Prospective first-generation college students: meeting their needs through Social Cognitive Career Theory

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First-generation students, or students whose parents did not attend college, represent 27% of all graduating high school students. They have unique needs that separate them from other students and that must be addressed in counseling. This article examines how school and career counselors can help these students through the use of Social Cognitive Career Theory. **This theory and its focus on self-efficacy, outcome expectations, barriers, and goals can help with career and academic decision-making.** A case example working with a high school junior is provided as an example of how this theory can assist this population. Implications for future research and counseling strategies are suggested as well.

One of the many duties that high school counselors perform is assisting with the career development of their students. School counselors generally agree that all students need to understand the relationship between interests, abilities, and the world of work, and how to identify and act on information pertaining to furthering their education (Barker & Satcher, 2000). In addition, the American School Counseling Association recently released its new model for school counseling programs (ASCA, 2003) based on the National Standards (ASCA, 1997). Within this National Model, it is suggested that school counselors should promote programs designed to enhance the academic, career, and personal/social domains of students. The model promotes three standards specifically related to career and includes student competencies such as developing career awareness, identifying career goals, and gaining understanding of information and how to apply this to reach career goals. The authors of the model also suggest that its structure benefits all students by helping to promote a challenging course of study and increases access to educational opportunities for everyone (ASCA, 2003). Clearly, one of the roles of the school counselor is to be involved with the career development of all students in their schools.

In spite of this, some populations remain underserved in this regard, either because of oversight or a lack of knowledge. One of these groups is prospective first-generation college students. According to information gathered from the National Education Longitudinal Study of 1988 (Horn & Nunez, 2000), approximately 27% of high school graduates in 1992 were first-generation students, or students whose parents did not attend college. Of these students, half were from low-income families and, compared to students with college-graduate parents, were more likely to be Hispanic or African-American. This growing population of students has unique needs that must be addressed by school counselors so that all students may have the same opportunities for appropriate and challenging higher education. The 1994 U.S. Census Bureau (as cited in Indiana Career and Postsecondary Advancement Center, 2000) found a direct correlation between higher education and higher salaries, with 4-year college graduates earning an average of $17,000 more per year than someone with only a high school diploma. To date, however, almost no one has focused on how to assist prospective first-generation college students before their arrival to college. Only one article could be located (Fallon, 1997) that focused specifically on primary prevention strategies in working with this population while they are in high school. No theoretical model, however, was applied, and little attention was given to assistance in overcoming barriers to attending college.

The purpose of this article is to examine how school counselors can assist prospective first-generation college students prior to college entrance. This article focuses on how the needs of these students may be met through the application of Social Cognitive Career Theory (Lent, Brown, & Hackett, 1994). The use of the term college refers to any formal education beyond high school leading to a degree. This can, and often does, include community college. The first section of this article centers on the unique needs of these students, followed by an explanation of the theory. A case example relevant to working with first-generation students is given to assist in practical application of the theory. Implications for future research are provided as well.

FIRST-GENERATION COLLEGE STUDENTS

Empirical research on first generation college students has helped to identify several unique characteristics of this population. Inman and Mayes (1999) examined differences of first-generation community college students and found that they were more likely to be female, older, come from lower-income families, and to have more financial dependents than other students. Horn and Nunez (2000) also found that first-generation college students tended to be from low-income families and were more likely to be Hispanic or African-American. Students in this population have a strong desire to attend college (Solorzano, 1992; Valadez, 1998), perceive themselves as being as capable as other college students (McGregor, Mayleben, Buzzanga, Davis, & Becker, 1991), and recognize the importance of course options at the college level (Inman & Mayes). Other strengths of these students included a stronger desire to accomplish degree goals than other students (Inman & Mayes) and a commitment to college equal to that of other college students (York-Anderson & Bowman, 1991). There are five specific areas in which first-generation college students seem to have different demographics than other college students. Differences are evident in the lack of parental experience with the college application process, how these students prepare for college both personally and academically, why they choose to attend college, and in their personal experiences and overall personality traits.

1. **Prospective first-generation college students face the daunting task of applying to college without the assistance of parental experience**. Due to a lack of knowledge, parents may be unable to help with many of the logistical requirements related to career and college planning. Horn and Nunez (2000) found that first-generation students were less likely to choose high school programs of study with their parents, while York-Anderson and Bowman (1991) found that these same types of students perceived less support from their families for attending college. This possible lack of involvement by parents only strengthens the need for school and career counselors to be proactive in their assistance with prospective first-generation students. However, while students from low-income families viewed school counselors as a source of college information, these students viewed the information provided as not useful for them (Chapman, O'Brien, & DeMasi, 1987).

