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A STUDY TO DEVELOP STUDENT PROFILES FOR THE ENTERING CLASS FOR FALL 1981 AT SAGINAW VALLEY STATE COLLEGE

Michigan State University PH.D. 1985

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A STUDY TO DEVELOP STUDENT PROFILES FOR THE ENTERING CLASS FOR FALL 1981 AT SAGINAW VALLEY STATE COLLEGE

By

Lloyd V. Bishop

A DISSERTATION

Submitted to
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ABSTRACT

A STUDY TO DEVELOP STUDENT PROFILES FOR THE
ENTERING CLASS FOR FALL 1981 AT
SAGINAW VALLEY STATE COLLEGE

By

Lloyd V. Bishop

The purpose of this study was to develop student profiles for the entering class of 1981 at Saginaw Valley State College. These profiles were developed from the students' responses to the Entering Student Questionnaire, which they completed in fall 1981. The study comprised a sample group of 380 students from the entering class of 1981 after part-time, transfer, and handicapped students had been deleted. The study was limited to the sample group of 380 for fall 1981. It was also limited to the first semester of fall 1981, and profiles were developed at the end of the first semester.

Participants' responses to the Entering Student Questionnaire were placed on tape. The Statistical Package for the Social Sciences Program, with subprogram Discriminant, was used to examine the data. After the data were examined through the discriminant-analysis process, each variable response from the Entering Student Questionnaire was given a weighted number. Those variables with a weighted number of at least .05 were deemed to be significant to the study. These variables

were then subjected to the stepwise method of discriminant analysis, and a cross-tabulation was performed to reduce the number of variables further. The variables that survived these processes were deemed highly significant to the study, and the student profiles were developed from these remaining significant variables.

The sample group was divided into eight separate groups based on sex, housing, and retention as a student. A profile was developed for each of these groups finding the null hypotheses were not rejected. No one variable was found to be significant to all of the sample groups, although some variables were significant to several groups.

After reviewing the research, the investigator concluded that a good college fit is important to student retention. Several of the significant variables indicated that student interaction with campus activities was related to retention. The evidence for retention for students who replied in a positive manner to variables dealing with school activities was apparent. It was also noted that bonding among students, peers, the faculty, and the college can take place only through interaction of these groups.

To Alice, Tom, Matt, and Sunny, without whose love and inspiration this would not have been possible.

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CHAPTER I

INTRODUCTION TO THE STUDY

Background

Keeping students in school is a primary concern of school administrators. Declining enrollments resulting from a smaller number of potential students, general financial problems for both students and schools, and the emergence of specialized certified programs have forced school officials to examine student retention more carefully. Recent studies have shown that educators throughout the United States are using various methods of retention to increase or maintain enrollment. In 1980, the Carnegie Council on Higher Education published a book entitled The Next Twenty Years for Higher Education. The chapter dealing with enrollments begins with the statement:

> The most dramatic feature of the next 20 years, as we now know, is the prospect of declining enrollments after more than three centuries of fairly stead increase. . . . Points of enrollment acceleration in history have been 1870 with the increase of growth after the Civil War and following the introduction of the land-grant college movement; 1945 with the G.I. Bill of Rights; and 1960 with the tidal wave of students following the high birthrates after World War II. Now there is a deceleration point, with the abrupt and substantial demographic decline in the numbers of young persons. Two points of change, with movements in opposite directions, will have occurred within one 20 year period. This has never happened before in American history. (p. 32)

In "Pressures on Higher Education," Glenny (1973) cited the following facts concerning competition for students and reasons for declining enrollments:

1. The actual number of five-year-olds dropped 15 percent between 1960 and 1970. These are the college youth of 1978 and beyond.

2. The actual number of births dropped 3 percent between 1970 and 1971 and 9 percent between 1971 and 1972. These are the potential freshmen of 1988 and 1990.

3. The nation's birthrate is at its lowest point in history, at a rate below zero-population growth, and it has not yet stabilized at that rate.

4. The proportion of all males 18 to 19 years of age who are in college has dropped to the level it was back in 1963, down to 37.6 percent from a high in 1969 of 44 percent. This drop can be attributed only partly to the draft, since the trend downward started at least two years before resolution of the draft issue.

5. The proportion of males 20 to 21 years of age in college has dropped from a high of 44.7 percent in 1969 to 36 percent in 1972, almost nine percentage points less.

6. Women in the 18 to 19 age group leveled off at about 34 percent in 1969 and those in the 20 to 21 age group seemed to have leveled at 25 percent in the past two years. This occurs despite the ostensible efforts of colleges and universities to increase the proportion of women going to college.

7. In the fall of 1972, the four-year colleges and universities lost about 1.5 percent in the first-time freshmen enrollment, while the community colleges increased less than 2 percent.

8. In the past two years, 85 percent of all the increase in the number of first-time students entered the community college.

9. The Census Bureau estimates a sharp drop in the number of college-age youth after 1982, almost paralleling the sharp rises during the 1960's. My own estimate, based on the Census Bureau projections and the data on live births of the U.S. Public Health Service, is that by 1991 we will have about the same number of college-age youth as we had back in 1965 or 1966. Although the U.S. Bureau of the Census, the Carnegie Commission, and the U.S. Office of Education all project an increase in this age group after 1990, there is no actual

evidence to support that assumption. Unless the number of live births begins to show an increase this year or next, the projected number of college-age youth will of necessity show further decline after 1990.

10. Some colleges and universities are now advertising their programs and services in newspapers and on TV and radio in order to attract students, a feature characteristic of proprietary schools but not thought to be in good taste for colleges. (p. 2)

From the preceding discussion, it is clear that the period of automatic growth in college enrollments is over. Within the foreseeable future, colleges and universities can expect a decrease in potential enrollees as the number of high school students continues to decline.

The expectations of current first-time college students are more specific than those of their predecessors. They are looking for immediate returns on their efforts. The large proportion of community-college and short-term-program enrollees reinforces the fact that today's students want a marketable skill that will immediately qualify them to enter the work force. With work opportunities geared largely toward technical fields, colleges must meet the needs of students planning to enter those fields. If schools can retain more of the students who <u>should</u> be retained (not all students belong in a college setting), enrollments will grow, or at least the rate of decline will slow. As a result, schools may "buy some time" to plan program changes.

Various studies have shown some major cases of attrition to be linked with an inappropriate student-college fit. The State University College at Oswego, New York, surveyed 125 former students to determine

why they had dropped out of school. Schell (1978) reported that the respondents gave the following reasons for leaving school: insufficient financial aid, wrong major, lack of educational counseling, and poor student housing.

Musband (1976) discussed the concept of individuals influencing other individuals to stay in college. As a result of a study he conducted at Spring Arbor College in Michigan, Musband found that students without peer contacts were more likely to drop out than were those who had peer contacts. The per contact was termed the "significant other."

Saginaw Valley State College, the institution at which the present study was conducted, does not differ from other colleges in its concern for maintaining enrollment levels. School personnel know that because of the smaller number of students available from traditional sources, retaining presently enrolled students must be a priority.

Setting for the Study

Saginaw Valley State College has a unique housing situation that might be directly related to retention. The school has on-campus dormitory living but can house only about 500 students. Also, because the school serves a large tri-city metropolitan area, the majority of the students are commuters. The literature reviewed for this study indicated a number of differences in retention between resident and nonresident students. Recognizing such differences, the researcher

grouped the students in the study according to on- and off-campus residence.

Overview of Saginaw Valley State College

Saginaw Valley State College is a four-year state-supported liberal arts college located in the tri-city area of Midland, Bay City, and Saginaw, Michigan. The college's major curriculum areas include:

School of Arts and Behavior Sciences, including a Department of Criminal Justice

School of Business and Management--A master's degree in business administration is offered

School of Nursing and Allied Health Sciences

School of Engineering and Technology

School of Education with a master's degree program

The college employs 125 faculty members to serve the student body. This group is directed and supported by an administrative staff of about 70 people headed by a president and his immediate staff.

In fall 1981, the student enrollment at Saginaw Valley State College was 4,355. This number can be broken down as follows:

Men	1,934
Women	2,421
	4,355
Full time	2,709
Part time	1,646
	4,355

On campus	4,035
Off campus[1]	302
	4,355

Dormitory-housed students	481
Commuter students	3,874
	4,355

Age--25 years or older	1,965
Age--25 years or younger	2,390
	4,355

Almost half of the students at Saginaw Valley are over 25 years of age. However, this study dealt with first-time college students, most of whom were between 17 and 19 years old.

Statement of the Problem

This study was undertaken in an attempt to develop profiles of persisters and leavers from the entering class of 1981 at Saginaw Valley State College. The investigator assumed that certain factors might influence the retention of entering new students. This assumption was based on characteristics of entering classes, although no studies have been conducted to validate the theory.

Saginaw Valley is striving to improve the retention rate of entering classes. The researcher decided that developing student profiles would best provide the information needed to allow school officials to address potential school leavers. Profiles were developed for the following eight groups:

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[1]Saginaw Valley has some off-campus course offerings at Oscoda and Caro, Michigan. Three hundred two students took classes at these centers.

Males on campus who returned winter term 1982
Females on campus who returned winter term 1982
Males off campus who returned winter term 1982
Females off campus who returned winter term 1982

Males on campus who did not return winter term 1982
Females on campus who did not return winter term 1982
Males off campus who did not return winter term 1982
Females off campus who did not return winter term 1982

This study is unique because of the development of student profiles to be used as predictors of retention. A review of recent literature indicated little evidence of student profiles having been used to predict retention. Some writers have devised profiles to examine current retention; this investigator has developed profiles to predict retention for first-time entering college students.

Purpose of the Study

The investigator was concerned with discovering the variables that affect student attrition at Saginaw Valley State College. Selected factors were examined that might distinguish between male and female persisters and leavers, on-campus and off-campus persisters and leavers, and persisters and leavers in general. A specific set of variables was studied to determine whether they are related to a student's leaving or continuing in school.

The primary purpose of this study was to examine the 1981 entering class at Saginaw Valley State College to see if specific student profiles could be developed to predict potential school leavers and stayers. The study was limited to the sample group of 380 for fall 1981. It was also limited to the first semester of fall 1981, and

profiles were developed at the end of the first semester. Eight population groups were identified, based on sex, on-campus or off-campus residence, and persistence or nonpersistence as students. The investigator assumed that if a definite student profile could be developed that would accurately predict school persisters and leavers within each of these groups, Saginaw Valley State College could design an effective student-retention program. Because less money is available to the college now than in the past, budget and personnel reductions have increased the work load of employees remaining at the college. If potential school leavers can be identified, school personnel working in the area of student retention can use their time more advantageously in assisting this group directly.

Hypotheses

The following testable null hypotheses were formulated to analyze the data collected in the study.

Hypothesis 1: No variables for some of the student groups will exist that will be significant for male and female persisters and leavers.

Hypothesis 2: No variables for some of the student groups will exist that will be significant for on-campus and off-campus persisters and leavers.

Hypothesis 3: No variables for some of the student groups will exist that will be significant for persisters and leavers, in general.

The discriminant analysis procedure was used to analyze the data related to these hypotheses. The .05 criterion level was used to determine the statistical significance of each variable used in this study.

Definition of Terms

The following terms are defined in the context in which they are used in this dissertation.

Attrition: The loss of full-time students as a result of their leaving school. The term "attrition" is used only when speaking in generalities and in reference to groups of student leavers.

College fit: The academic, physical, and social atmosphere of the college and student that leads to a comfortable situation for the student.

Drop-out: The same as a school leaver. However, the researcher chose to use the term "school leaver" unless directly quoting another writer.

Leaver: A student who did not return to school as a full-time student for winter term 1982 at Saginaw Valley State College.

Persister: A student who returned to school as a full-time student for winter term 1982 at Saginaw Valley State College.

Retention: The maintenance in school of full-time students who continue to make progress toward a degree.

Stop-out: A student who leaves school with the full intention of returning after a short time.

Delimitations of the Study

In formulating the student profiles for this research, the investigator imposed some delimitations on the population of students on whom the profiles were based. The entering class for 1981 was used for this study. Further comparisons with past entering classes can be

made, but it is assumed that each class is unique. Although the entire entering class at Saginaw Valley State College for 1981 was examined, the study was delimited to first-time students. Likewise, data on the following groups were not used in compiling the student profiles.

Part-time students: Students carrying 11 hours or less were not used in this study. Students who originally enrolled for a full-time load and through course dropping fell to a part-time level were not included in the study. Because of the number of part-time students at Saginaw Valley and education experts' expression of differences in retention between full- and part-time students, the writer believed that the two groups of students should be studied separately; therefore, part-time students were not included in the study.

Transfer students: Transfer students were not used in the study because the uncontrolled variables involved would not have supplied the information needed to develop accurate student profiles.

Handicapped students: Because of the number of handicapped students at Saginaw Valley and the variety of their handicaps, it was decided that this group should be studied separately; therefore, they were not included in the study.

