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ABSTRACT

A study was conducted in the Marin Community Colleges to determine whether direct mail and telephone contacts with college dropouts would be perceived as demonstrating a caring attitude on the part of faculty and staff, and positively influence their rate of return. The study measured the rate of return of four groups of students who were enrolled as full-time freshmen in fall 1983, but who did not return in spring 1984. Group 1 received both a letter from the College President and a phone call from the Director of Public Affairs and Development encouraging their return; Group 2 received the telephone calls only; Group 3 received the letters only; and Group 4 was not contacted as part of the study. Of the 168 students in the study sample, 29 re-enrolled after a semester's absence. Of the returning students, 11 belonged to Group 4, 7 belonged to Group 1, 6 belonged to Group 3, and 5 belonged to Group 2. Based on the study, it appeared that direct mail and telephone contacts with students who dropped out had no statistically significant effect on their rate of return. It was therefore recommended that the Marin Community Colleges direct their efforts toward finding more effective ways of retaining students or influencing their return. (Author/LAL)

THE EFFECT OF DIRECT MAIL AND TELEPHONE CONTACTS ON RATE OF RETURN OF STUDENTS WHO DROPPED OUT

APPLIED EDUCATIONAL RESEARCH AND EVALUATION

by

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Marin Community College District

A PRACTICUM PRESENTED TO NOVA UNIVERSITY
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ABSTRACT

The Marin Community Colleges are experiencing a decline in enrollment, especially among Sophomores. Prior to this study, no follow-up contacts were made with students who dropped out. A review of the literature suggested that the rate of return of students who dropped out might be positively influenced by the demonstration of a caring attitude on the part of faculty and staff. It was hypothesized that direct mail and telephone call contacts to dropouts would be perceived by them as demonstrating a caring attitude and positively influence their rate of return.

This study measured the rate of return of four groups of students who were enrolled as full-time Freshmen in Fall 1983 but who did not return in Spring 1984. Group One received both direct-mail and telephone contacts. Group Two received telephone contacts only. Group Three received direct mail contacts only. And Group Four received no contacts as part of the study. In Fall 1984, the rate of return of the four groups was measured by frequency and compared with each other.

Calculated Chi Squares supported the null hypothesis: the four frequencies did not differ significantly. It is recommended that The Marin Community Colleges direct its efforts toward finding more effective ways of retaining students or influencing their return. One of these ways might be to bring about greater student participation in campus life.

CONTENTS

TABLES

INTRODUCTION

During 1983-84, The Marin Community Colleges--College of Marin and Indian Valley Colleges--experienced a ten percent decline in average-daily-attendance, or ADA, which is the basis upon which they receive state funding. When comparing Fall 1980 student-level data at The Marin Community Colleges with that of all community colleges in the State of California, the percentage of Sophomore students at The Marin Community Colleges was considerably lower than the percentage of Sophomores enrolled statewide.

Specifically, in Fall 1980, only 7.2 percent of the students enrolled at Indian Valley Colleges and only 8.5 percent of the students enrolled at College of Marin were classified as Sophomores--one of seven possible categories of classification. Statewide, that percentage was 13.9. Moreover, the percentage of Sophomores at each of the two colleges declined each fall from 1977 to 1981. While more current data are not yet available, it is expected that the percentage of Sophomores has continued to decline from Fall 1981 to Fall 1983. If the percentage of Sophomores could be increased, it is likely that ADA also would increase.

The Statement of the Problem

Prior to the time this study was conducted, no planned or systematic effort had been made to contact students who enrolled as Freshmen at The Marin Community Colleges but who did not return as Sophomores. In Spring 1984, 329 students who were taking at least nine units in Fall 1983, but who had earned less than thirty units in total, did not return.

Of these 329 students, 36 were dismissed by The Colleges, leaving a population of 293 students who did not return for other reasons. When these non-returning students were contacted by direct mail, by telephone, or by both direct mail and telephone, and concern expressed regarding their welfare, the hypothesis was that contact would be effective in motivating them to return the following semester.

The Purpose of the Study

The purpose of this study was to determine if direct mail and telephone contacts with non-returning students would have an effect on their rate of return the following semester. The research hypothesis was that there would be a higher rate of return for students who dropped out and were contacted by The Colleges than for students who dropped out and were not contacted by The Colleges. A secondary hypothesis was that there would be a higher rate of return for those students who were contacted by both direct mail and telephone than for those students who were contacted by telephone only, or by direct mail only.

