Running Title: To Work Or Not To Work

# TO WORK OR NOT TO WORK: THE IMPACT OF WORK ON STUDENTS' COLLEGE EXPERIENCE

David X. Cheng, Assistant Dean for Research and Planning, Columbia College and The Fu Foundation School of Engineering and Applied Science, and Adjunct Professor, Department of Organization and Leadership, Teachers College, Columbia University

Lucia Alcántara, Doctoral Student, Department of Organization and Leadership, Teachers College, Columbia University

Address Correspondence to: David X. Cheng, Columbia University, 407 Alfred Lerner Hall, 2920 Broadway, MC 2611, New York, NY 10027. E-mail: dxc1@columbia.edu.

# TO WORK OR NOT TO WORK: THE IMPACT OF WORK ON STUDENTS' COLLEGE EXPERIENCE

#### **ABSTRACT**

Existing research on student employment focuses on the impact of work on persistence and degree attainment. This study, however, pays special attention to how work affects students' college experience. Blending quantitative and qualitative methods, the study examines the difference between working and nonworking students in their academic and social experience on campus, students' perceptions of work, and the impact of work on their college life. The results indicate no significant difference between working and nonworking students in their academic and social experience, though working students' GPAs are lower than that of the nonworking. Constantly searching for meaningful work as well as meaning in their work, most working students perceived work as experiential and economically opportunistic. Considered in the context of out-of-class activities, work has inserted structure into students' daily life and enhanced their self-confidence in a number of areas.

# TO WORK OR NOT TO WORK: THE IMPACT OF WORK ON STUDENTS' COLLEGE EXPERIENCE

#### **INTRODUCTION**

Student employment has long been a cause of concern for educators of American postsecondary institutions. "The more time a student devotes to employment, the less he or she has for either academic or social activities" (Fjortoft, 1995). The effects of student employment have become even more relevant in light of the fact that, from 1959 to 1986, the employment rate of college students rose from 45 to 56 percent (Stern and Nakata, 1991). A later study shows that, in the academic year of 1992-1993, 72 percent of undergraduates in four year institutions were employed an average of 31 hours per week while enrolled in school (Cuccaro-Alamin and Choy, 1998). Growing public demand and legislative expectations for accountability in the past two decades have made it imperative that higher education administrators and researchers pay attention to the potential impact of student work on the college outcomes.

As a result, research literature has been accumulating in the area of student employment and its impact on student academic achievement, personal and social growth, as well as retention and graduation rates. A review of literature reveals that, although research questions raised are quite straightforward, the answers are not. It all depends on which outcomes are measured (Furr and Elling, 2000). For every study which postulates the benefits of student employment, there is an equally compelling study purporting the exact opposite (Aper, 1994).

Student employment can affect academic and/or cognitive development positively or adversely. A moderate amount of nonacademic work is considered to be helpful to

academic achievement when compared to heavy or no employment (Hood, Craig, and Ferguson, 1992). Similarly, a study of 408 first-year pharmacy students at three different institutions found working and non-working students performed equally well in academic achievement: "Employment while in college simply did not appear to affect students' levels of academic achievement" (Fjortoft, 1995, 8). One logical explanation may be that, while working does affect the amount of time available, students tend to reduce leisure and socializing time rather than study time (Fjortoft, 1995). In a more extensive study of undergraduate students' college experience, Light (2001, 27) concludes that "[T]here is no significant relationship between paid work and grades. Students who work a lot, a little, or not at all show similar patterns of grades." Research conducted by Furr and Elling (2000), on the other hand, demonstrated the adverse effect of employment on the academic progress of students who work 30 hours or more. This finding is consistent with the research results by Horn (1994) that enrolled students who work between 1-15 hours per week are more likely to have GPA's of 3.5 or higher than those who worked longer hours.

