Academic Challenge Benchmark


Source Type: Peer-reviewed journal

Type of Research: Qualitative

Mixed Methods Study: N/A

Quantitative Study: N/A

Qualitative Study: Yes

N: 41 faculty members

Population subgroup focus: Latino students

Number of institutions: 3 community colleges

Grounded theory, case study, ethnography: Case study

Focus group or one-on-one interviews: 41 individual interviews

Implementation Studies: N/A

Summary of Study and Findings/Conclusions:

“Student-faculty engagement has been identified as the best predictor of Latino student persistence. This study explores the strategies that community college faculty employ to engage Latino students. Findings indicate that knowledge, appreciation, and sensitivity to Hispanic cultures and an understanding of the preferred learning styles of Latino students are important considerations to establishing classroom environments that engage Latino students and, thus, facilitate their retention and academic success” (p. 135). “Virtually all of the faculty we spoke with share the perception that new faculty hires need to be aware of the nature of the community college, the students that attend the institution, and Hispanic culture” (p. 149).

Hypotheses/Research Questions:

1. What strategies do community college faculty use to engage Latino students in the classroom and thus facilitate their academic success?
2. Do community college faculty use the same strategies as 4-year faculty to create classroom environments that promote student engagement?

Results:

- “The community college faculty we interviewed stressed that ‘culture matters,’ and pointed to knowledge, appreciation, and sensitivity to Hispanic culture as the key component to successfully engaging Latino students” (p. 143).
- “A second cultural aspect that emerged from the transcripts was that of community—helpfulness, cooperation, and collaboration. Faculty participants explained that they
often found Latino students would turn to each other for help rather than approach the instructor…A number of faculty members at [Rural Community College] and [Suburban Community College], areas with higher numbers of immigrant Latino families, spoke of the importance of earning the trust of Latino students as a prerequisite before students would take the step of asking for assistance” (p. 142-143).

- “The faculty we interviewed described Latino students as social learners…The faculty have observed that Latino students prefer to sit together in class and to work in small groups rather than as individuals…If they have a class assignment that requires them to interact with individuals or organizations, they prefer to do so in two or threes rather than by themselves. In short, Latino students have demonstrated a preference for cooperation and collaboration rather than individualism and competition” (p. 144).

- “Latino students have appreciated a high level of formative feedback and appreciate receiving feedback in a manner that is constructive and encouraging. The manner in which they receive feedback is also important, as a number of faculty have had Latino students explain that they prefer not to receive individual feedback from a professor in front of their classmates. In terms of summative evaluation, Latino students have valued professors who find reasons to recognize the accomplishments of the class as a whole. Even small celebrations are reported as highly effective motivational tools” (p. 144).

- “Latino students show a greater interest in learning when they are able to connect the class materials to their personal experiences. A number of faculty indicated that they used journals as a way to encourage students to relate course material to their personal lives. Journaling activities have been well received by Latino students and sharing information from their journals with each other serves as a mechanism to encourage active participation in the class” (p. 144).

- “When discussing higher-order cognitive processing, faculty stressed the preference of Latino students to active approaches to learning…The interviewees were quick to point out that while Latino students, in general, do not respond well to competition, they have thrived in classes where active learning techniques are followed by active evaluation strategies” (p. 145).

- “The faculty also observed that Latino students prefer application in a ‘real world’ setting. A number of faculty incorporate simulations, a capstone assignment, or field trips so that students can either demonstrate or view the application of the classroom to work or life situations” (p. 145).

- “In order to engage students in the classroom, some community college faculty have developed a student-faculty relationship to overcome the fact that some Latinos are wary of authority…Others spoke of engaging the student outside of the classroom in casual conversation or developing relationships by attending social or cultural activities and then extending that relationship into the classroom and academic matters. Latino students have responded positively to personal attention and, once a relationship is developed, value one-on-one time with faculty” (p. 146).

- “The faculty we spoke with…[stressed] that creating a learning community facilitates the academic success of all students. How have the individuals we interviewed created such environments? They have been patient, used humor, and let the students know that mistakes were okay. As many community college students have a low level of self-
esteem, they have worked to build their confidence through frequent feedback and encouragement” (p. 146).

- “Creating a supportive learning community does not mean that faculty must lower standards or expectations. Rather, many of the faculty related that they have initiated learning communities through frank discussions that emphasize standards and expectations…In terms of Latino students, a number of faculty members emphasized the importance of being flexible with time in order to create learning communities…Interviews also indicated that faculty provide opportunities for students to interact with each other at the beginning, during, or at the end of the class session. These individuals indicate that such practice provides for the Latino cultural aspect of turning to each other for help, but also provides the opportunity for a group to ask the faculty member a question” (p. 147).

- “Faculty also expressed a great deal of attention to creating learning communities that focus on success. They have been careful to not call on Latino students in class if they have perceived that doing so makes them uncomfortable. They have been nonconfrontational in evaluating student work, focusing on suggestions for improvement rather than elaborating on shortcomings. If language is a problem, they have utilized interpreters. Several reported exhaustively searching for texts and other learning resources in the native language of the student and allowing them to speak or write in their primary language. Many have incorporated peer tutoring or study groups to provide supplementary instruction” (p. 147).

- “Community college faculty who have facilitated the academic success of Latino students point to the importance of gaining some knowledge and sensitivity to Hispanic cultures. Some faculty sponsored student clubs or organizations or attended and celebrated Hispanic events with the students. Many encouraged students to share their culture in classroom assignments and discussion. When warranted, they stressed cultural relevance to the course content. Recognizing that Latinos value the community rather than the individual, a significant number of faculty have also incorporated community issues or focus on matters of social justice to apply abstract theory and classroom learning to practical real-life and work applications” (p. 148).

- “Community college faculty who were identified as facilitating the academic success of Latino students reported that they do not do anything ‘different,’ specifically for Latino students. They have, however, recognized that students enrolled in their classes will have a variety of cultural experiences and learning style preferences” (p. 150).

- “Although faculty leadership is important, faculty working alone will not be able to sustain an ongoing professional development agenda. Community colleges that have an interest in student engagement and success need to develop a culture of caring and support on their campus. It is important for the administration to work with faculty to develop a series of structured professional development seminars that help faculty and student affairs professionals better understand the cultures of historically underrepresented students and how culture impacts preferred learning styles” (p. 149).

