed college made it easier for traditional college students to adjust to the demands of their environment. The advantage of having parents who could guide them in their transition to college likely led to higher confidence and positive beliefs about their ability to succeed and adjust at a four-year university. Given the challenges first-generation college students experience, it is reasonable to conclude that beliefs (internal cognitive process) about their abilities are negatively affected, resulting in lower academic performance.

The effects of cognitive processes on outcomes are best understood through social cognitive theory (Bandura, 1997). The theory maintains that one class of cognitive processes, self-efficacy, influences behavior and subsequently influences outcomes. Self-efficacy is defined as beliefs about one's ability to successfully execute a behavior required to produce a

certain outcome (Bandura, 1997). In fact, level of self-efficacy is related to whether or not a person engages in a particular behavior or activity. People may avoid or exert less effort in situations where they possess lower self-efficacy (Bandura, 1986). Conversely, high expectations of self may increase performance and a person's willingness to persevere (Bandura, 1997). Such has been the case for academic performance.

The contribution of self-efficacy to academic performance is well developed in the literature (Bryan & Bryan, 1991; Chemers, Hu, & Garcia, 2001; Elias & Loomis, 2002; Hackett, Betz, Casas, & Rocha-Singh, 1992; Hampton & Mason, 2003; Lent, Brown, & Larkin, 1984, 1986; Multon, Brown, & Lent, 1991; Zimmerman, Bandura, & Martinez-Pons, 1992). Lent et al. (1986) found a positive relationship between self-efficacy and academic achievement for college students in technical and scientific majors. Hackett et al. (1992) supported these findings using a college sample of engineering students. Most notably, Chemers et al. (2001) reported that academic self-efficacy was directly related to academic performance of first-year college students, the year in which students encountered the hardest transition. Given the significant relationship between self-efficacy and performance outcomes, it was reasonable to conclude that this would extend to first-generation college students as well. It is possible that self-efficacy could mitigate the first year challenges of this population faces. Unfortunately, research investigating self-efficacy and generational status of college students is limited. Phinney and Haas (2003) examined self-efficacy and coping strategies of first-generation college students but did not address academic performance or college adjustment. Therefore, research examining the relationship between self-efficacy, academic outcomes and transitions of first-generation college students merits further investigation in order to develop interventions necessary to ensure a smooth transition to college.

The purpose of the current study was to extend previous research by applying social cognitive theory to help understand the association between self-efficacy and two academic outcomes for first-generation college students. The study was guided by three inquiries. First, did self-efficacy mediate the relationship between generational status and two academic outcomes? We hypothesized that the mediation relationship would be supported by the data for both academic performance (GPA) and college adjustment. Second, did self-efficacy differ significantly between first-generation and non-first generation college students? Based on the literature indicating that first-generation college students encountered more challenges, we expected that non-first generation college students would have higher self-efficacy than first-generation college students. Third, did within group changes emerge for self-efficacy over the course of the year? Finally, no specific prediction was made given that the inquiry was exploratory.

## Method

### *Participants*

Participants were 192 entering freshmen at a private liberal arts west coast university. The sample consisted of 65.1% ( $n = 125$ ) females, 34.4% ( $n = 66$ ) males, and .5% ( $n = 1$ ) missing case, with a mean age of 18.24. First-generation college students comprised 33.3% ( $n = 64$ ) of the sample while non-first generation college students comprised 66.1% ( $n = 127$ ) of the sample. For family income, 5.7% ( $n = 11$ ) were in the \$0-19,999% bracket, 14.1% ( $n = 27$ ) in the \$20,000-39,999 bracket, 22.4% ( $n = 43$ ) in the \$40,000-69,999 bracket, 16.7% ( $n = 32$ ) in the \$70,000-89,999 bracket, 14.6% ( $n = 28$ ) in the \$90,000-110,000 bracket, 21.9% ( $n = 42$ ) in the over \$110,000 bracket, and 4.7% ( $n = 9$ ) did not report income.