Not only hours of work matter, the employment locale is also a significant factor that influenced students' academic development. Pascarella, Bohr, Nora, Desler, and Zusman (1994) found that off-campus employment had no effect on the cognitive development of first year students, in spite of the fact that work responsibilities detracted from the number of daily study time. Conversely the same study found that on-campus employment in excess of ten (10) hours had a negative effect on reading comprehension. A longitudinal comparative analysis on the effects of work-study program on cognitive development of college students (Terenzini, Yaeger, Pascarella, and Nora, 1996) found

that students engaged in the work-study program scored slightly lower on the College Student Experience Questionnaire Writing Experiences scale, and were less likely to enroll in honors programs than their non work-study counterparts. While the outcomes were slight they are significant enough to be notable.

The literature examining the influence of work on student affective development is also mixed. In a 1995 study of student learning and personal development outside of the classroom, Kuh (1995) found that 32 percent of the 149 seniors interviewed attributed work as being instrumental to their leadership development and personal growth.

Additionally students engaged in either on- or off-campus employment associated their work experience with gains in interpersonal competence. Curtis and Nimmer (1991) found that work provides discipline and structure to the college life of newly independent freshmen. While on-campus employment may foster student involvement with faculty and peers so as to enhance their integration into college life (Pascarella et al., 1994), off-campus employment physically removes students from campus, and thus negatively influences their affective development (Astin, Sax, Korn, and Mahoney, 1996).

Most researchers, recognizing the influence of work on academic and social development of students, are ultimately concerned with the impact of work on student persistence in college and completion of a bachelors' degree (e.g., Ehrenberg and Sherman, 1987; Kohen, Nestel, and Karmas, 1978; Fjortorft, 1995). Given the mounting pressures from their constituencies to demonstrate student outcomes, colleges have paid close attention to any factors that are relevant to student academic and social integration, which may lead to students' persistence in and graduation from college (Tinto, 1987). Such an approach to student employment, though sufficiently justified, contributes very

little to our understanding of work on students' college experience itself. Moffatt (1988) found that, "for about 40 percent of students, the do-it-yourself side of college [what took place outside the classroom] was the most significant educational experience." Kuh (1995) and Light (2001) were among the few researchers who considered student employment in the context of their overall college experience. With the substantial proportion of students who work while in college, the experience of work should no longer be treated as a mere contributing factor to persistence and degree attainment; the experience itself merits close examination in the context of a student's entire out-of-class experiences as an undergraduate.

#### PURPOSE OF THE STUDY

This study is an exploratory effort to identify the impact of student employment on their college experience, academically and socially. The institutional setting for the study was a private residential college in a large research university. With selective admission criteria and a high graduation rate, the hallmark of student achievement at this institution goes beyond such common outcome measures as persistence and degree completion. This institutional advantage makes it possible for the researcher to refocus thinking about the impact of student employment away from such end results as graduation rates and toward the educational transformation processes, with an emphasis on issues directly related to student learning and growth. In other words, this study represents an attempt to account for what happened to the students who had worked and how they perceived such experiences in the context of their college life. This approach is in line with Palomba and Banta (1999, 5) who suggest that "knowing where students

wind up is only part of the story; information about where they start and what they encounter along the way is also necessary."

Two research questions guided the study: (1) Was there a significant difference between students who worked for pay during the academic year and those who did not work in their estimates of college experience? (2) For those who worked for pay, how do they perceive the work experience and its impact on their college life?

#### METHOD

#### Participants and Data Collection

Data was collected in two phases. First, in spring 2003 an annual student survey was sent to all 5,354 undergraduate students. A total of 2,638 students, or 49 percent of the target population, responded to the survey. In the survey, students were asked to report their employment status. A total of 1,001 students, or 38 percent of the respondents, indicated that they worked for pay in fall 2002. For those who worked for pay, they were asked to answer further questions concerning their financial situation and work experiences.