2. **Preparation for college life while still in high school seems to make a difference for these students**. First-generation students are more likely to leave college or higher education altogether than were other students, although usually for reasons other than academic failure (Brooks-Terry, 1988). This attrition may be due, in part, to inappropriate college choice or family-related constraints. Research has indicated that these students perceived adapting to the stresses of the college environment as more difficult than other students (McGregor et al., 1991). Overall, students from lower SES groups lack access to information to help them with decisions related to college planning (Valadez, 1998). However, low-income students who participated in community service and had successful leadership experience in high school were more likely to show academic progress at the college level (Strage, 1999; Ting, 1998).

3. **First-generation students seem to differ in academic preparation**. Horn and Nunez (2000) found that only 14% of prospective first-generation students took algebra in the eighth grade, compared to over one third of students with college graduate parents. This led to fewer first-generation students completing advanced level math courses, which prohibited them from pursuing college degrees. Riehl (1994) also found differences in academic preparation for first-generation students. His comparison of these students to other college students identified differences in SAT scores, high school grade point average, and overall first-year college performance, with first-generation college students scoring lower in each area. Academically, first-generation college students may be less prepared for college than other college-bound youth, leading to another possible barrier to completing college and obtaining a job that will support them financially.

4. **First-generation college students perceive the college experience differently than other college-bound youth**. Higher education is often seen solely as a means to a good job for first-generation students (Brooks-Terry, 1988). This perception, combined with a strong desire to go to school close to home (Inman & Mayes, 1999), could be another reason that so many first-generation students leave college before completing their degrees. Again, lack of information about the many factors regarding college choice may lead these students to select a college that does not meet their needs.

5. **Personality and basic living differences exist for first-generation students as well.** Researchers examining personality differences identified differences in self-esteem, social acceptance, humor, and creativity, with first-generation college students scoring lower in each of these areas when compared to other college students (McGregor et al., 1991). However, global self-worth, job and scholastic competence, and social relationships did not differ for these populations. Clearly, first-generation students have differences in family support and differences in personal qualities when compared to other college students. Other characteristics that differentiate first-generation college students include a higher likelihood to live at home and work part-time (Brooks-Terry, 1988), and a tendency to have more financial dependents, lower family incomes, and work more hours per week (Inman & Mayes, 1999). First-generation students may be less likely to be involved in campus activities due to their work requirements and commute from home, leading to more difficulties in connecting with college life.

Clearly, school counselors need to build upon the strengths of this population and work with these students who want to continue their education while meeting their specific needs. Counselors cannot assume that all college-bound youth are the same, and the evidence is clear that this portion of the population needs specific skills, information, and direction that other college-bound students may already possess. One approach that school counselors can use in assisting this growing population is Social Cognitive Career Theory (Lent et al., 1994).

SOCIAL COGNITIVE CAREER THEORY

Theoretical Overview

Social Cognitive Career Theory (SCCT) was developed as a way to explain career development through focusing on socio-cognitive constructs (Lent, Brown, & Hackett, 1996). Grounded in Bandura's (1986) social cognitive theory, SCCT examines how career and academic interests mature, how career choices are developed, and how these choices are turned into action. This is accomplished through a focus on three primary tenets: self-efficacy, outcome expectations, and goals (Lent et al., 1994).

Self-efficacy refers to the beliefs people have about their ability to successfully complete the steps required for a given task. These beliefs are not fixed, but are rather constantly changing based on interactions with other people, the environment, and one's own behaviors. Individuals develop their sense of self-efficacy from personal performance, learning by example, social interactions, and how they feel in a situation (Lent et al., 1996). For example, Lisa is a 15-year old sophomore who wants to attend college but says she will never go because she lacks the resources and knowledge needed to complete a degree program. Specifically, she says her math grades are terrible and that she feels just plain stupid in class because her math teacher has told her she will never make it in Algebra II next year. Lisa has the belief that she is unable to complete the steps needed to be successful in college based on interactions with others and her performance in math class.

