

Running head: LITERATURE REVIEW: NON-COGNITIVE CHARACTERISTICS

Literature Review: Non-cognitive Characteristics, Support Services, and Testing Instruments that
Contribute to the Success of First Generation College Students

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Introduction

First generation college (FGC) students are pioneers in their own realm. They are the first in their families to attend college and hopefully the first to graduate. As FGC students, they face additional challenges in comparison to their non-FGC student peers. The education level of their parents is a strong factor in determining their persistence in college and in their decision to attend an institution upon high school graduation (Choy, 2001; Duggan, 2001; Nunez & Cuccaro-Alamin, 1998). FGC students are also more likely to be from lower socioeconomic and underrepresented ethnic backgrounds (Bui, 2002). Additional at-risk factors for academic success include the prevalence of FGC students enrolling in two-year institutions rather than four-year institutions. In the 1995-1996 academic year, 50.2% of FGC students started at a two-year college (National Center for Education Statistics, 1999). Researchers cite several factors that contribute to this trend. First, upon high school graduation FGC students are not academically prepared to be competitive applicants for admission to four-year institutions. Second, the tuition at four-year institutions is not affordable for most FGC students. Third, the flexibility of class schedules that two-year institutions provides the flexibility they need in order to meet employment and family responsibilities (Bui, 2002). However, attendance at two-year institutions increases the risk of FGC students not earning a baccalaureate degree. For example, statistics show that only 10% of the FGC students who started at a two-year institution during the 1989-1990 academic year earned a baccalaureate degree by 1994 (National Center for Education Statistics, 2000). This percentage is in comparison to the over 40% who graduated with a baccalaureate degree that had started at a four-year institution.

FGC student enrollment has reached record highs within institutions of higher education. In the 1989-1990 academic year, 43.4% of students who began postsecondary education

identified as FGC students (Nunez & Cuccaro-Alamin, 1998). While these numbers are promising in terms of access, baccalaureate attainment rates are far less encouraging. According to data from the NELS Postsecondary Education Transcript Study (2005), only 24% of FGC students who graduated from high school in 1992 that enrolled in higher education earned a baccalaureate degree by 2000. This percentage compares to the 68% non-FGC students who had earned a baccalaureate degree in this timeframe. These revealing statistics should serve as a call to action for both secondary and postsecondary institutions. The inherent issues associated with the transition from high school to college and from two-year institutions to four-year institutions, need to be adequately addressed. Policymakers, administrators, and faculty should be especially concerned with such discouraging attainment rates given nearly half of the overall college student population is comprised of FGC students.

FGC students bring unique diversity and experiences that enrich the learning environments of college campuses. They epitomize the “American Dream” by setting out to do what their parents and grandparents had not been able to do. Often FGC students come from families that have sacrificed a great deal to afford them an opportunity in higher education. The economic and social benefits for Americans earning college degrees are substantial. Individually, college graduates have far more earning power in comparison to high school graduates. A diverse population of college graduates is critical to the advancement of the U.S. as a competitive global market and a socially responsible nation. Given the increasing pressure to remain competitive in this knowledge driven economy, it is in the best interest of our nation to take action toward increasing the number of students entering college, who graduate with at least a baccalaureate degree (Engle & Tinto, 2008).

If higher education institutions are serious about increasing the persistence of FGC students, they must be intentional in addressing the unique characteristics of this population. FGC students enter a foreign culture when embarking to achieve a higher education. Feelings of isolation and loneliness are especially difficult to endure in the first year. FGC students face additional challenges in successfully being able to negotiate between several identities: ethnic, familial, personal, social, cultural, and community, amongst others (Orbe, 2004). A positive freshman college experience is particularly critical for FGC students as they have a higher risk for attrition in between their first and second year (McCarron & Inkelas, 2006). As a result, institutions must provide intervention support as early as possible. Providing the appropriate support services to engage and prepare these students is critical. Additionally, early identification of the non-cognitive characteristics, which tend to improve academic success, should be achieved by using reliable testing instruments. As Engle and Tinto (2008) appropriately phrase, “Access without support is not opportunity.” (p. 46).