Instrumentation

The Entering Student Questionnaire served as the data base for this study. The questionnaire was provided by the National Center for Higher Education Management Systems (NCHEMS) in Boulder, Colorado. The actual questionnaire is reproduced in a manual issued by NCHEMS, titled

Student-Outcomes Questionnaires: An Implementation Handbook. According to NCHEMS, the questionnaire has been used in several other retention studies undertaken by colleges throughout the country. Peter T. Ewell, Senior Staff Associate for NCHEMS, revealed that two other institutions of higher education are using the Entering Student Questionnaire in similar retention studies. He related that only North Carolina State University and Towson State University have conducted studies similar to the present one. He also indicated that Towson State and Saginaw Valley State are of similar size and configuration and that the studies at the two institutions are parallel.

Data-Analysis Procedures

The data gathered for this study were used to identify characteristics of the eight groups into which the student sample was divided. The Statistical Package for the Social Sciences program (Nie, Hull, Jenkins, Steinbrenner, & Bent, 1975), with the subprogram Discriminant, was used to examine the data.

Each entering student from the class of 1981 filled out the Entering Student Questionnaire. Responses were tabulated and fed into a computer. From this data bank, using the discriminant analysis system, information was selected to develop possible profiles regarding retention for the eight groups in this study.

The .05 level was used to indicate variables that were significant to the study. The stepwise method of discriminant analysis was performed on the remaining significant variables as they specifically pertained to the eight groups in the study. A cross-tabulation

procedure was then performed on the remaining significant variables to show their relationship to staying or leaving. The student profiles were developed from this information.

Overview

Chapter I contained the background of the study, a description of the setting, statement of the problem, and purposes of the research. The hypotheses tested in the investigation were stated and important terms defined.

Chapter II contains a review of literature related to student persistence and attrition. Included are such topics as reasons students leave school, predictors of student attrition and retention, effects of financial aid on persistence, minorities and retention, retention models, retention at the community college level, and solutions to the problem of attrition.

The statistical procedures followed in the study are explained in Chapter III. In addition, the study sample is described.

Results of the data analysis are found in Chapter IV. Chapter V includes a summary of the study, findings and conclusions, recommendations, and implications for future research.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

Much has been written about student persistence and attrition. Because of the large amount of literature available, only the most recent writings on the subject are reviewed in this chapter. The following topics are discussed, and each is placed in a related section for review: Reasons for Leaving School, Predictors of Student Attrition and Retention, The Effects of Financial Aid on Persistence, Minorities and Retention, Retention Models, Retention at the Community College Level, and Solutions to the Problem of Attrition.

Reasons for Leaving School

In Preventing Students From Dropping Out, Astin (1975) listed 14 reasons students gave for dropping out of school:

Boredom with courses
Financial difficulties
Marriage
Pregnancy
Family responsibilities
Poor grades
Dissatisfaction with requirements
Dissatisfaction with regulations
Change in career goals
Inability to take desired courses
Good job offer
Illness or accident

Difficulty in commuting to college
Disciplinary troubles

None of these reasons was said to be more important than another.

In a University of California study (1980), a task group was appointed to study attrition. The task group found selected instances of high rising attrition at some campuses, for some ethnic groups, and for community-college transfer students from high school or for those who had low transfer grades.

Ramish (1981) reviewed research concerning students' reasons for leaving school. He compiled the following list of reasons students cited most often for leaving school: academic matters, financial difficulties, motivational problems, personal considerations, dissatisfaction with college, military service, and full-time job. A chart was developed to show likely persisters and leavers. No emphasis was placed on which of the reasons was more important.

DeWolf (1978) surveyed a sample group of students at the University of Washington. All of the students surveyed had been enrolled in school for the fall quarter but did not return for the next quarter. Respondents were grouped according to their first-mentioned reasons for not continuing school: graduated, financial, on leave, family problems, transferring, dissatisfied with the university, job, or just wanted time off.

In a longitudinal study, Endo (1979) found that academic ability and frequency of using academic advising sources were the most important distinguishing variables with regard to keeping students in school.

Approximately 1,000 drop-out/stop-out students from the University of California at San Diego were surveyed to determine why they left school (Bieschke, 1978). Bieschke concluded that to lessen attrition, emphasis was needed on developing a communal atmosphere, advertising student services, and expanding the school curriculum.

Through a questionnaire administered at North Texas State University, Novak (1978) discovered the following major reasons for students dropping out of school: lack of finances, need for a break, dissatisfaction with the university, and criticism of the student affairs personnel. According to Richard (1976), four major reasons for students not returning to school at North Carolina University at Greensboro were finances, marriage, health problems, and bad grades.

Cohan (1979) conducted a study to compare males' and females' reasons for leaving school. Results indicated male nonpersisters came from low socioeconomic backgrounds and demonstrated low high school grades, whereas female nonpersisters often were married, felt college was not important, and had low high school grades.

Garber (1977) found that students admitted to college through a special-admissions program were more apt to drop out than were students admitted through the regular admissions process. The study was conducted at the State University of New York at OSwego.

Bakshis (1979) investigated student retention at Triton College. A survey of 500 students in fall 1978 indicated that nonreturning students had different educational objectives and requirements than returning students and were less satisfied that their goals had been

met. Nonreturning students pointed to a poor college fit as the main reason for leaving.

According to Frost (1980), who studied late or delayed-entering students in Canada, motivation seemed to be students' primary reason for enrolling in college. Those who failed cited "not fitting in," rusty study habits, and financial and family problems as the main reasons for leaving school. Frost advised providing special counseling for older students.

In summary, several reasons for leaving school have been documented in the literature. The following reasons were most frequently cited:

Low high school grade point average
Financial difficulties
Employment, 20 hours per week to full time
Lack of college fit
Lack of counseling
Career indecision
Family problems
Beginning poor academic skills
Housing on campus
Need for time off
Need for more student services
Need for better peer contact
Personal problems, i.e., health, family
Lack of goal setting
Need for special programs for those students enrolled on special admittance
Need for better student-faculty relations

Predictors of Student Attrition and Retention

Astin (1975) wrote that seven factors can be used to predict which students will leave school:

Low high school grades
Low aspirations
Poor study habits
Relatively uneducated parents
Small-town background
Being older
No religious preference

None of these factors was said to be more important than others.

At the University of California, Berkeley, Frank and Jeffrey (1978) reported that raising the entering grade point average requirements for new freshmen from 3.0 to 3.3 only slightly affected retention. The higher high school grade point average was predictive of staying in school.

As a result of a study he conducted at the University of Iowa, Siryk (1981) concluded that the student-institution fit could be used to predict attrition. Students who left the university seemed to be less socially and academically adjusted than persisting students.

Curran (1981) discussed the use of an exit survey to predict attrition. The most common reasons students gave for leaving were career plans, money, and academic reasons. The author concluded that the exit survey was useful in drawing broad conclusions about withdrawing students.

Zimmerman (1981) studied pre-enrollment characteristics of nonpersisting students. He concluded that the smallest number of factors that maintain the current level of prediction of persistence should be developed and used in retention studies.

In a study conducted by Shaffer (1981), it was demonstrated that a biographical questionnaire can be a useful predictor of student

retention. He found that drop-outs and persisters could be differentiated on the basis of nonacademic background factors.

Kowalski (1977) found that home and college environments, as well as personal and academic characteristics, were important in predicting student success in college. The results of this research suggested that potential college leavers can be identified early.

In 1977, Gamble conducted an attitudinal survey at Grand Valley State College in Michigan. He found that students with high regard for higher education, and whose families and peers felt the same, were more likely to remain in school than those with less regard. In a longitudinal study of the high school class of 1972, Peng (1977) found that withdrawal was more a motivational than a socioeconomic problem. Sex, race, and economic background did not appear to be significantly related to student leaving.

Pedrini and Pedrini (1976) found that the American College Test (ACT) was a legitimate predictor of college success. In comparing special entries, regular entries, and minorities, higher ACT scores were significantly related to student retention. In a second study by Pedrini and Pedrini (1976), grade point average was the most significant predictor of attrition/persistence, making other predictors appear unnecessary.

Bradley and Lehmann (1975) studied attrition at Empire State College of New York. They found that drop-outs tended to be younger than currently enrolled students, were single, worked full time in lower-status occupations, and had been enrolled as half-time students.

Those who lacked or had poor student-mentor relationships were more likely to leave school than those with good student-mentor relationships.

Gollfredson (1980) found that anxiety and commitment are good predictors of persistence in education. She also noted that persistence in educational pursuits is strongly related to the prestige and income level of an occupation.

Heerman (1981) examined reading level as a predictor of school persistence. He noted that investigators seeking to verify reading achievement as a valid predictor of student success in college have found a moderate relationship between reading achievement and persistence.

In summary, most researchers have assumed it is possible to predict which students are potential school leavers. The most commonly cited predictors of attrition are the following:

Low high school grade point average
Low ACT test scores
Low aspiration
No commitment to a college major
Poor study habits
Small-town background
Being older
No religious preference
Not living on campus
Home attitude toward college
Peer attitude toward college
Socially active on campus
Working full time
Being married
Low reading ability

The Effects of Financial Aid on Persistence

In Preventing Students From Dropping Out, Astin (1975) presented a comprehensive report on the relationship of financial aid to persistence. He made ten generalizations concerning this relationship:

Parental support is significant
If spouse's aid is major, the student will persist; if minor, the reverse will be true
Scholarships or grants yield small increase in persistence
Reliance on loans yields decreased persistence
Federal work-study is significant to persistence
Savings on assets shows decrease
G.I. Bill support is negative (not sure)
ROTC stipend is strongly for persistence
Work-study programs best for persister with money available
Aid packages not as good as individual money programs

In a study she conducted at North Greenville College in fall 1975, Scott (1978) found that there appeared to be a positive correlation between receipt of financial aid and students' persistence and graduate rates. In his review of student withdrawal from a Florida community college, Sutton (1975) had findings opposite to Scott's. He concluded that no significant differences existed between the withdrawal rates of financial-aid recipients and nonrecipients. Sutton also found that G.I. Bill recipients did not show a higher withdrawal rate than others receiving financial aid.

According to the literature, students receiving full financial aid tied in with large loans are more likely to persist than those paying on a personal basis. The most persistent students were those on partial aid who were working part time to pay for their schooling. In

general, it was found that most persisters will stay in school because of financial aid.

Minorities and Retention

At Stevens Institute of Technology, Simmons and Maxwell (1980) reviewed special programs directed at increasing minority retention. Areas they investigated included communication improvement; better relations with the home, high school, and community; financial aid; sensitivity counseling; instructional support; and staff training. Properly administered programs in these areas increased retention.

Another multifaceted approach to increasing minority retention was used by West et al. (1980) at a community college in Central Florida. Areas of emphasis were special objectives for student support, special-skills courses, intensive counseling, tutorial assistance, special referral service, teaching assistance, and financial aid. It was found that students involved in these programs tended to stay in school.

Meyers and Drevlow (1982) reported on a special summer program for minorities at the University of California, San Diego. Results showed that at the beginning of fall quarter 1981, after the "summer bridge program," minority students who had taken part in the program had a 31% higher retention rate than those who had not participated in the program.

Copeland (1976) attempted to discover the reasons for black-student attrition at predominantly white institutions. Too many and too few peer expectations were seen to bring about attrition. Many

students had bad experiences at the white colleges, and discrimination was found to cause attrition of black students at white colleges. Summarizing Astin's (1976) study, the most important areas affecting attrition at black colleges were financial aid, residence and campus environment, employment, and the characteristics of the college.

From 1973 to 1978, Rosenthal (1980) investigated the persistence of entering freshmen at Michigan State University. He found that Chicanos had the highest noncompletion rate; Asians and blacks had the next highest rate of noncompletion.

According to Gore (1975), a special recruitment program for Mexican-American students at Reedley College showed favorable results. He attributed the significantly greater persistence of the Mexican-Americans at Reedley College to more effective recruiting, peer advising, financial aid, and other supportive services.

Gutierrez (1981) surveyed Chicano students at the University of Southern Colorado to determine why they were leaving school before completing their studies. Although the study findings were not consistent, more than half of the students surveyed mentioned finances as a reason for leaving school.

In summary, some special programs targeted at upgrading academic skills of low-achieving minority students have aided in minority-student retention. Extensive counseling has been found to help minority students deal with social problems at predominantly white colleges. Such counseling aided in retention. Peer experiences also play an important role in minority-student retention. In both

predominantly white and black colleges, financial aid plays an important role in keeping minority students in school.

Retention Models

The National Center for Higher Education Management Systems (NCHEMS) developed a student-flow model to show areas in which student movement from college takes place. Gilbert (1975) designed the student-flow model with three components: Historical Model--a historical base for further projections, Admissions Model--classification of new students, and Transition Model--a look at future enrollments. Data were collected on reasons for leaving school and characteristics of drop-outs. A year later, Gilbert (1976) compiled findings of follow-up studies.

The NCHEMS published a manual devoted to information about students (Bower, 1974). The intention of this project was to develop and pilot test a questionnaire and accompanying procedures that would help institutional personnel understand and explain their individual attrition problems and to take the needed action to solve these problems.