Outcome expectations are beliefs related to the consequences of performing a specific behavior. In contrast to self-efficacy, which refers to a person's belief about the ability to accomplish a particular goal, outcome expectations focus on the consequences someone believes will occur if a particular behavior is performed. Extrinsic reinforcement, self-directed consequences, and basic task understanding all can be tied to outcome expectations. Typically, outcome expectations are formed through past learning experiences, either direct or

vicarious, and the perceived results of these experiences. These expectations are often influenced by self-efficacy, especially when outcomes are based on the quality of a person's performance (Lent et. al., 1994, 1996). Juan, a 17-year old senior, enjoys his course in TV broadcasting, but says he will not pursue a job in journalism because he believes that he will be discriminated against because there is a lack of Latinos in that field. In this example, Juan has perceived a lack of Latinos in journalism, and this has created a negative outcome expectation for this career field.

Finally, **goals** are seen as playing a primary role in behavior. People are seen as determiners of their own behavior, with environment and genetics playing a secondary role. A goal is defined as the decision to begin a particular activity or future plan. Behavior is organized and sustained based on these previously set goals. SCCT views goals, outcome expectations, and self-efficacy as having a constant, complex, and ever-changing relationship that affects career and academic development and choice (Lent et al., 1994, 1996).
SCCT focuses on the psychological and social effects of race and gender, rather than the physical aspects. The relevance of these factors to career is related to the environmental and personal reactions that gender or race may create. Of particular importance is how gender or race affects the self-efficacy or outcome expectations related to specific vocational interests. Race and gender may limit or expand exposure to various careers, or may influence how a person views the possibility of achievement related to a particular interest. Biases and role socialization are also relevant to this issue (Lent & Brown, 1996).

For example, students of minority ethnicity may lack appropriate role models for various careers. This may create a sense for them that people from their ethnic background do not enter these careers. This could cause students to foreclose on these careers. For example, Xavier, a 16-year old African-American in a low-income urban school, may not be exposed to people of his ethnicity who have college degrees. He may begin to believe that he does not have the ability to get a 4-year degree (self-efficacy). Or consider Jason, an Asian-American who has an interest in art and sculpture. He has been debating going into engineering or graphic design, and has decided on engineering because he believes that Asians have more success in that field (outcome expectation). Both of these students had self-efficacy and outcome expectation beliefs that were directly influenced by their race. In addition, Xavier was also influenced by socioeconomic status. These contextual factors can directly influence students' beliefs about their potential success in career and college.

Perceived Barriers to Success
In SCCT, career interests are regulated by self-efficacy and outcome expectations, meaning people form lasting interests in activities when they experience personal competency and positive outcomes. On the other hand, a belief of low competency or in negative outcomes will lead people to avoid certain activities. Goals are formed based on experiences and their perceived outcomes in different activities. These goals may lead to practice efforts, which may in turn change or reinforce previous self-efficacy and outcome beliefs. SCCT interprets this as a process in constant flux through adolescence. After this time, vocational interests typically stabilize and do not change unless new exposures occur. Perceived barriers such those related to gender, ethnicity, age, socioeconomic status, or family constraints may create negative outcome expectations, even when people have had prior success in the given area.

For example, Charlotte, a 16-year old sophomore with an 8-month old son, believes that her family constraints prohibit her ability to pursue her associate's degree in nursing. She feels that college is too expensive and that she must work during the day once she graduates from high school to support her child. She has resigned herself to the idea that she can only work as a certified nursing assistant, a certification she can complete while still in high school. Students such as Charlotte may develop narrowed career interests and perceived barriers due to lack of exposure to efficacy-building activities, because of inaccurate self-efficacy or outcome expectation beliefs. SCCT also examines the effects of aptitudes and values as mediators in the development of vocational interests (Lent & Brown, 1996).

Interests will turn into occupational choices when an individual perceives few or no barriers to success in that occupation. If barriers to success are perceived as too difficult to overcome, a person will eliminate that occupational choice, even if success in the occupationally related tasks had been achieved. Perceived barriers play a mitigating role in SCCT, where they can shape each experience and directly influence interests and choices (Albert & Luzzo, 1999). In their work with at-risk populations, Chartrand and Rose (1996) recommended addressing environmental and socioeconomic barriers to career success, and applied the constructs of SCCT because of its recognition of these areas.