While many researchers focus on cognitive variables such as high school grades, class rank, or standardized tests scores in an attempt to predict college academic performance, results of these studies have had low validity when researching at risk student populations (Ting, 1998). Ting’s 1998 and 2003 research studies assert that a more holistic approach, using both cognitive and non-cognitive variables, enhances the predictive validity for at risk students such as FGC students. This paper presents a cohesive review of the non-cognitive characteristics, support services, and commonly used testing instruments that should be considered when working with FGC students. These recommendations have been found to be the most fruitful in assisting FGC students with achieving academic success and ultimately earning a baccalaureate degree.

Academic Self-Efficacy

Although self-efficacy is included for the purposes of this paper as a non-cognitive characteristic, it is defined as a cognitive process that influences behavior and subsequently affects outcomes (Bandura, 1993). Self-efficacy is included as a positive characteristic for FGC students due to the well-developed body of research relating academic self-efficacy to academic performance (Ramos-Sanchez & Nichols, 2007). Research also provides that academic self-efficacy can be improved through specific interventions such as student support services. Bandura (1993) asserts that self-efficacy is the belief about one's own ability to achieve successfully a behavior that generates a certain outcome. The level of one's self-efficacy influences whether or not an individual engages in a certain behavior or activity such as studying for an exam or trying out for a college debate team. In situations where individuals possess a lower level of self-efficacy, they may be less engaged or avoid certain activities (Bandura, 1993). In contrast, individuals with a high expectation of self may increase their performance and willingness to persist (Bandura, 1993).

Research Studies

One of the most notable findings concerning self-efficacy and academic performance is provided by Chemers, Hu, and Garcia (2001). This study reports that academic self-efficacy is directly related to academic performance for first year college students. Given the high attrition rates for FGC students between the first and second year, the improvement of academic self-efficacy during the first year of college contributes to a positive college experience.

Ramos-Sanchez and Nichols (2007) conducted an academic self-efficacy study working specifically with FGC students. Although their hypothesis was not supported in that self-efficacy did not mediate the association between generational status and GPA, the study asserted other implications. The study showed that a student's level of self-efficacy at the beginning of the year

predicted later college adjustment. Non-FGC students also had a higher level of academic self-efficacy that proved to be advantageous in regulating the first year transition and adjustment to college. Wang and Castaneda-Sound's (2008) study found similar results in a cohort of FGC students enrolled at a large public university on the West Coast. FGC students reported lower levels of academic self-efficacy and reported significantly more somatic symptoms than their non-FGC peers. Overall, research studies show that confidence in academic ability relates to better adjustment to college.

Support Services-Intervention

In addressing low levels of self-efficacy for FGC students, support services staff such as academic advisors should identify students as early as possible-during orientation, initial advising visits, etc. Once support services staff identifies these students, advisors should address these beliefs through appropriate intervention.

Extracted from Gibbons and Shoffner (2004):

“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” (p. 94).

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 advisor challenge this assumption. As follow-up and to increase the acceptance of a new set of self-efficacy beliefs, the advisor can design interventions that will lead to student success and increased self-efficacy. For example, discussions between the advisor and student can focus on exploring the student's true capabilities and reasons for selecting or eliminating particular degree

programs/majors. The advisor can assist the students in exploring the reasons behind low self-efficacy related to specific college program/academic major 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.

Extracted from Ramos-Sanchez and Nichols (2007):

Advisors could use Bandura's four sources of self-efficacy to develop efficacy-building interventions. The four sources named by Bandura are; vicarious experiences; emotional arousal; verbal persuasion; and performance accomplishments.

