DOCUMENT RESUME

ED [redacted]9 595 HE 017 985

AUTHOR Groseth, Rolf; Brigham, Ralph
TITLE Factors Associated with Retention and Attrition: A Follow-up of Students Who Entered Montana State in September, 1979.
PUB DATE 5 Oct 84
NOTE 13p.; Paper presented at the Annual Meeting of the Northern Rocky Mountain Educational Research Association (2nd, Jackson, WY, October 4-6, 1984).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Academic Persistence; College Freshmen; College Graduates; *College Students; Followup Studies; Grade Point Average; Higher Education; Institutional Research; *School Orientation; *State Universities; *Student Attrition; *Summer Programs
IDENTIFIERS *Montana State University

ABSTRACT

The effect of college orientation experiences on student grade point average (GPA) and persistence toward the degree was studied at Montana State University. Two groups of students were compared: 131 students who attended a 3-day orientation during the summer before their freshman year, and 97 freshmen who attended large group sessions just before the beginning of fall classes. Information was collected on: high school GPA, class size, rank in class, American College Testing Program scores, college credits carried and earned, college GPA, time of graduation, and degree. As a group, the students who attended the extended summer orientation program exceeded their predicted GPA by .38, while those who attended the large fall group sessions fell short of their predicted GPA by .06. The school lost 5 percent of the summer orientation students after the first quarter, compared to 15 percent of the fall group. Seventy-three percent of the summer orientation group and 55 percent of the fall group returned for the second year. Finally, a greater percentage of summer than fall orientation students graduated. (SW)

6.2

FACTORS ASSOCIATED WITH RETENTION AND ATTRITION:

A FOLLOW-UP OF STUDENTS WHO ENTERED MONTANA STATE IN SEPTEMBER, 1979

Rolf Groseth, Assistant Dean of Students
Montana State University

Ralph Brigham, Assistant Registrar
Montana State University

Presented at the Second Annual Meeting of the
Northern Rocky Mountain Educational Research Association
Jackson, Wyoming --- October 5, 1984

INTRODUCTION

Beginning in the academic year 1974-75, Montana State University began a ten year period of steady growth, from 8000 students to its current population of about 11000 students. During this period and even before, the institution understood that it had necessarily begun to compromise the personal attention that had been its trademark and its drawing card. Larger numbers of students without the addition of instructional and support staff forced MSU to deal with its students with greater efficiency. Unfortunately, this was not always coupled with greater effectiveness.

One small example of this was the way in which the institution introduced itself to new students. Typically, all new students, freshmen, transfer, and graduates, were assembled in the fieldhouse a few days prior to the beginning of classes, given some welcoming speeches and sent in search of advisors with the help of a few hurriedly trained undergraduate volunteers. Very little effort was given to instructing students about the idiosyncracies of the "system" they had just entered or the processes and procedures that made the system run. So long as the institution was small enough to deal with students on an individual basis, it could assure students that they would be taken care of on a management by exception basis.

In 1977, MSU felt that some magic critical mass had been reached and that it would be served by attempting to implement an orientation program which would give students a more in-depth introduction to the institution and would allow the institution to assume greater knowledge of and responsibility for various policies and procedures by students. Within two years, roughly 60% of the institutions entering freshmen students were

involved in programs which brought them to the campus for three day sessions during the summer immediately preceeding their matriculation at MSU. The remainder continued to come immediately before the start of classes to sessions which, though they had been revamped, were still primarily concerned with moving large numbers of students through the system.

BRIEF LITERATURE REVIEW

Some type of orientationto college, formal or otherwise, occurs at most campuses in the United States. These programs are becoming more important to each institution as well as more formalized since the competition for students is increasing across the nation. Administrators are looking for ways to reduce attrition and retain the students that are so difficult to recruit. Academicians are also concerned about maintaining academic standards. As a result, formal orientation programs have evolved to the point such that they are now serious attempts to provide a balanced introduction to the constraints imposed by and the opportunities available in the collegiate environment as well as to enable students to more clearly identify and define their educational purposes (Wrenn, 1951).

In 1888, the first orientation program was initiated at Boston College (Drake, 1966). From this beginning, many types of programs have developed. These last from a day or two to some which are spread over an entire year. Basically, the goal has been for most programs to narrow the gap between the institution's and the student's expectations and needs (Li, 1962). Also, "...as the proportion of traditional students seeking higher

education continues to shrink, the presumptions about the orientation needs of the new students need to be carefully reexamined (Packwood, 1977).