BACKGROUND AND SIGNIFICANCE OF THE STUDY

The background and significance of the study were determined by conducting a review of the literature, defining terms used in the study, describing limitations of the study, and stating the basic assumptions.

Review of the Literature

A search of the literature revealed a large number of citations regarding student attrition in the community or two-year college. An ERIC title search revealed, however, that the community college litera-

ture focused on descriptive studies rather than experimental studies. A review of the Education Index, July 1979 through March 1984, under the headings of Dropouts, Holding Power, and Student Recruiting, yielded information more relevant to this study, although it focused on the four-year college and university.

Beal and Noel (1980:43) found that the top positive factors influencing retention, in priority order, were "caring attitude of faculty and staff, high quality of teaching, adequate financial aid, student involvement in campus life, and high quality of advising." Gardiner and Nazara-Robati (1983:26) also mentioned the importance of caring.

> The upcoming period of declining enrollments presents an excellent opportunity for administrators to restructure their colleges and universities into responsive, student-centered institutions. This requires that administrators shift their focus from attrition to retention, from trying to understand why students leave to actively converting their colleges into caring institutions, with increased emphasis on quality and service.

By implication, Lenning, Sauer and Beal (1980:99) also reported on the importance of caring. They found that about ten percent of the students at Long Beach State College who were planning to drop out decided not to as a result of an exit interview. During the interview, assistance in staying in college was offered the potential dropouts which might have been perceived as a caring attitude.

Astin (1975:146-182) conducted a four-year study of Freshmen which supported the theory that student involvement in campus life was a key factor in persistence. The study followed Freshmen entering in Fall 1968 and followed up four years later in the Summer and Fall of 1972. Approximately 300 students were selected randomly from 358 two and four-year colleges and universities. The response rate was approximately

forty percent. Astin concluded that a number of mechanisms was available to most institutions to bring about greater student participation: academic programs, admissions, freshman orientation, counseling and advisement, financial aid, work opportunities, extracurricular activities, and housing and student services.

A policy brief which was not available to the investigator might have provided evidence that follow-up contacts with non-returning students resulted in an increased rate of return. Pascarella (1982:75) made reference to an American Council on Education policy brief in which C. Henderson cited case studies on retention improvement. One of the case studies apparently referred to follow-up contacts made by Fort Hayes State University. A copy of the brief was requested from the Council but was not made available.

Tyree and Ritch (1982:36-39) reported on a telephone survey of non-returning students they conducted at Gulf Coast Community College. Over twelve hundred potential non-returning students were identified by matching the fall registration computer file against the spring (to date) registration computer files. The authors cited the importance of caring in the title of their article about the telphone survey--"Caring Enough to Call." However, while they stated that calling "resulted in dramatically improved student retention and college relations," no control group was used and, for those who were unsure of their plans and were referred to college support services, no official count was kept on how many of those students actually enrolled.

A number of reasons were given for not returning by the two hundred sixty eight students who responded to this question. The most frequent reasons given, in order of frequency, were: moving, need/

prefer work, transfer, only taking classes interested in, and already working/no time/schedule. Tyree and Ritch reported that Gulf Coast Community College planned to incorporate the telephone call survey into its planning and student retention systems because "the quantitative results, and, more importantly, the qualitative results of the survey were so impressive."

While the literature revealed that most writers believed an expression of caring might make a difference in retention, or possibly in the rate of return of students who dropped out, it appeared that little or no experimental research had been conducted on the effect of follow-up contact on rate of return of students who dropped out. If the results of this study had demonstrated that some form of contact with students who had dropped out increased the rate of return, then the results could have been used to convince faculty and staff at The Marin Community Colleges to make follow-up contacts.

Definition of Terms

This study involved several key words and concepts with meanings specific to the realm of The Marin Community Colleges or to this study. Following is a list of definition of these terms as they were used in this study.

Average Daily Attendance, or ADA, was used to describe full-time-student equivalence. One ADA is equal to one full-time-student equivalent. It is the primary basis upon which community colleges in the State of California receive funding from the state for students enrolled in the credit program. The Marin Community Colleges currently receive approximately $2200 per credit ADA.

Contact was the term used to describe a planned, systematic and caring follow-up contact made by The Marin Community Colleges with a non-returning student who had not been dismissed by The Colleges. Two types of contacts were made, with some dropouts receiving one type, some receiving the other type, and some receiving both types. One type of contact was direct mail--a personally-addressed standardized letter mailed to a non-returning student personally signed by the President. See Appendix A. The other type of contact was by telephone--a call to a dropout by the Director of Public Affairs and Development. The Director stated that The Colleges missed the student and asked if there were anything The Colleges might do to assist the student return in Fall 1984.