Approximately fifty-two percent of the sample identified themselves as non-Hispanic White/European-American ( $n = 100$ ), 13.0% ( $n = 25$ ) identified as Latino/Hispanic, 20.3% ( $n = 39$ ) indicated they were Asian-American or Pacific Islander, 1.6% ( $n = 3$ ) were African-American, 8.3% ( $n = 16$ ) indicated more than one race and were coded as “biracial” race, and 2.6% ( $n = 5$ ) reported “other” for their racial classification. The participants in the study were a representative sample of the university population for ethnicity and sex: European Americans (62.2%), Latinos (11.4%), Asian Americans (22.0%) and females (65%), respectively. First-generation college students were over-sampled as they represented 20% of the university population.

### *Measures*

The College Self-Efficacy Instrument (CSEI; Solberg, O’Brien, Villareal, Kennel, & Davis, 1993) was developed to assess the self-efficacy of students related to college activities for the Hispanic population. The instrument consists of three subscales with a total of 19 questions. The subscales address experiences encountered in college such as course work, roommates, and social encounters. Items addressing course work ask how confident the participant feels about doing research, writing papers and taking notes. The second subscale regarding roommates addressed the level of confidence students have dividing up chores and living area. The final subscale on social encounters asks participants their confidence level on asking questions in class and talking to professors.

Ratings are made on a 10-point Likert type scale where (1) = *no confidence* and (10) = *extremely high confidence*. A high score on the instrument is representative of high self-efficacy while a low score is representative of low self-efficacy. Scores are calculated using average item

score. Solberg et al. (1993) established reliability coefficient of .93 for the CSEI. The coefficient alpha for each of the three subscales was .88.

In the current study, the CSEI was modified for brevity and to focus primarily on academic experience. The wording of the items was left unchanged. A total of ten items were used; 6 of the 7 items on the course work subscale; and 4 of the 8 items on the social encounter subscale. Items were retained that addressed issues related to course work, faculty interactions and classroom interactions. All items examining roommate relationships were dropped from the survey to focus primarily on academic experience. Overall, the shortened version did not substantively affect the internal consistency of the scale, .86.

Adjustment to college was measured using the Student Adaptation to College Questionnaire (SACQ; Baker & Siryk, 1984). The SACQ measures personality and environmental factors that influence adjustment to college. The instrument consists of 4 subscales (academic adjustment, social adjustment, personal-emotional adjustment, and institutional attachment/goal commitment) with 66 items. In the current study the academic adjustment subscale was administered (24 items) to maintain the brevity and increase the likelihood of completion of the survey. Participants were asked to rate each item on a 5-point Likert scale ranging from (1) *very strongly disagree* to (5) *very strongly agree*. Internal consistency for the overall scale and the academic adjustment subscale were reported at .93 and .91, respectively (Alvan, Belgrave, & Zea, 1996). Coefficient alpha for the current study was .85.

The last section of the survey consisted of demographic information. Data gathered included ethnicity, gender, age, generational status and family income. Generation was coded as

0 = *non-first generation college students* and 1 = *first-generation college students*. Cumulative GPA at the end of their first year was also obtained from student records.

### *Procedures*

All entering first-year students who could be identified as first-generation ( $n = 129$ ) from their applications to the university and a random sample of first-year students not identified as first-generation ( $n = 225$ ) were invited to take part in the study. Demographic and self-efficacy data were gathered at the start and end of the year to determine changes in self-efficacy. College adjustment data was gathered only at the end of the year. All potential participants were sent an E-mail that briefly described the study, requested their voluntary participation, informed them of their rights and provided them with a website to complete the survey on-line. The E-mail message was sent the first half of the fall quarter. Students completed the questionnaire anonymously on-line and each student was paid \$10 for their participation in the study. In fall quarter, of the 354 potential participants contacted, 215 completed the survey for a return rate of 61%. The return rate based on generational status was 58% for first-generation and 62% for non-first generation college students. In spring quarter, a follow-up survey was sent to those 215 students via E-Mail in the latter half of the spring quarter. One hundred and ninety-two of those students completed the survey anonymously on-line for a return rate of 89% for the total group. The return rate based on generational status was 85% for first-generation and 90% for non-first generation college students. Participants who did not complete the second part of the study were dropped from the sample. Of the participants that did not complete the study at both time points, 9% ( $n = 13$ ) were non-first generation and 12% ( $n = 9$ ) were first-generation college students.