The career choice process emphasizes the connection between interests, goals, and actions and the successes and failures that create self-efficacy and outcome expectations. SCCT highlights the variables that may influence this choice, in spite of or in conjunction with interests. People may prematurely eliminate occupations because of inaccurate self-efficacy or outcome expectations. These foreclosed occupational options may be reintroduced and reexamined so that self-efficacy or outcome expectations may be judged for accuracy. Additionally, discrepancies between scores on different assessments such as a high aptitude in a particular area coupled with a low interest may be examined with potential for faulty self-efficacy in mind. Analyzing perceived career barriers might also be pertinent when working with career choice. Counselors can help clients identify and prepare for these potential barriers through a listing of any perceived barriers to goal achievement related to a specific career. Finally, SCCT recommends modifying self-efficacy beliefs through introduction of new experiences upon which new self-efficacy and outcome expectations can be built (Brown & Lent, 1996).

To illustrate these concepts, a case example is presented. Although the student in this example is an African-American, many of the issues discussed pertain to prospective first-generation college students in general. In the case of Marcus, the school counselor applies specific interventions targeting the perceptions identified in SCCT as well as incorporating other career- and college-related techniques.

THE CASE OF MARCUS

Marcus is a 16-year old African-American who is trying to decide his future plans. As a junior in high school, he knows that decisions need to be made soon regarding what he will do after graduation. He lives with his mother, a high-school graduate working as an administrative assistant, his grandmother, and his two younger siblings, ages 11 and 13. His father, a high-school dropout, does not live with the family and has had a series of jobs, primarily in the restaurant and hospitality field. Marcus is a 'B' student, takes honors-level science courses, and is involved in school athletics. His mother supports the idea of Marcus continuing his education but wants him to stay close to home so he can continue to work part-time and be available to help care for his brothers.

Marcus has had positive interactions with his school counselor during course registration, so he initiated the first meeting to talk about his future plans. The counselor began by asking him about the interest inventory he had recently completed during a classroom guidance activity so that she could develop a sense of his interests and goals. Marcus reported high scores in Investigative and Realistic (Holland Codes) related occupations, but was uninterested in any of the careers that required an advanced degree. The careers listed as highly matching his interests included engineer, chemist, computer systems analyst, physician, and science teacher. When asked to talk further about this, Marcus said that careers in the science and computer fields were for "white people, geeky white people." He stated that he was considering careers in the automotive industry and that he enjoyed repairing his car and the family car.

Marcus also mentioned that his interests moderately matched those for auto mechanics on the interest inventory. When the counselor remarked on his good grades in science and math, Marcus observed that he

simply had lenient teachers and that the material was easy. He also indicated that although he did well in those subjects, he would never consider jobs related to them because they would require 4 years of college, and no one in his family had gone to college. This session gave the counselor insight into Marcus's outcome expectations and barriers related to various careers as well as information about self-efficacy beliefs regarding his potential for succeeding in college.

During the second and third sessions, Marcus completed a modified card sort activity, where he sorted various occupations into categories of 'might choose,' 'would not choose,' and 'in question.' Marcus and the counselor then discussed the discarded activities and examined Marcus's reasoning for discarding these activities. The counselor noted that many of the discarded occupations were related to science and math, and Marcus provided reasons such as "there are no black people in this field" and "I could never do something this hard." Brown and Lent (1996) recommended this type of exercise in order to help clients determine if the discarded occupations were due to faulty self-efficacy or outcome expectation beliefs.

The counselor then challenged Marcus to think of other reasons that he did well in math and science classes. Marcus recognized his ability to understand the meaning of scientific theories and saw that he was able to complete complex computations without a calculator. When the counselor asked how others responded to his ability to do well in these subjects, Marcus indicated that his teachers were always pleased with his work, but that his friends often made fun of him for doing well in classes that were just for nerds. This information suggested to the counselor that Marcus might need new experiences so he could create more positive outcome expectations.

The counselor also further explored Marcus's feelings about college. Marcus stated that he wanted to go to college but that doing so would be a financial burden on his family. In addition, if he continued his education, his mother only wanted him to consider a school within a 30-mile radius. As a homework assignment, the counselor asked Marcus to attend the career fair at the high school and talk to at least five people in different careers.

