

Promoting Transfer Students' Success via Faculty-Student Research Collaborations

Robert J. Youmans¹, Ivonne J. Figueora, Jared T. Ramsburg, & Olga Kramarova
California State University, Northridge

Although many Southern-California residents have benefited from the community-college system, research shows that most students who transfer to a four-year university receive little support from either the community college they are leaving or the university to which they are transferring. As a result, although transfer students are a highly motivated and academically successful population, transfer students often experience so-called 'transfer shock', a state of alienation, loneliness, and lack of engagement with students and faculty in the new university setting. This paper reports data about sixteen transfer students at California State University, Northridge who volunteered to become student researchers in the lead author's research group. Although the study was limited in scope, the data suggests that transfer students who become research assistants may spend more time volunteering on campus, less time working in off-campus employment, and feel better about being able to cope with the challenges of university life. We argue that both faculty and transfer students would benefit from formal academic programs that promote collaborative research projects between faculty and transfer students on university campuses.

INTRODUCTION

Students at the California State University and University of California systems increasingly include undergraduates who have transferred to these institutions from community colleges. Past surveys of community college students in general have shown that the majority of students, anywhere between 51%-74%, anticipate applying to transfer to a four-year university (Richardson & Bender, 1986). In Southern California, these percentages have likely increased in recent years as admissions standards and tuition rates at California's four-year universities have become more competitive. In addition, the large percentage of minority and first-generation college students makes the community college system a special conduit to post-secondary studies, making the system an important cultural icon of upward mobility via education. In short, Southern California community colleges allow many students who might otherwise have been unable to continue with their post-secondary education to begin the process of pursuing baccalaureate degrees even before they arrive at the campuses that will grant them (Lanaan, 1996).

Although many thousands of Southern-California residents have benefited from the community-college system, research shows that most students who transfer to a four-year university receive little support from either the community college they are leaving or the university they are transferring to (Townsend, 1995). The lack of support can lead to so-called "transfer shock," a sense of alienation, loneliness, and lack of engagement with students and faculty in the new university setting (Berger & Malaney, 2003; Cejda, 1994; Cejda, Kaylor, & Rewey, 1998; Hills, 1965; Lanaan, 1996). Positive student perceptions of the transfer process, essentially the *absence* of transfer shock, have been linked with success at the new university (McCool, 1984), and one documented method of reducing transfer shock is engagement with faculty

members early in that transfer student's new program of study (Berger & Malaney, 2003). In fact, interactions with faculty and other members of a college community have been identified as the most important predictor of whether or not a student will succeed in obtaining a degree in a 4-year university program (Pascarella & Terenzini, 1991).

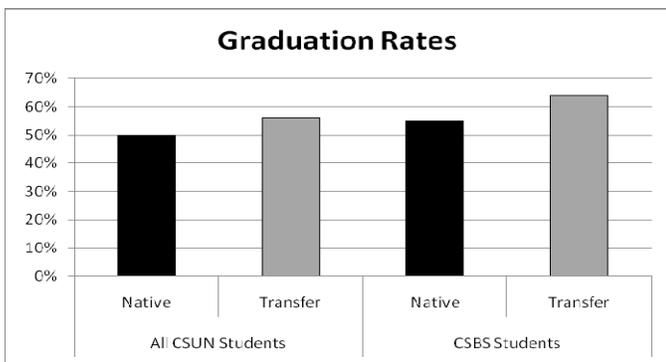
Many faculty and administrators would like to improve the transfer experience for students, but they face a legitimate dilemma when it comes to finding effective methods of fostering faculty-student engagement. Even very young faculty members may feel that attempts to engage students are awkward when they have little in common with the student. One activity that may promote more natural student-faculty interaction is research collaborations. Student-faculty research enables both parties to work towards a common goal (e.g., a research competition, a conference presentation, a conference paper, etc.), and student-faculty research provides an educational outlet for interactions that are flexible enough so that both students and faculty members can align their mutual interests. In fact, a review of the literature on undergraduate student-faculty research partnerships has identified them as a leading predictor of overall student success in higher education (Nagda, Gergerman, Jonides, von Hippel, & Learner, 1998).