Source Type: Peer-reviewed journal

Type of Research: Quantitative

Qualitative Study:

N: Not reported

Population subgroup focus: N/A

Number of institutions: 1

Survey: Researcher-designed survey

Intervention: N/A

Transcript: No

Longitudinal: No

How were participating students selected: Survey participants were also participants in the Student Technology Mentor program

Randomized trial: N/A

Quasi-experimental study: N/A

Statistical method: Survey

Outcome measures: Instructional support for faculty, staff, and students; technology skills; student work experience and internship opportunities

Controlling for other variables: N/A

Statistics included: Percentages

Implementation Studies: N/A

Summary of Study and Findings/Conclusions:

The LaGuardia Community College Student Technology Mentor (STM) program demonstrates how a college’s own students can become resources for the technology development of faculty, the improvement of teaching tools, and the expansion of library services. The program also illustrates how the Student Technology Mentors themselves benefit from campus employment, interaction with teaching faculty, and the community of peers that the service creates. These benefits are manifested in comparatively higher retention and graduation rates for those in the program as compared with other students of equal qualifications" (p. 9).
Hypotheses/Research Questions:

- This study reviews the establishment and achievements of the Student Technology Mentor program, an initiative of LaGuardia Community College’s Center for Teaching and Learning created in 2000.

Results:

- “A survey of LaGuardia librarians conducted by the STM program in 2010 indicates that STMs are highly valued and serve a need in the library classes. They help offset student apprehension of database searches and save time for the librarian/instructor and for students when the need arises to help a student or troubleshoot a technical program” (p. 15).
- “In [a] survey of the STMs, 93.5% of those responding indicated that they had learned about other cultures through their working relationships with fellow STMs, other students, and faculty, with 74% indicating that group discussions about their culture had helped them to learn more about each other. Among those surveyed, there was unanimous agreement that the STM program had provided them with a sense of community and helped them to become comfortable working collaboratively with others” (p. 16).
- “Faculty were asked on a 2011 survey to rate STM technology skills: 75% of faculty responding rated STM skills as ‘excellent,’ while another 17.5% rated their skill levels as ‘very good.’ Commenting on STM classroom instructional support, faculty indicated the quality of service as ‘excellent’ and student interaction as ‘positive and supportive’ and ‘very helpful and accommodating’” (p. 17).
- “Students in the STM program graduated at a 16% higher rate; had comparable GPAs upon graduation; and transferred to senior colleges at a rate of 6.5% higher than the general college population” (p. 17).
- “The [STM] program has helped [participants]: build technology skills and skills for lifelong learning; improve interpersonal and communication skills; build self-confidence; connect with a community of learners, students in other majors, and college faculty and staff; develop new perceptions of faculty and forge new relationships with faculty; work on campus; learn to respect and interact with diverse cultures; and, maintain academic success” (p. 18-19).

Source Type: Peer-reviewed journal

Type of Research: Qualitative

Mixed Methods Study: N/A

Qualitative Study: Yes

N: 60

Population subgroup focus: N/A

Number of institutions: 10

Grounded theory, Case study, Ethnography: Case study

Focus group or one-on-one interviews: One-on-one interviews

Implementation Studies: N/A

Summary of Study and Findings/Conclusions:

“...This study explores student success courses from the student perspective to answer three questions: What topics do students find the most useful? What teaching methods do the students find most helpful? How can these courses be customized to better serve the students? The purpose of this study is to interview students from a number of community colleges, exploring these topics from the student perspective with the goal of orientation course enhancement. Although students reported the skills and information provided in these orientations [sic] classes to be useful, the usefulness of specific topics varied according to the precollege preparation of each student. The authors offer suggestions for creating specialized orientation programs and courses to fit the needs of the diverse community college population” (p. 121).

Hypotheses/Research Questions:

1. What topics do students find the most useful?
2. What teaching methods do the students find most helpful?
3. How can these courses be customized to better serve the students?

Results:

- “Initial memories of [students’] orientation/student success course varied greatly. Most students referred to the course as a ‘great experience,’ remembering ‘fun activities like setting goals and where I see myself in five years,’ reporting they ‘learned a lot about the campus’ and received ‘good tips on studying.’ One student voiced it was ‘daunting to me
to be in any college. The course was somewhat calming, but at times it made me more intimidated.’ Another student stated, ‘Others needed the course more than I did. I’m not sure it was worthwhile for me, but I learned one credit for very little work’” (p. 124-125).

- “Several students reported the course provided opportunities to meet faculty in their chosen field along with other students in their program. Some of the information provided was ‘common sense’ for freshmen, including how to dress for job interviews and help with writing papers, obtaining tutoring for math, and learning how to use technology, referred to as ‘real world’ skills” (p. 125).

- “A few students reported career research being the most useful part of the course. Another cited the online career/majors assessment because it ‘showed you the many options out there, ones that I didn’t even know about’” (p. 125).

- “Overall, students reported their orientation course having well prepared them for college. The course ‘gave [them] an idea of how to approach certain tasks such as research and which teachers and professionals could assist [them] in answering’ their questions…A few students, however, voiced some negatives regarding the course, calling it a ‘waste of time and money’ as they were already prepared for college” (p. 126).

- “Students reported most often using the information about colleges clubs and organizations; balancing between home, work, and school; blackboard training; time management; and organizational skills…Academic skills were the next most popular with students using study skills, note-taking, and test-taking skills…Increased engagement with the institution was also cited as students reported becoming more involved in student organizations and clubs” (p. 126).

- “Students learned to balance their academics with family, work, and social life. Few made academic adjustments, citing time management as being a key component” (p. 127).

- “While many students were pleased with the topics covered in the course, others offered suggestions of additional items for inclusion. Most students reported receiving information on employability skills, job search, resume writing, and job choice; students not receiving such information wanted it included. One student wanted to know how to use college experience to obtain a job or a better job. Another student asked for additional information on transfer” (p. 128).

Source Type: Peer-reviewed journal

Type of Research: Quantitative

Mixed Methods Study: N/A

Quantitative Study:

N: 239

Population subgroup focus: N/A

Number of Institutions: 12

Survey: Community College Student Experiences Questionnaire (CCSEQ)

Intervention: N/A

Transcript: N/A

Longitudinal: N/A

How were participating students selected: “Participants were members of nominated organizations who were present at a meeting when the survey was administered” (p. 86).