Second, after a preliminary analysis of the survey results, 500 students were randomly selected from those who worked for pay and invited to participate in follow-up focus group discussions on the impact of work on college experience. Eventually 14 students participated in two focus groups. This low participation rate might be due to the timing of the focus groups. After completing the preliminary analysis of survey data, the scheduling of the focus groups in April was quite late in the semester, when students had already begun to prepare for final exams and other end of the term activities.

The focus group meetings were tape-recorded with permission from the participants. One author moderated the discussions while the other author took detailed notes. The researchers followed the focus group protocol by preparing a questioning route in order to maintain consistency in the group discussion processes. Efforts were made to encourage open and honest responses by assuring students of complete and professional confidentiality.

#### Data Analysis

The analysis of data blends quantitative and qualitative methods. Data collected through surveys was analyzed to provide overviews or "big pictures" of the issues investigated. The analysis was coupled with focus groups to help interpret quantitative results, gain better understanding of student perceptions and feelings, and suggest intervention strategies (Cheng, 2004).

Three sets of survey items regarding students' academic experience, social experience, and college activities were extracted from the survey (see Appendix). Each item was presented with a four-point Likert-type response format with 1 being strongly disagree and 4 being strongly agree. A *t*-test was conducted on each item for students who worked for pay during the academic year and those who did not work to find if they differ significantly on these aspects of their college experience.

In the survey, students who worked for pay were asked about their level of agreement with the following statement: "My work-study or academic year job helps me gain valuable skills and experience." This is a four-point Likert-type question with 1 being strongly disagree and 4 being strongly agree. An ANOVA procedure with a factorial design was conducted to find whether students' self-reported gains in skills and

experience through work differ significantly due to work locale (on campus, off-campus, and both) and work hours (less than 10 hours, 10-19 hours, and 20 or more hours per week).

The recorded data from two focus groups were transcribed verbatim, and the NVivo software program was utilized to code and analyze the data. The transcripts were cross-checked with the group meeting notes, and themes and categories were developed using a "comprehensive approach" that "incorporates both the 'holistic' and 'mechanical' methods" (Cheng, 2004, 153).

#### **RESULTS**

#### Quantitative Results

Table 1 provides a comparison of students who worked for pay during the academic year and those who did not work in their estimates of college experience. In terms of student academic and social experiences, there is no statistically significant difference between the two groups in any of the self-reported items. The only area where the two groups differ significantly is students' self-reported GPA, with the working group showing a lower average GPA score than the nonworking group (working: M=3.40, SD=.46, nonworking: M=3.47, SD=.42, p<.01). When asked to indicate the extent to which they have gained a list of skills through involvement in student activities and events, working students reported more positive gains than nonworking students in four areas: leadership competencies (Mean Diff=.10, p<.05), event planning (Mean Diff=.16, p<.01), budgeting (Mean Diff=.13, p<.01), and advocacy and coalition building (Mean Diff=.11, p<.05).

Table 2 presents the results of the ANOVA used to test the null hypothesis that students who worked on- or off-campus or both with different working hours per week would report no significant difference in their gains in skills and experience through work. The ANOVA test yields statistically significant results for both main effects (work locale: F(2, 837)=3.86, p<.05; and work hours: F(2, 837)=7.31, p<.01), with the two factors showing no statistically significant interaction (F(4, 837)=0.37, p=.83).

Further post hoc tests were conducted to account for the statistically significant results of the main effects in the ANOVA. Students who worked off-campus reported significantly higher level of gains on skills and experience through work (on-campus: M=2.82, SD=.93; off-campus: M=3.03, SD=.79; p<.05). For those who worked 20 or more hours per week, their ratings of gains (M=3.20, SD=.88) are significantly higher than those who worked less than 10 hours (M=2.78, SD=.88) and those who worked 10 to 19 hours per week (M=2.90, SD=.96; p<.05).