Aside from promoting positive faculty-student interactions, it is important to emphasize that there are tangible benefits for faculty who choose to recruit students to work with them on research projects. Student researchers are recognized as integral in many types of academic research (see Lechago, Love, & Carr, 2009), and while *native* students, students who began at a university as freshman without transferring, are no doubt a large part of this important demographic, we argue that *transfer* students may be particularly desirable for faculty to recruit. Transfer students represent a highly motivated population, one that has proven

¹ Robert J. Youmans, the corresponding author, is now at George Mason University, 4400 University Dr., Psychology Department, MS: 3FS, Fairfax, VA 22030. Email: ryouman2@gmu.edu

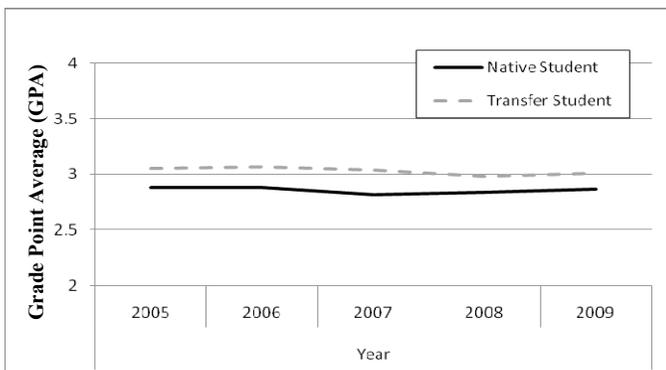
they can overcome the bureaucratic and administrative tasks involved with successfully transferring from a community college. At California State University, Northridge (CSUN), published data from their university webpage shows that transfer students graduate more quickly than native students, even when differences between the initial enrollments dates of the two populations are taken into account. As shown in Figure 1, the overall percentage of native students who graduated from CSUN in six years was approximately 50%, while the percentage of transfer students who graduated in only *three* years was approximately 56%. In our college, the College of Behavioral Sciences (CSBS), only 55% of native CSBS students graduated in six years, while 64% of the students who had transferred graduated in only three.

Figure 1: Graduation Rates of CSUN Students (2009)



Grade Point Averages (GPAs) at the time of graduation also suggest that transfer students are more motivated to perform well in comparison with their native counterparts. As shown in Figure 2, transfer students at CSUN demonstrated consistently higher academic performance than their native counterparts between 2005 and 2009. Issues of transfer shock aside, to the extent that faculty want to attract strong students to help with their research, transfer students represent an excellent source by which to do so.

Figure 2: Northridge Student GPAs at Graduation



Although past research has identified the benefits of student-faculty interactions for avoiding transfer shock, and although transfer-students may have academic advantages that faculty wish to capitalize on, less is known about the effects that participating in research has on a transfer student's day-

to-day campus life and outlook while at a university. The present study investigated how volunteering to become a research assistant impacted the daily life of transfer students. Specifically, this project examined how transfer students divided their time between common student activities before and after volunteering to become a research assistant, and what effects, if any, participating in a laboratory project had on their perceived ability to cope with the challenges of academics and their feelings of inclusion at the university.

We predicted that participating in a research project would increase the overall time that students spent volunteering to complete academic related activities (including, but not limited to, the research project they volunteered to help with), and also that transfer students who completed the research would be more likely to spend more time on campus in general. Additionally, we predicted that the increases in time spent on these academic-related projects would result in transfer students perhaps spending less time with other activities such as employment that was unrelated to their school work. Finally, we predicted that becoming a research assistant might improve transfer students' coping abilities, and increase their feelings of inclusion at the university they attended.

METHOD

Participants

Participants were recruited in spring upper-division courses taking place in the Psychology Department at CSUN. Announcements were made in these classes notifying students that we were recruiting students who were interested in volunteering to help our laboratory group conduct psychology research. Students were told that participating would allow them to learn more about experimental psychology and gain experience that could be valuable for applying to graduate programs, and we especially encouraged transfer students who had not yet gained any research experience in the department to apply. A total of 18 undergraduate students applied, all of them transfer students, and sixteen were accepted into the study (one student was not accepted because she could not volunteer to participate for the entire semester, and one student was not accepted because she could only work from home). As is common in the psychology major, the participants were predominately female (15 out of the 16 were female). The ages of the sixteen participants ranged between 21 and 36 years, with an average age of 24.19 years old. The average self-reported GPA of participants was 3.63. When years of study at a community college were combined with years of study at Northridge, fifteen participants had a combined total of four years of higher education at the beginning of the study, and one had a combined total of three years.