Colleges in which a retention model is used to aid in retention are more successful in increasing persistence than colleges in which such models are not used.

Retention at the Community-College Level

Because some of the earliest work on college retention was done at the community-college level and the available research is so vast, the investigator covered this area fairly extensively.

Lee (1980) reported on a study conducted at Middlesex Community College that was aimed at increasing retention of low-ability students. Two five-week sessions before regular enrollment focused on skill-building courses, motivation and self-confidence, identifying individual needs, additional counseling as needed, tutoring, and financial assistance. The retention level of students who participated in these sessions increased.

In northern California, 23 community colleges joined in a venture called NORCAL to develop a program to analyze factors contributing to attrition and to implement experimental plans designed to improve retention (NORCAL, 1980). It was found that sharing information was useful to the individual schools' retention programs.

Lara (1980) reported on a survey of 508 persisting students and 316 drop-outs at UCLA Community College. He found that persistence and grade point average were significantly related to a student's transferring to another school or leaving college altogether. In another study dealing with UCLA persisters and nonpersisters, it was found that the two groups differed in terms of demographics, self-perception, and measures of quality of effort based on the sending schools. In this study, Cardinal (1981) reported on persistence of transfer students, contrasting them with native students.

Walleri (1981) reported on retention in Oregon community colleges. In the third of a five-part report, he pointed out that some forms of attrition may be congruent with students' objectives. He also examined attrition statistics for a typical community college and compared it to a statewide study with similar results.

Horvath (1979) developed a handbook to aid in the retention effort at Jefferson Community College. Ideas to encourage student retention focused on faculty-student interaction, general classroom management, and student-initiated activities.

Project HELP was undertaken at Sacramento City College in 1978. Bohr (1979) reported that students in this project worked with instructors and tutors in small groups and on a one-to-one basis. An interactive team-teaching approach was also used. Favorable results were reported; however, no comparative study was available.

Reeb (1979) reviewed Barstow College's calendar experiment and found that, in 1976, student retention had increased markedly following a change from a semester to a quarter system. However, the validity of the study is in question because of questionable data.

At Kingsborough Community College, Willner (1979) conducted a study to identify potential drop-outs. He discovered high school grade point average, curriculum, reasons for going to college, certainty of occupational choice, parents' attitude toward higher education, and a good rating of Kingsborough were significantly related to persistence and retention.

Baker (1977) found differences in female school leavers at a small Utah community college. Females who were lower achieving, experienced less family harmony, and had more personal problems were more likely to leave school than were other female students.

In a study on disadvantaged community-college students, Stevenson (1979) developed the following program. The students were taught by 14 instructors and took their courses in blocks of time that kept them together in smaller groups. The persistence rate of these students was much higher than that of the student body as a whole.

Mercer County Community College (1978) developed a computer-tracing program for entering freshmen, to be used in attrition study. The system was successful in cataloging and tracing students. Each student was categorized as to schedule, grades, and background information.

Delta Community College in Michigan has studied goals as a means of stemming attrition. In one such study, Brunner (1978) discovered that evening students were more likely than day students to leave, 40% of the students with fewer than 10 credits left, older students were more likely to leave than younger students, and 20% of the students surveyed said their goal accomplishment was important.

larkin (1977) reported on course withdrawal at Prince George Community College in Maryland. He recommended allowing students to drop courses rather than to fail the course. He also recommended developing a solid student-contact system, using continuing education units, and training faculty to identify student objectives.

Wetzel (1977) reported on a survey of nonreturning students at Delaware County Community College. Major reasons for leaving were transfer to another school, home or work obligations, financial problems, and moving from the area. At Essex County College, students indicated financial or family problems as their major reasons for leaving school (McMillan, 1977).

Preising (1979) conducted a study of extended-opportunity programs and services. The study dealt with first-time entering students for fall 1973. He found that low aspirations led to students' early exit. Sixty-two percent of the successful students stated that their goal was an associate degree.

Based on a follow-up study conducted at West Los Angeles College in 1977, Garber (1979) listed several reasons for students not returning to school. Nonreturning students tended to be older and to have limited specific objectives; also, they planned to take selected courses rather than degree-oriented programs.

In 1977, a research team at Honolulu Community College (1978) conducted a study of working students. Responses related to attrition were the following: transferred for better jobs, preference for work over school, full-time employment, and a solid persistence or part-time employment.

In summary, the literature on community colleges is similar to that on four-year colleges in the areas of prediction of attrition, reasons for leaving school, financial aid, minority-student attrition,

and solutions to the problem of attrition. Some unique measures found to aid retention at the community-college level are:

Emphasis on self-confidence
Development of self-awareness
Calendar changes
Computer tracing

Solutions to the General Problem of Attrition

Hershey (1981) emphasized the relationship of enrollment to retention and showed the importance of studying why students remain in college, as well as why they leave. He suggested that retention efforts should include a review of services to transfer students and identification of students with marginal ability and those whose academic major is still in question.

Bowles (1980) described an actual university-life seminar designed to help entering students cope with various aspects of the academic environment, specifically human relations, academic decision making, study skills, career decision making, and experience in time management. Results of this research were good enough to develop a course that later evolved into a permanent life seminar with five sections.

The University of Wisconsin (Eau Claire) has developed freshman-level adjunct courses. According to Harding (1981), these courses were designed to eliminate entering freshmen's deficiencies, thereby helping them to meet the skill requirements of their regular course work. These adjunct courses meet for extra class sessions each week and have been reported to show positive results.

Personnel from eight private colleges in Southern California took part in a consortium in which they polled retention information. Green (1981) indicated the importance of having designated individuals at each college collect data on student retention.

Lenning (1980) reported on various studies dealing with retention. He emphasized that the fit between the student and the institution plays an important role in persistence. A student's pre-enrollment knowledge of the institution is vital.

In 1978, a study was conducted at Western Illinois University, showing the relationship between attrition and the student's choice of major. Lueck (1978) discovered that specific curricular choices--business administration, science, education, and public affairs--had the greatest positive effect on student retention.

In a study at Columbia State College of Tennessee, Jackson (1978) found that students were far more likely to persist in school if individual faculty advising had been available to them than if they had not had such advising.

The university system of the Georgia Board of Regents conducted a special-studies program for one school quarter in an attempt to improve retention. Nash (1978) reported that students enrolled in the special program had a 2% higher retention rate (92% versus 90%) than regularly enrolled students.

Kapraun (1980) stated that student peer advisors can do much to facilitate entering students' academic adjustment. He studied seven components of academic advising: an institutional commitment to

academic advising, a faculty-endorsed statement of advisor responsibilities, the training of advisors, an advisor's evaluation, a well-defined referral system, a group of peer advisors, and an information-support system.

At the University of Minnesota an activist counseling program for academically unprepared students was undertaken in defense of an open admissions policy. Arrington (1980) reported that although students who took part in the counseling program did not receive higher grades or earn more credits, they persisted longer in school than those who did not participate in the program.

Gamache (1981) found that the proportion of students applying for and enrolling in college was directly related to the number of pre-enrollment contacts by college personnel. However, no evidence was found to support a difference in persistence between contacted and noncontacted students.

Haagen (1977) investigated studies conducted in 1973 and 1976 and compiled information on student attrition from both years. The experiences and attitudes of school leavers were examined in hopes of helping other students who were thinking of leaving school.

In a study at a midwestern university, Kowalski (1977) found significant differences between persisting and nonpersisting students. The home environments and personal and academic characteristics of these students were examined. Persisters recorded better conditions in all areas than did nonpersisters.

Glennen (1975) emphasized the importance of faculty counseling in reducing attrition. According to Glennen, a program that used faculty counseling reduced academic attrition, probation, suspension, and withdrawal.

Huber (1971) asserted that matching students with schools would increase retention immeasurably. He advised defining the school's mission, understanding its priorities, and selecting incoming students as individuals who would fit the college.

Discussing a national seminar on college retention, Noel (1976) observed that retention is a campus-wide responsibility. School administrators need to conduct a thorough examination to define the institution's strengths and weaknesses.

In a longitudinal study conducted at Syracuse University (Pascarella, 1977), support was found for Tinto's model, which asserts that informal student-faculty contact is a significant predictor of college persistence. Likewise, Pervin, Reik, and Dalrymple (1966) reported that interaction between the institution and the individual is highly important to student retention.

Christensen (reporting on Heath, 1980) offered the following recommendations for solving retention problems: Admissions officials should plan their programs around retention, student-activities coordinators should focus on involvement of students who belong to an organized group, counselors and advisors should help develop retention programs, and the financial-aid office should look at the total needs of students, not just their financial needs.

As a result of a study conducted at Hofstra University, MacMillan and Kester (1980) listed the following means of improving retention: development of a retention committee, administrative commitment, inservice for faculty, college environment changes, recruitment changes, addition of pertinent seminars, dormitory changes, changes in social life, and financial aid.

At C. W. Post Center of Long Island University, a study group recommended the following actions for increasing retention: freshman curriculum changed to a developmental approach, on-going freshman orientation program with emphasis on counseling, focus on critical moments of the freshman year, on-going counselor training, and the fusion of teaching, learning, advising, and counseling (Sheffield & Meskill, 1980).

In summary, many solutions to the problem of student attrition have been offered. Some of the most frequently mentioned methods are as follows:

Improved counseling
More emphasis on screening pre-entries
Special programs for low achievers
Special programs for those whose admission test test scores are low
Better social activities on campus
More emphasis on college-student fit
A more student-reflected curriculum
Better services for transfer students
Increased and upgraded student personnel services
Upgraded pre-enrollment contact

Summary

An extensive amount of literature is available in the area of student retention and attrition. The selections included in this

chapter were chosen because of their timeliness and similarities to the present study. The selections were grouped in seven related sections to structure the review more meaningfully. It should be remembered that no study was found in which student profiles were developed as a tool for use in retention.

CHAPTER III

DESIGN AND METHODOLOGY

Introduction

This chapter contains a description of the study sample and a rationale for the grouping of the sample. Procedures followed in collecting the data are described, followed by a discussion of the statistical-analysis techniques used in the study.

Description of the Sample

The total number of students entering Saginaw Valley State College in fall 1981 was 590. After the part-time, transfer, and handicapped students had been deleted from the sample, the number of students in the actual sample was 380. These 380 students were divided into eight groups, according to differences in housing, sex, and retention. The rationale for selecting these eight groups was based on a review of the latest research on retention and on specific concerns of Saginaw Valley administrators. Each of these groups was compared to and weighed against variables taken from the Entering Student Questionnaire, which was completed by the entire entering class for fall 1981.

At the beginning of winter term 1982, of the 380 students in the sample, 326 had stayed in school and 54 had left school. The significant variables were identified as they related to students in

the sample who had stayed in or left school. The sample group was followed through the second semester of their freshman year. The following performance variables were tested for significance in the study: students returning, first semester grade point average, and credits completed. The variables were used to compare the eight groups and to develop the student profiles.

Data Collection

Each member of the entering class of 1981 at Saginaw Valley State College filled out the Entering Student Questionnaire (see Appendix A), the instrument used to collect data for this study. The questionnaire was developed at the National Center for Higher Education Management Systems in Boulder, Colorado. The instrument was subjected to a two-year field evaluation in higher education institutions.

The questionnaire was administered repeatedly in institutions participating in the field test; responses were subjected to standard validation procedures. At the same time, materials associated with the administration of the instrument--handbooks and the analysis service--were critically reviewed and revised when necessary. Institutions that participated in field evaluation of the Entering Student Questionnaire included Florida Technological University, Fort Hays State College, South Dakota State University in Brookings, Cuyahoga Community College, Colorado Mountain College, Metro-Community College (Kansas City), and Yakima Valley Community College.

Data-Analysis Procedures

Discriminant Analysis

All of the information from the Entering Student Questionnaires was tabulated and fed into the Statistical Package for the Social Sciences (Nie et al., 1975) computer service. Discriminant analysis was then used to weigh the significance of all the variables listed on the questionnaire tape.

Table 3.1 is a weighted list of all the variables obtained through the discriminant analysis procedure. All of the variables were weighed as predictors of students who stayed in school or left after the first semester of the 1981 school year. In the table, each of the variables is listed in order of its weighting. With the discriminant analysis procedure, the higher the weighted number a variable received, the more significant that variable was to the student sample. The variables are listed in the table by compter code name and by a full description as they appear on the questionnaire, starting with the highest or most significant weighting and working down to the lowest or least significant weighting. The positive weights indicate the variables that were significant to retention, and the negative weights indicate the variables that were significant to attrition. The standard level of .05 was used to determine significance. From this point on, only the computer code names are used when referring to individual variables.

Table 3.1.--The variables and their weighting numbers.