#### Qualitative Results

The transcripts were carefully examined and data was coded into relevant sets and subsets. Analysis of the coded transcripts focused on strength of content as indicated by repetition in text, relevance or relationship to quantitative data, and convergence or divergence from data exemplified through the literature review. Findings fell into two distinct groupings: student work experiences and their perceptions, and the impact of work on college life.

#### Work Experiences and Perceptions

Focus group participants were first asked to describe their job situations. Jobs held by the participants include:

- Shelving books in the university libraries
- Doing clerical work in various offices in the university
- Working at the security desks of residence halls
- Assisting professors on research projects
- Working as teaching assistants for lab classes
- Doing IT work/Designing web pages
- Working as a student executive at a community services program
- Bartending
- Working in the archives department of the city government

A number of students reported to have held more than one position. They either worked two hourly jobs, or held one hourly job and a second position with flexible working hours. Overall the participants averaged 13 hours of work per week during the academic year. While acknowledging constantly having to juggle between study and work, most students nonetheless wished that they had larger work-study allocations or more hours of work. When pressed with the reasons for wanting longer working hours, students said that, given the type of work they do, they need more time to make the work more meaningful or complete. For instance, the student who worked tutoring youth at a local community agency felt that the time she had for the kids was too limited to make a difference. This may partially explain the reason why, according to the survey, the students who worked 20 or more hours scored higher in their self-perceived gains through work.

Most students prefer to work on campus because of convenience. One student reported his experience working off-campus:

During [my] freshman year [in the] second semester [I] got bored with secretarial work for a test taking company. Had to commute to Long Island on Sundays, and it ate up Sunday. Paid well but was a real pain because it ate up a day out of the week.

Other students shared his view on off-campus jobs. While the rationale for preferring on-campus jobs makes good sense, it is also interesting to compare with the survey results showing those who worked off-campus reporting significantly higher levels of self-perceived gains on skills and experience through work.

Students were asked how they and their peers perceive that they have to work to support themselves. Some acknowledged being less understood by their peers or felt differentiated in certain social events due to financial circumstances. For instance, one student said that she never joined her peers for Broadway shows, which costs around \$100 a night, either because she could not afford the money or she had to work.

However, no participants reported any negative peer perceptions about their having to work. On the contrary, most students were proud of their employment status for at least two reasons. First, it was the income from work that had helped them maintain a good social life on campus, and, without it, their social life could only be worse. Second, students considered their jobs coveted, and the ability to find a job and/or compete for a challenging job makes them more competitive and confident amongst their peers:

The process of getting a job gives you an edge. Also [you gain] the confidence knowing that you have more experience than other kids getting out of school.

Students' sense of fulfillment varies depending on the type of work they do. For those whose jobs are less challenging, especially for freshmen who just started working, they often felt bored and useless. The students who worked at the security desk of the residence halls or as clerical assistants in the university offices reported using the extensive down-time periods to complete their homework.

Once they had gained some experience from entry level jobs, students began to jump from job to job usually advancing in status and responsibilities. While the kind of jobs students seek is somewhat influenced by their personal and/or academic interests, the work experience can also have an impact on their academic interests or even future career plans. One senior reported having already obtained an IT job two months before graduation, thanks to the valuable experience gained through working both on- and off-campus computer jobs. Another student worked as a student teacher and felt it was an eye-opening experience for her:

Working has given me more options. Don't have to go on just one career path. I have broader interests. I know I can do other things.

Students are motivated to work for a number of reasons. Most students felt that working was necessary to meet their daily financial obligations. However, once they started working, students began to see other benefits of work. Employment has provided them with greater access to the world beyond the campus gate, on-the-job learning, and opportunities to interact and network with people in the workplace. Work during the academic year also lead to better summer positions and, in some cases, permanent employment upon graduation. Most focus group participants perceived work as experiential and economically opportunistic, an important supplement to their academic experience.