## Results

### *Preliminary Analyses*

Bivariate correlations were conducted to determine if participant variables were related to the dependent measures. As can be seen on Table 1, participant variables (i.e., income, age) were not significantly related to the dependent measures. A MANOVA was conducted with ethnicity as the independent variable to determine the relationship between ethnicity and the dependent measures. Ethnic groups did not differ significantly from each other on either dependent measure,  $F(2, 179) .96, p > .05$ . A t-test of independent samples found no significant differences between the group who completed versus the group who did not complete the entire study, on self-efficacy,  $t(2, 213) .02, p > .05$ , and income,  $t(2, 205) .00, p > .05$ . Demographic variables were not significantly related to the dependent measures, therefore, covariates were unnecessary in the primary analyses. A chi-square was conducted crossing 2 levels of generational status with 2 levels of study completion (those who completed versus those who did not complete the study). No significant differences,  $\chi^2(1, N = 215) = 1.42, p = .23$ , emerged between participants who completed and those who did not complete the study.

### *Primary Analyses*

A mediation path analysis was conducted to determine if self-efficacy mediated the relationship between generational status and two academic outcome indicators; GPA and college adjustment. The Baron and Kenny (1986) mediation method was used to test this hypothesis. Baron and Kenny indicate that three conditions must occur for self-efficacy to mediate the relationship between generational status and the two academic outcomes, (a) generational status must be significantly associated with self-efficacy, (b) generational status must be significantly associated with the academic outcome variables (GPA/college adjustment), and (c) the relationship between generational status and the academic outcome variables (GPA/college adjustment) is no longer significant when controlling for self-efficacy. In the first step of the

equation generational status significantly predicted self-efficacy,  $F(1, 189) = 6.61, p < .05; R^2 = .03$ , (adjusted  $R^2 = .02$ ), the mediator variable. Review of results for step 2 and 3 can be seen on Table 2. In the second step of the equation, two simple regression analyses were conducted to determine if generational status predicted GPA and college adjustment. Generational status significantly predicted GPA,  $F(1, 187) = 6.08, p < .02; R^2 = .03$ , (adjusted  $R^2 = .02$ ), but not college adjustment,  $F(1, 189) = .14, p > .05; R^2 = .00$ , (adjusted  $R^2 = -.00$ ). Therefore, the second necessary condition was met only for GPA. In the third step of the equation for GPA, a regression was conducted to assess whether the inclusion of self-efficacy would lessen the association between generation and GPA. The standardized regression coefficient for generation indicated that the association between generation and GPA, in the presence of self-efficacy, did not decrease the relative association observed in step 1; generation was still a significant predictor of GPA,  $F(2, 186) = 3.16, p < .05; R^2 = .03$ , (adjusted  $R^2 = .02$ ).

For college adjustment, the second condition that generational status had to significantly predict the dependent criteria was not met. As a result, self-efficacy could not serve as a mediator between generation and college adjustment. Nonetheless, the third equation with generational status and self-efficacy entered as independent variables and college adjustment as the dependent measure was conducted because the outcome of the relationship was still of interest. Self-efficacy at the beginning of the year significantly predicted college adjustment at the end of the year,  $F(2, 188) = 10.62, p < .001; R^2 = .10$ , (adjusted  $R^2 = .09$ ). This indicated that higher self-efficacy regardless of generational status predicted higher self-perceived college adjustment.

A univariate repeated measures ANOVA was conducted to determine if first-generation college students significantly differed from non-first generation college students at the start and

end of the year, and whether self-efficacy increased over the course of the year for each group. Non-first generation college students had significantly higher self-efficacy,  $F(1, 379) = 16.16, p < .001$ , at the start ( $M = 7.29, SD = 1.24$ ) and end of the year ( $M = 7.58, SD = 1.12$ ), compared to first-generation college students, at the start ( $M = 6.81, SD = 1.31$ ) and end of the year ( $M = 6.95, SD = 1.57$ ). Self-efficacy did not significantly increase over the course of the year for either group,  $F(1, 379) = 2.29, p > .05$ , and there was no significant interaction effect,  $F(1, 379) = .26, p > .05$ .