Professionals at advising centers should consider providing psychoeducational support groups for first-generation and non-first-generation college students with low self-efficacy levels that would focus on one or more of the aforementioned four sources of self-efficacy. For example, the psychoeducational support groups could be co-led by successful first-generation and non-first-generation college students who are close to graduating. More advanced students in the group could discuss with first-year students experiences that might encourage success and share with them methods for studying and coping with stressors.

Mentors might also be beneficial for both first-generation and non-first-generation college students with low self-efficacy levels. Students could be paired with an advanced student of similar generational status but who has a higher level of self-efficacy. Both vicarious learning and verbal persuasion could be implemented in this intervention. In addition to modeling appropriate behavior, the mentor could provide encouragement to their mentee regarding their capabilities and academic performance. Such verbal persuasion can reduce participants' self-doubt, while increasing their effort and motivation.

Advisors could join with faculty for an intervention that would focus on performance accomplishments. College students who present with low self-efficacy levels when they come for treatment could 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 could provide feedback regarding how well they felt students had researched the topic, what they would do differently, and ways to improve research techniques in the future. In this way, the process of learning, not the outcome, would be the focus, and all students could feel that they succeeded in learning new information, thereby increasing their self-efficacy.

Advisors could also provide workshops for faculty that address the relationship between self-efficacy and college adjustment of their students. Faculty members often have more contact with students than do the advisors involved in student services on college campuses. Therefore, professors are in a better position to help identify a student who is having academic or adjustment difficulties.

Testing Instrument

For measuring academic self-efficacy levels, it is recommended that the College Self Efficacy Inventory (CSEI) be administered. The CSEI was developed by Solberg, O'Brien, Villareal, Kennel, and Davis (1993) to assess a student's confidence in completing tasks required in college (Wang & Castañeda-Sound, 2008). The CSEI is composed of three subscales: course self efficacy; social self efficacy; roommate self efficacy. However, it may be appropriate to use only the first two subscales given roommate situations may not apply to all college students, especially FGC students who tend to live off campus and/or with their family. It has been tested and proven a statistically reliable tool with a coefficient alpha of .88 or better.

Non-cognitive Characteristics

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Overview

Standardized placement tests help determine college readiness, which is a fundamental part of the admissions process. In the community college setting there are increasingly more resources dedicated to remedial and developmental courses for students who are academically underprepared (Byrd and MacDonald, 2005). However, standardized tests can overlook the unique cultural experiences that might contribute and/or take away from college readiness. Predicting college readiness should not be limited to high school grades or test scores. Rather, other non-cognitive variables contribute to academic success specifically for FGC students. These include self-regulation skills/time management, goal setting/goal focus, self-advocacy, receptivity to faculty/support services, social motivation, leadership and coping skills. Providing adequate intervention for improving these skills contributes to better academic performance in the second semester (Ting, 1998). This increased performance implies that these skills can be improved over time through intentional support efforts.

Self Regulation Skills/Time Management

Goal Setting/Goal Focus

Self Advocacy

Research Studies

Being a successful college student is largely attributed to the student's own efforts. Colleges place this responsibility primarily on the student, which has led researchers to study the relevance of self-regulating behavior (Byrd and MacDonald, 2005). Factors that assist students to be independent, self-directed learners are known as the self-regulated learning model (Naumann, Debora, & Gutkin, 2003). Self-regulated learning is particularly challenging for FGC students due to a lack of understanding of the college culture. However, a student's ability to navigate the

college culture has been found to contribute to success (Byrd and MacDonald). Time management, how to use course materials, collaborating with peers, attending class, and being prepared are all part of the cultural expectations. In a study conducted by Byrd and MacDonald, FGC students indicated that skills in time-management, the ability to apply oneself and focus on a goal, and self-advocacy skills are essential for college readiness. All of the participants discussed time management as one of the most critical skills needed for their success. For FGC students, improving time management skills is extremely valuable given their unique family and work responsibilities. In a separate study conducted by Naumann, Bandalos, and Gutkin (2003), found that self-regulated learning variables were strong predictors of GPA's for FGC students. The nine self-regulated learning variables included: intrinsic goal orientation; task values; expectancy for success beliefs; control beliefs; self efficacy; study strategies; goal setting; seeking assistance from others; and time management.