#### Impact of Work on College Life

Students were asked if their life at college differed significantly from that of their peers due to work. Participants admitted that most jobs are available during the daytime business hours, thus competing with academic schedules. As a result, they constantly faced the choice between spending time working or studying. Most students said that they always opted to reduce work hours or stop working altogether when the academic pressure was mounting.

I attempted to find a job related to my interests. Once I found that type of job I found it was useful and attractive. Later I realized I couldn't afford to work because I felt I could take an extra class, and even be better in class.

None of the participants believed that work had affected their academic performance in any negative way, which is contrary to the survey results showing that the working students have a lower average GPA score than those who did not work.

Students believed that work had helped shape their academic interests and career choices upon graduation. One student working as research assistant in a professor's engineering lab regarded his work the most fulfilling and gratifying experience of his college life. Another student was a math major but took a job as computer programmer:

I got more hands-on experience than I would have in an academic setting. I wouldn't have learned what I've learned from working taking 3 or 6 more hours of classes every week.

After working in a community service job for a couple of years, one student made a plan to teach after graduation:

I learned what [New York Public School] Chancellor Klein is doing with the "No Child Left Behind Act" and school reform in New York City schools. If I wasn't

working I wouldn't know about these things. It's important to care about these things because they're the future of our society.

When asked how work had influenced their academic experience, some students did not seem to distinguish between their academic pursuit and employment opportunities upon graduation. They consider themselves in a more advantageous position than their peers who did not work, because work had given them opportunities to gain insight into the job market, real world experiences, and inside track information on their selected professions. One student was very straightforward about the purpose of study: "We come here (i.e., the college) to learn how to get work."

Despite the non-significant result in the survey regarding work on students' social experiences, the focus group participants clearly felt the impact of work on their social life on campus. Almost all the participants agreed that the highest cost of work is free time, sleep time, and time for socializing with friends. When asked what they would do if having a choice not to work, students would use the time to get more sleep, socialize, take more classes, participate in more clubs and student organizations, or take unpaid or low-paying internships related to their academic interests.

However, these sacrifices were hardly a negative experience to most participants. One student said that she considered working as a means to insert structure into her daily schedule. Although work takes away time for socializing, students reported that, due to the tight schedule, they had to make their life more focused and structured, and they learned how to manage time.

I enjoy what I do (i.e., work). I think it's good to have [something] other than the academic part in my life. I am not sure if I want to just study all the time.

More importantly, work experience helps enhance students' self-confidence in working with people. One student reported having learned how to interact and work with well-known faculty members while working as clerical assistant in a department.

Another student even felt a sense of camaraderie with the working class during his commute to a storage warehouse where he worked to archive government files. Students felt very competent when their work product contributed to research results and/or when they presented at professional conferences resulted from their work.

To many students, the quality of social life on campus is not just a matter of how much free time they have to spend with their friends. To a large extent it depends on whether they can afford to participate in cost-based activities. Work not only makes it affordable to attend Broadway shows or go to bars, it also gives students a sense of financial independence. While feeling bad every time she asked her parents for money, one student said, "Job is nice, because it provides an activity that pays."

#### **DISCUSSION**

While most existing studies on student employment sought to identify the influence of work on such college outcomes as persistence and graduation rates, this study focused on working students' college experience.

Students who work during the academic year and those who don't work display similar patterns in their perceptions on overall college experience. Regarding the academic experience, working students' ratings of the quality of instruction, intellectual engagement with faculty, improvement of critical thinking skills, and learning in the areas of sciences are similar to that of the nonworking students. In terms of social

experiences, working and nonworking students reported similar experiences in their interactions with different groups, acceptance by various communities, and residential experiences.

Although college experiences are identical for both working and nonworking students, the academic outcomes, as measured by GPA, are not. Supporting Kuh's (1995, 141) suspicion that working while going to college can take a toll on academic performance, our study meanwhile disputes Light's (2001, 27) assertion that there is no significant relationship between paid work and grades. Using focus groups to follow up with the survey results, our study reveals that working students are either unaware of, or refuse to admit, the fact that their academic performance is somewhat compromised because of the very obvious reason: they do not have enough time to study.