Computer Code Name	Variable	Discriminant Weighted Number
GRAD	Those planning to graduate from Saginaw Valley State College	+.20574
FIRSTC	Those who said Saginaw Valley State College was their first choice	-.20125
TRAN	Those planning to leave Saginaw Valley State College	-.18802
SOCREP	Those who came to Saginaw Valley State College because of its social reputation	-.17370
KNOWDG	Those who said gaining knowledge was a goal	-.15208
DROP	Those planning to drop out or stop out of school	+.14877
NRCHLIF	Those wanting to enrich their life as a goal	-.12323
ARCON	Those who were interested in artists' presentations and concerts on campus	+.11437
STDYHAB	Those who said they wanted to improve their study habits	-.11075
IMS	Those interested in intramurals and recreational activities on campus	-.10831
STUSERV	Those who said they would be in need of some student services	-.10783
SLFCON	Those who wished to improve their self-confidence while in school	-.09615
STUGOVT	Those who said they would be interested in taking part in student government	+.09577
CONVEN	Those who came to Saginaw Valley State College because it was inconvenient to go elsewhere	-.09475

Table 3.1.--Continued.

Computer Code Name	Variable	Discriminant Weighted Number
INCRPAY	Those who said they came to Saginaw Valley State College to improve their earning power	+.09135
ACT	ACT test scores	-.09059
COUNADV	Those who came to Saginaw Valley State College on their counselor's advice	+.08811
SURMAJ	Those who listed a major academic area	+.08039
ADMGPA	Admitting grade point average	+.08000
MARTL	Those who were married	+.07980
ULTIMAT	Those who indicated their ultimate degree goal	-.07676
INDPNDT	Those who said gaining independence was a goal	+.07024
NEWCAR	Those who came to Saginaw Valley State College looking for a new career	-.07010
CONCNFN	Those who said they were concerned about finances for their education	-.06984
TUTOR	Those who said they would need tutoring in one or more academic areas	+.06807
INVOL	Those who said they would get involved in campus activities	+.06460
AGE	An age breakdown of the sample	-.05571
PRSPROB	Those who said they would need help with their personal problems	+.05240
LDRSKLS	Those who said they wanted to improve their leadership skills	+.05042

The following variables failed to achieve a significant weighting of .05. They are listed here for informational purposes only but are not considered further.

COST	Those who came to Saginaw Valley State College because of finances	.04952
STUADV	Those who came to Saginaw Valley State College on other students' advice	.04961
CGMAJ	Those who were sure of their choice of a major academic area	.04811
DECPLAN	Those who wanted to decide educational and career plans	.04518
CHOME	Those who came to Saginaw Valley State College because it was close to home	.04423
EMPLSEM	Those wanting some form of employment while in school	.03742
EMPLSUG	Those who came to Saginaw Valley State College because of an employer suggestion	.03684
CLASTIM	Those who were concerned about when their classes would meet	.03549
SOCIAL	Those who said they wanted to improve their social participation	.03477
MTPLE	Those wishing to meet people while in school	.03232
DISCINT	Those wishing to discover other interests	.03140
TCHADV	Those who came to Saginaw Valley State College because of teachers' advice	.03067
CULSOC	Those who came to Saginaw Valley State College because of its cultural and social reputation	.03015

IMPKNOW	Those who came to Saginaw Valley State College to improve their knowledge	.02976
TRANS	Those planning to transfer from Saginaw Valley State College	.02846
LNGTRM	Those having long-term goals	.002627
EMPL	Those interested in employment	.02434
YMAJOR	Those selecting an individual major and why	.02142
CRSOFF	Those who came to Saginaw Valley State College because of course offerings	.02073
NEWLOC	Those who came to Saginaw Valley State College looking for a new location	.02046
DEGREE	Those planning to attain a degree from Saginaw Valley State College	.01982
FINAID	Those who applied for financial aid	.01648
ACADREP	Those who came to Saginaw Valley State College because of its academic reputation	.01113
FLLWSTU	Those who came to Saginaw Valley State College because of fellow students' advice	.00756
RACE	The racial breakdown of the sample	.00487
FINAD	Those needing financial assistance to attend school	.00420
CURRENT	Those on a current degree program	.00241
STULIFE	Those who wish to be involved in student life	.001274

The following variables failed the tolerance test for discriminant analysis and fell below the .0009 canonical discriminant weighting function.

HS	Having heard of Saginaw Valley State College from high school
RELFNDS	Having heard of Saginaw Valley State College from relatives and friends
COLREP	Having heard of Saginaw Valley State College from college representatives
PLACSER	Having heard of Saginaw Valley State College from a placement service
CATALOG	Having heard of Saginaw Valley State College from a catalog
MAIL	Having heard of Saginaw Valley State College through the mail
NEWSMAG	Having heard of Saginaw Valley State College from newspapers or magazines
RADIOTV	Having heard of Saginaw Valley State College from radio and television
INFODIS	Having heard of Saginaw Valley State College from information displays
TYPE	Individual student's class. All in the sample were freshmen

Four sets of weight comparisons were performed. A separate discriminant analysis was done on four combinations of the eight sample groups, looking specifically at persisters and leavers, students living on campus and those living off campus, and males versus females. The actual groupings were as follows:

Males on campus, persisters and leavers

Males off campus, persisters and leavers

Females on campus, persisters and leavers

Females off campus, persisters and leavers

The identified significant variables were weighted against these groups.

The researcher decided on a .05 significance level because it is generally accepted as a level at which significance is valid. This decision resulted in the elimination of variables with a weighting of less than .05 and left 29 variables to be considered in the study. The remaining significant variables and their discriminant weights are shown in Table 3.2.

Table 3.2.--The 29 significant variables and their weighted numbers.

Variable	Discriminant Weighted Number
GRAD	-.20574
FIRSTC	-.20125
TRAN	-.18802
SOCREP	-.17370
KNOLDG	-.15208
DROP	-.14877
NRCHLIF	-.12323
ARCON	+.11437
STDYHAB	-.11075
IMS	-.10831
STUSERV	-.10783
SLFCON	-.09615
STUGOVT	+.09577
CONVEN	-.09475
INCRPAY	+.09135
ACT	-.09059
COUNADV	+.08811
SURMAJ	+.08039
ADMGPA	+.08000
MARTL	+.07980
ULTIMAT	-.07676
INDPNDT	+.07024
NEWCAR	-.07010
CONCNFN	-.06984
TUTOR	+.06807
INVOL	+.06460
AGE	-.05571
PRSPROB	+.05240
LDRSKL	+.05042

These 29 significant variables can be examined according to the division of the questions in the Entering Student Questionnaire. The following is a discussion of those divisions. The variables are referred to by their computer code names.

The variables dealing with personal information were addressed in Questions 1 through 6. Of the 29 variables found to be significant through discriminant analysis, the following fell in this area:

AGE
MARTL

The variables related to goals of the individual were found in Questions 7 through 11. Through discriminant analysis, the following significant variables were found to be in this area:

NEWCAR	INCRPAY
SLFCON	ULTIMAT
INDPNDT	INVOL
NRCHLIF	ARCON
KNWLDG	LDRSKLS

Questions 9 and 10 concerned degree goals. Of the 29 variables found to be significant by discriminant analysis, only one--ULTIMAT--was in the area of degree goals.

None of the significant variables was found under Question 12, which dealt with employment.

Questions 13, 14, and 15 concerned factors that had influenced the students to attend Saginaw Valley State College, how they had heard of the school, and whether Saginaw Valley was their first choice of

college to attend. The following significant variables were found in this area:

STUSERV	SOCREP
CONVEN	FIRSTC
COUNADV	

Question 16 concerned financial aid; no significant variable was found for this question. Question 17 dealt with class-time preference; no significant variable was found for this question. Question 18 concerned whether the respondent planned to return to Saginaw Valley in winter term 1982. No significant variable was found for this question.

In Question 19, the respondents were asked how sure they were of their major. SURMAJ was the lone variable found to be significant for this question.

Question 20 dealt with housing, and as the sample groups were divided according to housing, this variable was examined throughout the entire study.

Question 21, dealing with finances, had one significant variable: CONCNFN.

Questions 22 through 26 dealt with the students' concerns with help they would need during the first year of college. The following significant variables were found in this area:

STDYHAB	PRSPROB
INVOL	TUTOR

In the next-to-last section of the Entering Student Questionnaire, respondents were asked about potential changes they might make

in the immediate future. The following significant variables were found in this area:

DROP
GRAD
TRAN

The final section of the questionnaire concerned activities in which the students would participate during their stay at Saginaw Valley State College. The following significant variables were found in this area:

ARCON
IMS
STUGOVT

Two performance variables were added because various writers on retention have emphasized the importance of both grade point average at admission and ACT scores of the entering class. Both of these variables were found to be significant.

Sample members did not respond to a section of the questionnaire dealing with class-time preference. It must be pointed out that individuals included in the sample had never been in college and really did not have any knowledge of class-time offerings. Hence this area would not reflect any significant relationship to staying in or leaving school.

Although not a direct objective of the present research, discriminant analysis provides a formula that could act as a predictor for the stayers and leavers in this study. That formula was not used in the analyses performed in the study but is provided for the reader's information in Appendix B.

Stepwise Method of Discriminant Analysis

After all of the variables had been weighed by the discriminant analysis procedure, the 29 variables found to be significant were processed through the stepwise method of discriminant analysis and compared to the four groups examined in the study. The results of this analysis are described in the following pages. The stepwise method of discriminant analysis was used to examine further the significance of the 29 variables. These 29 variables were subjected to the stepwise system and compared to the established groups of the sample. In essence, the stepwise system was used to analyze each of the 29 variables against all groups individually until they were no longer significant to the individual group. The stepwise system was employed until the significance of the variables was reached.

Males on campus, stayers and leavers. Eighty students constituted this group; 65 of them returned for winter term 1982 and 15 did not. After 14 steps of analysis, the following variables were declared significant:

INDPNDT	LDRSKLS
IMS	CONVEN
PRSPROB	TRAN
SOCREP	SLFCON
FIRSTC	NRCHLIF
INVOL	INCRPAY
NEWCAR	CONCNFN

Males off campus, stayers and leavers. This group contained 84 students; 74 of them returned for winter term 1982 and 10 did not. After 11 steps of analysis, the following variables were declared significant:

MARTL	ULTIMAT
NEWCAR	KNWLDG
AGE	CONVEN
INDPNDT	NRCHLIF
COUNADV	SLFCON
FIRSTC	

Females on campus, stayers and leavers. This group had 94 members; 80 of them returned for winter term 1982 and 14 did not. After 14 steps of analysis, the following variables were declared significant:

IM	ACT
TRAN	PRSPROB
TUTOR	NRCHLIF
INVOL	NEWCAR
ARCON	STDYHAB
KNWLDG	INCRPAY
COUNADV	INDPNDT

Females off campus, stayers and leavers. Of the 122 students in this group, 107 returned for winter term 1982 and 15 did not. After 11 steps of analysis, the following variables were declared significant:

ASE	STDHAB
INCRPAY	TRAN
ULTIMAT	KNWLDG
CONCNFN	ACT
IMS	COUNADV
GRAD	

As a result of the stepwise discriminant analysis, the following 24 variables were significant to retention for at least one of the sample groups:

INDPNDT	INCRPAY
IMS	CONCNFN
PRSPROB	MARTL
SOCREP	AGE
FIRSTC	COUNADV
INVOL	ULTIMAT
NEWCAR	KNWLDG
LDRSKLS	TUTOR
CONVEN	ARCON
TRAN	ACT
SLFCON	STDYHAB
NRCHLIF	GRAD

Cross-Tabulation Analysis

Cross-tabulation analysis was performed on the 24 variables that were found to be significant to retention for at least one of the sample groups. This analysis gave a percentage breakdown of each variable as well as a raw chi-square level of significance for each variable. The cross-tabulation findings for each of the 24 variables were as follows.

GRAD. Of the 326 sample members who stayed in school, 126 said it was very likely they would graduate from Saginaw Valley State College, 99 said it was somewhat likely, 32 said it was not likely, and 69 were undecided. Of the 54 sample members who left school, 22 said it was very likely they would graduate from Saginaw Valley, 17 said it was somewhat likely, 6 said it was not likely, and 9 were undecided.

FIRSTC. Of the 326 sample members who stayed in school, 188 said Saginaw Valley was their first choice of schools to attend, whereas 138 said it was not. Of the 54 sample members who left school, 26 said Saginaw Valley was their first choice of schools to attend, whereas 28 said it was not.

TRAN. Of the 326 sample members who stayed in school, 41 said it was very likely they would transfer, 88 said it was somewhat likely, 128 said it was not likely, and 69 were undecided. Of the 54 individuals who left school, 11 said it was very likely they would transfer, 10 said it was somewhat likely, 25 said it was not likely, and 8 were undecided.

SOCREP. Of the 326 students who stayed in school, 285 said they had been attracted to Saginaw Valley because of its social reputation; 40 said they had not been attracted to the school because of its social reputation. Of the 54 students who left school; 46 said they had been attracted to Saginaw Valley because of its social reputation, and 8 said they had not been attracted to the college for this reason.

KNWLDG. Of the 326 students in the sample who stayed in school, 283 said that to improve their knowledge, technical skills, and/or competencies required for their job or career was a goal they hoped to reach while in college; 43 did not respond to this item. Of the 54 students who left school, 45 said that to improve their knowledge, technical skills, and/or competencies required for their job or career was a goal they hoped to reach while in college; 9 did not respond to this item.

