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ABSTRACT

The hypothesis of this study was that there is no significant difference between the mean academic performance of freshmen who hold work-study jobs during their first semester and those who do not, where performance is measured in terms of Grade Point Average (GPA). Subjects were two matched groups, the first being 27 students who held work-study jobs for the entire semester and carried 12 semester hours. The control group was composed of 27 students who did not hold jobs during the first semester. Results showed that the first semester mean GPA of the work-study group was insignificantly higher than that of the control group. However, it is quite possible that some extraneous factors counterbalanced any detrimental effects of the job, such as more personal attention which could instill a sense of responsibility for work-study students, and the need to develop better study habits. Further research is needed on the effects of attitudinal and motivational variables on the classroom performance of the working student. (KJ)

University of South Carolina

Division of Student Affairs

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Research Notes No. 9 May 21, 1970

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BACKGROUND INFORMATION

Many colleges and universities question the advisability of freshmen working during their first semester. Consequently, many high school counselors advise seniors planning to go to college not to work during their first college semester. For several years financial aid officials at the University of South Carolina have also discouraged first semester freshmen from working. The soundness of such advice, however, has recently been questioned in various studies.

Bradfield (1967) reports a study conducted with thirty-six freshmen with Work-Study jobs at a state university and a junior college. These students were matched on American College Test scores and college attended with a control group of 36 freshmen men from the student bodies at large. He found that the Work-Study group had insignificantly higher first semester grade-point averages than did the control group.

A study was conducted by Henry in the fall of 1965 with similar results. The grade-point averages of about 200 first-semester freshmen, each of whom earned over $50 during the term, were compared with GPAs of a control group of slightly more than 300 nonworking freshmen at the University of Missouri. The students were divided into three ability groups on the basis of high school rank and School and College Ability Test scores. Working and nonworking students did not differ significantly in first semester grades in any of the ability groups.

In a study reported by Kaiser and Bergen in 1968, a group (A) of seventy-two first-semester freshmen who received financial assistance and worked a modest number of hours (10-15 hours per week) was matched with a group (B) that received financial aid but did not work and with another group (C) which neither worked nor received financial aid. No significant differences (at the .05 level of confidence) in the grade point averages were found between groups A-B. A-C, or B-C.

HYPOTHESIS

There is no significant difference between the mean academic performance of freshmen who hold Work-Study jobs during their first semester and those who do not, where performance is measured in terms of GPR.

DELIMITATIONS OF THE STUDY

Students with Work-Study jobs were selected for the present study because of the similarity of their working hours. Work-Study students may not work for more than an average of 15 hours per week. Students with Non-Work-Study jobs were excluded because of the great variation in the number of hours worked per week. In addition, all subjects in the present study were enrolled in baccalaureate programs. Similarly, all subjects were students who entered the University of South Carolina for the first time in the Fall semester of 1969, i.e., they did not include returning freshmen or those who attended summer school. Therefore the conclusions reached by the present study apply only to students who were enrolled in baccalaureate programs and who held Work-Study jobs during their entire first semester at the University of South Carolina.

PROCEDURES

In order to test the hypothesis, two matched groups were used. The Work-Study Group was composed of all 27 freshmen who held Work-Study jobs for the entire first semester, and who also completed the semester with not less than 12 semester hours carried.

The Control Group was composed of 27 students who did not hold jobs during the first semester. They were matched with students in the Work-Study Group on the basis of: (1) predicted GPR (formula weighted for the student's College Board scores and high school rank), (2) sex, (3) school enrolled in, (4) number of semester hours carried ($\pm$ 3), (5) in-state or out-of-state residency, and (6) marital status. The Computer Science Center prepared a list of the Freshman Class rank ordered on the basis of their predicted GPR. The formula used to determine predicted GPR was developed by the Admissions Office Testing Service. The first matched student in the Control Group was selected by going up the list from the first Work-Study student (in alphabetical order by last name) until a student matching all criteria was found. The student matched with the second Work-Study student was selected by going down the list in the same manner. The remaining matched students were likewise selected by alternately going up or down the list from each respective Work-Study student until all criteria were met.

No Work-Study student participating in the present study was aware of his participation. Each student in the Control Group was telephoned at the end of the semester to see if he had been employed during the semester. At this time he was also asked to give an estimate of his parents' annual income. If he did not know what their income was, he was asked to give his parents' occupations. In the event any subject in

the Control Group had a job or had withdrawn from school prior to the end of the semester, he was removed from the Control Group and another student was selected in the same manner as the original student.