One of the themes emerged during the focus group discussions is that students are constantly searching for meaningful work as well as meaning in their work. For starters, most students take jobs that require minimal skills or knowledge. The motivation for them to keep this type of jobs is mostly financial. However, students soon learn about the value of working and begin seeking opportunities that not only benefit them financially but also help shape and enhance their academic, social, and career interests. That explains why students, on one hand, reported working as being challenging to sleep patterns and academic endeavors but, on the other hand, wanted more work-study allocations and longer working hours. When Light (2001, 28) pointed out in his book that "on average, the more hours per week a student works, the happier he or she is with work experience as an integral part of college," he did not elaborate. When we found from the survey that those who worked 20 or more hours per week are happier than their

peers who worked fewer hours, we did not know the reason either. It was through the focus group discussions that we discovered the key to the student satisfaction with work: it is only when students find working meaningful, or when they find meaning in their work, that they begin to truly appreciate the value of work and consider work an integral part of their college experience.

The search for meaning in work takes three forms. First, it is the process of searching for jobs that adds meaning to student employment, making the active job seekers feel the excitement of competition and a sense of competence. Students talked with pride about how their work experience gives them an edge in competing for a more challenging job, and how their job opportunities are coveted by their peers. Second, it is the meaningful jobs that provide greater access to the world beyond the campus gate and allow them to make connections between what they learn in college and what they want to do after graduation. For those who are lucky enough to find jobs that match their academic interests or future career plans, work becomes a part of their on-the-job learning or preparation for advanced graduate training. Finally, with or without "meaningful" jobs, working students still consider work meaningful, because it becomes a means to insert structure into their daily schedules. Our study confirms Curtis's and Nimmer's (1991, 24) assertion that "[J]obs provide discipline and structure, along with extra income, to the lives of newly independent college freshmen and may even provide a positive influence on study habits, by forcing students to more carefully budget their free time." In our case, the disciplinary function of work goes beyond the freshman year, leading to an intense, but much enriched life in college for most of the working students.

Student employment is often viewed as something for which students sacrifice their social life. The same perception is also shared by some students in our focus groups. Kuh (1995) is among the few who disputes this approach and studies student work in the context of their out-of-class experiences. Noteworthy are our survey results showing working students' higher level of self-reported gains through involvement in student activities and events than that of the nonworking group in four areas: leadership competencies, event planning, budgeting, and advocacy and coalition building. If the quality of students' social life is measured by their gains in social skills and competencies, rather than by the amount of time spent with friends, work may have helped students accomplish more in the social aspects of their college life than they have realized. Work, among other out-of-class activities, has "presented students with personal and social challenges, encouraged them to develop more complicated views on personal, academic, and other matters" (Kuh, 1995, 146).

#### **LIMITATIONS**

This study has two obvious limitations. First, in the survey students were asked to report if they worked for pay during the academic year. This question was used to group survey respondents who worked for pay and those who did not. While this question could be used to exclude the students who took volunteer jobs and other community service work from the working group, it is hard to make a distinction between those who worked to meet their daily financial needs and those who worked out of their personal interests or simply to gain employment experience. Therefore, this might have influenced the way students reported their experiences and perceptions of work.

Second, the relatively small number of focus group participants might affect the transferability of the qualitative research results to other settings (Lincoln and Guba, 1985). As mentioned before, the reason for the low participation was probably due to the scheduling of group meetings, which could be especially problematic for the target population, the students who worked. As a result, the representativeness of the working group with different experiences could to a certain extent be compromised.

