FINANCIAL AID:

JUST A RECRUITING TOOL?

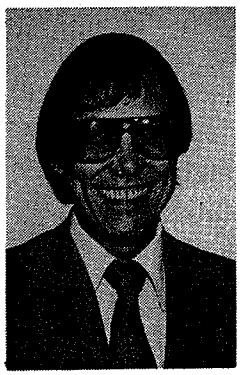
by Larry N. Craft and Mark D. Howard

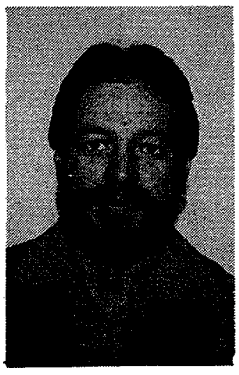
Synopsis - Students who do not continue in classes until grades are awarded at the end of the term are of growing concern to college and university personnel. This paper reports on how a sample of non-persisting students compares with their persisting counterparts in terms of receipt of financial aid, grades awarded, etc. It appears, whether by chance or by design, that financial aids offices may have actually been doing their jobs as well as they should have been.

Background - Like most institutions, Pepperdine University has an almost unlimited need for the very limited financial resources available to students. Using these resources as wisely as possible is an ongoing objective of the admissions staff, the financial aids personnel, and faculty; assessing how well this objective is met too often is a matter of subjective opinion rather than of careful analysis. The investigation on which this article reports addresses the matter of academic persistence by attempting to answer such questions as:

- "Is persistence related to receipt of financial aid at this University?"
- "Do the non-persisters have grades significantly different from the control group?"
- "Is persistence related to dormitory residency?"
- "Is persistence related to the sex of the student?"

Of course the ultimate question and the one for which this study should be a prototype is "Are we awarding aid to students likely to graduate, or simply using it as a recruiting tool?" Because Pepperdine University is in a state (California) that provides state scholarships to a high proportion of high school graduates, the question may be more pertinent here than in those states without such aid (although all of us undoubtedly have an obligation to students, our institutions, and the funding sources to ask this same question). Considerably more than 50 percent of the new students at this institution receive some form of financial assistance — a figure typical at least in the independent university ranks. Thus, the need for this and similar investigations is self-evident.





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Literature - One of the difficulties encountered in a review of the literature associated with the subject was the use authors make of the word "persisting" with reference to students who do not drop out of school on their way to program completion. Non-persisters were defined as students who fail to return for the next, or subsequent term (s). (1). In this study, a non-persister is defined as a student who registers for classes, attends at least one class session, but withdraws from *all* classes (i.e. the University) prior to the awarding of grades at the end of the term; a persister is a student who completes the term (s) examined in this study.

Because various papers (4, 7, 8, and 10) refer to the relationship between persisting and academic performance, residency, sex, etc., several of these variables are herein correlated with persisting and not persisting as defined above. Findings in the reference materials appear to be consistent with our own, despite the discrepancy in definitions.

Research Method

Subjects - Subjects for this study were selected from the undergraduate population of Pepperdine University, Malibu, who were registered for one or more of three trimesters — Winter '77, Spring '77, Fall '77. The group of persisters (Group P) was selected with the use of a random numbers table and drawn from a list of registered students. The group of non-persisters (Group NP) was formed using the entire population of students (for the three trimesters mentioned) who fit the non-persister definition. Group P was composed of 121 subjects and Group NP was composed of 97 subjects.

Procedure - Information on each of the variables was gathered from records located in the financial aid office, the University housing office, and/or the office of the registrar. The variables investigated were:

1. *grade-point average (GPA);*
2. *grade level;*
3. *hours attempted; hours earned; and the ratio between the two;*
4. *number of incomplete grades received;*
5. *the percentage of tuition paid by financial aid;*
6. *the presence (or absence) of a promissory note for a loan;*
7. *housing - commuter or university housing;*
8. *late registration;*
9. *sex.*

Variable 1, *GPA,* is computed using as the basis 4.0 points per unit of credit for the grade of A. New students with a GPA of 0.00 and 0 hours attempted were excluded from the analysis since these grades cannot be considered representative of their ability. Fourteen non-persisters fell into this category. Variable 3, *hours attempted,* is the number of hours used in the grade-point computation for each trimester. Information on variable 6, *percentage of tuition paid by financial aid,* was collected from records in the financial aids office. Variables such as *GPA, grade level, hours attempted, hours earned,* and *number of incomplete grades*

were computed using data available up to and including the trimester from which the subject was selected. Information on variables that are non-cumulative (*late registration,* for example) was drawn only from the applicable trimester. Other variables are self-explanatory.