Randomized trial: N/A

Quasi-experimental study: N/A

Statistical method: Multiple linear regression

Outcome measures: General education, intellectual skills, science and technology, personal development, and career preparation

Controlling for other variables: N/A

Statistics included: b, p, R^2, F

Implementation Studies: N/A

Summary of Study and Findings/Conclusions:

“This study tested the extent to which student interaction with faculty, student peer teaching situations, student organization involvement, and discussion with diverse others contributed to self-reported learning for students involved in an ethnic-specific or multicultural student organization. The Community College Student Experiences Questionnaire (CCSEQ) was used to collect data from 239 students who were involved in an ethnic-specific or multicultural student organization at 1 of 12 different community colleges. Self-reported learning was reported in the
following domains: general education, intellectual skills, science and technology, personal development, and career preparation. For each of the five learning outcomes, frequent interaction with faculty was the strongest predictor in the model. Engagement with peers contributed to most outcomes, but not as strongly as student-faculty interaction. Thus, the study extend the contribution of faculty interaction to the arena outside the classroom and suggests further research about the ways student-faculty interaction benefits students at the community college level” (p. 79).

Hypotheses/Research Questions:

- “The current study tested the extent to which faculty interaction, peer teaching, student organization involvement, and discussion with diverse others contributed to self-reported learning for students involved in at least one ethnic-specific or multicultural student organization” (p. 80).

Results:

- “For each of the five learning outcomes, frequent interaction with faculty was the strongest predictor in the model. It predicted gains in general education ($b=.249$, $p<.001$), intellectual skills ($b=.299$, $p<.001$), science and technology ($b=.343$, $p<.001$), personal development ($b=.332$, $p<.001$), and career preparation ($b=.362$, $p<.001$)” (p. 88).

- “The three variables measuring engagement with peers were weaker predictors than frequent interaction with faculty, but each contributed to most outcomes. Peer teaching contributed positively to gains in science and technology ($b=.259$, $p<.001$), intellectual skills ($b=.127$, $p<.05$). Frequency of participation in a student organization contributed positively to gains in personal development ($b=.191$, $p<.01$), intellectual skills ($b=.178$, $p<.01$), career preparation ($b=.142$, $p<.05$), and general education ($b=.127$, $p<.05$). Discussing ideas with diverse others contributed only to gains in general education ($b=.228$, $p<.01$). Interacting with diverse acquaintance contributed substantially to gains in general education ($b=.228$, $p<.01$), but not to the other outcomes” (p. 88).

- “The only student background characteristic that made a significant contribution to learning was non-native English speaker, which made a positive contribution to gains in science and technology ($b=.227$, $p<.001$) and contributed to 5% to the total variance explained by the model. Students’ perception that administrative staff were helpful contributed to gains in general education ($b=.173$, $p<.01$) and intellectual skills ($b=.126$, $p<.05$). Perceptions that instructors were approachable, helpful, and supportive contributed to gains in career preparation ($b=.182$, $p<.01$). Each of these institutional characteristics contributed to gains in career preparation ($b=.182$, $p<.01$). Each of these institutional characteristics contributed 7% or less to the total variance explained by the model” (p. 88).

- “In summary, the measures of engagement contributed the most to the variance, ranging from 30% (for general education) to 18% (for personal development). Student and institutional characteristics contributed much less to the variance (from 0% for personal development to 6% for general education)” (p. 88).

Source Type: Peer-reviewed journal

Type of Research: Qualitative

Mixed Methods Study: N/A

Qualitative Study: Yes

N: 61

Population subgroup focus: Latina, Black, and Asian women between the ages of 18 and 24

Number of institutions: 3

Grounded theory, Case study, Ethnography: Phenomenology and grounded theory

Focus group or one-on-one interviews: Focus groups

Implementation Studies: N/A

Summary of Study and Findings/Conclusions:

“Given the nationwide concern about college persistence and graduation rates, this article reviews pertinent literature related to autonomous learning as well as social and academic engagement. It also presents findings of a qualitative study of young community college women of color, as understudied population. The article, part of a larger research project that explores the obstacles faced by young women of color, describes their experiences related to academic and social engagement and self-determination in the community-college setting. Data were collected from 15 focus groups with a total of 61 Latina, Black, and Asian women between the ages of 18 and 24 on three community college campuses in a large northeastern city in the United States. The findings of this exploratory study suggest that young women of color demonstrate a compelling determination to complete college autonomously and, to a lesser degree, are willing to engage socially and academically. The findings prompt the suggestion that academic and student affairs professionals create opportunities to develop autonomous learning strategies that can be nested within academic and social engagement activities” (p. 346-347).

Hypotheses/Research Questions:

“This study explored the lived experience of young women of color on community college campuses through a dual lens. Conceptually, intrinsic motivation and engagement seem to be unrelated concepts, yet both are noted as empirical must-haves if students are to succeed” (p. 350).

Results:
• “The intense drive to be autonomous, as though the key to success were a solitary quest, was a pervasive theme…These young women approached college with purpose. In each of the focus groups, regardless of credits accumulated, young women spoke with pride and determination when they described how they managed on their own, both in and out of the classroom…Reverberating through many of the interviews was the sense that self-reliance would lead to positive educational outcomes. Thus, autonomy was articulated as both aspiration and purposeful—both as a goal and a credo” (p. 352).

• “Young women early in the college journey noted that they shied away from others…Successful young women in their third and fourth semesters also mentioned that they had avoided socializing…The notion that the route to college success is meant to be achieved on a solitary mission was echoed across the focus groups. However, not all students avoided social contact altogether. Many found connections with other students as instrumentally useful in the navigation of the complex processes of the urban community college terrain…One cohort of students across all three campuses that spoke about social engagement as a vehicle for academic success were the young women who had grade point averages greater than 3.5. High achieving young women spoke about the sense of community and the support provided by fellow students…it is important to note that students who are high achievers appeared to be courted more frequently by honors societies, scholarship advisors, and leadership groups, thus facilitating instrumental engagement” (p. 353-354).

Source Type: Peer-reviewed journal

Type of Research: Qualitative

Qualitative Study:

N: 22

Population subgroup focus: African American and Latina(o) students

Number of institutions: 1

Grounded theory, case study, ethnography: Grounded theory

Focus group or one-on-one interviews: Focus groups

Implementation Studies: N/A

Summary of Study and Findings/Conclusions:

“These community college students spoke to three major themes that contributed to their success as students. Those themes were: (1) relationships with faculty, (2) family support and (3) campus engagement and support.” “Using a framework of social and cultural capital, this study examined successful African American and Latina/o community college students. Based on focus group interviews with twenty two African American and Latina/o undergraduates at an urban community college, the authors reveal how social and cultural capital gained from students’ relationships and interactions with friends, family, faculty members, student affairs staff and college support services impacted their successful college outcomes. In general, students identified social capital resources in the form of faculty relationships, supportive family, and campus engagement as sources of support for their college success” (p. 522).