Details about the Student-Faculty Research Project

Students volunteered to help with a faculty research project designed to improve how ordinary CSUN students

managed their spare time. Research has demonstrated that students in many different disciplines spend less time on academic activities than they often estimate (e.g., Casey, Senapati, White, Gruppen, & Hammound, 2005; Smith, 1938), a memory phenomenon sometimes referred to as a *hindsight bias*. Hindsight biases may lead students to make estimates based on how much time they *intended* to spend, rather than the time they actually spent. Transfer students who became student researchers in this project helped by controlling a system that utilized a type of previously-developed feedback system (see Youmans & Stone, 2005) to attempt to improve students' time management. This version of the feedback systems sent text-message 'pings' to students asking what they were currently doing. Over several weeks or months, these samples provided enough information about how students were using their time to reliably estimate their time management in ways that were free of hindsight and other memory biases.

The project was successful in making students more mindful of their time management, but the outcomes of the research project are tangential to the data being reported here and will not be discussed further. However, it is important to note that transfer-student research assistants helped during the research project by controlling the system that sent out and logged student responses to the text-message pings, creating aggregates of student responses, or by presenting the text-message feedback to the students who were participating in the study. Most transfer students volunteered to help two or three times per week for approximately two hours per day. The duration of the research project was approximately 3 months.

Surveying Transfer-Student Participants

Participants who volunteered to help with a research project began on the first day by reading and completing informed consent documents. Next, they completed a series of surveys over the course of about an hour. The first set of surveys were comprised of demographic questionnaires that asked participants to volunteer information about their age, gender, academic major, GPA, etc. Participants were free to skip questions if they wished (no participants skipped any of the demographic questions).

The second set of survey questions asked participants to estimate how much time they spent on campus in general, how much time they spent volunteering for university-related activities, and how much time they spent off campus working for pay.

Next, participants responded to a survey containing two questions designed to measure how well students felt they are able to *cope* with the challenges they face at the university. The questions, adopted from work by Blascovich and Tomaka (1996), asked students to estimate both 'the level of pressure and demand expected in your academic work,' and their 'ability to cope with the previously rated level of academic pressure and demand.' Both questions were asked using a 7-point bi-directional Likert scale. Positive scores on the survey indicated that students felt capable of coping with the

demands of being at the university, whereas negative scores indicated that students felt unable to cope with the demands. In short, the coping survey made estimates of how well students felt they were able to cope with the day-to-day challenges of university life at Northridge.

The second survey, adapted from work by Chemers, Hu, and Garcia (2001), estimated how 'included' students felt at CSUN. Students rated how much they agreed or disagreed with five statements about inclusion at the university using a 5-point bi-directional Likert scale. The survey utilized positive statements including 'I feel included within the CSUN community' and 'CSUN targets their events to include me just as much as the average CSUN student,' and also contained negative statements including 'I feel that I am ignored at CSUN' and 'I seem to be invisible to the rest of the CSUN population.' Once participants' responses to negative statements were reverse coded, greater average scores indicated that students felt a greater sense of inclusion.

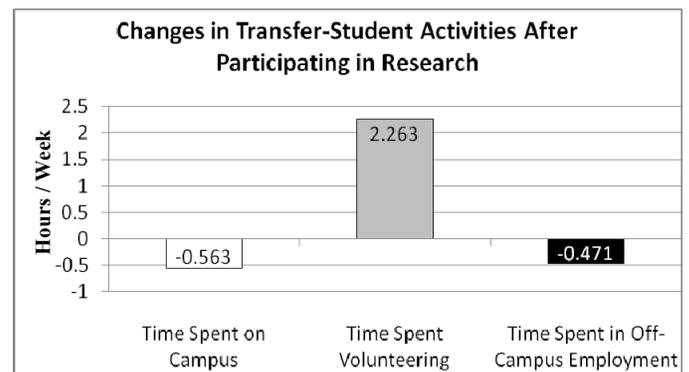
RESULTS

Following the three-month research project, all transfer student researchers were asked to complete the intake surveys again. The data from the first set of surveys was compared with the data from the second to determine how the students had changed across the semester. Comparisons between transfer-student responses on the first and second surveys were analyzed to look for evidence that helping with the research project had a positive effect on the transfer-students who volunteered. The sample size (n=16) was too low to conduct inferential statistical tests for reliability, therefore only descriptive data is reported.