### Discussion

The findings did not support the hypothesis that self-efficacy would mediate the association between generational status and GPA. Results support previous findings that non-first generation college students generally perform better academically than first-generation college students (Bui, 2002). These results underscore the negative and enduring association between generational status and GPA. This suggests that irrespective of their confidence ability to succeed, first-generation college students still under perform academically in comparison to their peers. It is noteworthy that self-efficacy reported by non-first generation college students was significantly higher than first-generation college students but that self-efficacy alone did not contribute unique variance over and above generational status for GPA. This could indicate that the relationship between GPA and generational status transcends mediation. Another possibility is that a different internal resource not assessed in the current study may have impacted the relationship between generation and academic performance.

The current longitudinal data does, however, make a significant contribution to the literature by increasing our understanding of self-efficacy and its powerful relationship with college adjustment. The finding that self-efficacy at the beginning of the year predicted later

college adjustment has implications for interventions, especially since, at-risk students can be identified early on by assessing self-efficacy. Overall, confidence in academic ability was related to better adjustment to college. This within group difference supports the idea that internal cognitive processes may buffer some of the challenges associated with the first year of college for first-generation college students. Although, this is merely speculative given that a buffering effect could not be determined because challenges were not assessed. Nonetheless, it is possible that students with higher self-efficacy may not perceive obstacles as insurmountable, and may exert greater effort in general. This may not be the case with students low in self-efficacy. Overall, higher self-efficacy seemed to be an advantageous internal resource in regulating first year transitions in general.

As expected, non-first generation college students had higher self-efficacy than first-generation college students at the start and end of the first year of college. This suggests that non-first generation college students perceived themselves as more capable and confident of performing academically in college. Because non-first generation college students may not have experienced the same level of challenges as first-generation students, the attitudes they hold about their abilities to perform at the college level were more positive and confident. Self-efficacy did not increase significantly over the year for either group. This suggests that more college experience does not necessarily lend itself to increases in initial confidence levels. Even though self-efficacy did not increase significantly, it is heartening that first-generation college students' self-efficacy did not decline, so that their perception of confidence stayed relatively the same regardless of how they did academically.

Even though the mediation hypothesis was not supported, self-efficacy is still important to consider given the potential relationship with long-term college outcomes. For example, high

self-efficacy may have implications for persistence in college. Bandura (1997) maintains that judgment of one's efficacy can impact how much effort one will expend and eventually persist when one encounters adversity. Higher self-efficacy for college students, could translate to greater effort and a higher likelihood of persistence in college. Given that first-generation college students had lower self-efficacy, the efforts to persist toward graduation could be less vigorous than non-first generation college students.

### *Limitations*

The current findings should be interpreted with caution as college students from a private university may not represent the larger college population. Future researchers may want to address this by sampling from various universities to determine the generalizability of the current results. Also, because results were based on a small sample, future studies should use a larger sample of first-generation college students. Given the short time-frame of the study, long-term predictions on academic performance were hard to determine. A different study could take a longer longitudinal approach that tracks students over the course of their college career to assess the impact of internal cognitions such as self-efficacy on college adjustment and persistence in college. Finally, future studies focusing on self-efficacy should use the complete self-efficacy survey not an abbreviated version. It is possible that abbreviating the scale resulted in lack of findings for self-efficacy as a mediator for academic performance. Furthermore, a potential methodological limitation of the study was its reliance on an abbreviated CSEI and a truncated version of the SACQ (Academic Adjustment subscale). This should be avoided in future studies as using the complete scales would ensure that issues of reliability and validity do not arise.