Hypotheses/Research Questions:

1. What cultural resources do community college students bring to the college experience that can positively impact their college success and do these resources influence their overall retention within a higher educational environment?

Results:

- “Overwhelmingly participants spoke about their instructors as being instrumental to their success in college. What was unique was that all focus group participants made some mention of their instructors as critical to their success. The number one theme echoed by all students related to the accessibility of their instructors…Instructors were described as willing to provide additional tutoring support, or be accessible over email during their office hours. This access made a big difference in the success of [the] focus group
participants. Another comment echoed by many students was that their instructors were motivating. Many stated that their instructors didn’t assume it was the student’s job alone to succeed in class…From simply making themselves available, to taking time to help keep students motivated, to bringing their career expertise into the classroom, the quality of faculty was critical in the success of both [the] part-time and full-time focus group participants” (p. 528-529).

- “Family also played a critical role in the success of the student participants…Family members were willing to take on more of the financial and household responsibilities in order to support the academic success of their loved one…Family members also provided moral support and encouragement for schoolwork” (p. 528-529).

- “It seems for [the students in the study] regardless of whether they attend full-time or part-time, feeling connected to the campus was a factor in their college success. The ways in which students connected to the campus varied from obtaining work study jobs, to feeling connected in class, to having helpful staff members assist in their academic processes, and joining clubs and organizations” (p. 529).

- Aspirational capital: “Our student participants experienced significant personal and professional barriers while attending college. However, many had signs of significant aspirational capital which helped them persevere through their programs, even when many were the first in their family to do so. As a result, many of them had high aspirations to not only be employed, but also be in an upper management position, or in occupations with high levels of responsibility” (p. 530).

- Familial capital: “Many student participants had solid ties with their immediate and extended families while attending college. Many described the power of receiving encouragement and support from family members which sustained them through their academic programs. The support they received in turn allowed the students to view themselves as role models to their younger family members which inevitably enhanced their overall family legacy in higher education” (p. 530).

- Social capital: “Many student participants noted how they gained social capital as they benefitted from the real world expertise as well as the access given to them by their faculty members, many of whom were adjunct faculty members. The student participants also stated how their overall campus environment embraced a sense of inclusiveness, regardless of whether the students were enrolled as full or part time” (p. 531).

- Navigational capital: “Many of the student participants who had attempted to enroll in college at one time but were unsuccessful are now enrolled once again in higher education. Many have gained a new sense of navigational capital where they now have the skills to maneuver themselves through the sometimes intimidating college system. Many of these student participants now feel comfortable attempting to earn their degrees in a place they can successfully navigate” (p. 531).

- “This study also demonstrated that contrary to popular belief, diverse families support their children’s college aspirations, and students feel an obligation to meet those family expectations about college completion. In fact, it is that family engagement that is a source of support and strength as diverse students navigate the college experience” (p. 531).

Source Type: Peer-reviewed journal

Type of Research: Quantitative

Mixed Methods Study: N/A

Quantitative Study:

N: 69 in experimental group, 64 in the control group

Population subgroup focus: N/A

Number of Institutions: 1

Survey: Pre- and posttests of the Communicative Adaptability Scale (CAS)

Intervention: Yes

Transcript: N/A

Longitudinal: N/A

How were participating students selected: Random sample

Randomized trial: N/A

Quasi-experimental study: Yes

Statistical method: t-test differences in pre- and post-test scores.

Outcome measures: Change scores (pre- and post-test) on the Communicative Adaptability Scale (CAS) overall score and scores on the three instrument subscales (Social Composure, Appropriate Disclosure, and Articulation)

Controlling for other variables: Whether or not students participated in a service learning project or used any social media tools in a Communication 101 course

Statistics included: Mean, standard deviation, t-test, df, p-value, mean gains

Implementation Studies: N/A

Summary of Study and Findings/Conclusions:

“This study discusses the implementation of a service learning component in community college communication 101 level courses. Through the execution of a service learning component in communication classes at a community college, students’ communicative competency and attitude toward community service is assessed. Using two different delivery approaches, a
quantitative study assessed the pretest and posttest of the standardized tool Communicative Adaptability Scale (CAS). Eight sections of communication 101 courses were distributed into two groups: (a) an experimental group and (b) a control group. The experimental group (n=69) was required to finish a service learning project consisting of 15 hours by the end of the semester. The control group (n=64) students did not participate in a community service project. Quantitative research methods were applied through data collection of the CAS taken by participants pre-implementation and post-implementation of the service learning component, which was a community service project. The CAS results support that the implementation of service learning significantly increases students’ communication adaptability and competence” (p. 280).

Hypotheses/Research Questions:
- None listed

Results:
- "Independent sample t tests were conducted to examine the effect of service learning among the experimental group and on the control group that had no exposure to a service learning project. A t test was conducted on the pre-and posttest results of the control group and the experimental group. In the control group, significant results were found in the Appropriate Disclosure subscale where the pretest (M=3.4, SD=.8) is significantly different from the posttest (M=3.7, SD=.8); t(120)=1.8, p=.074" (p. 285).
- "Significant results for the experimental pre- and posttest were found in the subscales of Social Composure, Articulation, and overall CAS score. The social composure subscale pretest (M=3.6, SD=.61) is significantly different from the posttest (M=3.8, SD=.67); t(122)=-1.7, p=.086. The articulation subscale pretest (M=3.4, SD=.82) is significantly different from the posttest (M=3.7, SD=.82); t(122)=-2.7, p=.008. Third, the overall CAS score pretest (M=3.5, SD=.44) is significantly different from the posttest (M=3.7, SD=.42); t(132)=-2.1, p=.040. Founded on the results comparing gains and losses between the groups, evidence shows that there are four subscales positively influenced by service learning” (p. 285).
- "Based on the t tests, it was discovered that the experimental group had significant results in the Social Composure, Articulation, and the overall CAS scores. There was also a significant difference found in the control group regarding the Appropriate Disclosure subscale” (p. 286).
- “The t-test results support the theory that service learning produces better communication skills. Several t tests showed significant results for the experimental pre-and posttest in Social Composure and Articulation subscales and the overall CAS score” (p. 286).
- “Students’ social composure confidence increased after actively volunteering, suggesting that communicating outside the classroom and in the community caused them to feel more comfortable and confident when conversing with others” (p. 286).
- “In the overall CAS score, the five subscales included are social composure, appropriate disclosure, articulation, wit, social experience, and social confirmation. The pre- and
posttest outcome of the overall CAS score showed significant changes for the experimental group. This overall score, which consists of all five subscales accumulated, illuminates that service learning significantly increases students’ positive perception of their communication aptitude and competence” (p. 286).
Citation: Settle, J. S. (2011). Variables that encourage students to persist in community colleges. Community College Journal of Research and Practice, 35(4), 281-300. doi: 10.1080/10668920701831621