Support Services-Intervention

Several studies recommend workshops that assist FGC students in learning how to navigate the college culture. An emphasis should be placed on academic services that enhance the student's self-regulation skills. Self-regulated learners have better academic outcomes because they seek assistance from peers and faculty, possess high levels of self-efficacy, and have effective time management skills (Credé & Kuncel, 2008). As a result, first-year courses should teach skills that improve self-regulation such as time management, goal focus, and self-advocacy. Schwartz and Gredler's (1997) study indicates that specific goal setting instruction is an effective way to teach basic concepts about the purposes of goals, types of goals, and the qualities of effective goals.

Testing Instrument

Funding for this research grant was provided by The Suder Foundation

In reviewing the Motivated Strategies for Learning Questionnaire (MSLQ) and the Learning and Study Strategies Inventory (LASSI), it is recommended that the LASSI be used. In regards to finding an effective tool to measure self regulation/time management, goal setting/goal focus, and self-advocacy skills, the LASSI and MSLQ are the most applicable. However, the MSLQ has limitations because it measures a student's motivation and use of learning strategies only for a specific college course (Pintrich & Smith, 1993). Unlike the MSLQ, the LASSI can be generalized for all academic college courses. The LASSI is a self-assessment and diagnostic tool that consists of 77 items. It measures the student's use of learning and study strategies across ten scales: attitude; motivation; time management; anxiety; concentration; information processing; selecting main ideas; study aids; self-testing; and test strategies (Deming & Others, 1994). Although the LASSI is a statistically reliable instrument, further research is required concerning its reliability when used with students in developmental courses (Deming & Others, 1994).

Receptivity to Faculty and Support Services: Mastering the College Student Role

Mastering the college student role is a skill that FGC students generally lack (Collier & Morgan, 2008). FGC students are deficient of the cultural capital that enables them to master successfully the navigation of the college culture. Non-FGC students traditionally enter college with a level of cultural capital that makes it much easier for them to become "role experts" (Collier and Morgan, p. 430). As a result, FGC students tend to have a difficult time with understanding the expectations of their professors. They are also unaware of the academic and social support services available to them. Even once they discover these services, often there is a great deal of hesitancy to seek and accept support due to cultural differences (Ousley, 2008).

Research Studies

Funding for this research grant was provided by The Suder Foundation

Collier and Morgan (2004) conducted a study on how differences in the fit between faculty expectations and their students' understanding of these expectations can result in differential academic outcomes. Results showed FGC students to be disproportionately affected by an inability to master the college student role. While FGC students may have possessed the academic knowledge (ability to understand course material etc.), they lacked the tacit knowledge (professor expectations for exams, appropriate amount of study time, etc.) needed to maximize academic success. Their receptivity to support services that may have served as an effective intervention for opening up the lines of communication with their professors or improving study skills also hindered their academic progress. In another study conducted by Ousley (2008), there was a significant lack of receptivity to support services within the Hispanic student population who were predominantly FGC students.

Support Services-Intervention

Extracted from Collier and Morgan (2008):

Orientations programs designed around the needs of first-generation students are recommended. The goal of these programs would be to influence the upper path in our conceptual model by giving students the skills to recognize and respond to professors' expectations. Thus, specialized orientation programs for students from non-traditional backgrounds could emphasize a basic understanding of the different kinds of faculty expectations they will encounter. In addition, a truly effective orientation program might need to provide resources that extend beyond the beginning of the school year. For example, coaching materials might be available through online technology, to assist first-generation students who do not grasp the extent of their problems in meeting faculty expectations until crises start occurring.