The value and type of orientation program has been debated for most of the twentieth century. At the heart of this debate has been disagreement about what is best for the matriculating student. Shaffer (1962) said that orientation "...should contribute to the student's understanding of the relevance of higher education to his [her] life and problems". Orientation programs are not intended to spoonfeed a few students, but rather they are designed to help students to develop and to, hopefully, fit in at the particular institution. In terms of many administrators, these programs are to help students to successfully adjust to the life of the institution and to be successful academically. One measure of this adjustment and success is the completion of a degree.

Reducing the dropout rate has been receiving much national attention over the past decade. According to Astin (1975), the dropout problem, compounded by declining enrollment is "...perhaps the biggest concern of college administrators and faculty members". Montana State University has also placed attention to this subject during the past decade. The focus there has been particularly on the entering freshman and his or her success. Iffert (1957) has written that of the students who withdrew, approximately one-half did so before the second year. Montana State's dropout rate (defined as freshmen who did not return for the second year has been 31.4% (Dulniak, 1981).

THE CURRENT PROBLEM

Once the orientation program had been in place for a period of two years, it was felt that some evaluation should be made of the long term effects of the program. In short, were students who came to the extended programs in the summer doing any better than those who attended the "old style" large group sessions just before the beginning of classes in the fall? It was decided that samples of the two categories of students would be followed to determine success in college as measured by Grade Point Average (GPA) and persistance toward degree.

THE SAMPLE

A random sample of students from each of the categories of students was selected which approximated their representation in the total freshman class. The group contained 131 students who had come to the summer orientation program and 97 who had come in the fall. To judge the similarity of the groups, they were compared on the factor Predicted Grade Point Average (PGPA), an algorithm which combines high school grades in "solid" subjects with standardized test scores to produce a value which has proven to be quite accurate through the first year. The average for the summer group was 2.40 and for the fall group was 2.35, a difference which was not significant.

PROCEDURES

The main issue in the current problem was the determination of persistance and graduation rates for students in each of the samples. In order to facillitate further research on the same samples, it was decided that reasonably complete information would be collected on each student. This included the following: High School GPA, Size of Class, Rank in Class, ACT scores(math, science,english, social science, and comprehensive), information on each quarter of attendance including credits carried, credits earned, quarter GPA, and cumulative GPA, quarter graduated, degree, orientation session attended, and final GPA. For the present study, it was assumed that any impact of an in-depth orientation program would manifest itself in the first year of study. As such dropout rates and GPAs were followed for five quarters. Dropout rate was defined as the number of students from each sample enrolled in a subsequent quarter as measured against the total in each sample. Each student in both of the samples was a first-time freshman in the Fall Quarter, 1979. The follow-up continued to determine which of the students in each sample graduated within four academic years (Spring, 1983 or earlier), within five academic years (Spring, 1984 or earlier), or were a persister (had graduated or were enrolled for at least one quarter of the 83-84 year). Descriptive data were assembled and the Chi-square was used to determine whether differences existed in the graduation and persistance rates of the two samples. Additional analyses were performed to provide further explanation.

FINDINGS

The descriptive data from the study are presented in Figure 1. These data indicate several things. First the differences in the first quarter GPA and in the post first quarter attrition are substantial. As a group, the students who attended the extended summer orientation programs exceeded their PGPA by .38, while those who attended in September fell short of their PGPA by .06. Further, the institution lost only 5% of the summer students after the first quarter, while 15% of the September students failed to return for a second quarter. An important measure is the number of students wh return for the fall quarter of the second year. In this study, the data show that 73% of the summer students returned for the second year, while 55% of the September students came back for that same quarter. Data on GPA would indicate that in each group, marginal students may have self-selected out of the second year, because in each group, especially the September group, the GPA took a large jump between the spring and fall quarters of 1980.

Graduation data support the trends indicated by the attrition and the GPA figures. In the measures for both graduation within four years and within five years, the percentage from the summer group is roughly double that from the September group. Though the four year graduation rate may be below the national average, the total of those who have either graduated or are still persisting after five years is probably above the national average. A Chi square test was performed investigating the effect of type of orientation program attended and persistance. Figure 2 shows the results of the test which indicates that those who attended the program of summer