Source Type: Peer-reviewed journal

Type of Research: Quantitative

Mixed Methods Study: N/A

Quantitative Study:

N: 310

Population subgroup focus: N/A

Number of Institutions: Unknown—data is from the Beginning Postsecondary Students Longitudinal Study

Survey: Beginning Postsecondary Students Longitudinal Study

Intervention: N/A

Transcript: N/A

Longitudinal: Yes

How were participating students selected: From the Beginning Postsecondary Students Longitudinal Study

Randomized trial: N/A

Quasi-experimental study: N/A

Statistical method: Logistic regression analysis, Nagelkerke $R^2$, chi-square, degrees of freedom, correct prediction

Outcome measures: Year-to-year persistence

Controlling for other variables: N/A

Statistics included: Delta-$p$, Beta coefficient, significance level, $p$-value

Implementation Studies: N/A

Summary of Study and Findings/Conclusions:

“Estimating the persistence of first-time students from the first year to the second year of college is a growing social and financial concern. Studying how socioeconomic status affects year-to-year persistence may help to identify and assist those students who have socioeconomic profiles most likely to indicate challenges to year-to-year persistence. This study used data from
the Beginning Postsecondary Students Longitudinal Study (BPS: 96/98), a nationally representative survey, to provide additional information about the patterns of educational attainment and persistence for a subset of more than 51,000 students included in the NPSAS:96 survey. The study used all students enrolled as first-time beginning students at two-year institutions. The purpose of the study was to develop and test a theoretical framework for describing the persistence of students at two-year institutions. The preliminary model included 39 literature-based variables grouped into seven factors: background, high school, college-entry, financial, social integration, academic integration, and college performance. The data were tested using descriptive statistics and logistic regression to determine the predictive value of the models for the students. Social capital variables, particularly student integration to the collegiate environment, were strongly associated with persistence of students. Contact between students and faculty outside of the classroom environment is critical to persistence” (p. 281).

Hypotheses/Research Questions:

1. How does socioeconomic status, including social-capital variables, positively or negatively influence the year-to-year persistence of first-generation college students compared to continuing-generation students?
2. What effect does socioeconomic status suggest for persistence of students?
3. How do background, high school, college-entry, financial, social integration, academic integration, and college performance factors affect year-to-year persistence for first-generation students?
4. What implications do these findings have for future federal and institutional policy decisions for first-generation and continuing-generation students?

Results:

- “A total of 183 first-generation students from the total two-year sample of 310 students were considered. Of the sample, 183 persisted to the next year, or 60%...The model correctly predicted 92.7% of all first-generation students who persisted. The model predicted 54.35% of first-generation students who did not persist. The overall predictive percentage for the model was 83.06% for all persistence decisions” (p. 291).
- “All students who persisted had friends attending the same institution and had social contact with faculty members outside of the classroom. Both of these variables were associated with year-to-year persistence at a 1.000 or ‘perfect’ association. In addition to the two constant association variables, several other variables were strongly associated with persistence to the second year. Students who were older than 21 years of age were much more likely to persist. Other significant variables included coming from a family of two or three additional family members, having at least one other family member in college, attending full-time, not delaying entry into postsecondary education, satisfaction with the cost of the college, having financial aid, and living on-campus. Students who persisted also indicated satisfaction with their intellectual development and the college’s prestige. Students who had some level of dissatisfaction with the instructor’s ability to teach and did not participate in fine arts activities were associated with persistence.
Finally, grade point average was significantly associated with persistence; students who had ‘A’ and ‘B’ level grades were more likely to persist” (p. 295).

- For first-generation students: “Every student who persisted had friends attending the same institutional and had social contact with faculty members outside of the classroom. Both of these variables were associated with year-to-year persistence at a 1.000 or perfect association. In addition, all first-generation students who persisted were also over the age of 21. Several other variables were strongly associated with persistence. Nine of the 30 significant variables were associated with persistence with a $p = \leq .25$, or 25%. First-generation students who persisted were associated with attendance at a school within 150 miles of their home, living on campus, having an e-mail account, being satisfied with the campus climate and their intellectual development, going places with friends, having a lower SAT score, and earning ‘B’ and ‘C’ grades” (p. 296).

For continuing-generation students: “Continuing-generation students who persisted were likely to be male, from either a very small family of only two persons or a large family of more than four persons, from a nonrigorous high school curriculum located in rural areas, not on any financial aid, dissatisfied with the instructor’s ability to teach, not participating in fine arts activities, did not meet with advisor about academic plans, and did not talk with faculty outside of class” (p. 296-297).

Source Type: Peer-reviewed journal

Type of Research: Quantitative

Mixed Methods Study: N/A

Quantitative Study:

N: 315

Population subgroup focus: Black females

Number of Institutions: Not mentioned

Survey: Community College Student Experiences Questionnaire (CCSEQ)

Intervention: N/A

Transcript: N/A

Longitudinal: N/A

How were participating students selected: Sample was selected from the CCSEQ; the researchers only included “individuals who were currently enrolled in associate’s of arts or associate’s of science degree programs at accredited, degree-granting two-year community colleges that offered grades to computer grade point averages” (p. 539)

Randomized trial: N/A

Quasi-experimental study: Yes

Statistical method: Descriptive statistics, correlation analyses, and hierarchical linear regression tests

Outcome measures: Black women college students’ satisfaction with their community college experience—“posited as a function of community college students’ background traits, perceptions, and commitments. Satisfaction is also the extent to which students are frequently and meaningfully engaged in educationally purposeful activities that have been deemed good practices or important socializing activities that positively influence students’ subjective evaluation of their college experience” (p. 538).