FINDINGS

The mean predicted GPR, presented in Table 1, was 2.267 for the Work-Study Group and 2.283 for the Control Group. Therefore, the mean difference in predicted GPR between groups at the beginning of the present study was .016, not significant at the .05 level of confidence.

After the first semester the mean GPR for the Work-Study Group, as presented in Table 1, was 2.037. The Control Group's mean GPR was 2.011. Through the use of a matched groups t-test, the two means were found to be insignificantly different at the .05 level. The range and standard deviation were slightly greater for the Control Group.

The mean annual income for the parents of the Work-Study Group (obtained from the Financial Aid Office) was $5,611, as shown in Table 1. The mean annual income for the parents of the Control Group was considerably higher at $17,429. Approximately half of the Control Group estimated their parents' annual income when asked on the telephone. The rest, who had no idea what their parents' annual income was, stated their parents' occupations. From this information, the present researchers estimated the annual income of these students' parents. These estimates did not differ appreciably from the self reports of the other Control Group students.

Table 1. Summary Table for Work-Study and Control Groups.

	WORK STUDY GROUP	CONTROL GROUP
Mean predicted GPR	2.267	2.283
First Semester Mean GPR	2.037	2.011
Total Discrepancy Score	-6.209	-7.328
Range of First Semester GPRs	2.617	2.699
Standard Deviation of First Semester GPRs	.579	.721
Parents' Mean Annual Income	$5,611	$17,429

The mean predicted GPR was 1.940 for the entire freshman class, while the actual first semester mean GPR for the class was 1.979. Both figures are lower than those for both the Work-Study and Control Groups. The standard error was .6950 for the freshman class's mean predicted GPR.

The predicted GPRs, First semester GPRs, and discrepancy scores for each member of the Work-Study and Control Groups are presented in Appendix A.

DISCUSSION

The fact that the first semester mean GPR of the Work-Study Group was insignificantly higher than that of the Control Group is consistent with previous research done in this field. (Bradfield, 1967). The Work-Study Group's first semester mean GPR was likewise slightly greater than the mean GPR for the entire freshman class. It may be misleading, however, to conclude from these results that having a Work-Study job does not detrimentally affect an individual's GPR.

Indeed, common sense would seem to indicate that the time and energy a student must invest in his job would detract from his academic performance. In addition, the great difference in parents' annual income

between the Work-Study and Control Groups indicates that the Work-Study Group has a much poorer economic background. This is another factor which, according to studies by Janke and Havighurst (1945) and Frankel (1960), should point to an inferior performance from the Work-Study Group.

It is quite possible, then, that some extraneous factor or factors counterbalanced any detrimental effects of the job itself so that the GPR of the Work-Study Group was not significantly different from that of the Control Group. This factor may well have been the personal attention that the Work-Study Group received on the job. This attention may have instilled a sense of responsibility or self-worth which was reflected in the group's GPR. In addition, the jobs themselves may have been conducive to the good study skills and habits necessary for success in college. For example, the job may have forced the Work-Study students to budget their study time better than the nonworking students. Another possibility may be that the type of student who sought a Work-Study job was likewise the type of person with the motivation and responsibility to do well in his studies. Similarly, the Work-Study student, who supported himself to some degree through his job, may have felt more academically motivated than a student who did not help pay for his college expenses. It is important, therefore, to be aware of the possible counterbalancing effects of uncontrolled variables in a study of this nature.

The fact that the GPR of the Work-Study Group did not differ significantly from that of the Control Group has important implications in the field of freshman counseling. In the future, the Student Aid Office might wish to consider dropping its present policy of discouraging entering freshmen from working, and instead, present to them the results of the present study and explain their chances of working up to 15 hours

per week on a Work-Study job and maintaining passing grades during their first semester in school. University officials may also wish to release to high school counselors in South Carolina the results of the present study accompanied by recommendations supporting eligible graduating seniors who are planning to hold Work-Study jobs during their first semester at the University of South Carolina.

It is hoped that this study will lay the groundwork for additional research on the effects of student employment on various aspects of university life. More specifically, further research is needed on the effects of attitudinal and motivational variables on the classroom performance of the working student. In addition, it may be valuable to replicate the present study using two additional matched groups: a nonworking group whose parents' annual income is low (comparable to that of the present Work-Study Group) and a working group whose parents' annual income is high (comparable to that of the present Control Group). In this way, the influence of the students' economic background on their academic performance could be tested. Additional studies are also needed to determine the number of hours a student can work per week before his GPR is detrimentally effected.