NRCHLIF. Of the 326 sample members who stayed in school, 228 said they wished to enrich their lives; 98 said this was not a major concern. Of the 54 sample members who left school, 40 said they wished to enrich their lives, and 14 said this was not a major concern.

ARCON. Of the 326 students who stayed in school, 125 said they were interested in artists and concerts, 129 said they were not interested, and 72 were undecided. Of the 54 sample members who left school, 21 said they were interested in artists and concerts, 22 said they were not interested, and 11 were undecided.

STDYHAB. Of the 326 members of the sample who stayed in school, 185 said they would need help to improve their study habits, whereas 112 said they would not; 29 did not respond. Of the 54 sample members who left school, 29 said they would need help to improve their study habits, 19 said they would not need such help, and 6 did not respond.

IMS. Of the 326 students who stayed in school, 171 said they were interested in intramurals, 81 said they were not interested, and 74 were undecided. Of the 4 students who left school, 22 said they were interested in intramurals, 22 said they were not interested, and 10 were undecided.

SLFCON. Of the 326 students who stayed in school, 197 said improving their self-confidence was a goal they hoped to reach during their college stay; 129 did not respond to this item. Of the 54 sample members who left school, 33 said improving their self-confidence was a goal they hoped to reach during their college stay; 21 did not respond to this question.

CONVEN. Of the 326 students who stayed in school, 37 said it was inconvenient to attend school elsewhere, whereas 289 did not respond to this item. Of the 54 students who left school, 7 said it

was inconvenient to attend school elsewhere; 47 did not respond to this item.

INCRPAY. Of the 326 sample members who stayed in school, 113 said a goal they had for attending school was to increase their chances for a raise and/or a promotion; 213 did not respond to this item. Of the 54 students who left school, 10 said a goal they had for attending school was to increase their chances for a raise and/or promotion; 44 did not respond to the item.

ACT. Of the 326 students who stayed in school, 213 had entering ACT scores below 19; 113 had entering ACT scores above 20. Of the 54 students who left school, 41 had entering ACT scores below 19, 11 had entering ACT scores above 20, and 2 had no recorded ACT scores.

COUNADV. Of the 326 members of the sample who stayed in school, 240 said that some counselor's advice had been influential in their coming to Saginaw Valley, whereas 86 did not respond to this question. Of the 54 students who left school, 39 said some counselor's advice had been influential in their coming to Saginaw Valley; 15 did not respond to the item.

MARTL. Of the 326 members of the sample who stayed in school, 317 were single and 9 were married. Of the 54 students who left school, 50 were single and 4 were married.

ULTIMAT. Of the 326 sample members who stayed in school, 4 said they had no degree in mind, 5 wanted a certificate degree, 6 wanted an associate's degree, 96 sought a bachelor's degree, 119 wanted

a master's degree, 14 wanted a specialist degree, 21 wanted a professional degree, 19 sought a doctorate, and 42 did not respond. Of the 54 students who left school, 2 said they had no degree in mind, 2 wanted a certificate degree, 17 wanted a bachelor's degree, 19 desired a master's degree, 1 wanted a specialist degree, 4 sought a professional degree, 3 wanted a doctorate, and 6 did not respond.

INDPNDT. Of the 326 students who stayed in school, 245 said they wanted independence and 81 said it was not a major concern. Of the 54 students who left school, 37 said they wanted independence and 17 said it was not a major concern.

NEWCAR. Of the 326 sample members who stayed in school, 194 said they were seeking a new career; 132 said they were not sure. Of the 54 members who left school, 33 said they wanted a new career and 21 said they were not sure.

CONCNFN. Of the 326 students who stayed in school, 43 said financing was not a concern, 151 said there was some concern about having adequate finances for their educational expenses, 100 said financing was a major concern, and 32 did not respond. Of the 54 sample members who left school, 6 said financing was not a concern, 22 said there was some financial concern, 19 said financing was a major concern, and 7 did not respond.

TUTOR. Of the 326 students who stayed in school, 78 said they might need tutoring in one or more academic subject areas, 214 said they would not need tutoring, and 34 did not respond. Of the 54 students who left school, 10 said they might need tutoring in one or

more academic subject areas, 36 said they would not, and 8 did not respond.

INVOL. Of the 326 sample members who stayed in school, 132 said they would need assistance in getting involved in campus activities, whereas 166 said they would not; 28 did not respond. Of the 54 students who left school, 18 said they would need assistance getting involved in campus activities, 30 said they would not need such help, and 6 did not respond.

AGE. Of the 326 students who stayed in school, 229 were between 18 and 22 years of age, whereas 92 were under 18; 5 did not respond. Of the 54 sample members who left school, 37 were between 18 and 22 years of age and 13 were under 18; 4 did not respond to this item.

PRSPROB. Of the 326 students who stayed in school, 20 said they would need help with personal problems during the year, whereas 276 said they would not; 30 did not respond. Of the 54 students who left school, 7 said they would need help with personal problems during the year, and 41 said they would not; 6 did not respond.

LDRSKLS. Of the 326 students who stayed in school, 136 said one of their goals while in college was to improve their leadership skills; 190 did not respond to this item. Of the 54 sample members who left school, 20 said one of their goals while in college was to improve their leadership skills; 34 did not respond to this question.

Summary

The methodology of the study was explained in Chapter III. The uses of direct discriminant analysis, stepwise analysis, and cross-tabulation were illustrated and explained. All of the data illustrated in this chapter are analyzed in Chapter IV. This information is examined as it pertains to each of the student groups formed for this research.

CHAPTER IV

ANALYSIS OF THE DATA

Introduction

The data from the Entering Student Questionnaire are analyzed, discussed, and interpreted in this chapter. The chapter is divided into three major parts: (1) results of the discriminant analysis of the variables listed in the questionnaire, (2) results of the stepwise analysis used in dealing with the significant variables, and (3) results of the cross-tabulation performed on all of the significant variables.

Results of the Discriminant Analysis

All of the variables listed on the Entering Student Questionnaire, which was completed by the 380 first-time students for fall 1981 at Saginaw Valley State College, are examined in this section. Each of the variables was entered into the discriminant analysis system and individually weighted, to be used as a predictor of whether a student would return to or leave school for winter term 1982.

The subprogram DISCRIMINANT can be used to analyze the data either by entering all discriminating variables directly into the analysis, or through a variety of stepwise methods, selecting the best set of discriminating variables. All of the variables were weighted by

the discriminant-analysis direct method. The .05 level was used as the criterion for significance as it is an accepted statistical level of analysis. The variables with a weight of at least .05 were then analyzed by the stepwise method to find which variables were the most significant for each of the identified groups.

A cross-tabulation was done on those variables found to be significant for the identified groups, in order to examine comparable percentages and to find the raw chi-square level for each variable as it related to the groups. Each of the variables was given a discriminant weight. The higher the weight, the more significant the variable. A complete list of the discriminant weighting levels was shown in Table 3.1. The 29 significant variables (those with a weight of at least .05) were listed in Table 3.2.

Results of Stepwise Analysis

The 29 variables deemed significant by the direct method of discriminant analysis were placed in the stepwise-analysis system and weighted against the sample divided into groups from which the eventual student profiles were developed. The stepwise analysis was used to find the specific relationship of the significant variables to the individual identified groups. Once the stepwise method was completed, 5 of the 29 variables were eliminated because they failed to pass the stepwise method. That is, when they were placed in stepwise, they did not appear as significant. Therefore, they were eliminated from the remaining analyses. These five variables were:

STUSERV	SURMAJ
DROP	STUGOVT
ADMGPA	

The remaining 24 variables were found to be significant at least once during the stepwise analysis when compared to the groups established for profile development. Table 4.1 contains the stepwise-analysis results, showing each of the significant variables and the groups for which they were significant. The four groups set up for the profile study were all compared on the basis of how many students stayed in or left school. The groups were:

Males on campus, persisters and leavers	Group 1
Males off campus, persisters and leavers	Group 2
Females on campus, persisters and leavers	Group 3
Females off campus, persisters and leavers	Group 4

Each of the four groups included persisters and leavers. Hence, eight groups of students were actually considered in the study.

Results of Cross-Tabulation Analysis

Cross-tabulation analysis of the 24 significant variables in the study offered yet another view of the variables and their relationship to retention. The cross-tabulation analysis, in addition to the stepwise method, was used to develop the sample-group profiles that are discussed in Chapter V.

Of the 24 significant variables considered in the cross-tabulation analysis, eight were found significant for three of the sample groups, ten for two of the groups, and six for only one group.

Those variables whose raw chi-square value was at least .05 were determined to be significant.

Table 4.1.--Results of stepwise analysis: Significant variables, by the groups for which they were significant.

Variable	Group 1	Group 2	Group 3	Group 4
INDPNDT	X	X	X	
IMS	X		X	X
PRSPROB	X		X	
SOCREP	X			
FIRSTC	X	X		
INVOL	X		X	
NEWCAR	X	X	X	
LDRSKLS	X			
CONVEN	X	X		
TRAN	X		X	X
SLFCON	X	X		
NRCHLIF	X	X	X	
INCRPAY	X		X	X
CONCNFN	X			X
MARTL		X		
AGE		X		X
COUNADV		X	X	X
ULTIMAT		X		X
KNWLDG		X	X	X
TUTOR			X	
ARCON			X	
ACT			X	X
STDYHAB			X	X
GRAD				X

The following pages contain a breakdown of the cross-tabulation tables for each significant variable. Included are the positive and negative coefficient weighting number for each of the variables, the number of times the variable was significant for the sample groups, the

pertinent findings of the cross-tabulation analysis, and the significance level of the raw chi-square value.

Analysis of Significant Variables

The eight variables that were found to be significant for three groups are discussed on the following pages.

To develop ability to be independent, self-reliant, and adaptable (INDPNDT)

The canonical discriminant coefficient weighting number was positive, +.07024, showing that this variable was significant to retention. The variable was significant for males on campus, males off campus, and females on campus. Tables 4.2, 4.3, and 4.4 relate to this variable.

As shown in Table 4.2, 60% of the males on campus who stayed in school had this variable as a goal, whereas 33.3% of those who left school had this variable as a goal. The raw chi-square value was .0613.

Table 4.2.--Cross-tabulation analysis of INDPNDT--males on campus.

		Did Not Respond	Yes Goal	Row Total
Stayers	N	26	39	65
	Row %	40.0	60.0	81.3
Leavers	N	10	5	15
	Row %	66.7	33.3	18.8
Column Total	N	36	44	80
	Col %	45.0	55.0	100.0

Table 4.3 shows that 73% of the males off campus who stayed in school had this variable as a goal; 80% of those who left school had this variable as a goal. The raw chi-square value was .6352.

Table 4.3.--Cross-tabulation analysis of INDPNDT--males off campus.

		Did Not Respond	Yes Goal	Row Total
Stayers	N	20	54	74
	Row %	27.0	73.0	88.1
Leavers	N	2	8	10
	Row %	20.0	80.0	11.9
Column Total	N	22	62	84
	Col %	26.2	73.8	100.0

As shown in Table 4.4, 81.3% of the females on campus who stayed in school had this variable as a goal; 85.7% of those who left school had this variable as a goal. The raw chi-square value was .6889.

Table 4.4.--Cross-tabulation analysis of INDPNDT--females on campus.

		Did Not Respond	Yes Goal	Row Total
Stayers	N	15	65	80
	Row %	18.8	81.3	85.1
Leavers	N	2	12	14
	Row %	14.3	85.7	14.9
Column Total	N	17	77	94
	Col %	18.1	81.9	100.0

Activities of interest, intramural sports, and recreation (IMS)

The canonical discriminant coefficient weighting number was negative, -.10831, showing this variable to be significant to attrition. The variable was significant for males on campus, females on campus, and females off campus. Table 4.5, 4.6, and 4.7 relate to this variable.

As shown in Table 4.5, 70.8% of the males on campus who marked this variable "yes" stayed in school. The raw chi-square value was .0236.

Table 4.5.--Cross-tabulation analysis of IMS--males on campus.

		Did Not Respond	Yes	No	Row Total
Stayers	N	14	46	5	65
	Row %	21.5	70.8	7.7	81.3
Leavers	N	3	7	5	15
	Row %	30.0	46.7	33.3	18.8
Column Total	N	17	53	10	80
	Col %	21.2	66.2	12.5	100.0

As shown in Table 4.6, 58.7% of the females on campus who marked this variable "yes" stayed in school. The raw chi-square value was .0063.

Table 4.7 shows that 37.4% of the females off campus who marked this variable "yes" stayed in school. The raw chi-square value was .8952.

Table 4.6.--Cross-tabulation analysis of IMS--females on campus.

		Did Not Respond	Yes	No	Row Total
Stayers	N	22	47	11	80
	Row %	27.5	58.7	13.7	85.1
Leavers	N	2	5	7	14
	Row %	14.3	35.7	50.0	14.9
Column Total	N	24	52	18	94
	Col %	25.5	55.3	19.1	100.0

Table 4.7.--Cross-tabulation analysis of IMS--females off campus.