### *Implications for Counselors*

The current findings regarding the relationship between self-efficacy and college adjustment has implications for how universities design services for first-generation college students and students in general. Folger, Carter, and Chase (2004) indicated that the transitional needs of first-generation college students were often not met by traditional support services offered by the university and that specific services should be developed to meet the unique needs of this population. While there are programs that attempt to address issues of first-generation college students, this may not be enough. Furthermore, interventions that focus primarily on self-efficacy of all college students are limited. This gap in interventions is particularly relevant for counselors working at college counseling centers. Based on current findings, when first generation and non-first generation college students present for treatment, building confidence around perceptions of academic ability would be beneficial. Having all students develop a better sense of self may increase their motivation to academically persist, irrespective of generational status. Therefore, working with the belief system of college students seems necessary.

In some instances, the focus of counseling is to identify how maladaptive beliefs affect behavior negatively. Cognitive theorists posit that replacing negative beliefs with more constructive beliefs can lead to positive changes in behavior (Corey, 2001). Given that self-efficacy beliefs are malleable (Bouffard-Bouchard, 1990; Cervone & Peake, 1986), counselors working with college students could identify whether issues of low self-efficacy are present and work with students to increase positive self-perceptions. Increasing self-efficacy could positively impact one's college experience since students may exert more effort in the short-term, which could enhance persistence in the long-term.

Bandura's (1986) four sources of self-efficacy could be used to develop efficacy-building interventions. The four sources include vicarious experiences, emotional arousal, verbal

persuasion and performance accomplishments. Bandura maintained that through vicarious learning experiences, observed outcomes could alter behavior similar to directly experienced consequences. Therefore, if observed behavior leads to success, then the observer is more likely to engage in said behavior as well. Emotional arousal can serve to decrease self-efficacy through physiological arousal. Mainly, fear generates a physiological arousal that can inhibit behavior and negatively impact performance. Through verbal persuasion, individuals can be persuaded that they possess the capabilities to master a task. Once persuaded, individuals may demonstrate a greater degree of motivation and effort to complete a task, in turn increasing the likelihood of success. Finally, performance accomplishments occurs when individuals succeed in a task that in turn increases their self-efficacy.

Counseling centers should consider providing psycho-educational support groups for first-generation and non-first generation college students with low self-efficacy focusing on one or more of the aforementioned sources of self-efficacy. For example, the psycho-educational support groups can be co-led by a successful first-generation and non-first college student who is close to graduating. Participants in the group can vicariously learn from more advanced students ways to study, cope with stressors and discuss shared experiences that may encourage success with first-year students. The support groups can also practice relaxation techniques and meditation that work to lower participants' emotional arousal, reducing their perception of a subjective threat. Lowering physiological arousal that may interfere with performance may improve their performance over time.

The use of mentors may also prove to be beneficial for both first-generation and non-first generation college students with low self-efficacy. Students can be paired up with an advanced student who is similar in terms of generational status but higher in self-efficacy. Both, vicarious

learning and verbal persuasion could be targeted in this intervention. In addition to modeling behavior, the mentor can provide encouraging words regarding their mentee's capabilities and academic performance. The verbal persuasion can serve to reduce participants' self-doubt, while increasing effort and motivation.

Counselors could link with faculty for an intervention that would focus on performance accomplishments. College students who present with low self-efficacy when they come for treatment can be encouraged to participate in a project that is process oriented rather than outcome oriented, such as researching a topic. When the students have finished the project, faculty can provide feedback regarding how well they felt they researched the topic, what they would do differently, and faculty could give suggestions on how to improve upon their research techniques in the future. In this way, the process of learning, not the outcome, is the focus and all students can feel that they succeeded in learning new information, therein increasing their self-efficacy.

Counselors could also provide workshops for faculty that address the relationship between self-efficacy and college adjustment of their students. Faculty members often have much more contact with students than the student services on college campuses. Therefore, professors are in a good position to help identify if a student is having academic or adjustment difficulties. With the help of university counselors, faculty can learn to identify adjustment related problems and make appropriate referrals to the university counselor center or other appropriate services. Certainly, greater efforts are needed by all to help first-generation college students navigate the demands of college, increase persistence and increase degree completion at a four-year university.