Controlling for other variables: Background traits such as age (in years), native language, and external commitments (job and family commitments)

Statistics included: Frequencies, means, standard deviations, p values, R², B
Implementation Studies: N/A

Summary of Study and Findings/Conclusions:

“Data from the Community College Student Experiences Questionnaire were analyzed for a sample of 315 Black women attending community colleges. Specifically, we conducted multivariate analyses to assess the relationship between background traits, commitments, engagement, academic performance, and satisfaction for Black women at community colleges. Descriptive results provide a profile of Black women who attend community colleges in terms of age, native language, units taken, and grades. Hierarchical linear regression results suggest that our statistical model accounted for 22% of the variance in satisfaction. Significant predictors of Black women’s satisfaction at community colleges include age, effect of family on school work, and social engagement with faculty. Grades may also be significantly related to Black women’s satisfaction, although the relationship was reduced to nonsignificance over successive models. Implications for future policy, practice, and research are highlighted” (p. 534).

Hypotheses/Research Questions:

1. What is the relationship between Black women’s background traits, expectations, engagement, academic performance, and satisfaction with college for those attending two-year community colleges?
2. Which of these factors are the strongest predictors of Black women’s satisfaction with their community college experience?

Results:

- “First, results demonstrate that there is a relationship between Black women’s background traits, expectations, engagement, performance, and satisfaction with community colleges. This is in consonance with the study’s theoretical framework. Recall that the statistical model accounted for just under a quarter (22%) of the variance in Black women’s satisfaction at community colleges. And while this lends partial support to the hypotheses embedded in our theoretical model—for instance, the background traits like age are significantly related to Black women’s satisfaction at community colleges—results also raise questions about the applicability of traditional satisfaction models to community college students. Explaining 22% of the variance in satisfaction leaves 78% of the variance in satisfaction unexplained by the model” (p. 545).
- “Results from this secondary analysis of CCSEQ data suggest that age is the strongest predictor of Black women’s satisfaction with their community college experience. It has a greater influence on her satisfaction than other factors like number of credits taken, social engagement with campus life, or her intentions to transfer to a four-year institution…Older students [in the study] tended to be more satisfied than their younger counterparts” (p. 545).
- “Black women’s social engagement with community college faculty members was positively associated with her satisfaction with college. That is, Black women in our sample who engaged faculty socially in frequent and meaningful ways tended to be more satisfied with their collegiate experience than their peers who did not engage
faculty often, if at all. We also learned that Black women’s engagement with faculty members at community colleges exerted the second largest influence on satisfaction, based on partial correlation results” (p. 545-546).

- “Black women in our sample who reported that their family responsibilities greatly affect their schoolwork tended to be less satisfied with college than their counterparts with no family or whose families have little effect on school” (p. 546).
- “Grades significantly predict satisfaction with college among Black women at two-year community colleges...Students’ academic readiness and performance in school is related to their overall evaluation of the community college experience—indeed, community college satisfaction may be a function of how confident one feels about her ability to perform well and accomplish such tasks” (p. 546).

Source Type: Peer-reviewed journal

Type of Research: Quantitative

Mixed Methods Study: N/A

Quantitative Study:

N: 552

Population subgroup focus: African-American and Caucasian students

Number of Institutions: Not mentioned—students were selected from the national CCSEQ database

Survey: Community College Student Experiences Questionnaire (CCSEQ)

Intervention: N/A

Transcript: N/A

Longitudinal: N/A

How were participating students selected: Random sample

Randomized trial: N/A

Quasi-experimental study: Yes

Statistical method: ANOVAs, Tukey-Kramer tests

Outcome measures: Student perceptions of academic, social, and personal growth and development

Controlling for other variables: Age, gender, and enrollment status

Statistics included: F test, p test, mean, standard deviation, $R^2$, beta

Implementation Studies: N/A

Summary of Study and Findings/Conclusions:

“This study examined whether African-American and Caucasian students attending a two-year college differed in the relationship between the quality of their efforts exerted toward important educational objectives and their perceptions of growth and development in academic and nonacademic domains. The results suggest that the relationship between student effort and self-reported gains are not the same for African-American and Caucasian students. When
background variables were statistically controlled for, quality of effort yielded several common
and unique influences on estimates of gains made for each group. African-American students
reported greater gains, which were explained by more involvement toward the completion of
important educational objectives. These findings are discussed in light of Pace’s theory and past
research on students attending two- and four-year institutions” (p. 297).

Hypotheses/Research Questions:

1. Are African-American and Caucasian community college students similar in terms of
levels of quality of effort?
2. Is the relationship between quality of effort and self-reported gains the same for African-
American and Caucasian community college students?

Results:

• “The ANOVAs for quality of effort in student acquaintances and self-reported gains were
highly significant ($p < .0001$). The ANOVAs for library, faculty, writing, and computers
also were significant ($p < .001$). The ANOVA for coursework was significant at $p < .01$” (p.
302).

• “Tukey-Kramer statistics suggested differences among involvement and gains. As for
quality of effort, African-American students were more involved in coursework, library
use, faculty member interaction, student interaction, and use of computer technology.
Regarding self-reported gains, African-American students reported more gains than
Caucasian students” (p. 302-303).

• “Of primary interest was determining the influence of quality of effort on estimates of
gains while controlling for student characteristics and a college program variable.
Therefore, the first step was to enter a block of background variables (i.e., age, gender,
and enrollment status) and examine the percentage of variance explained ($R^2$) in each
group. When considered together, background variables did not explain a significant
amount of variance in gains for African-American students. The results were different for
Caucasian students...background variables explained about 13% of variance in gains for
Caucasian students...Although age was not important (the $t$ test for its beta was not
significant), examining the direction of the standardized beta suggests that self-reported
gains were higher for Caucasian students if they were enrolled full time but lower if they
were women” (p. 304).

• “When age, gender, and enrollment status were controlled, about 52% of self-reported
African-American students’ gains was explained by greater involvement in coursework,
library use, faculty member interactions, writing, and computer use. A different picture
emerged for the Caucasian students. The influence of gender on gains disappeared
once quality of effort was included in the analyses. Also of interest is that the influence of
enrollment status on gains became less importance once quality of effort was taken into
consideration. Thus, for Caucasian students, the important influences on gains were
enrollment status, faculty member interactions, student acquaintances, science, writing,
and computer use. As a group, these variables explained 52% of the variance in gains
for Caucasian students” (p. 304, 306).
• “That the influence of background variables on self-reported gains was minimal compared with how involved students were in the learning process is consistent with Pace’s (1984) theory. What students bring to college is not as important as how much they do while in college for influencing learning and growth. As for ethnicity, the findings of this study are consistent with earlier research using the [College Student Experiences Questionnaire] that suggested that the relationships between student involvement and self-reported gains are different for African-American and Caucasian students” (p. 306).