		Did Not Respond	Yes	No	Row Total
Stayers	N	23	40	44	107
	Row %	21.5	37.4	41.1	87.7
Leavers	N	4	5	6	15
	Row %	26.7	33.3	40.0	12.3
Column Total	N	27	45	50	122
	Col %	22.1	36.9	41.0	100.0

To prepare for a new career (NEWCAR)

The canonical discriminant coefficient weighting number was negative, -.07010, showing this variable to be significant to attrition. The variable was significant for males on campus, males off campus, and females on campus. Table 4.8, 4.9, and 4.10 relate to this variable.

Of the males on campus who marked this variable as a goal, 80% stayed in school. The raw chi-square value was .8469 (see Table 4.8).

Table 4.8.--Cross-tabulation analysis of NEWCAR--males on campus.

		Did Not Respond	Yes Goal	Row Total
Stayers	N	45	20	65
	Row %	69.2	30.8	81.3
		81.8	80.0	
Leavers	N	10	5	15
	Row %	66.7	33.3	18.8
		18.2	20.0	
Column Total	N	55	25	80
	Col %	68.8	31.3	100.0

As seen in Table 4.9, 82.5% of the females on campus who marked this variable as a goal stayed in school. The raw chi-square value was .5413.

Table 4.10 shows that 94.6% of the males off campus who marked this variable as a goal stayed in school. The raw chi-square value was .1027.

Table 4.9.--Cross-tabulation analysis of NEWCAR--females on campus.

		Did Not Respond	Yes Goal	Row Total
Stayers	N	47	33	80
	Row %	58.7	41.3	85.1
		87.0	82.5	
Leavers	N	7	7	14
	Row %	50.0	50.0	14.9
		13.0	17.5	
Column Total	N	54	40	94
	Col %	57.4	42.6	100.0

Table 4.10.--Cross-tabulation analysis of NEWCAR--males off campus.

		Did Not Respond	Yes Goal	Row Total
Stayers	N	39	35	74
	Row %	52.7	47.3	88.1
		83.0	94.6	
Leavers	N	8	2	10
	Row %	80.0	20.0	11.9
		17.0	5.4	
Column Total	N	47	37	84
	Col %	56.0	44.0	100.0

The likelihood of transferring to another school (TRAN)

The canonical discriminant coefficient weighting number was negative, -.18802, showing this variable to be significant to attrition.

The variable was significant for males on campus, females on campus, and females off campus. Tables 4.11, 4.12, and 4.13 relate to this variable.

As shown in Table 4.11, 82.1% of the males on campus who said it was not likely they would transfer stayed in school. The raw chi-square value was .9717.

Table 4.11.--Cross-tabulation analysis of TRAN--males on campus.

		Did Not Respond	Very Likely	Somewhat Likely	Not Likely	Row Total
Stayers	N	13	6	14	32	65
	Row %	20.0	9.2	21.5	49.2	81.3
		81.3	75.0	82.4	82.1	
Leavers	N	3	2	3	7	14
	Row %	20.0	13.3	20.0	46.7	14.9
		18.8	25.0	17.6	17.9	
Column Total	N	16	8	17	39	80
	Col %	20.0	10.0	21.2	48.7	100.0

Table 4.12 shows that 96.2% of the females on campus who said it was somewhat likely they would not transfer stayed in school. The raw chi-square value was .0101.

As shown in Table 4.13, 90.3% of the females off campus who said it was somewhat likely they would not transfer stayed in school. The raw chi-square value was .7561.

Table 4.12.--Cross-tabulation analysis of TRAN--females on campus.

		Did Not Respond	Very Likely	Somewhat Likely	Not Likely	Row Total
Stayers	N	20	6	25	29	80
	Row %	25.0	7.5	31.3	36.2	85.1
		90.9	54.5	96.2	82.9	
Leavers	N	2	5	1	6	14
	Row %	14.3	35.7	7.1	42.9	14.9
		9.1	45.5	3.8	17.1	
Column Total	N	22	11	26	35	94
	Col %	23.4	11.7	27.7	37.2	100.0

Table 4.13.--Cross-tabulation analysis of TRAN--females off campus.

		Did Not Respond	Very Likely	Somewhat Likely	Not Likely	Row Total
Stayers	N	22	15	28	42	107
	Row %	20.6	14.0	26.2	39.3	87.7
		91.7	88.2	90.3	84.0	
Leavers	N	2	2	3	8	15
	Row %	13.3	13.3	20.0	53.3	12.3
		8.3	11.8	9.7	16.0	
Column Total	N	24	17	31	50	122
	Col %	19.7	13.9	25.4	41.0	100.0

To learn skills that will enrich daily life or make a more complete person (NRCHLIF)

The canonical discriminant coefficient weighting number was negative, -.12323, showing this variable to be significant to attrition.

The variable was significant for males on campus, males off campus, and females on campus. Tables 4.14, 4.15, and 4.16 relate to this variable.

According to Table 4.14, 79.6% of the males on campus who said this variable was a goal stayed in school. The raw chi-square value was .6328.

Table 4.14.--Cross-tabulation analysis of NRCHLIF--males on campus.

		Did Not Respond	Yes Goal	Row Total
Stayers	N	26	39	65
	Row %	40.0	60.0	81.3
		83.9	79.6	
Leavers	N	5	10	15
	Row %	33.3	66.7	18.8
		16.1	20.4	
Column Total	N	31	49	80
	Col %	38.7	61.2	100.0

As seen in Table 4.15, 87.5% of the males off campus who said this variable was a goal stayed in school. The raw chi-square value was .8117.

Table 4.16 shows that 86.3% of the females on campus who said this variable was a goal stayed in school. The raw chi-square value was .5440.

Table 4.15.--Cross-tabulation analysis of NRCHLIF--males off campus.

		Did Not Respond	Yes Goal	Row Total
Stayers	N	25	49	74
	Row %	33.8	66.2	88.1
		89.3	87.5	
Leavers	N	3	7	10
	Row %	30.0	70.0	11.9
		10.7	12.5	
Column Total	N	28	56	84
	Col %	33.3	66.7	100.0

Table 4.16.--Cross-tabulation analysis of NRCHLIF--females on campus.

		Did Not Respond	Yes Goal	Row Total
Stayers	N	17	63	80
	Row %	21.2	78.7	85.1
		81.0	86.3	
Leavers	N	4	10	14
	Row %	28.6	71.4	14.9
		19.0	13.7	
Column Total	N	21	73	94
	Col %	22.3	77.7	100.0

To increase chances for a raise and/or promotion (INCRPAY)

The canonical discriminant coefficient weighting number was positive, +.09135, showing this variable was significant to retention. The variable was significant for males on campus, females on campus, and

females off campus. Tables 4.17, 4.18, and 4.19 relate to this variable.

Of the males on campus who said this variable was a goal, 89.7% stayed in school. The raw chi-square value was .1464 (see Table 4.17).

Table 4.17.--Cross-tabulation analysis of INCRPAY--males on campus.

		Did Not Respond	Yes Goal	Row Total
Stayers	N	39	26	65
	Row %	60.0	40.0	81.3
		76.5	89.7	
Leavers	N	12	3	15
	Row %	80.0	20.0	18.8
		23.5	10.3	
Column Total	N	51	29	80
	Col %	63.8	36.2	100.0

As seen in Table 4.18, 91.3% of the females on campus who said this variable was a goal stayed in school. The raw chi-square value was .3367.

Of the females off campus who said this variable was a goal, 95% stayed in school. The raw chi-square value was .0866 (see Table 4.19).

Table 4.18.--Cross-tabulation analysis of INCRPAY--females on campus.

		Did Not Respond	Yes Goal	Row Total
Stayers	N	59	21	80
	Row %	73.7	26.2	85.1
		83.1	91.3	
Leavers	N	12	2	14
	Row %	85.7	14.3	14.9
		16.9	8.7	
Column	N	71	23	94
Total	Col %	75.5	24.5	100.0

Table 4.19.--Cross-tabulation analysis of INCRPAY--females off campus.

		Did Not Respond	Yes Goal	Row Total
Stayers	N	69	38	107
	Row %	64.5	35.5	87.7
		84.1	95.0	
Leavers	N	13	2	15
	Row %	86.7	13.3	12.3
		15.9	5.0	
Column	N	82	40	122
Total	Col %	67.2	32.8	100.0

To increase knowledge and understanding in an academic field (KNWLDG)

The canonical discriminant coefficient weighting number was negative, -.15208, showing this variable was significant to attrition.

The variable was significant for males off campus, females on campus, and females off campus. Tables 4.20, 4.21, and 4.22 relate to this variable.

As shown in Table 4.20, 88.9% of the males off campus who said this variable was a goal stayed in school. The raw chi-square value was .5822.

Table 4.20.--Cross-tabulation analysis of KNWLDG--males off campus.

		Did Not Respond	Yes Goal	Row Total
Stayers	N	10	64	74
	Row %	13.5	86.5	88.1
		83.3	88.9	
Leavers	N	2	8	10
	Row %	20.0	13.3	11.9
		15.9	5.0	
Column Total	N	12	72	84
	Col %	14.3	85.7	100.0

Table 4.21 shows that 85.5% of the females on campus who said this variable was a goal stayed in school. The raw chi-square value was .7444.

According to Table 4.22, 83.3% of the females off campus who said this variable was a goal left school. The raw chi-square value was .5327.

Table 4.21.--Cross-tabulation analysis of KNWLDG--females on campus.

		Did Not Respond	Yes Goal	Row Total
Stayers	N	9	71	80
	Row %	11.2	88.8	85.1
		81.8	85.5	
Leavers	N	2	12	14
	Row %	14.3	85.7	14.9
		18.2	14.5	
Column	N	11	83	94
Total	Col %	11.7	88.3	100.0

Table 4.22.--Cross-tabulation analysis of KNWLDG--females off campus.

		Did Not Respond	Yes Goal	Row Total
Stayers	N	13	94	107
	Row %	12.1	87.9	87.7
Leavers	N	1	14	15
	Row %	6.7	93.3	12.3
Column	N	14	108	122
Total	Col %	11.5	88.5	100.0

Attending Saginaw Valley State College on counselor's advice (COUNADV)

The canonical discriminant coefficient weighting number was positive, +.08811, showing this variable was significant to retention. The variable was significant for males off campus, females on campus,

and females off campus. Tables 4.23, 4.24, and 4.25 relate to this variable.

As shown in Table 4.23, 93.3% of the males off campus who said they had come to Saginaw Valley State College on a counselor's advice stayed in school.

Table 4.23.--Cross-tabulation analysis of COUNADV--males off campus.

		Did Not Respond	Reason	Row Total
Stayers	N	60	14	74
	Row %	81.1	18.9	88.1
		87.0	93.3	
Leavers	N	9	1	10
	Row %	90.0	10.0	11.9
		13.0	6.7	
Column Total	N	69	15	84
	Col %	82.1	17.9	100.0

Of the females on campus who said they had come to Saginaw Valley State College on a counselor's advice, 87.9% stayed in school. The raw chi-square value was .5787 (see Table 4.24).

As seen in Table 4.25, 83.9% of the females off campus who said they had come to Saginaw Valley State College on a counselor's advice stayed in school. The raw chi-square value was .4516.