MONTANA STATE UNIVERSITY
PROGRESS OF FRESHMEN WHO ENTERED FALL QUARTER 1979

	SUMMER ORIENTATION	SEPTEMBER ORIENTATION
NUMBER IN SAMPLE	131	97
PREDICTED GRADE POINT AVERAGE	2.40	2.35
ACTUAL GRADE POINT AVERAGE AFTER:		
FALL QUARTER 1979	2.77	2.29
WINTER QUARTER 1980	2.73	2.31
SPRING QUARTER 1980	2.72	2.39
FALL QUARTER 1980	2.84	2.72
WINTER QUARTER 1981	2.76	2.64
CUMULATIVE % WHO DROPPED OUT AFTER:		
FALL QUARTER 1979	4.72	15.31
WINTER QUARTER 1980	12.60	23.47
SPRING QUARTER 1980	26.77	44.90
FALL QUARTER 1980	27.56	42.86
WINTER QUARTER 1981	29.13	45.92
PERCENTAGE WHO:		
GRADUATED WITHIN FOUR YEARS	23.8	10.2
GRADUATED WITHIN FIVE YEARS	45.3	21.4
HAVE NOT GRADUATED, BUT HAVE ATTENDED IN 83-84	18.4	18.3
DROPOUTS	36.1	60.3

CROSSTABULATION OF ORIENT BY RETAIN

ORIENT	RETAIN: NOT GRAD NOR 83-84 (0.)	RETAIN: Grad or 83-84 (1.)	ROW TOTAL
1. Summer Orientati	47	84	131
	35.9	64.1	57.5
	45.6	67.2	
	20.6	36.8	
2. Autumn Orientati	56	41	97
	57.7	42.3	42.5
	54.4	32.8	
	24.6	18.0	
COLUMN TOTAL	103	125	228
	45.2	54.8	100.0

CORRECTED CHI SQUARE = 9.88296 WITH 1 DEGREE OF FREEDOM. SIGNIFICANCE = .0017
RAW CHI SQUARE = 10.74722 WITH 1 DEGREE OF FREEDOM. SIGNIFICANCE = .0010
PHI = .21711
CONTINGENCY COEFFICIENT = .21217
LAMBDA (ASYMMETRIC) = .09278 WITH ORIENT DEPENDENT. = .14563 WITH RETAIN DEPENDENT.
LAMBDA (SYMMETRIC) = .12000
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .03472 WITH ORIENT DEPENDENT. = .03439 WITH RETAIN
UNCERTAINTY COEFFICIENT (SYMMETRIC) = .03455
KENDALL'S TAU B = -.21711 SIGNIFICANCE = .0005
KENDALL'S TAU C = -.21368 SIGNIFICANCE = .0005
GAMMA = -.41879
SOMERS'S D (ASYMMETRIC) = -.21569 WITH ORIENT DEPENDENT. = -.21854 WITH RETAIN DEPENDENT.
SOMERS'S D (SYMMETRIC) = -.21711
ETA = .21711 WITH ORIENT DEPENDENT. = .21711 WITH RETAIN DEPENDENT.
PEARSON'S R = -.21711 SIGNIFICANCE = .0005

orientation graduate in higher percentages than those who attend in the fall ($X^2_{(1)}$ =9.88, p=.0017).

DISCUSSION AND IMPLICATIONS

It would seem clear that the summer orientation had a powerful impact on the graduation rate of the freshman class which entered in the fall of 1979. This data would tend to support recommendations by Astin(1975) and others who have indicated that retention can be improved with the implementation of a comprehensive program of this kind. Administratively, this type of study can point to groups of students who may need a more intrusive type of advising in order to be successful in college.

Additional research must be conducted in order to refine the means of predicting success. Clearly, the orientation effect is not a clean one and undoubtedly contains the impact of other variables. These need to be identified before conclusive prediction formulas can be developed and used.

BILBIOGRAPHY

Astin, A. W. Preventing Students from Dropping Out. San Francisco; Jossey-Bass, 1977.

Drake, R. W. Freshman Orientation in the United States Colleges and Universities. Fort Collins: Colorado State University, 1966. (ERIC Document Reproduction Service No. ED 030 923).

Dulniak, D. J. "Predicting Freshmen Dropouts at Montana State University Using Selected Institutional Data." EdD dissertation, Montana State University, August, 1981.

Iffert, R. E. "Study of College Student Retention and Withdrawal." College and University, 31: 435-47. Summer, 1956.

Li, P. "Freshman Orientation and the goals of general education." Journal of College Student Personnel, 1962, 3, 130-135.

Packwood, W. T. ed. College Student Personnel Services. Springfield: Charles C. thomas, 1977.

Shaffer, R. H. "A new look at orientation." College and University, 1962, 37, 272-279.

Wrenn, C. G. Student Personnel Work in College. New York: Ronald Press, 1951.