Statistical Analysis - Differences between Group P and Group NP in *GPA, grade level, hours attempted, hours earned, hours earned/hours attempted, number of I grades, and percentage of tuition paid by financial aid* were analyzed using the t-test for group means (Table I). Differences in number of *promissory notes signed, housing,* and *sex* were analyzed using the program *crosstabs* (5) in the Statistical Package for the Social Sciences (SPSS) manual (Table 2). Program *crosstabs* employs a Chi^2 analysis for the purpose of comparison. A discriminant analysis was also conducted using SPSS program *discriminant* and stepwise method *Rao* (Table 3). This procedure selects the variables which, when combined, most efficiently differentiate between Group P and Group NP. The .05 alpha level of significance was selected for all statistical procedures.

Results - Table 1 displays the results of all comparisons employing the *t*-test. Group NP exhibited a mean GPA of 2.47; the mean GPA of Group P was 2.72. The comparison yielded a significant *t* of -2.46 ($df = 202$, $p < .05$), indicating that those students who persisted throughout the duration of the trimester had previously earned significantly higher grades than had those who did not. The mean career total number of *hours attempted* by students in Group NP was 46.21; students in Group P had obtained a mean of 59.89 hours. This signifidifference yielded a *t* of -2.82 ($df = 216$, $p < .05$).

Table 1
Comparison of Group Means, Standard Deviations, and t-Scores

	Non-Persisters Group I		Persisters Group II		
Variable	Mean	SD	Mean	SD	t-Scores
GPA	2.47	.73	2.72	.67	-2.46*
Grade level	2.02	1.00	2.46	1.13	-3.03*
Hours attempted	46.21	34.43	59.89	36.54	-2.82*
Hours earned	44.33	32.49	59.80	36.17	-3.28*
Hours earned attempted	.84	.40	1.00	.18	-3.68*
Number of incomplete grades	.4	.93	.35	.79	.40
% of tuition paid by aid	50.54	59.15	46.07	57.88	.56

* $p < .05$

The variables *grade level* and *hours earned* actually indicate very similar information to that found in *hours attempted.* Group NP had previously earned 44.33 hours (sophomores) on the average while Group P earned 59.80 hours (lacking only 0.2 hours of junior status). The obtained *t* of -3.28 ($df=216$, $p < .05$) is significant and indicates those students who persisted had averaged a significantly larger number of *hours earned* and were consequently at a higher

grade level than those students who did not persist throughout the trimester. A further analysis was conducted on the two groups, comparing them in terms of the mean proportion of *hours earned/hours attempted.* Group NP earned, on the average, 84 percent of the hours they attempted while Group P on the average earned 100 percent of the attempted hours. This comparison yielded a significant t of -3.68 ($df = 128, p < .05$). However, these figures are somewhat distorted because courses which the student attempted under the grading options of credit/no credit or pass/fail, or those for grades of withdrawal (W) withdrawal unsatisfactory (WU) or incomplete (I) were awarded, were not included in the number of *hours attempted* under the system currently employed at Pepperdine University.

There was no significant difference between the groups in the number of *incomplete grades* earned. The mean number of *incomplete grades* for Group NP was .4 and for Group P was .35. The t-score for comparison on this variable was .40 ($df = 216, p < .05$). Likewise, the percentages of tuition that were paid by financial aid were similar for both groups. The mean *percentage of tuition paid for by financial aid* for Group NP was 50.54; for Group P, 46.07. This comparison yielded a t-score of .56, ($df = 216, p < .05$), not significant at the .05 level. For the sake of further comparison, students in both groups were reclassified into either a "yes" or "no" category in terms of receipt of financial aid. In the non-persisting group 47 students received aid and 50 did not, while in the persisting group 58 students received aid and 63 did not. This comparison yielded a Chi^2 value .0036 ($df = 1, p < .05$) clearly not significant at the .05 level.