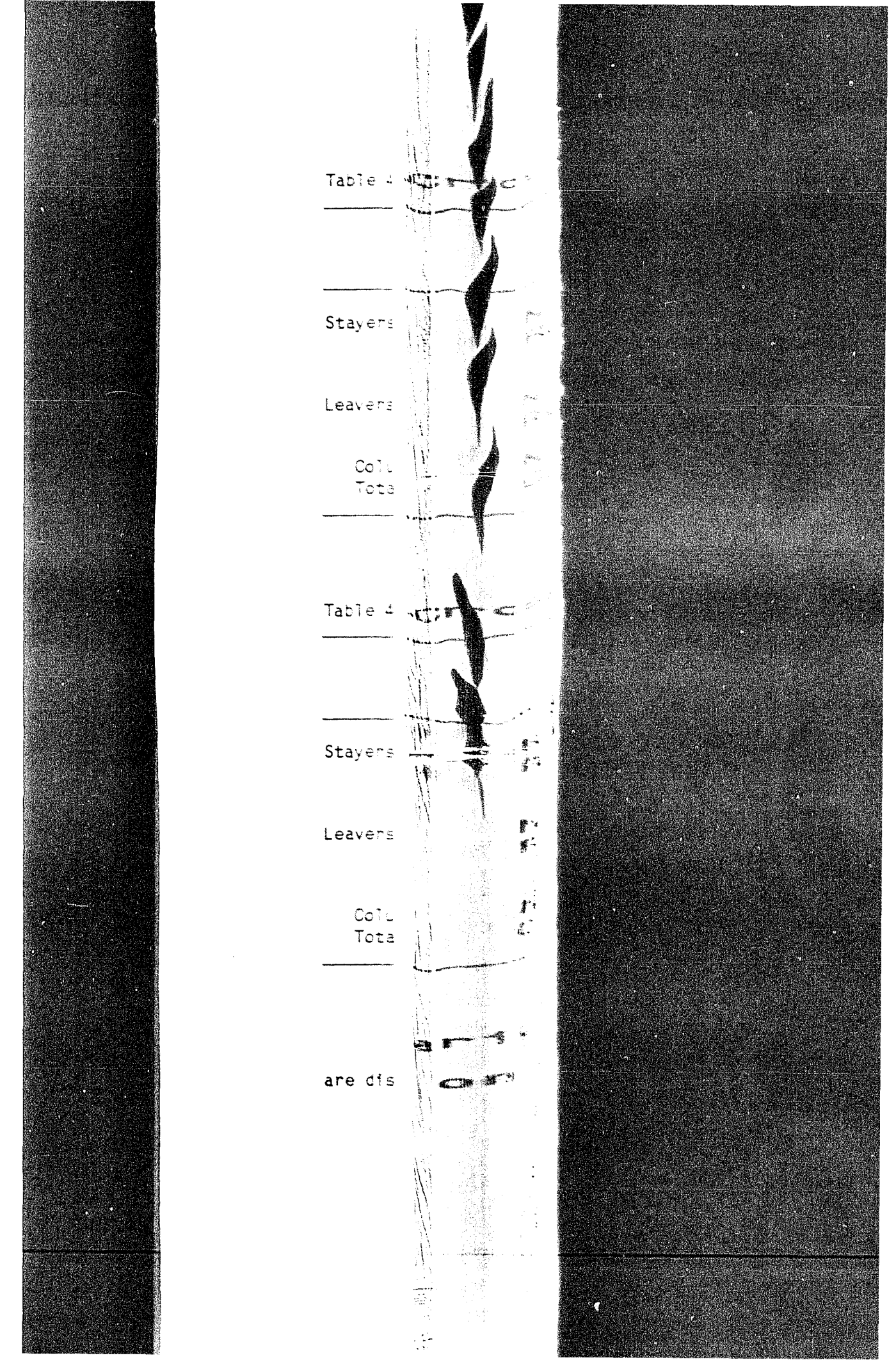
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Table 4.24.--Cross-tabulation analysis of COUNADV--females on campus.

		Did Not Respond	Reason	Row Total
Stayers	N	51	29	80
	Row %	63.8	36.2	85.1
		83.6	87.9	
Leavers	N	10	4	14
	Row %	71.4	28.6	14.9
Column	N	61	33	94
Total	Col %	64.9	35.1	100.0

Table 4.25.--Cross-tabulation analysis of COUNADV--females off campus.

		Did Not Respond	Reason	Row Total
Stayers	N	81	26	107
	Row %	75.7	24.3	87.7
		89.0	83.9	
Leavers	N	10	5	15
	Row %	66.7	33.3	12.3
		11.0	16.1	
Column	N	91	31	122
Total	Col %	74.6	25.4	100.0

Ten variables were found to be significant for two groups. They are discussed on the following pages.

Needing assistance in resolving a personal problem (PRSPROB)

The canonical discriminant coefficient weighting number was positive, +.05240, showing this variable was significant to retention. The variable was significant for males on campus and females on campus. Tables 4.26 and 4.27 relate to this variable.

As shown in Table 4.26, 83.9% of the males on campus who had said they would not need assistance with personal problems stayed in school. The raw chi-square value was .4904.

Table 4.26.--Cross-tabulation analysis of PRSPROB--males on campus.

		Did Not Respond	Yes	No	Row Total
Stayers	N	9	4	52	65
	Row %	13.8	6.2	80.0	81.3
		75.0	66.7	83.9	
Leavers	N	3	2	10	15
	Row %	20.0	13.3	66.7	18.8
		25.0	33.3	16.1	
Column Total	N	12	6	62	80
	Col %	15.0	7.5	77.5	100.0

As shown in Table 4.27, 86.6% of the females on campus who had said they would not need assistance with personal problems stayed in school. The raw chi-square value was .2685.

Table 4.27.--Cross-tabulation analysis of PRSPROB--females on campus.

		Did Not Respond	Yes	No	Row Total
Stayers	N	6	3	71	80
	Row %	7.5	3.7	88.8	85.1
		85.7	60.0	86.6	
Leavers	N	1	2	11	14
	Row %	7.1	14.3	78.6	14.9
		14.3	40.0	13.4	
Column	N	7	5	82	94
Total	Col %	7.4	5.3	87.2	100.0

To become actively involved in student life and campus activities (INVOL)

The canonical discriminant coefficient weighting number was positive, +.06460, showing this variable was significant to retention. The variable was significant for males on campus and females on campus. Table 4.28 and 4.29 relate to this variable.

Eighty-seven percent of the males on campus who had said getting involved in campus activities was a goal stayed in school. The raw chi-square value was .6552 (see Table 4.28).

According to Table 4.29, 88.2% of the females on campus who had said getting involved in campus activities was a goal stayed in school. The raw chi-square value was .6435.

Table 4.28.--Cross-tabulation analysis of INVOL--males on campus.

		Did Not Respond	Yes	No	Row Total
Stayers	N	9	20	36	65
	Row %	13.8	30.8	55.4	81.3
		75.0	87.0	80.0	
Leavers	N	3	3	9	15
	Row %	20.0	20.0	60.0	18.8
		25.0	13.0	20.0	
Column Total	N	12	23	45	80
	Col %	15.0	28.8	56.3	100.0

Table 4.29.--Cross-tabulation analysis of INVOL--females on campus.

		Did Not Respond	Yes	No	Row Total
Stayers	N	5	45	30	80
	Row %	6.3	56.3	37.5	85.1
		83.3	88.2	81.1	
Leavers	N	1	6	7	14
	Row %	7.1	42.9	50.0	14.9
		16.7	11.8	18.9	
Column Total	N	6	51	37	94
	Col %	6.4	54.3	39.4	100.0

Was Saginaw Valley State College the first choice of schools (FIRSTC)

The canonical discriminant coefficient weighting number was negative, -.10115, showing this variable was significant to attrition.

The variable was significant for males on campus and males off campus. Tables 4.30 and 4.31 relate to this variable.

Table 4.30 shows that 86.5% of the males on campus who had said Saginaw Valley State College was their first choice of colleges stayed in school. The raw chi-square value was .2657.

Table 4.30.--Cross-tabulation analysis of FIRSTC--males on campus.

		Yes	No	Row Total
Stayers	N	32	33	65
	Row %	49.2	50.8	81.3
		86.5		
Leavers	N	5	10	15
	Row %	33.3	66.7	18.8
		13.5	23.3	
Column Total	N	37	43	80
	Col %	46.2	53.7	100.0

As shown in Table 4.31, 90.7% of the males off campus who had said Saginaw Valley State College was their first choice of colleges stayed in school. The raw chi-square value was .3151.

Table 4.31.--Cross-tabulation analysis of FIRSTC--males off campus.

		Yes	No	Row Total
Stayers	N	49	25	74
	Row %	66.2	33.8	88.1
		90.7	83.3	
Leavers	N	5	5	10
	Row %	50.0	50.0	11.9
		9.3	16.7	
Column Total	N	54	30	84
	Col %	64.3	35.7	100.0

The influence of inconvenience to go elsewhere for school as an attending factor for Saginaw Valley State College (CONVEN)

The canonical discriminant coefficient weighting number was negative, -.09475, showing this variable was significant to attrition. The variable was significant for males on campus and males off campus. Tables 4.32 and 4.33 relate to this variable.

As shown in Table 4.32, 93.3% of the males on campus who left school did not respond to this question. The raw chi-square value was .7425.

Eighty percent of the males off campus who left school did not respond to this question. The raw chi-square value was .9066 (see Table 4.33).

Table 4.32.--Cross-tabulation analysis of CONVEN--males on campus.

		Did Not Respond	Reason	Row Total
Stayers	N	62	3	65
	Row %	95.4	4.6	81.3
Leavers	N	14	1	15
	Row %	93.3	6.7	18.8
Column	N	76	4	80
Total	Col %	95.0	5.0	100.0

Table 4.33.--Cross-tabulation analysis of CONVEN--males off campus.

		Did Not Respond	Reason	Row Total
Stayers	N	58	16	74
	Row %	78.4	21.6	88.1
Leavers	N	8	2	10
	Row %	80.0	20.0	11.9
Column	N	66	18	84
Total	Col %	78.6	21.4	100.0

To increase self confidence as a goal (SLFCON)

The canonical discriminant coefficient weighting number was negative, -.09615, showing this variable to be significant to attrition. The variable was significant for males on campus and males off campus. Tables 4.34 and 4.35 relate to this variable.

Sixty percent of the males on campus who left school had said this variable was a goal. The raw chi-square value was .7453 (see Table 4.34).

Table 4.34.--Cross-tabulation analysis of SLFCON--males on campus.

		Did Not Respond	Yes Goal	Row Total
Stayers	N	29	36	65
	Row %	44.6	55.4	81.3
Leavers	N	6	9	15
	Row %	40.0	60.0	18.8
Column Total	N	35	45	80
	Col %	43.8	56.3	100.0

As shown in Table 4.35, 70% of the males off campus who left school had said this variable was a goal. The raw chi-square value was .3023.

Table 4.35.--Cross-tabulation analysis of SLFCON--males off campus.

		Did Not Respond	Yes Goal	Row Total
Stayers	N	35	39	74
	Row %	47.3	52.7	88.1
Leavers	N	3	7	10
	Row %	30.0	70.0	11.9
Column Total	N	38	46	84
	Col %	45.2	54.8	100.0

Needing assistance to improve study habits (STDYHAB)

The canonical discriminant coefficient weighting number was negative, -.11075, showing this variable was significant to attrition. The variable was significant for females on campus and females off campus. Tables 4.36 and 4.37 relate to this variable.

As shown in Table 4.36, 86% of the females on campus who said they would need assistance with study habits stayed in school. The raw chi-square value was .9582.

Table 4.36.--Cross-tabulation analysis of STDYHAB--females on campus.

		Did Not Respond	Yes	No	Row Total
Stayers	N	5	49	26	80
	Row %	6.3	61.2	32.5	85.1
		83.3	86.0	83.9	
Leavers	N	1	8	5	14
	Row %	7.1	57.1	35.7	14.9
		16.7	14.0	16.1	
Column Total	N	6	57	31	94
	Col %	6.4	60.6	33.0	100.0

Table 4.37 indicates that 84.7% of the females off campus who said they would need assistance with study habits stayed in school. The raw chi-square value was .6280.

Table 4.37.--Cross-tabulation analysis of STDYHAB--females off campus.

		Did Not Respond	Yes	No	Row Total
Stayers	N	9	50	48	107
	Row %	8.4	46.7	44.9	87.7
		90.0	84.7	90.6	
Leavers	N	1	9	5	15
	Row %	6.7	60.0	33.3	12.3
		10.0	15.3	9.4	
Column	N	10	59	53	122
Total	Col %	8.2	48.4	4.34	100.0

Concerned about having adequate finances for educational purposes (CONCNFN)

The canonical discriminant coefficient weighting number was negative, -.06984, showing this variable was significant to attrition. The variable was significant for males on campus and females off campus. Tables 4.38 and 4.39 relate to this variable.

Eighty-eight percent of the males on campus who said financing was a major concern stayed in school. The raw chi-square value was .7125 (see Table 4.38).

Sixty percent of the females off campus who did not return to school said finances were a major concern. The raw chi-square value was .2165 (see Table 4.39).

Table 4.38.--Cross-tabulation analysis of CONCNFN--males on campus.

		Did Not Respond	Not Concern	Some Concern	Major Concern	Row Total
Stayers	N	9	9	25	22	65
	Row %	13.8	13.8	38.5	33.8	81.3
		75.0	75.0	80.6	88.0	
Leavers	N	3	3	6	3	15
	Row %	20.0	20.0	40.0	20.0	18.8
		25.0	25.0	19.4	12.0	
Column Total	N	12	12	31	25	80
	Col %	15.0	15.0	38.7	31.3	100.0

Table 4.39.--Cross-tabulation analysis of CONCNFN--females off campus.

		Did Not Respond	Not Concern	Some Concern	Major Concern	Row Total
Stayers	N	10	15	44	38	107
	Row %	9.3	14.0	41.1	35.5	87.7
		90.9	100.0	89.8	80.9	
Leavers	N	1	0	5	9	15
	Row %	6.7	0	33.3	60.0	12.3
		9.1	0	10.2	19.1	
Column Total	N	11	15	49	47	122
	Col %	9.0	12.3	40.2	38.5	100.0

Age (AGE)

The canonical discriminant weighting number was negative, -.05571, showing this variable was significant to attrition. The variable was significant for males off campus and females off campus. Tables 4.40 and 4.41 relate to this variable.

As shown in Table 4.40, 77% of the males off campus who stayed in school were between 18 and 22 years of age. The raw chi-square value was .7125.

Table 4.40.--Cross-tabulation analysis of AGE--males off campus.