Changes in Student Activities

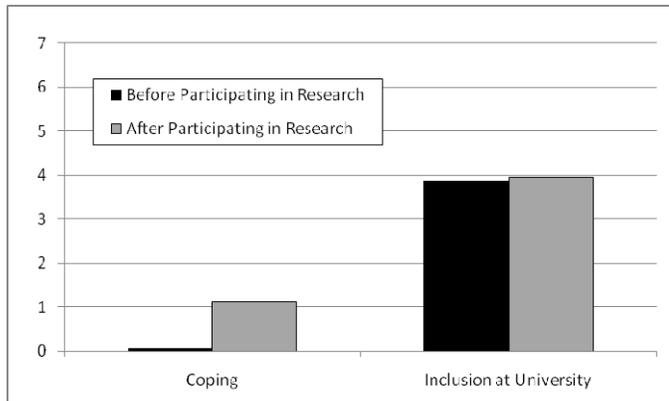
In order to determine how volunteering had affected student activities of interest, the authors looked for before and after changes in how transfer students spent their time on campus, volunteered for university activities, and worked off campus. As shown in Figure 3, volunteering in the research project led to small reductions in students perceptions of how much time they spent on campus overall, and how much time they spent working off campus for pay. Not surprisingly, volunteering increased how much time students estimated they were spending completing volunteer work on campus.

Figure 3: Changes in Student Activities



In order to determine how volunteering had affected transfer students' feelings of inclusion on campus and their feelings about their own ability to cope with the challenges of student life, the authors looked for before and after changes in their responses to the coping and inclusion survey questions. As shown in Figure 4, transfer students reported a greater ability to cope with the challenges of being at a university, and a slightly greater sense of inclusion after volunteering as student researchers.

Figure 4: Changes in Coping and Inclusion



DISCUSSION

The results of this study suggest that transfer students may feel paradoxically more able to cope with the day-to-day stresses of academic life after volunteering to participate in a research project, in spite of the time that doing so adds to the students' schedule. Where the transfer students found the extra time to volunteer is beyond the scope of this study, but the authors note that the time that students reported being at work decreased after volunteering, although, we also note that reported 'time on campus' also decreased. Therefore, one interpretation of the data is that students reduced their work schedules and spent less time 'hanging out' on campus to compensate for the time they spent volunteering, an interpretation that might be in keeping with the small increase in how 'included' the transfer students felt at CSUN.

Previous research has identified student-faculty collaborations as one of the leading predictors of overall student success in higher education (Nagda, Gergerman, Jonides, von Hippel, & Learner, 1998); this study may help to suggest *why* these types of collaborations are predictive of student success. The data reported here seem to suggest that while students may have had less spare time to cope with the stress of college, they actually felt better able to cope with those same stressors. This may have been because so many of the transfer students who participated in this study quickly became a cohort of friends who spent time together in the laboratory setting, a natural support group of sorts. In addition, all 16 of the students who participated in this project went on to list their experiences on their resumes or academic curriculum vitas, and all 16 students approached the lead author of the study about writing him or her letters of

recommendation for graduate or professional programs.

The authors wish to stress that the data reported here represents only a limited, initial attempt to look for measurable benefits of student-faculty research collaborations on students who transfer from community colleges to four-year universities. One limitation of this study was the relatively short three-month period of time that the students participated in our research project. The authors note that, in our department, the typical period of commitment that faculty require undergraduate students to make is one year or greater. Another limitation of the data reported here is the relatively small sample of transfer students who were studied ($n = 16$), a sample size that made common inferential statistical techniques inappropriate, leaving our findings' reliability open to question. Finally, the investigation lacked a proper comparison condition, for example, a group of comparable students who did not participate in a student-faculty research collaboration. Future research that included a comparison condition would allow researchers to rule out the possibility that the changes we detected in the transfer students were merely a function of time, unrelated to volunteering to help with research.

These limitations aside, we believe that transfer students' vulnerability to transfer shock, and their superior academic performance and graduation rates, make them prime candidates for student-faculty research collaborations. The sense of alienation, loneliness, and lack of engagement often reported by transfer students need not be a necessary part of the transfer experience, and we urge faculty and administrators to consider adopting policies and programs that foster student-faculty collaborations. We note that incoming native freshmen often are required to enroll in an orientation class dedicated solely to introducing them to the university – perhaps a similar class could be developed for transfer students that could be used to introduce students to research opportunities on campus. Lechago, Love, and Carr (2009) have published a series of guidelines that faculty can use to successfully recruit and manage undergraduate students. To this excellent review, we would only suggest that faculty and administrators consider proactive methods to attract transfer students to volunteer to assist faculty in their research projects.

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