First census is the tenth day of credit classes in any given semester. The ADA at first census is part of the formula the state uses in the current fiscal year for calculating funding the community college will receive the following fiscal year.

Freshman was a student who had earned fewer than thirty units in the credit program, including credits earned at The Marin Community Colleges or credits accepted for transfer from another institution.

Full-time student was a credit student taking at least nine units in any given semester.

Non-returning student, or dropout, was a student who was enrolled in the credit program at The Marin Community Colleges during one semester and who did not return the following semester. For purposes of this study, a non-returning student was one who was enrolled in at least nine units in Fall 1983, who had earned fewer than thirty units in total, and who did not return in Spring 1984.

Sophomore was a student who had earned between thirty and sixty units in the credit program, including credits earned at The Marin Community Colleges or credits accepted for transfer from another institution.

Limitations of the Study

This study was limited to a sample of 168 students taken from a total population of 293 students who took nine or more units in Fall 1983 at either College of Marin or Indian Valley Colleges, who had earned fewer than thirty units in total, who were not dismissed by The Colleges, and who did not return to The Marin Community Colleges in Spring 1984 either as a full or part-time student.

The vast majority of students in this study were residents of Marin County and, as such, they were likely to be more affluent or come from more affluent families than typical community college students across the nation. Because of the relative affluence of residents of Marin County, students were apt to have options available to them which were not available to others. For instance, they may have stopped out of college in order to travel for an extended period of time. Because students at The Marin Community Colleges likely were atypical, their reasons for returning or for not returning also likely were atypical. While follow-up contacts did not significantly influence the rate of return of students who dropped out of The Marin Community Colleges, they may influence the rate of return of students who drop out of other community colleges.

Because the research design required contact with some students by telephone, a limitation of the study was that it only applied to

populations which had telephones. The results of the study, therefore, are not generalizable to populations which do not have telephones.

Basic Assumptions

It was assumed that the non-returning students in the control group were equally affected by intervening variables as were those in the three treatment groups and, therefore, intervening variables made no significant difference in the return rate of the four groups in Fall 1984.

When the nonparametric test of Chi Square was applied to the frequency counts in the four categories, it was assumed that a finding of a statistical significant X^2 value would not necessarily indicate a cause-effect relationship. A significant X^2 value, if found, would indicate that the variables probably did not exhibit the quality of independence, that they tended to be systematically related, and that the relationship transcended pure chance or sampling error.

PROCEDURES

The procedures of the study included the collection of data and the treatment of data.

Collection of Data

This study used a randomized control-group posttest only design as described by Isaac and Michael (1981:69). It consisted of four groups: three experimental groups and one control group. Prior to the application of the three treatments (direct mail and telephone contact, telephone contact only, and direct mail contact only), the subjects were

assigned to one of four groups. Group One was contacted by direct mail and telephone; Group Two was contacted by telephone only; Group Three was contacted by direct mail only; and Group Four was not contacted as part of this study. After the exposure to treatment, the rate of return at Fall 1984 First Census of each of the four groups was compared to the rate of return of the other groups. Because the variables were expressed in nominal form (classified in categories and represented by frequency counts), Chi Square was applied to determine whether any differences in rates of return were greater than might have occured by chance.

The population of the study consisted of 293 students who took at least nine units in Fall 1983, who had earned less than thirty units in total, who were not dismissed by The Colleges, and who did not enroll in The Marin Community Colleges in Spring 1984 either as a full or part-time student. The Data Processing Department of The Marin Community Colleges provided two alphabetical lists of students--one list for College of Marin and one list for Indian Valley Colleges, a total of 329 students. The Department also provided two lists of students who were dismissed in Fall 1983--one list for College of Marin and one list for Indian Valley Colleges. When these two lists of thirty-six students were removed from the population, the population totaled 293.

The sample of the study consisted of 168 students who were randomly selected from the total population of 293. Because half of the students were contacted by telephone by one person over a nine-day period, the sample was more easily managed than the total population, i.e., telephone contacts to 84 students compared to 147. According to Isaac and Michael, a sample of 168 drawn from a population of 293 ensured that the sample proportion was within $\pm$ .05 of the population proportion

with a 95 percent level of confidence that the sample was representative of the population (1981:193). A sample size of 168 also allowed random assignment of 42 students to each of the four groups.