#### REFERENCES

- Aper, J. P. (1994). An investigation of the relationship between student work experience and student outcomes. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA (ERIC Document Reproduction Service No. ED375750).
- Astin, A., Sax, L., Korn, W. and Mahoney, K. (1996). *The American Freshmen: National Norms for fall 1996*. Los Angeles, CA: Higher Education Research Institute, UCLA.
- Cheng, D. X. (2004). The focus group method. In Chen, S. (2004). *Research Methods:*Step by Step. Dubuque, IA: Kendall/Hunt.
- Cuccaro-Alamin, S. and Choy, S. P. (1998). Postsecondary Financing Strategies: How
   Undergraduate Students Combine Work, Borrowing, and Attendance.
   Washington, DC: National Center for Education Statistics (ERIC Document
   Reproduction Service No. ED418097).
- Curtis, G. and Nimmer, C. E. (1991). To work or not to work: That is the question. *Journal of Student Financial Aid*, 21(3), 16-26.
- Ehrenberg, R. and Sherman, D. (1987). Employment while in college, academic

- achievement, and post-college outcomes: A summary of results. *Journal of Human Resources*, 22, 1-23.
- Fjortoft, N. F. (1995). College student employment: Opportunity or deterrent? Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA (ERIC Document Reproduction Service No. ED 386079).
- Furr, S. and Elling, T. W. (2000). The influence of work on college student development.

  NASPA Journal, 37(2), 454-470.
- Hood, A. B., Craig, A. F., and Ferguson, B.W. (1992). The impact of athletics, part-time employment, and other activities on academic achievement. *Journal of College Student Development*, *33*, 447-453.
- Horn, L. and Maw, C. (1994). Undergraduates Who Work While Enrolled in Postsecondary Education: 1989-1990, Contractor Report. National Center for Education Statistics, Washington, DC, 1994 (ERIC Document Reproduction Service No. ED419461).
- Kohen, A., Nestel, G., and Karmas, C. (1978). Factors affecting individual persistence rates in undergraduate college programs. *American Educational Research Journal*, 15, 233-252.
- Kuh, G. D. (1995). The other curriculum: Out-of-class experiences associated with student learning and personal development. *Journal of Higher Education*, 66(2), 123-155.
- Light, R. J. (2001). *Making the Most of College: Students Speak Their Minds*.

  Cambridge, MA: Harvard University Press.

- Lincoln, Y. and Guba, E. G. (1985). *Naturalistic Inquiry*. Beverly Hills, CA: Sage.
- Moffatt, M. (1988). *Coming of Age in New Jersey: College and American Culture*. New Brunswick, NJ: Rutgers University Press.
- Pascarella, E. T., Bohr, L., Nora, A., Desler, M., and Zusman, B. (1994). Impacts of oncampus and off-campus work on first-year cognitive outcomes. *Journal of College Student Development*, 35, 364-370.
- Palomba, C. A. and Banta, T. W. (1999). Assessment Essentials: Planning, Implementing, and Improving Assessment in Higher Education. San Francisco, CA: Jossey-Bass.
- Stern, D. and Nakata, Y. (1991). Paid employment among U.S. college students: Trends, effects, and possible causes. *The Journal of Higher Education*, 62(1), 25-43.
- Terenzini, P. T., Yaeger, P. M., Pascarella, E. T., and Nora, A. (1996). Work-study program influences on college students' cognitive development. Paper presented at the meeting of the Association for Institutional Research, Albuquerque, NM (ERIC Document Reproduction Service No. ED405781).
- Tinto, V. (1987). *Leaving College*. Chicago: University of Chicago Press.