SUMMARY

High school and university officials often advise students who are entering their freshman year in college against working during their first semester. The present study was carried out in an effort to see if Work-Study students holding jobs during their first semester at the University of South Carolina do, in fact, have lower GPRs for this period than students who do not hold jobs.

The Work-Study Group was composed of all 27 freshmen at the University of South Carolina who had Work-Study jobs for the entire Fall semester of 1969. These students were matched with nonworking students on the basis of: (1) predicted GPR (formula weighted for the student's College Board scores and high school rank), (2) sex, (3) school enrolled in, (4) number of semester hours carried ($\pm$ 3), (5) in-state or out-of-state residency, and (6) marital status. By means of a matched group t-test, it was found that the Work-Study Group's mean GPR was insignificantly higher than that of the Control Group at the end of the first semester. These results are sonsistent with those of similar studies in this field. (Bradfield, 1967; Henry, 1965; and Kaiser and Bergen, 1968). In addition, the Work-Study Group's first semester mean GPR was slightly greater than the mean GPR for the entire freshman class.

The parents of the Work-Study students had a much lower annual income than the parents of the Conrrol Group students. It is reasonable to believe that this factor, along with the study time lost in working on their jobs, would be detrimental to the academic performance of the Work-Study students. Since there was no significant difference in performance between groups, however, it may be important to note the possible counter-balancing factors such as motivation, responsibility, and on-the-job experience which may have influenced the Work-Study Group to do as well as their economically superior, nonworking counterparts. Therefore, it may be faulty to infer from the results that the job itself had no effect on the students' performance.

If the results of the present study were made available to USC and South Carolina high school officials, they might aid them in counseling entering freshmen as to their chances of holding a Work-Study job

and maintaining good grades during their first semester in college. Further, it is recommended that research be conducted on the effects of motivational and attitudinal variables on the academic performance of the working student. Additional studies on the influence of economic background on the GPRs of working and nonworking students may also prove enlightening. Further research is also needed to determine the number of hours per week a student is able to work without a significant decrease in GPR.

Appendix A. Predicted GPRs, first semester GPRs, and discrepancy scores for each member of the Work-Study and Control Groups.

SUBJECT	PREDICTED GPR	GPR AT END OF 1st SEMESTER	DISCREPANCY SCORE
W-S-1	2.673	0.933	-1.740
C-1	2.657	2.353	- .304
W-S-2	0.589	1.313	+ .724
C-2	0.714	2.000	+1.286
W-S-3	2.309	2.000	- .309
C-3	2.305	1.813	- .492
W-S-4	3.263	2.588	- .675
C-4	3.267	3.538	+ .271
W-X-5	1.784	1.462	- .322
C-5	1.669	0.923	- .746
W-S-6	1.289	1.563	+ .274
C-6	1.488	1.125	- .363
W-S-7	2.142	1.765	- .377
C-7	2.139	1.786	- .353
W-S-8	1.867	1.000	- .867
C-8	1.851	2.000	+ .149
W-S-9	3.253	2.588	- .665
C-9	3.258	1.667	-1.591
W-S-10	2.323	1.846	- .477
C-10	2.328	1.688	- .640
W-S-11	2.183	2.188	+ .005
C-11	2.183	1.154	-1.029
W-S-12	2.359	2.625	+ .266
C-12	2.362	1.462	- .900
W-S-13	2.545	3.235	+ .690
C-13	2.543	2.563	+ .020
W-S-14	3.604	3.000	- .604
C-14	3.622	2.357	-1.265
W-S-15	1.816	1.313	- .503
C-15	1.831	1.250	- .581
W-S-16	2.377	2.647	+ .270
C-16	2.355	1.125	-1.230
W-S-17	2.276	2.600	+ .324
C-17	2.307	3.286	+ .979
W-S-18	3.493	3.000	- .493
C-18	3.303	3.375	+ .072
W-S-19	1.016	1.294	+ .278
C-19	1.378	2.000	+ .622
W-S-20	2.876	2.438	- .438
C-20	2.843	2.200	- .643
W-S-21	2.365	2.125	- .240
C-21	2.374	1.875	- .499
W-S-22	1.936	1.462	- .474
C-22	1.928	2.385	+ .457
W-S-23	2.993	3.235	+ .242
C-23	3.018	2.813	- .205
W-S-24	2.198	2.188	- .010
C-24	2.183	1.846	- .337
W-S-25	1.772	1.563	- .209
C-25	1.778	1.474	- .304
W-S-26	2.086	2.231	+ .145
C-26	2.090	2.647	+ .557
W-S-27	1.824	0.800	-1.024
C-27	1.859	1.600	- .259

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