In addition, orientation programs and other strategies that emphasize role mastery as a strategy for improving first-generation student retention rates may require a two-pronged strategy of “targeting” and “tailoring.” Targeting identifies those who need to receive assistance with a particular issue—in this case, the importance of understanding faculty expectations. While first-generation students are not the only ones who would benefit academically from a better understanding of faculty expectations, the current results indicate that these students are more likely to require help in this area. In contrast to targeting, tailoring consists of adjusting a message or strategy so that it more closely “fits” the group in question. In this case, orientation and coaching programs for first-generation students need to be designed to be maximally useful for this group of students. Specific strategies might involve the creation of non-threatening environments by employing already-successful first-generation students as peer mentors for new students.

Testing Instrument

The College Student Inventory (CSI) specifically has a scale that measures the student’s receptivity to support services. The other four compound scales measure academic motivation, social motivation, and general coping ability (Ousley, 2008). This scale is one of the most commonly administered tools that colleges use to measure students’ motivational traits and social background factors related to academic outcomes. The CSI has a reliability index of 0.79, which exceeds the minimum accepted level of 0.7.

Social Motivation

Engagement in institutional social and peer networks has been shown to have positive effects on academic success for FGC students (Pascarella, Pierson, Wolniak, & Terenzini, 2004). Social interaction provides a sense of belonging that contributes to persistence (Somers,

Woodhouse, and Cofer, 2004). These interactions also help increase social capital for FGC students. Developing peer support networks especially in the first year provides a valuable safety net throughout college (Dennis, Phinney, & Chuateco, 2005). However, FGC students require more intentional support that engages them in both social and academic activities. FGC students are generally more hesitant to get involved in campus life until they feel more academically confident (Terenzini & Springer, 1996). Unfortunately, this hesitation unnecessarily prolongs their feelings of isolation and acceptance within the college culture. When these feelings of being an outsider persist throughout the first year, FGC students are far more likely not to return for a second year. This makes a strong case for identifying their social motivation levels as quickly as possible. Early identification of social motivation levels will assist colleges in providing appropriate support services that encourage social and academic integration.

Research Studies

According to a study conducted by Pascarella, Pierson, Wolniak, and Terenzini (2004), “extracurricular involvement had stronger positive effects on critical thinking, degree plans, sense of control over (and responsibility for) their own academic success, and preference for higher-order cognitive tasks for first-generation than for other students” (p. 278). Similarly, there was a significant impact of non-course related interactions with peers concerning science reasoning, writing skills, and educational degree plans (Pascarella et al., 2004). The study also revealed that although FGC students were significantly less engaged in extracurricular activities and peer interaction, they derived greater outcome benefits than other students.

In a study conducted by Prospero and Vohra-Gupta (2007), academic and social integration contributed to higher GPA’s for FGC students. Dennis, Phinney, and Chuateco (2005) also found peer support or a lack of peer support to be a stronger predictor of grades than

family support. This result is largely because the parents of FGC students do not have the college insight needed to assist them in navigating the system (Purswell, Yazedjian, & Toews, 2008).

Support Services-Intervention

Extracted from Pascarella et al. (2004):

In short, students' college experiences have a bigger bang-for-the buck for FGC students than for those whose parents have had some college exposure. To put it another way, most of these conditional effects are related to experiences over which colleges and universities have some programmatic and policy control. One clear implication of these findings is the need for more sharply focused and sustained efforts and campus and public policies designed to increase FGC students' involvement in the academic and nonacademic systems of the institutions they attend.

Extracted from Folger, Carter, and Chase (2004):

The Freshman Empowerment Program is a group process designed to support first generation freshmen. It is critical that they become active thinkers and develop from their traditional state as passive students to a newly evolved state as active and passionate learners. They can only become active and passionate learners if they can gain the necessary skills to understand and self direct themselves to become full participants in the academic community, while still maintaining a strong connection to family and home. The cornerstone of this project was a small group intervention where students could engage in dialogue with other students. Peer and adult co-leader teams facilitated these groups.