Marcus began the fourth session by sharing what he had learned at the career fair. He explained that he spent a long time talking with an African American engineer who had grown up in the same neighborhood as Marcus. He indicated that the engineer had gone to a college nearby and that he knew of various scholarship opportunities for students who had good grades. He offered Marcus the opportunity to shadow him on the job to see what engineering was all about. Marcus also noted that engineering used math and science skills and could be related to the automotive industry. The counselor observed that

Marcus had now begun to create new self-efficacy beliefs and outcome expectations related to science and math careers. The counselor, recognizing some potential barriers facing first-generation students, discussed with Marcus other possible financial aid opportunities and encouraged him to accept the offer of a shadowing experience. Marcus stated that he would call the engineer that evening. The counselor also recommended that Marcus discuss the opportunities of financial aid and nearby colleges with his mother.

The last session with Marcus focused on ways that he could learn more about college life. Marcus had made an appointment to shadow the engineer during winter break, and he reported that his mother had expressed interest in the information about financial aid and generally supported his efforts to continue his education. The counselor provided Marcus with brochures about two different pre-college programs offered in his state. One program was science based while the other had a more general knowledge focus; both offered scholarship opportunities and possible stipends for interested students. In addition, Marcus was encouraged to use the library's computer to visit various college websites and to explore additional careers. These activities were designed to help Marcus obtain a more accurate view of college life with the hope that some potential

barriers could be eliminated. The some ended with the counselor inviting Marcus to return whenever he had questions about the college application process.

IMPLICATIONS

Much like the counselor who has helped Marcus to reconsider some of his perceptions of college and of career, school counselors working with students who will be first-generation college students provide activities and interventions to increase these students' options and to increase their success upon entry into college. Specifically, counselors can explore how individuals may perceive each of the major constructs identified in SCCT. Self-efficacy, outcome expectations, perceived barriers, and perceived supports are clearly tied to the interests, goals, and choices of individuals at various points in their educational and career development (Lent, Brown, & Hackett, 1994, 2000). Each of these constructs are addressed in turn, by addressing questions that the counselor should consider while working with a potential first-generation college student.

Self-Efficacy

What does this student believe he or she is capable of doing? In which fields? For what reasons? The initial use of interest inventories and modified card sorts (Brown & Lent, 1996) can be helpful here. Exploring faulty self-efficacy beliefs is especially important. If students say that they are not capable of succeeding in college or getting into college, it is critical that the school counselor challenge this assumption. As follow-up and to increase the acceptance of a new set of self-efficacy beliefs, the counselor can design interventions that will lead to student success and increased self-efficacy. For example, discussions between the counselor and student can focus on exploring the student's true capabilities and reasons for selecting or eliminating particular career fields. The counselor also can help the student explore the reasons behind low self-efficacy related to specific career opportunities. In addition, it is vital to discuss with students their beliefs about their ability to pay for, be successful in, and complete college to determine if these factors have inhibited self-efficacy.

Outcome Expectations

What does this student believe will be the results of entering college? Of entering particular fields? What has led him or her to hold those beliefs? The modified card sort can be useful here as well. Some outcome expectations are based on faulty thinking but others are very real aspects of institutional prejudice in the world of work. It is important to challenge faulty expectations and help students to increase their sense of 'coping serf-efficacy' (Lent et al., 1994) in dealing with accurate assessments of what these students might face as they enter college and/or the world of work. The counselor's identification of potential new experiences where self-efficacy and outcome expectations can be challenged and modified is critical. The counselor can help the student find activities that might alter outcome expectations to reflect more positive and realistic views of his or her abilities and beliefs about college and the world of work. Some examples of these such as summer enrichment programs held on college campuses and job shadowing were included in the above case example.

Perceived Barriers and Supports

What barriers does this student perceive that will stand in the way of achievement of the goal of entering college and/or entering into a particular occupation or type of occupation? What supports is he or she able to identify to counterbalance these barriers? Are the perceived barriers based on faulty perceptions? If they are, it is again critical for the counselor to challenge these perceptions and to provide the student with opportunities to create new perceptions around the barriers they might face and the supports available to help them as they proceed. It also is important to prepare these students for college by helping them to understand that some of their experiences and preparation may be different from others in college but that they can nonetheless succeed. One way to do this is to provide them with role models and to establish networks of first-generation college graduates who have been successful in their college career and in their chosen occupations.