Table 2 gives the results of other comparisions made with the use of Chi^2 analysis. On the variable *receipt of a promissory note,* 16 students in Group NP signed promissory notes and 81 did not. In Group P 14 students signed promissory notes and 107 did not. The resulting Chi^2 of .72 ($df = 1, p < .05$) was not significant.

On the variable *housing,* 11 students in Group NP resided in University housing and 86 did not. In Group P, 51 students made use of University housing, while 70 commuted. The Chi^2 obtained in this comparison was 23.62 ($df = 1, p < .05$), indicating a clearly significant difference. In other words, a significantly larger number of persisters resided in University housing than did non-persisters.

Concerning *late registration* for Group NP, 23 students did late register and 74 did not, while for Group P 12 students registered late and 109 did not. The resulting Chi^2 of 6.61 ($df=1, p <.05$) was significant. including that a larger number of non-persisters failed to register at the scheduled time than did persisters.

Table 2
Chi square analysis between groups

	Non-Persisters Group I		Persisters Group II		
	Yes	No	Yes	No	
Variable	# / %	# / %	# / %	# / %	Chi^2
Promissory note	16/16.5	81/83.5	14/11.6	107/88.4	.72
University housing	11/11.3	86/88.7	51/42.1	70/57.9	23.62*
Late registration	23/23.7	74/76.3	12/9.9	109/90.1	6.61*
Sex Female	42/43.3	55/56.7	67/55.4	54/44.6	2.67

* $p < .05$

The final Chi² comparison involved the variable, *sex*. It was found that Group NP consisted of 42 females and 55 males; Group P, 67 females and 54 males. An insignificant Chi² of 2.67 ($df = 1, p < .05$) indicated that there were no significant differences as a result of the number of males and females in the groups.

One significant discriminant function resulted from the discriminant analysis. The function was characterized by the variables of *grade level, housing* situation, and *late registration*. The standardized discriminant function coefficients for these variables, which surpassed a criterion cutoff level of .35, were respectively −.36, −.87, and .39. This function seems to reflect an increased responsibility to and perhaps greater commitment to the academic environment rather than a more carefree approach. Table 3 presents the number and percentage of subjects who were classified by their discriminant scores into either Group NP or Group P. Membership in Group NP was correctly predicted for 70 of the 83 subjects, or 84.3 percent of this group. For Group P, 73 of the 121 subjects or 60.3 percent of the subjects were correctly classified. The total number of correctly classified subjects was 143 of 204, or 70.1 percent.

Table 3
Number and percentage of subjects classified by their discriminant scores

		Predicted Membership[a]	
Actual Membership	N	Group NP	Group P
Group NP	83	70	13
		84.3	15.7
Group P	121	48	73
		39.7	60.3

[a]Second row of numbers for each group gives the percentage of occurrence.

Summary and Conclusions

If a financial aid office awards aid to a late registering freshman or sophomore who does not wish to stay in University housing, then a school like Pepperdine University could probably make wiser use of financial aids dollars. These institutional data show that this situation does not occur in a significant number of cases. Those who register and attend at least one class but who do not finish a term are different from their persisting peers in that:

— Their grades are lower
— They have previously attempted and earned fewer credits
— They more often register late
— They are less likely to be housed by the University.

The two groups are similar in that:

— They receive financial aid in similar proportion (s) and are equally likely to sign a promissory note
— The number of "incomplete" (I) grades received is similar
— The percentage of tuition paid by financial aid is simliar
— There are no differences in sex composition.

Given the quantity and nature of information available to financial aids officers at the time aid is awarded, those at this University do not appear to award aid in an inappropriate manner, i.e. to students with a lower probability of persisting to the end of the term of enrollment. If the time comes when cut-backs in awards

are necessary, the last students to be penalized (on the basis of persisting probability) should be upperclass, resident students who complete their enrollment activities according to the published University schedule.

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