Six groups involving 53 participants began meeting during the fall semester. The groups consisted of 6 to 10 first-generation freshmen and were co-facilitated by FEP staff and student co-facilitators. The groups met for 6 weeks, beginning in October and concluding at the end of

the fall semester in December. Groups were randomly assigned and had mixed gender and ethnicity. They met weekly for 90 minutes at each session. Topics discussed were, for the most part, student-directed and included information on academics, college resources, adjustment, relationships, and other issues of concern to the students. The facilitators participated in weekly training and case sharing.

Throughout the semester, group facilitators attempted to introduce the students to resources and activities available to them on campus. Group facilitators provided information on academic assistance, career counseling, and advising services on a regular basis with strong recommendations for their use. Students were encouraged to make connections with faculty, staff, and other students on campus; and were given information to facilitate that process. Group activities centered on community building leading to many of the participants becoming friends with other group members or using the groups as a support system. Many of the students chose to engage in joint social activities outside the group meetings. Facilitators noted that group members encouraged and supported each other while holding each other responsible academically. Also noted was an increase in mentoring relationships between the students and the FEP staff. Staff reported an increase in the number and frequency of students seeking out staff outside of groups, using them as a resource, and coming to them for help with problems.

The results indicate that the first semester, second semester, and the cumulative GPA were significantly higher for those students involved in the FEP groups. An additional outcome for the FEP group participants was their high rate of retention. Participants in the FEP groups were retained into their sophomore year at a rate of 79%, while students in the control group were retained into their sophomore year at a rate of only 39%.

Testing Instrument

Funding for this research grant was provided by The Suder Foundation

The College Student Inventory (CSI) specifically has a scale that measures the student's level of social motivation. It is recommended that it be used to determine the student's inclination to become socially and academically integrated within the college culture.

Leadership Skills

Research Studies

Preparing the next generation of leaders requires the availability of leadership development for college students. Providing successful leadership experience has been found to be an effective psychosocial predictor of retention and GPA's for college students (Ting, 1998; White & Sedlacek, 1986). Ting's (1998) study specifically found this to be relevant among FGC students in their freshman year. Leadership development is especially important for underrepresented students who may have had little interaction with leaders in an academic or professional setting. Given the diverse backgrounds of FGC students, developing leadership skills also requires advisors, mentors, faculty, etc. to have a general understanding of different cultural norms. In particular, FGC students are generally more concerned with career and financial stability given their unique family commitments and cultural expectations for higher education. However, inadequate leadership development can hinder their upward professional mobility.

Support Services-Intervention

Mentorship opportunities that expose students to other successful FGC students, faculty, community leaders, professional leaders, etc., is a way for them to learn by example. Giving the students the opportunity to serve as mentors also allows them to gain experience through their own leadership practice. These mentorship interactions also serve as a way to effectively integrate FGC students socially and academically within the college culture.

Extracted from Ting (2003):

Community service opportunities helps FGC students build leadership and teamwork skills while serving others. Demonstrated community service was found to be an indicator of academic success for FGC students. Community service reflects the ability of FGC students to build a sense of belonging and to connect to the university community.

Testing Instrument

The College Student Inventory (CSI) specifically measures the student's attitude toward his or her own leadership motivation. It is recommended that it be used to determine the student's inclination toward leadership in order to identify the appropriate intervention.

Coping Skills

Research Studies

The ability to cope effectively with stress is pertinent to the academic success and persistence of FGC students. In a study conducted by Wang (2008), FGC students experienced more somatic symptoms compared to their non-FGC student peers. This is no surprise given FGC students face additional challenges and stressors when entering, what can be considered a foreign culture to them. Phinney and Hass (2003) explain that "the extent to which one perceives situations as stressful depends in part on one's ability to handle them, that is, one's coping strategies" (p. 709). While colleges have no control over personal and family stressors, there are ways to assist FGC students in developing effective coping skills/strategies.