• “The between-group mean comparisons presented [in the article] suggest that the Caucasian students in this sample were older and enrolled in more credit hours when they completed the CCSEQ than their African-American counterparts. The African-American students in this sample were exerting more effort toward activities related to coursework, library use, faculty member and student interaction, writing, and use of computer technology. African-American students also reported significantly higher levels of gains in social, personal, and academic growth than did the Caucasian students...Although quality of effort exerted by both groups of students yielded a number of common and unique influences on gains, the analyses suggested that increased involvement in coursework and library use by African-American students exerted an important influence on their self-reported gains. The extra effort in these activities by the African-American students clearly paid off in terms of their self-reported gains. Interestingly, the extra effort exerted by the African-American students toward making student acquaintances did not explain variance in gains. One possibility is that many of these African-American students might have been commuter students, who tend to have fewer opportunities to interact with other students outside of class” (p. 306-307).

• “The regression analyses also suggested that African-American and Caucasian students were similar in that increased involvement in faculty member interactions, writing, and use of computers explained a significant amount of variance in self-reported gains. For Caucasian students, increased involvement in writing activities and computer use were more important in explaining gains than for their African-American counterparts. Thus, for both groups of students, what mattered most was their involvement in activities such as talking one-on-one with their instructors about course progress, preparing rough drafts of term papers, and asking fellow students to proofread them” (p. 307).

• “Regarding technology, it was important for both groups of students that they used computers, E-mail, and World Wide Web instructional materials” (p. 307).

• “Immediately apparent for the African-American group is the dominant role that involvement in coursework played in explaining gains. This means that what mattered most for African-American students in terms of gains was the degree to which they were actively involved and participating in activities such as class discussions or summarizing major points and information from their readings and notes. Although not as important as their involvement in coursework, African-American students indicated that their use of the library had an effect on what they got out of college. Thus, they benefitted from using the library to read, study, or prepare bibliographies for term papers” (p. 307-308).

• “Enrollment status, student acquaintances, and science activities had a unique influence on gains for Caucasian students. Caucasian students classified as full time reported making greater gains than part-time students. Caucasian students reported more gains if
they were making more effort toward initiating contact with students who were different in some regard...Taking advantage of science activities was also beneficial for Caucasian students” (p. 308).

- “Involvement in activities related to art, music, and theater and vocational preparation did not explain gains variance in this sample” (p. 308).
Citation: Tovar, E. (2015). The role of faculty, counselors, and support programs on Latino/a community college students' success and intent to persist. Community College Review, 43(1), 46-71. doi: 10.1177/0091552114553788

Source Type: Peer-reviewed journal

Type of Research: Quantitative

Mixed Methods Study: N/A

Quantitative Study:

N: 397

Population subgroup focus: Latino/a students

Number of Institutions: 1

Survey: College Mattering Inventory (Tovar, 2009)

Intervention: N/A

Transcript: No

Longitudinal: N/A

How were participating students selected: Participants were selected from “a database of students participating in a larger research project assessing the construct validity of the College Mattering Inventory” (p. 53).

Randomized trial: N/A

Quasi-experimental study: Yes

Statistical method: Hierarchical ordinary least squares regression analyses

Outcome measures: Success as measured by cumulative GPA and intent to persist to degree completion

Controlling for other variables: “Controlling for the effects of pre-college student characteristics, transition-to-college experiences, and academic and social factors” (p. 62)

Statistics included: Variance inflation factor, mean, standard deviation, Beta, probability value, standard error, t, R squared, F-test, and p

Qualitative Study: N/A

Implementation Studies: N/A

Summary of Study and Findings/Conclusions:
“This study examines how interactions with institutional agents (faculty and academic counselors) and select student support programs influence success (i.e., grade point average) and intentions to persist to degree completion for Latino/a community college students. Using social capital theory and college impact models, the study controls for the effects of select pre-college student characteristics, transition-to-college experiences, and academic and social factors. Findings indicate that interactions (quantity and type) with institutional agents exercise a small, but significant effect on Latino/a students’ success. Similarly, participation in an academically rigorous program and a counseling-intensive support program influences students’ success and intention to persist. Implications for practice are addressed” (p. 46).

**Hypotheses/Research Questions:**

1. How do institutional agents (instructors and counselors) and student support programs influence Latino/a community college students’ success (i.e., GPA)?
2. How do institutional agents (instructors and counselors) and student support programs influence Latino/a community college students’ intent to persist to degree completion?

**Results:**

- An “overwhelming majority (96.6%) [of students] noted spending several hours per week on family responsibilities. Nearly three quarters also indicated they held a paid job…Most students reported discussing academic issues with both instructors and counselors (83.5% and 93.2%, respectively), in comparison to career-related (30.9% and 60.5%) and personal issues (22.8% and 17.3%). Curiously, students were more likely to discuss personal issues with instructors than counselors” (p. 58).
- “Results indicated that age and students’ citizenship status were significant predictors in Block 1, pre-college student characteristics. This block accounted for 5% of the variance. Neither gender nor students’ college generation status was a significant predictor. Among the transition-to-college variables composing Block 2 (accounting for 11% of the variance), the number of hours students spent on family responsibilities per week and reporting they had experienced a challenging transition to college were found to be negative predictors of GPA. The largest predictor was students’ reporting that they experienced academic difficulties while in college, followed by enrollment intensity” (p. 60).
- “The last block, interactions with institutional agents and student support programs, accounted for 6% of the variance in the model. The highest predictor was the frequency with which students met with instructors outside of class since starting college. Interestingly, the number of times students met with counselors was not a significant predictor of GPA. While discussing career-related issues was the next highest predictor in the mode, it is particularly important to note that these discussions had opposite effects on GPA when students met with instructors and counselors. As noted in the model, discussing career-related issues during meetings with instructors positively impacted GPA; however, not discussing career issues with counselors had a negative effect on GPA. Last, participation in the Scholars Program was also a positive predictor of GPA. Discussions pertaining to academic or personal issues and participation in other...
support programs, including [Extended Opportunity Programs and Services (EOPS)] and the Latino/a Center, did not exercise any significant effect on GPA” (p. 60).