## References

- Alvan, A. L. J., Belgrave, F. Z., & Zea, M. C. (1996). Stress, social support, and college adjustment among Latino students. *Cultural Diversity and Mental Health, 2*, 193-203.
- Baker, R. W., & Siryk, B. (1984). Measuring adjustment to college. *Journal of Counseling Psychology, 31*, 179-189.
- Bandura, A. (1986). *Social Foundations of Thought and Action: A Social Cognitive Theory*. New Jersey: Prentice-Hall, Inc.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(3), 1173-1182.
- Bouffard-Bouchard, T. (1990). Influence of self-efficacy on performance in a cognitive task. *Journal of Social Psychology, 130*, 353-363.
- Billson, J. M., & Terry, M. B. (1982). In search of the silken purse: Factors in attrition among first-generation students. *College and University, 58*, 57-75.
- Brooks-Terry, M. (1988) Tracing the disadvantages of first-generation college-students: An application of Sussman's option sequence model. In S. Steinmetz (Ed), *Family and support systems across the life span* (pp.121-134). New York: Plenum Press.
- Bryan, T., & Bryan, J. (1991). Positive mood and math performance. *Journal of Learning Disabilities, 24*, 490-494.
- Bui, K. V. T. (2002). First-generation college students at four-year university: background characteristics, reasons for pursuing higher education, and first-year experiences. *College Student Journal, 3*, 3-11.

- Cervone, D., & Peake, P. K. (1986). Anchoring, efficacy, and action: The influence of judgmental heuristics on self-efficacy judgments and behavior. *Journal of Personality and Social Psychology, 61*, 257-266.
- Chemers, M. M., Hu, L., & Garcia, B. F. (2001). Academic self-efficacy and first-year college student performance and adjustment. *Journal of Educational Psychology, 93*, 55-64.
- Cone, A. L. (1992). Sophomore academic retention associated with a freshman study skills and college adjustment course. *Psychological Reports, 69*, 312-314.
- Corey, G. (2001). *Theory and Practice of Counseling and Psychotherapy* (6<sup>th</sup> ed.). United States: Brooks/Cole, Thomas Learning.
- Elias, S. M., & Loomis, R. J. (2002). Utilizing need for cognition and perceived self-efficacy to predict academic performance. *Journal of Applied Social Psychology, 32*, 1687-1702.
- Fallon, M. V. (1997). The school counselor's role in first generation students' college plans. *The School Counselor, 44*, 384-393.
- Folger, W. A., Carter, J. A., & Chase, P. B. (2004). Supporting first generation college freshmen with small group intervention. *College Student Journal, 38*, 472-476.
- Gerdes, H., & Mallinckrodt, B. (1994). Emotional, social, and academic adjustment of college students: A longitudinal study of retention. *Journal of Counseling and Development, 72*, 281-288.
- Hackett, G., Betz, N. E., Casas, J. M., & Rocha-Singh, I. A. (1992). Gender, ethnicity, and social cognitive factors predicting the academic achievement of students in engineering. *Journal of Counseling Psychology, 39*, 527-538.

- Hampton, N. Z., & Mason, E. (2003). Learning disabilities, gender resources, sources of efficacy, self-efficacy beliefs, and academic achievement in high school students. *Journal of School Psychology, 41*, 101-112.
- Hertel, J. B. (2002). College student generational status: Similarities, differences, and factors in college adjustment. *Psychological Record, 52*, 3-18.
- Lent, R. W., Brown, S. D., & Larkin, K. C. (1984). Relation of self-efficacy expectations to academic achievement and persistence. *Journal of Counseling Psychology, 31*, 356-362.
- Lent, R. W., Brown, S. D., & Larkin, K. C. (1986). Self-efficacy in predication of academic performance and perceived career options. *Journal of Counseling Psychology, 33*, 265-269.
- London, H. B. (1989). Breaking away: a study of first-generation college students and their families. *American Journal of Education, 97*, 144-170.
- McGregor, L. N., Mayleben, M. A., Buzzanga, V. L., Davis, S. F., & Becker, A. H. (1991). *College Student Journal, 25*, 231-234.
- Mitchell, K. (1997). Making the grade: helping and hope for the first-generation college student. *The ERIC Review, 5*, 13-15.
- Multon, K. D., Brown, S. D., & Lent, R. W. (1991). Relation of self-efficacy beliefs to academic outcomes: A meta-analytic investigation. *Journal of Counseling Psychology, 38*, 30-38.
- Olenchak, R. & Hebert, T. P. (2002). Endangered academic talent: Lessons learned from gifted first-generation colleges males. *Journal of College Student Development, 43*, 195-212.
- Pascarella, E. T., Wolniak, G. C., Pierson, C. T., & Terenzini, P. T. (2003). Experiences and outcomes of first-generation students in community colleges. *Journal of College Student Development, 44*, 420-429.

