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ABSTRACT

Several traditional approaches to studying the student dropout are outlined. They include data collection on reasons given for dropping out and characteristics of dropouts, as well as follow-up study. The use of the National Center for Higher Education Management Systems (NCHEMS) Student Flow Model (SFM) is described to show how students could be followed as they moved through the institution during various time periods. An example of the SFM using the fall 1971 entering freshmen at Western Illinois University is presented. The SFM is shown to be a valuable tool in charting student progress through the institution and to identify those who drop out. (Author/LBH)

APPROACHES TO STUDYING THE STUDENT DROPOUT - OR WHERE HAVE ALL THE STUDENTS GONE?

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Introduction

When measured by the percent who graduate in four years from their original college, the dropout rate in higher education in the U.S. has been about forty percent for the past 45 years. Of course this rate varies from institution to institution with more selective universities and colleges often having a much lower attrition rate than the less selective.

Although transfer and returning students reduce the attrition rate, higher education still experiences a significant loss in the investment of personal, institutional and governmental resources when students do not complete their degree objectives. The downward and stable enrollment trends many of us are now facing, or will face in the next few years, present a real concern because of the direct relationship between attrition and enrollments in succeeding years.

Research on dropouts is readily available, although comparisons of findings are difficult since the term "dropout" means different things to different people. When dropouts are defined as students who do not graduate within four years from the college in which they enrolled as freshmen, we know we miss many students who drop out temporarily or transfer to another school and eventually complete a degree.

Astin has added several other terms (e.g. persisters and stopouts) to help define the status of students after four years. A study by El-Khawas and Bisconti (1974) showed that only 23.2 percent of the 1961 entering freshmen had not received a degree by 1971.

Approaches to Analyzing the Problem

One of the first steps we can take in reducing attrition is to analyze the causes of dropping out. At Western the Student Personnel Services office conducts exit interviews in which they record the reasons students give for leaving school. They also record immediate and future plans of these students, as well as their social security number, sex, class level and point of withdrawal (before or after 10th day). Using the social security number as an identifier, we conducted a study this past year using our Student History File to gather data on characteristics of students who withdrew in 1974 and 1975. The characteristics included major, ACT scores, grade point averages, marital status, fraternity or sorority membership and military status.

Through this use of the history file, a total of 1,383 students were matched with the exit interview records. Reasons for dropping out were most often personal (36.1%), financial (22.8%), and academic (15.9%). Their immediate plans were most often employment (38.4%), transferring (17.7%), and to seek employment (15.2%). Their future plans were to return to Western (47.0%) and to finish elsewhere (22.3%).

Recommendations on ways the institution could handle these students in order to encourage them to possibly return to Western were presented at the end of the above study. These recommendations included designating an existing office to assist students who plan to transfer to another institution, informing

dropouts of alternative routes to completing a degree through external degree programs and proficiency examinations, and a revision of the tuition and fees structure to eliminate disparities in charges for part-time students.

Astin (1975) found that work study programs increase persistence, single sources of aid have a more positive effect than a financial aid package and loans have a negative effect on student retention. Persistence is also related to the students social and academic "congruence." (Cope and Hannah, 1975). In other words, if the student's academic and social values conform to the dominant values on campus, they will be less likely to drop out.

During the Winter Quarter of 1975-76 a follow-up study of students who were enrolled during the Fall of 1975 and who did not return for the Winter Quarter was conducted. A two-page questionnaire was sent to 234 of these students (a one-third sample) and 92 responses were received, a return rate of 39.3 percent.

Reasons given for withdrawing were most often personal (23.8%) and academic (17.5%). Financial reasons which were the second most frequent response in our previous study dropped to fifth place in this survey, a drop from 22.8 percent to 8.7 percent, an indication that financial problems are less important in retrospect than at the time they drop out.

Current activities of the respondents showed that 56.2 percent were enrolled in another institution, while only 17.7 percent of the dropouts in our earlier study indicated they were transferring. Although the respondents may not be a completely representative sample, it still appears that a large number of them do enroll in another institution and would very possibly receive a degree elsewhere and should not be considered dropouts since they may achieve their degree objectives.

Of the fifty students who transferred to another institution eighteen, or 36.0%, entered two-year colleges and 32, or 64.0%, entered four-year colleges or universities. Of those who said they were working toward a degree, 75.0 percent said they planned to earn a bachelor's degree and 10.4 percent a master's degree. Only 10.7 percent of the respondents said they had no plans to continue their education.

