CIRP Research Update

Hundreds of research articles, presented papers, and books have used CIRP data to examine various facets of the college experience. In this Research Update we highlight four articles we think would be of particular interest to CIRP users.

Student-Faculty Interaction Related to Higher GPA and Satisfaction

Cole (2008) found that African American and Hispanic seniors who reported higher levels of faculty and student interaction that reflected support and encouragement also had higher grade point averages and higher overall college satisfaction. Using data from the CIRP Freshman Survey (TFS) and the College Senior Survey (CSS), Cole was able to examine several different types of student-faculty interaction as well as control for pre-college experiences (such as high-school GPA). He also found that the positive effects of this type of student-faculty interaction remain even when several other types of student-faculty interaction ("receiving assistance to improve your study skills" and receiving "negative feedback on your academic work") had slight negative impacts on GPA and satisfaction.

Although this research recognizes the important positive role that faculty support and encouragement plays in academic achievement and satisfaction, Cole also suggests a need for further faculty development related to more effectively fostering and promoting study skills and providing negative academic feedback to students of color. If faculty can provide more effective assistance in these areas, we might expect to see enhanced academic achievement and satisfaction among our students.

Cole, D. (2008). Constructive Criticism: The Role of Student-Faculty Interactions on African American and Hispanic Students' Education Outcomes. *Journal of College Student Development*, 49 (6), 587–605.

Retention and Degree Attainment Impacted by Both Individual and Peer Factors

Oseguera & Rhee (2009) found that whether a student actually obtains a degree after six (or fewer) years is affected not only by that student's intent to transfer, stop out, or drop out as an incoming first-year student, but is also impacted by the general retention climate at the institution. Thus not only is the student's personal expectation of transferring, stopping out or dropping out a significant predictor of actually doing so, the more other students at the institution also report expectations of transferring, stopping out, or dropping out, the less likely it is that individual student will obtain a degree at that institution. Interestingly enough, when the authors also factored in data about how faculty at those institutions felt about the campus climate, they found no impact on degree attainment. This study paired data from the CIRP Freshman Survey (TFS), and the HERI Faculty Survey (FAC) for the demographic, expectation, and campus climate measures, and data on degree completion collected directly from registrars offices six years after the CIRP Freshman Survey data had been collected.

The authors suggest that campuses interested in retention should more closely monitor the overall retention expectations of their students; something that as they suggest is easy to do through a survey program such as CIRP. Armed with knowledge about the retention context on campus, institutions can work to programmatically counter the effects of a peer environment that does not have strong degree completion expectations.

Oseguera, L., & Rhee, B. S. (2009). The Influence of Institutional Retention Climates on Student Persistence to Degree Completion: A Multilevel Approach. *Research in Higher Education, 50*, 546–469.

Increasing Retention in the Sciences in the First Year of College

Chang and his colleagues (2009) found that 82% of students in four-year institutions who intended to major in the biomedical or behavioral sciences upon entry into college (as measured in the CIRP Freshman Survey) remained in that major at the end of the first-year of college (as measured by the Your First College Year Survey). Lower retention in the sciences at the end of the first year was evident among underrepresented minority students. Science majors were slightly less likely to persist in their majors at more selective institutions than at less selective institutions. This was not the case, however, at historically black colleges and universities (HBCUs), where rates of persistence in science majors during the first year actually increased rather than decreased. The authors suggest that these institutions may do a better job of cultivating talent.

The data indicated that science students who joined pre-professional or departmental clubs during their first year of college more than doubled their chances of persisting in their major. Students participating in health science research programs also were more likely to persist in the major. The authors conclude that participation in these groups likely helps students form a firmer science identity.

Based on the totality of their findings, the authors suggest that selective institutions interested in increasing retention in the sciences need to focus more on success among all students and less on identifying the very top students among their high aptitude population. Institutions can use the results in this study to help them examine and perhaps rethink how the learning environment on their campus contributes to success in the sciences.

Chang, M. J., Cerna, O., Han, J., & Saenz, V. (2008). The Contradictory Role of Institutional Status in Retaining Underrepresented Minorities in Biomedical and Behavioral Science Majors. *The Review of Higher Education,* 31(4), 433–464.

Effects of Diversity-Related Courses and Programs More Far Reaching Than Previously Believed

Denson's and Chang's (2008) study found that participating in academic classes that focus on diversity and workshops focused on diversity provides two levels of benefits. In the first case, those students participating in such activities show increased benefits in academic skills, self-efficacy, and racial-cultural engagement. The more they participated, the greater the gains. In addition, the authors saw similar benefits to *all* students just by being on a campus at which students are more engaged in such activities, regardless of whether or not they as an individual did participate. Thus the additional benefit to these outcomes for all students that comes from being on a campus with high levels of student participation in these activities is a benefit above and beyond the individual benefit to students who engage directly in classes and workshops around diversity.

In discussing these results from the CIRP Freshman Survey (TFTS) and the College Senior Survey (CSS), Denson and Chang noted that being a student on a campus where there is a high level of engagement around issues of diversity seems to most robustly influence students' knowledge of and ability to get along with people of cultures and races other than their own.

Denson, N., & Chang, M. J. (2009). Racial Diversity Matters: The Impact of Diversity-Related Student Engagement and Institutional Context. *American Educational Research Journal*, 46(2), 322–353.