The two lists of students were treated as one consecutive list; a coin was flipped to determine which list came first in the consecutive order. The four groups were selected in random order. Each of four pieces of paper were marked in one of the following ways: Letter and Call, Call, Letter, and Control. Someone other than the investigator placed the four pieces of paper, with markings hidden, in order of selection of the sample of 42 assigned to each group.

For the selection of the first group (N=293, s=42), seven pieces of paper were marked with the numbers one through seven and placed face down. Someone other than the investigator selected one piece of paper. The random sample for the first group was begun with the student so numbered, and continued to be selected by drawing every seventh number from the total population of 293.

For the selection of the second group (N=293-42), six pieces of paper were marked with the numbers one through six and placed face down. Someone other than the investigator selected one piece of paper. The random sample for the second group was begun with the student so numbered, and continued to be selected by drawing every sixth number from the remaining population of 251.

For the selection of the third group (N=251-42), five pieces of paper were marked with the numbers one through five and placed face down. Someone other than the investigator selected one piece of paper. The random sample for the third group was begun with the student so numbered, and continued to be selected by drawing every fifth number from

the remaining population of 209.

For the selection of the fourth group (N=209-42), four pieces of paper were marked with the numbers one through four and placed face down. Someone other than the investigator selected one piece of paper. The random sample for the fourth group was begun with the student so numbered, and continued to be selected by drawing every fourth number from the remaining population of 167.

The independent variable--contact--was controlled for as much as possible in two ways. First, the letter from the President was exactly the same for each student contacted and was mailed on the same day (June 29, 1984). Second, the telephone calls were made by the Director of Public Affairs and Development using a standard opening--a statement that the Colleges missed the student and a question to determine if there were anything The Colleges might do to assist the student return in Fall 1984. To some extent, one person making all the telephone calls controlled for personality variables. However, it was not possible to make all the telephone calls (84) to Groups One and Two on the same day, or even during the same week. The first-attempt calls were made over a period of nine days, beginning ten days after the letter from the President had been mailed to Groups One and Three (July 9-13, 16-19).

The first call to each of the eighty-four students was attempted in the late afternoon since, according to Tyree and Ritch (1982:38), late afternoon calls proved to be far more effective in terms of actually contacting students than during other hours of the day or evening. At least three attempts were made to reach each of the eighty-four students in the sample. Second or third-attempt calls were made through August 13, 1984. The first day of credit classes was August 20,

1984.

While the original research design called for replacement of losses from each of the three experimental groups experienced due to letters being returned to sender, telephones being out of service, or inability to make telephone contact with the student, the limited time available to the investigator to complete the experiment before the first day of classes made it impractical to replace these losses. To partially compensate for this weakness in sample size, two Chi Squares were calculated to determine if either one revealed a significant difference among the rate of return of the four study groups. The first Chi Square was calculated using 42 members in each of the four study groups, regardless of whether letters had been returned to sender, telephones were reported as being out of service, or telephone contact was not made. The second Chi Square was calculated using varying numbers of members in each of the four study groups. Those members for whom letters had been returned to sender, telephones were reported as being out of service, or telephone contact was not made were dropped out--regardless of whether they enrolled in Fall 1984.

The outcome of the experiment was measured by the rate of return of the non-returning student sample at Fall 1984 First Census. When the enrollment data were available, the Data Processing Department allowed the investigator access to the data through a terminal into the HP 3000 mainframe. The social security numbers of all those students who were enrolled, either full or part time, were checked against the social security numbers of all those students in the four study groups.

Treatment of Data

To test the significance of the difference among the rate of return of the four study groups, two Chi Squares were calculated. The degrees of freedom were determined to be three. The level of significance was established at .05, meaning that a difference of 5 percent could be due to chance or to an error. A Chi Square value of 7.82 was established from a table of critical values for a two-tailed test.

The null hypothesis of this study was: The four frequencies did not differ significantly. The alternative hypothesis was: Frequencies of one or more groups differed significantly from frequencies of one or more other groups.

RESULTS

When all 168 students' social security numbers were checked against Fall 1984 First Census enrollment, it was determined that 29 had re-enrolled after a semester's absence. Group Four--the control group--had the highest number returning (11). Group One--the group to which a letter from the President had been sent and to which a telephone call from the Director of Public Affairs and Development had been attempted--had 7 returning. Group Three--the group to which a letter from the President had been sent--had 6 returning. Group Two--the group to which a telephone call from the Director of Public Affairs and Development had been attempted--had 5 returning.