- “After controlling for the effects of pre-college student characteristics, transition-to-college experiences, and academic and social factors, this study found a small but significant impact of support programs and institutional agents’ interactions with Latino/a community college students’ success and intention to persist to degree completion. With respect to GPA, it was found that students’ interactions with instructional faculty outside of class had a small but significant impact on GPA, but did not influence their intention to persist. Generally speaking, the higher the number of times a student met with faculty members outside of class, the higher the GPA they achieved” (p. 62).

- “This study found that discussing or failing to discuss career-related issues with students by instructors and counselors, respectively, significantly predicted students’ GPA. Whereas discussing career issues with students by instructors had a compensatory effect on GPA, a failure to do so by counselors had a negative effect. Additionally, participating in select college support services characterized by greater interactions with counselors, in particular, positively influenced Latino/a students’ GPA via their involvement in the Scholars Program and increased intention to persist when participating in the EOPS” (p. 63).

- “Having significant family responsibilities, experiencing a challenging transition to college, and encountering academic difficulties had a deleterious impact on Latino/a students’ grades; albeit enrolling in a higher number of units positively predicted GPA. Having supportive family and friends, receiving transition assistance from the institution, spending adequate time studying, and committing to the pursuit of a major or degree exercised a powerful influence on intention to persist to degree completion” (p. 63).

Source Type: Peer-reviewed journal

Type of Research: Quantitative

Mixed Methods Study: N/A

Quantitative Study:

**N:** 1000 (500 White students and 500 African American students)

**Population subgroup focus:** White students and African American students

**Number of Institutions:** 40

**Survey:** Community College Student Experiences Questionnaire

**Intervention:** N/A

**Transcript:** N/A

**Longitudinal:** N/A

**How were participating students selected:** Random sample of students from the Community College Student Experiences Questionnaire database

**Randomized trial:** N/A

**Quasi-experimental study:** Yes

**Statistical method:** ANOVA, ordinary least squares regression procedure, propensity score matching

**Outcome measures:** Acquired knowledge and skills applicable to a specific type of job, gained information about career opportunities, and developed clear career goals

**Controlling for other variables:**

**Statistics included:** Cronbach’s alpha, $R$, $R$ square, adjusted $R$ square, standard error of the estimate, sum of squares, $df$, mean square, frequency, significance, $t$, collinearity, $B$, standard error total, Beta VIF

**Implementation Studies:** N/A

**Summary of Study and Findings/Conclusions:**

“This study examined data from a random sample of 500 White students and 500 African American students who have taken the Community College Student Experiences Questionnaire
to determine which factors in the environment impact their career preparation. The results showed that interaction with faculty had the strongest impact on career preparation for all students. Counseling services were significant for African American students. The African American students indicated that they put more effort into student-faculty interactions and peer interactions than White students, and they reported greater gains in career preparation” (p. 738).

Hypotheses/Research Questions:

1. Do African American and White community college students report significantly different levels of quality of effort in the areas of informal student-faculty interactions, peer interactions, counseling activities, work experience, and perceived gains in career preparation?
2. Are there significant differences in the relationships of the constructs of career preparation, informal student-faculty interaction, peer interaction, counseling activities, and work experience between African American and White students?

Results:

- “The analysis of variance for career preparation by ethnicity yielded a statistically significant result ($F=7.805$, $df=1$, $p<.01$). In this analysis, the African American students indicated a higher level of career preparation compared to the White students. Although this evidence of significance suggests that there are indeed differences between African American and White students, the effect size for the group difference was relatively small (.18)” (p. 745).
- “The analysis of variance for Informal Student-faculty Interactions was also significant ($F=6.539$, $df=1$, $p<.05$). In this analysis, African American student indicated a higher level of interaction with faculty compared to White students” (p. 745).
- “The analysis of variance for Peer Interactions also showed a statistically significant difference ($F=16.428$, $df=1$, $p<.001$). African American students reported a higher level of interaction with peers of different backgrounds compared to White students” (p. 745).
- “The analysis of variance for Counseling was also significant ($F=12.536$, $df=1$, $p<.000$). An examination of the means shows the African American students used counseling services more than White students” (P. 745).
- “In [the multiple regression analysis for African American students], the dependent variable of career preparation was regressed on the independent variables of informal student-faculty interaction, student acquaintances, counseling, and effect of job on schoolwork. The results showed the independent variables accounted for 24% of explained variance in the dependent variable of career preparation ($F=38.792$, $df=4$, $p<.001$). When examining the coefficients, informal student-faculty interaction and counseling were the constructs that yielded significant results in the regression model. This suggests that for African American community college students, informal student-faculty interaction and interaction with counselors and advisors substantially affected their perception of growth in career development” (p. 746).
• "When examining the coefficients, informal student-faculty interaction was the only construct that was statistically significant in the regression model. This suggests that just as for African American students, White students perceived their interactions with faculty had an effect on their career development" (p. 748).

• "When the data were analyzed to determine which factors contributed most to their career preparation, both groups of students indicated that student-faculty interactions had the most significant impact. This is consistent with previous research on the effect of student-faculty interaction on academic and nonacademic experiences. Evidently, the students in this study sought out faculty outside the classroom to find out their expectations for student performance, discuss current events, and discuss career or educational plans. African American students put more effort into cultivating these relationships than White students, possibly because they are less comfortable with the expectations in the environment and have fewer peers who can help them negotiate the system" (p. 749).

• "Counseling was also a significant factor in career preparation for African American students, but not for White students. They apparently talk to counselors or advisors about their choice of courses, major or career; plans to transfer to a four-year college or university; and vocational interests, abilities, and ambitions. One might expect African American students to resist counseling because of past experiences, but the items in this section of the CCSEQ focus on career preparation and academic advising rather than personal counseling, which may make a difference" (p. 749).

• "In addition to counseling, the African American students put more effort into building relationships with their faculty and peers than their White counterparts...The greatest difference between the groups was in peer interaction" (p. 750).

• "African American students also reported greater gains in career preparation than their White counterparts. More specifically, they indicated they acquired more knowledge and skills related to specific jobs, obtained more information about career opportunities, and developed clearer career goals...This data should be interpreted cautiously, however, because the CCSEQ measures gains, rather than outcomes; so we have no way of knowing whether they gained enough to overcome many of the barriers they perceive in the environment. The fact that White students reported less progress in career preparation might be of concern, as well" (p. 750).