Table 1. College Experience of Students Who Did and Did Not Work

	Worked		Did Not Work		Mean	
	Mean	(SD)	Mean	(SD)	Diff.	Sig.
Academic Experience						
Quality of instruction	2.99	(0.68)	3.02	(0.66)	-0.03	NS
Intellectual engagement	3.15	(0.67)	3.13	(0.69)	0.02	NS
Critical thinking skills	2.97	(0.82)	2.98	(0.79)	-0.01	NS
Science requirement	2.61	(0.92)	2.63	(0.88)	-0.02	NS
Self-reported GPA	3.40	(0.46)	3.47	(0.42)	-0.07	**
Social Experience						
Opportunities to interact	3.17	(0.68)	3.20	(0.67)	-0.03	NS
Accepted in communities	2.92	(0.76)	2.96	(0.70)	-0.04	NS
Social interaction confined	2.27	(0.90)	2.25	(0.93)	0.02	NS
Friends share interest	3.18	(0.64)	2.23	(0.66)	0.95	NS
Residence hall experience	3.01	(0.68)	3.07	(0.67)	-0.06	NS
College Activities						
Leadership competencies	2.35	(0.94)	2.25	(0.91)	0.10	*
Work in a diverse community	2.52	(0.94)	2.53	(0.90)	-0.01	NS
Problem solving	2.54	(0.87)	2.52	(0.88)	0.02	NS
Event planning	2.22	(1.05)	2.07	(0.99)	0.16	**
Conflict resolution	2.02	(0.90)	2.02	(0.89)	0.00	NS
Delegating responsibility	2.20	(0.92)	2.13	(0.92)	0.07	NS
Navigating political systems	1.96	(0.98)	1.91	(0.96)	0.06	NS
Budgeting	2.12	(0.99)	1.98	(0.94)	0.13	**
Advocacy/coalition building	1.89	(0.91)	1.78	(0.84)	0.11	*

<sup>\*</sup> p<.05; \*\* p<.01.

Table 2. Results of the ANOVA for Student Self-Reported Gains in Skills and Experience through Work: Work Locale and Hours

	Sum of		Mean		
Source	Squares	df	Square	F Ratio	Sig.
Corrected Model	21.62	8	2.70	3.27	0.00
Intercept	2558.39	1	2558.39	3097.35	0.00
Work Locale	6.38	2	3.19	3.86	0.02
Work Hours	12.07	2	6.04	7.31	0.00
Locale * Hours	1.24	4	0.31	0.37	0.83
Within	691.36	837	0.83		
Total	7624.00	846			
Corrected Total	712.98	845			

Note: R Squared = .030 (Adjusted R Squared = .021).

#### Appendix. Variables and Their Coding in the Analyses

#### VARIABLES IN TABLE 1

# **Academic Experience**

I am satisfied with the overall quality of instruction at this institution

I feel that I have been engaged intellectually both inside and outside the classroom

My critical thinking skills have improved through my Core Curriculum courses

Science requirement courses have introduced me to the kinds of questions scientists ask and the methods they use to answer them

Self-reported GPA

4=strongly agree

1=strongly disagree;

4.0 & higher=4.15; 3.75-4.0=3.875; 3.5-3.74=3.62; 3.25-3.49=3.37;

3.0-3.24=3.12; 2.75-2.99=2.87; 2.5-2.74=2.62; 2.25-2.49=2.37;

Below 2.25=1.13

#### **Social Experience**

This institution provides opportunities for me to interact with people of backgrounds different from mine

I feel accepted as a member of several communities

My social interactions at this institution are largely confined to students of my race/ethnicity

I have a group of friends at the institution who share my interests and values

My experience living in residence halls has been a positive one

#### **College Activities\***

Leadership competencies
Working in a diverse community

Problem solving

Event planning

Conflict resolution

Delegating responsibility

Navigating political systems

**Budgeting** 

Advocacy and coalition building

1=strongly disagree;

4=strongly agree

1=very little; 2=some; 3=quite a bit; 4=very much

20 or more hours

### Appendix (Continued)

# VARIABLES IN TABLE 2 Dependent Variable My work-study or academic year job helps me gain 1=strongly disagree; valuable skills and experience 4=strongly agree Independent Variables Work Locale on-campus, off-campus, on- & off-campus Work Hours less than 10 hours; 10-19 hours,

<sup>\*</sup> The question in the survey is: Please indicate the extent to which you have gained these skills from your involvement in student activities and events.