Based on the statistics presented above, nearly ninety percent of these dropouts may go on to work toward a degree. Armed with this knowledge, we now need to develop strategies to retain those students who can benefit from continuing their attendance at Western. Part of this strategy involves identifying the kinds of students who are most likely to dropout or stopout before completing a degree.

The Student Flow Model as a Tool to Analyze the Student Dropout

One of the most useful tools which has been utilized to study attrition is the Student Flow Model (SFM). This is a model which was developed by the National Center for Higher Education Management Systems (NCHEMS) at WICHE. A more detailed explanation of this model was presented in a paper last year (Gilbert & Lueck, 1975).

The SFM is a tool which allows the plotting of student movements over a series of time periods. In any given run of the model, the investigator can examine four time periods. The basic data needed to drive this model is minimal in that each student must be identified by a unique number which is tied to basic data such as class, sex, major, and term from which the data was collected. The record can be expanded to contain any additional information which seems appropriate, and it is possible to follow all students from one time period to

another, or from some sub-set, such as those students with a particular matriculation date.

One use of the SFM has been as a tool to study student progress toward a degree over a period of years. The history module of the SFM has been utilized to complete this analysis at Western. The target population was all new freshmen with a matriculation date of Summer or Fall 1971. At the end of every Fall quarter, this group was re-examined to determine their progress. Table 1. gives an overall picture of this class from Fall 1971 through Fall 1975. Although the criteria for selection was matriculation date, new students appear later in the study. This may be due to incorrect matriculation data, incorrect identification number, or students who started in the Summer of 1971 and didn't stay for Fall, or those who started briefly in the Fall of 1971, but didn't continue until the end of the quarter.

TABLE 1. CONTINUOUS PROGRESS ANALYSIS OF NEW FRESHMEN FROM FALL 1971 THRU FALL 1975

Student Category	Fall 1971	Fall 1972	Fall 1973	Fall 1974	Fall 1975
Freshman	2,939	70	4	2	2
Sophomore	4	2,027	141	30	9
Junior		20	1,497	172	34
Senior		2	83	1,365	340
Temporary Drop		116	63	31	-
Permanent Drop		716	394	141	151
Undergrad Degree[1]			2	47	1,067
Graduate Student			2	4	88

Those students who fall into the temporary drop category are students who were here at one time period, but absent the next. However, these same students appear at another time in the future. It is possible that these figures contain students who have dropped in and out several times. By the end of Fall 1975 a total of 1,402 students had dropped while 1,116 had received an undergraduate degree. As can be seen, there were still 385 students enrolled as undergraduate

[1]Undergraduate degree includes those graduate students who were seniors the previous year.

students. This class will continue to be followed through the end of Fall 1976, thereby completing the present analysis.

The history module of the flow model can also be utilized to study the effect on individual programs. Conventional analyses may show that the enrollment in a given major was the same from one fall to the next. The flow model will give an analysis of where these students come from or go to. For example, when using the analysis of the freshman class of 1971, in Fall 1972 there were eleven majors in economics - ten sophomores and one junior. In the Fall of 1973, there were nine junior majors. However, of those nine, only six were from the original eleven the previous year. By using the reports generated out of the SFM, we can also plot where these students actually went. Of the eleven majors, six went from sophomores in economics to juniors in economics, one sophomore to junior in psychology, one sophomore to junior in marketing, one from junior in economics to a senior history major and two permanent dropouts. The three new majors came from psychology, business administration, and unclassified categories. When the total student population is utilized, the interaction between majors can be shown. The model is especially useful when trying to determine the effect of enrollment changes on individual programs.

While the examples have shown the use of the SFM in following students identified by class and major, the model is quite flexible in that it can utilize parameters other than student majors which may affect student attrition. When several terms are pooled, i.e. Fall and Spring terms, the average transition percentages can be determined. Utilizing the SFM in this manner has produced transition percentages which, when used to project future mixes of majors, have yielded very accurate results. Our preliminary experiences have been quite

encouraging and we feel the SFM can be a valuable tool in charting student progress through the institution and to identify those who drop out. At the present time we are beginning to use it to take a look at special groups of students in order to compare their progress with regular students.

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