- Pike, G. R., & Kuh, G. D. (2005). First- and second-generation college students: A comparison of their engagement and intellectual development. *The Journal of Higher Education, 76*, 276-300.
- Phinney, J. S., & Haas, K. (2003). The process of coping among ethnic minority first-generation college freshmen. A narrative approach. *Journal of Social Psychology, 143*, 707-726.
- Riehl, R. (1994). The academic preparation, aspirations, and first-year performance of first-generation students. *College and University, 70*, 14-19.
- Solberg, V. S., O'Brien, K., Villareal, P., Kennel, R., & Davis, B. (1993). Self-efficacy and Hispanic college students: Validation of the college self-efficacy instrument. *Hispanic Journal of Behavioral Sciences, 15*, 80-95.
- Strage, A. A. (1999). Social and academic integration and college success: similarities and differences as a function of ethnicity and family educational background. *College Student Journal, 33*, 198-205.
- Terenzini, P., Springer, L., Yaeger, P., Pascarella, E., & Nora, A. (1996). First-generation college students: Characteristics, experiences, and cognitive development. *Research in Higher Education, 30*, 301-315.
- Thayer, P. B. (2000). Retaining first-generation and low income students. *Opportunity Outlook: Council for Opportunity in Education, 2-8*.
- Warburton, E., Bugarin, R., & Nunez, A. (2001). *Bridging the gap: Academic preparation and postsecondary success of first-generation students* (NCES 2001-153). Washington, DC: National Center for Educational Statistics, U.S. Government Printing Offices.

York-Anderson, D. C., & Bowman, S. L. (1991). Assessing the college knowledge of first-generation and second-generation college students. *Journal of College Student*

*Development, 32*, 116-122.

Zalaquett, C. P. (1999). Do students of noncollege-educated parents achieve less academically than students of college-education parents? *Psychological Reports, 85*, 417-421.

Zimmerman, B., Bandura, A., & Martinez-Pons, M. (1992). Self motivation for academic attainment: The role of self-efficacy beliefs and personal goal setting. *American Education Research Journal, 29*, 663-676.

Table 1

*Intercorrelations Between Dependent Variables, Independent Variables, and Participant Variables (N = 192)*

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. Age	18.24	3.09	--					
2. Generation Status	.33	.47	.10	--				
3. Income	3.90	1.56	.05	.36**	--			
4. GPA	3.08	.50	-.10	-.17*	-.09	--		
5. Self-efficacy	7.14	1.28	.05	-.18*	.19**	.06	--	
6. College Adjustment	3.40	.49	.13	-.02	-.02	.02	.31**	--

*Note.* Generation Status: 0 = non-first generation, 1 = first-generation; GPA = Grade Point Average.

\* $p < .05$ . \*\* $p < .01$ .

Table 2

*Self-Efficacy as a Mediator of Generational Status: Steps 2 and 3 of Mediation Analysis (192)*

Criterion	Generation $\beta$		Self-Efficacy $\beta$
	Direct	Indirect	
GPA	-.159*	-.143*	.051
College Adjustment	-.027	.032	.323**

*Note.* GPA = grade point average;  $\beta$  = standardized regression coefficient.

\* $p < .05$ , \*\*  $p < .01$ .