When certain students were removed from the three treatment groups, either because the letter from the President had been returned to sender, the Director of Public Affairs and Development had received a recording that the telephone was out of service, or three calls resulted

in no contact with the student, Group Four--the control group--still had the highest number returning (11). Group One had 7 returning. Group Three had 6 returning. Group Two had 4 returning, because one of the original 5 reported as returning in this group had not received treatment and was removed from the group.

Two Chi Squares were calculated, one for the four groups of 42 each and one for four groups which ranged in size from 22 to 42. Each was calculated using a Multiplan software package which had been programmed to calculate Chi Squares using IBM XT hardware.

Table 1 illustrates the rates of return among the four groups of 42 each, including the observed frequencies of return in Fall 1984, the expected frequencies of return, the differences between the observed and expected frequencies, the square of the differences, the square of the differences divided by the expected frequencies, and the calculation of the Chi Square among the four groups of 42 each.

Table 1

Rates of Return Among
Four Groups of 42 Each

Group	Observed Frequency	Expected Frequency	OF-EF	$(OF-EF)^2$	$\frac{(OF-EF)^2}{EF}$
One	7	21	-14	196	9.3333333
Two	5	21	-16	256	12.190476
Three	6	21	-15	225	10.714286
Four	11	21	-10	100	4.7619048
				Chi Square =	-7.428571

Table 2 illustrates the rates of return among the four groups which ranged in size from 22 to 42, including the observed frequencies of return in Fall 1984, the expected frequencies of return, the differences between the observed and expected frequencies, the square of the differences, the square of the differences divided by the expected frequencies, and the calculation of the Chi Square among the four groups which ranged in size from 22 to 42.

Table 2

Rates of Return Among Four Groups
Which Ranged in Size
From 22 to 42

Group	Observed Frequency	Expected Frequency	OF-EF	$(OF-EF)^2$	$\frac{(OF-EF)^2}{EF}$
One	7	11	-4	16	1.4545455
Two	4	11	-7	49	4.4545455
Three	6	20.5	-14.5	210.25	10.256098
Four	11	21	-10	100	4.7519048
				Chi Square =	0.3073593

The Chi Square calculated using data presented in Table 1 was -7.428571. Since a Chi Square value of 7.82 was established from a table of critical values at .05 level of significance with three degrees of freedom, the calculated Chi Square supported the null hypothesis: the four frequencies did not differ significantly. It is interesting to note, however, that if 12 students in Group Four had returned instead of 11, the calculated Chi Square would have been 8.33333.

The Chi Square calculated using data presented in Table 2 was 0.3073593. Again, since a Chi Square value of 7.82 was established, the calculated Chi Square supported the null hypothesis: the four frequencies did not differ significantly.

Based on the results of this study, then, it appeared that direct mail and telephone contacts with students who dropped out had no effect on their rate of return. Because these contacts involved a considerable effort on the part of staff, and because they appeared to have no effect on the rate of return of students, The Marin Community Colleges might direct its efforts toward finding more effective ways of retaining students or influencing their return. If, as Astin concluded, student involvement in campus life is a key factor in persistence, The Marin Community Colleges might better direct its efforts toward bringing about greater student participation in campus life.

FURTHER STUDIES

Based on the results of this study, it might be worth pursuing the possibility that direct mail and telephone contacts with students who drop out have a negative effect on their rate of return. As noted, if twelve students in Group Four--the control group--had returned instead of eleven, a statistically significant difference in rate of return among the four groups would have been demonstrated. It is possible that direct mail and telephone contacts with students, or with students in Marin County, might be perceived as an invasion of privacy. It might influence them to decide not to return to The Marin Community Colleges, not to return to college, or to return to another college instead.

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The Marin Community Colleges
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Appendix A

June 29, 1984

You were a student at The Marin Community Colleges in Fall 1983, yet didn't return in Spring 1984. Frankly, we missed you!

We recognize that there are many reasons why students "stop out" from college. Maybe you just needed to take a break. Whatever your reason or reasons, I just wanted you to know that if there's anything we can do to make your return to college possible, our staff stands ready to help.

Credit classes begin on August 20 at both College of Marin and Indian Valley Colleges. Credit schedules are available in the campus bookstores. You may call the Admissions Office on either campus for registration information at 485-9411 (COM) or 883-2211 (IVC).

If we don't see you in Fall 1984, we hope you are meeting your immediate needs in a way that will ultimately lead to the fulfillment of your educational goals.

Sincerely,

Irwin P. Diamond
Superintendent/President

IPD:js