CONCLUSION

Since these students tend to differ from students who are not first-generation college students (citations), it is important to provide them with the information and support that will help to counteract inaccurate beliefs and that will serve to provide them with the knowledge that they may not be able to get from their parents or guardians. In addition, counselors can provide programs for both parents and students that can help to fill the gap in knowledge by assisting them in the search process, the decision-making process, college applications, financial aid, and preparing for college life. Small group guidance and counseling can be an effective and efficient way of providing services to a group of first generation students, who can then continue to provide support to each other throughout the process and after they have entered college. Continued contact with identified role models and those who are part of an established network can also be encouraged.

There is a need for future research related to both SCCT and working with prospective first-generation students. First, empirically based articles need to focus on the effectiveness of SCCT versus alternative approaches with this population. Second, additional investigation of applying SCCT to various diverse populations is recommended. Third, research is needed to determine if additional needs are not being met for this population. More investigations focusing on first-generation students prior to their arrival to college is sorely needed. By meeting the needs of first-generation students, counselors can increase all students' potential for success in the academic and career arenas. Falling to address these specific issues serves to alienate this portion of the diverse population that counselors work with each day.

References

Albert, K. A., & Luzzo, D. A. (1999). The role of perceived barriers in career development: A social cognitive perspective. Journal of Counseling and Development, 77, 431-436.

American School Counseling Association. (1997). ASCA national standards. Retrieved November 1, 2002, from http://www.schoolcounselor.org/content. cfm?L1=1&L2=9.

American School Counseling Association. (2003). The ASCA national model: A framework for school counseling programs, executive summary. Retrieved February 5, 2004, from http://www.schoolcounselor.org/ library/ ExecSumm.pdf.

Bandura, A. (1986). Social foundations of thought and action: a social cognitive theory. Englewood Cliffs, NC: Prentice-Hall.

Barker, J., & Satcher, J. (2000). School counselors' perceptions of required workplace skills and career development competencies. Professional School Counseling, 4, 134-139.

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.

Brown, S. D., & Lent, R. W. (1996). A social cognitive framework for career choice counseling. Career Development Quarterly, 44, 354-366.

Chapman, D. W., O'Brien, C. J., & DeMasi, M. E. (1987). The effectiveness of the public school counselor in college advising. The Journal of College Admissions, 175(Spring), 11-18.

Chartrand, J. M., & Rose, M. L. (1996). Career interventions for at-risk populations: Incorporating social cognitive influences. Career Development Quarterly, 44, 341-353.

Fallon, M.V. (1997). The school counselor's role in first generation students' college plans. School Counselor, 44, 384-393.

Horn, L., & Nunez, A. (2000). Mapping the road to college: First-generation students' math track, planning strategies, and context of support. Education Statistics Quarterly, 2, 81-86.

Indiana Career and Postsecondary Advancement Center. (2000). Connections: Future planner for 9th graders. Bloomington, IN: Author.

Inman, W. E., & Mayes, L. (1999). The importance of being first: Unique characteristics of first generation community college students. Community College Review, 26(4), 3-22.

Lent, R. W., & Brown, S. D. (1996). Social cognitive approach to career development: An overview, Career Development Quarterly, 12, 401-417.

Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. Journal of Vocational Behavior, 45, 79-122.

Lent, R. W., Brown, S. D., & Hackett, G. (1996). Career development from a social cognitive perspective. In D.

Brown, L. Brooks, & Associates (Eds.), Career choice and development (3rd ed., pp. 373-421). San Francisco: Jossey-Bass.

Lent, R.W., Brown, S. D., & Hackett, G. (2000). Contextual supports and barriers to career choice: A social cognitive analysis. Journal of Counseling Psychology, 47, 36-49.

McGregor, L. N., Mayleben, M. A., Buzzanga, M. A., Davis, S. F., & Becker, A. H. (1991). Selected personality characteristics of first-generation college students. College Student Journal, 25, 231-234.

Riehl, R. J. (1994).The academic preparation, aspirations, and first-year performance of first-generation students. College and University, 70, 14-19.

Solorzano, D. G. (1992). An exploratory analysis of the effects of race, class, and gender on student and parent mobility aspirations. Journal of Negro Education, 61, 30-43.

Strage, A. A. (1999). Social and academic integration and college success: Similarities and differences as a function of ethnicity and family background. College Student Journal, 33, 198-205.

Ting, S. R. (1998), Predicting first-year grades and academic progress of college students of first-generation and low-income families. Journal of College Admission, 158, 14-23.

Valadez, J. R. (1998). Applying to college: Race, class, and gender differences. Professional School Counseling, 1(5), 14-20.

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.

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