Support Services-Intervention

It is recommended that in addition to academic support services, the availability of more comprehensive services is beneficial to FGC students. Services that address their social

functioning and enhance their psychological well-being are beneficial to FGC students given the additional stressors they must cope with.

Extracted from Wang and Castaneda-Sound (2008):

Group counseling and stress management courses are effective for assisting students with developing coping skills. There are a number of workshops and courses that can be adapted to the student's/college needs in regards to stress management skills and techniques for managing anxiety, depression, and improved self-esteem. Incorporating these within other activities or courses might also be an efficient use of students' time.

Because family support serves a protective function for FGC students in reducing their stress levels, for the enhancement of their well-being, colleges may develop some outreach programs that target their families to help them gain understanding and familiarity with the typical tasks and challenges faced by college students with a goal of increasing family support. Strategies include inviting families to visit campus, initiating small group discussions among parents, regularly communicating with families via brochures, newsletters, etc., and providing family consultations when needed.

Testing Instrument

Two instruments specifically measure coping skills. The College Student Inventory (CSI) has a subscale that measures general coping concerning ease of transition, family emotional support, openness, career planning, and sense of financial security. It is recommended that if using the CSI to measure other characteristics, the same testing instrument be used.

The second testing instrument is the stress subscale of the Rhode Island Stress and Coping Inventory. The coefficient alpha for the stress subscale is .85 and uses a five-point Likert

scale to measure how often each of the statements was true in the past month for each participant (Wang & Castañeda-Sound, 2008).

Generalized Support Services Supported by Research Studies

- Mentorship: Group mentorship model found to be effective, assign two upper level FGC undergraduates as mentors to a small group of FGC students. Allows for interaction with multiple mentors and other FGC students to maximize community support.
- Intrusive academic advising
- Learning-living communities
- Faculty academic mentorship
- Social activities that build community amongst FGC students
- Academic activities with specific focus such as workshops in stress management, time management, study skills, etc.
- Emphasis on the freshman college experience-front load intervention support services made available to FGC students
- Collaborative support services should integrate as many departments on campus to better serve FGC students
- Family/parent engagement and informational support services geared toward FGC students' parents and families
- Community service projects within the local and college community that build a sense of commitment and leadership for FGC students
- Leadership development through formal and informal opportunities is essential for FGC students. Workshops, research projects, community service, and mentorship are all effective ways to encourage leadership
- Career counseling that assists FGC students explore various professions, academic majors, and disciplines is beneficial given they are generally focused on financial and career stability upon graduation

Conclusion

Although it may seem overwhelming for institutions to identify the resources needed to improve the academic success and persistence of FGC students, the rewards are insurmountable. For the institution, well-researched support services that address the unique needs of FGC students are proven to significantly improve retention rates and academic performance. These improved outcomes assist in securing financial support from government and private sources. With FGC students accounting for over half of the college student population, institutions must be committed to a culture that embraces and supports these students. For society, it is critical that

opportunity, access, and support be genuinely available to students from diverse backgrounds. Advancing as a global competitor and socially responsible society requires more of our population to be educated beyond the secondary education level. In this knowledge driven economy, a minimum of a baccalaureate degree is increasingly necessary for personal financial security. From an individual perspective, acquiring social capital and professional mobility is achieved primarily through higher education. For FGC students it is imperative that they acquire these benefits so that future generations are able to build upon their groundwork. Perhaps the best way to conclude is with a summative quote that captures the essence of this paper:

An institution of higher education cannot change the lineage of its students. But it can implement interventions that increase the odds that first generation college students “get ready,” “get in,” and “get through” by changing the way those students view college and by altering what they do after they arrive” (Pike & Kuh, 2005, p. 292).

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