		Under 18	18-22	23-25	26-30	Row Total
Stayers	N	15	57	2	0	74
	Row %	20.3	77.0	2.7	0	88.1
Leavers	N	2	7	0	1	10
	Row %	20.0	70.0	0	10.0	11.9
Column Total	N	17	64	2	1	84
	Col %	20.2	76.2	2.4	1.2	100.0

Of the females off campus who remained in school, 61.7% were between 18 and 22 years of age. The raw chi-square significance value was .007 (see Table 4.41).

Table 4.41.--Cross-tabulation analysis of AGE--females off campus.

		Under 18	18-22	23-25	26-30	Row Total
Stayers	N	39	66	1	1	107
	Row %	36.4	61.7	.9	.9	87.7
Leavers	N	3	9	2	1	15
	Row %	20.0	60.0	13.3	6.7	12.3
Column	N	42	75	3	2	122
	Col %	34.4	61.5	2.5	1.6	100.0

The highest degree ultimately planned to earn (ULTIMAT)

The canonical discriminant coefficient weighting number was negative, -.07676, showing this variable was significant to attrition. The variable was significant for males off campus and females off campus. Table 4.42 and 4.43 relate to this variable.

Table 4.42 shows that 65% of the males off campus who stayed in school said the bachelor's (31.1%) and master's (33.8%) degrees were the highest degrees they planned to earn. The raw chi-square value was .3892.

As shown in Table 4.43, 69.2% of the females off campus who stayed in school said the bachelor's (29.9%) and master's (39.3%) degrees were the highest degrees they intended to earn. The raw chi-square value was .6230.

Table 4.42.--Cross-tabulation analysis of ULTIMAT--males off campus.

		No Degree	Certifi-cate	Asso-ciate	Bache-lor's	Master's	Spec.	Profes-sional	Ph.D.	Row Total
Stayers	N	10	1	2	23	25	1	8	4	74
	Row %	13.5	1.4	2.7	31.1	33.8	1.4	10.8	5.4	88.1
Leavers	N	1	1	0	2	2	0	2	2	10
	Row %	10.0	10.0	0	20.0	20.0	0	20.0	20.0	11.9
Column Total	N	11	2	2	25	27	1	10	6	84
	Col %	13.1	2.4	2.4	29.8	32.1	1.2	11.9	7.0	100.0

Table 4.43.--Cross-tabulation analysis of ULTIMAT--females off campus.

		No Degree	Certifi-cate	Asso-ciate	Bache-lor's	Master's	Spec.	Profes-sional	Ph.D.	Row Total
Stayers	N	0	11	1	32	42	5	3	13	107
	Row %	0	10.3	.9	29.9	39.3	4.7	2.8	12.1	87.7
Leavers	N	0	3	0	5	6	0	1	0	15
	Row %	0	20.0	0	33.3	40.0	0	6.7	0	12.3
Column Total	N	0	14	1	37	48	5	4	13	122
	Col %	0	11.5	.8	30.3	39.3	4.1	3.3	10.7	100.0

ACT Scores (ACT)

The canonical discriminant coefficient weighting number was negative, -.09059, showing this variable was significant to attrition. The variable was significant for females on campus and females off campus. Tables 4.44 and 4.45 relate to this variable.

As shown in Table 4.44, the higher the entering ACT scores of the females on campus, the higher their retention rate. The lower these students' entering ACT scores, the lower their retention rate. The raw chi-square value was .6099.

Table 4.45 shows that the higher the entering ACT scores of the females off campus, the higher their retention rate. The lower these students' entering ACT scores, the lower their retention rate. The raw chi-square value was .6793.

Six variables were found to be significant for one group. They are discussed on the following pages.

The social reputation of Saginaw Valley State College as a factor that influenced enrollment (SOCREP)

The canonical discriminant coefficient weighting number was negative, -.17370, showing this variable was significant to attrition. The variable was significant for males on campus. Table 4.46 is related to this variable. The table shows that 80% of the males on campus who left school did not respond to this question. The raw chi-square value was .5474.

Table 4.44.--Cross-tabulation analysis of ACT--females on campus.

		ACT Score																						Row Total
		0-7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	25	26	27	29	30	
Stayers	N	11	0	2	4	3	4	9	4	6	5	3	1	4	4	7	3	2	2	1	3	1	1	80
	Row %	13.7	0	2.5	5.0	3.7	5.0	11.2	5.0	7.5	6.8	3.7	1.2	5.0	5.0	8.8	3.7	2.5	2.5	1.2	3.7	1.2	1.2	85.1
		91.7	0	100.0	80.0	60.0	100.0	75.0	66.7	75.0	100.0	100.0	100.0	100.0	100.0	77.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Leavers	N	1	1	0	4	2	0	3	2	2	0	3	1	4	0	2	0	0	0	0	0	0	0	14
	Row %	7.1	7.1	0	5.4	14.3	0	21.4	14.3	14.3	0	3.7	1.2	5.0	0	14.3	0	0	0	0	0	0	0	14.9
		8.3	100.0	0	80.0	40.0	0	25.0	33.3	25.0	0	100.0	100.0	100.0	0	22.2	0	0	0	0	0	0	0	
Column Total	N	12	1	2	5	3	4	12	4	6	5	3	2	8	4	9	3	2	2	1	3	2	1	94
	Col %	12.8	1.1	2.1	5.3	5.3	4.3	12.8	6.4	8.5	15.3	3.2	1.0	4.3	4.3	9.6	3.2	2.1	2.1	1.1	3.2	2.1	1.1	100.0

Table 4.45.--Cross-tabulation analysis of ACT--females off campus.

		ACT Score																					Row Total
		0-7	8	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	28	30	
Stayers	N	40	1	1	3	3	3	3	6	7	9	3	3	10	14	6	3	5	3	2	1	1	107
	Row %	18.7	.9	.9	2.8	2.8	2.8	2.8	5.6	6.5	8.4	2.8	2.8	9.3	13.1	5.6	2.8	4.7	2.8	1.9	.9	.9	87.7
		76.9	100.0	50.0	100.0	100.0	75.0	75.0	100.0	87.5	75.0	100.0	100.0	100.0	100.0	100.0	100.0	83.3	75.0	100.0	100.0	100.0	
Leavers	N	6	0	1	0	0	1	1	0	1	3	0	0	0	0	0	0	1	1	0	0	0	15
	Row %	40.0	0	6.7	0	0	6.7	6.7	0	6.7	20.0	0	0	0	0	0	0	6.7	6.7	0	0	0	12.3
		76.9	0	50.0	0	0	25.0	25.0	0	12.5	25.0	0	0	0	0	0	0	16.7	25.0	0	0	0	
Column	N	46	1	2	3	3	4	4	6	8	12	3	3	10	14	6	3	6	4	2	1	1	122
	Col %	21.3	.8	1.6	2.5	2.5	3.3	3.3	4.9	6.6	9.8	2.5	2.5	8.2	11.5	4.9	2.5	4.9	3.3	1.6	.8	.8	100.0

Table 4.46.--Cross-tabulation analysis of SOCREP--males on campus.

		Did Not Respond	Reason	Row Total
Stayers	N	56	9	65
	Row %	86.2	13.8	81.3
Leavers	N	12	3	15
	Row %	80.0	20.0	18.8
Column	N	68	12	80
Total	Col %	85.0	15.0	100.0

Tutoring assistance in one or more academic subject areas (TUTOR)

The canonical discriminant coefficient weighting number was positive, +.06807, showing this variable was significant to retention. The variable was significant for females on campus. As shown in Table 4.47, 87.7% of the females on campus who said they did not need tutoring stayed in school. The raw chi-square value was .5834.

Table 4.47.--Cross-tabulation analysis of TUTOR--females on campus.

		Did Not Respond	Yes	No	Row Total
Stayers	N	6	24	50	80
	Row %	7.5	30.0	62.5	85.1
		75.0	82.8	87.7	
Leavers	N	2	5	7	14
	Row %	14.3	35.7	50.0	14.9
		25.0	17.2	12.3	
Column	N	8	29	57	94
Total	Col %	8.5	30.9	60.0	100.0

To improve leadership skills as a goal (LDRSKLS)

The canonical discriminant coefficient weighting number was positive, +.05042, showing this variable was significant to retention. The variable was significant for males on campus. As Table 4.48 indicates, 87.5% of the males on campus who said improving leadership skills was a goal while attending college stayed in school. The raw chi-square value was .2422.

Table 4.48.--Cross-tabulation analysis of LDRSKLS--males on campus.

		Did Not Respond	Yes Goal	Row Total
Stayers	N	37	28	65
	Row %	56.9	43.1	81.3
		77.1	87.5	
Leavers	N	11	4	15
	Row %	73.3	26.7	18.8
		22.9	12.5	
Column Total	N	48	32	80
	Col %	60.0	40.0	100.0

Married (MARTL)

The canonical discriminant coefficient weighting number was positive, +.07980, showing this variable was significant to retention. The variable was significant for males off campus. Ninety percent of the unmarried males off campus left school. The raw chi-square value was .0062 (see Table 4.49).

Table 4.49.--Cross-tabulation analysis of MARTL--males off campus.

		Yes	No	Row Total
Stayers	N	0	74	74
	Row %	0	100.0	88.1
Leavers	N	1	9	10
	Row %	10.0	90.0	11.9
Column Total	N	1	83	84
	Col %	1.2	98.8	100.0

Showing an interest in artist series, concerts, or special events (ARCON)

The canonical discriminant coefficient weighting number was positive, +.11437, showing this variable was significant to retention. The variable was significant for females. According to Table 4.50, 85.7% of the females on campus who said they were interested in artist series, concerts, or special events stayed in school. The raw chi-square value was .0873.

Planning to graduate from Saginaw Valley State College (GRAD)

The canonical discriminant coefficient weighting number was negative, -.20574, showing this variable was significant to attrition. The variable was significant for females on campus. The largest number of females on campus (41.1%) said they would very likely graduate from Saginaw Valley State College. As shown in Table 4.51, 89.8% of this group stayed in school. The raw chi-square value was .6174.

Table 4.50.--Cross-tabulation analysis of ARCON--females on campus.

		Did Not Respond	Yes	No	Did Not Respond	Row Total
Stayers	N	21	30	29	0	80
	Row %	26.2	37.5	36.2	0	85.1
		91.3	85.7	82.9	0	
Leavers	N	2	5	6	1	14
	Row %	14.3	35.7	42.9	7.1	14.9
		8.7	14.3	17.1	100.0	
Column Total	N	23	35	35	1	94
	Col %	24.5	37.2	37.2	1.1	100.0

Table 4.51.--Cross-tabulation analysis of GRAD--females on campus.

		Did Not Respond	Very Likely	Somewhat Likely	Not Likely	Row Total
Stayers	N	22	44	26	15	107
	Row %	20.6	41.1	24.3	14.0	87.7
		91.7	89.8	81.3	88.2	
Leavers	N	2	5	6	2	15
	Row %	13.3	33.3	40.0	13.3	12.3
		8.3	10.2	18.8	11.8	
Column Total	N	24	49	32	17	122
	Col %	19.7	40.2	26.2	13.9	100.0

Summary

The data gathered from the discriminant analysis direct method, discriminant analysis stepwise method, and the cross-tabulation

breakdown of all the significant variables were presented in Chapter IV. For both the discriminant weighted numbers and the raw chi-square figures, the .05 level was used to identify those variables that were significant for each of the student groups. The results of this analysis are examined further in Chapter V, in which the profiles developed for the various student groups are presented.

CHAPTER V

SUMMARY, CONCLUSIONS, RECOMMENDATIONS, AND IMPLICATIONS

Summary

The study was undertaken to develop profiles of persisters and leavers from the entering class at Saginaw Valley State College for fall 1981. The investigator assumed that certain factors might influence the retention of students entering college for the first time.

From the original 1981 entering class of 591 students, 380 were included in the study after transfer, part-time, and handicapped students had been deleted. Participants' responses to the Entering Student Questionnaire were fed into a computer using the Statistical Package Special Program for Social Studies System. Eight groups were formed based on housing, sex, and whether the students returned for winter term 1982. After reviewing the effects of direct method discriminant analysis, stepwise analysis, and cross-tabulation on all the significant variables, student profiles were developed.

The student groups for which profiles were developed were as follows:

Groups 1 and 2 included males who lived on campus

Group 1: Males on campus who stayed in school

Group 2: Males on campus who left school

Groups 3 and 4 included males who lived off campus

Group 3: Males off campus who stayed in school

Group 4: Males off campus who left school

Groups 5 and 6 included females who lived on campus

Group 5: Females on campus who stayed in school

Group 6: Females on campus who left school

Groups 7 and 8 included females who lived off campus

Group 7: Females off campus who stayed in school

Group 8: Females off campus who left school

Students' responses to each question were weighted against retention through the discriminant analysis direct method procedure; as a result of this analysis, 29 variables were deemed significant. These variables were then run through the stepwise method of discriminant analysis and weighted against the groups formed for the study. Through this process, the number of significant variables was reduced to 24. The five variables that did not pass the tolerance test were:

Use of student services	STUSERV
Sure of major	SURMAJ
Planning to drop	DROP
Interested in student government	STUGOVT
Admitting grade point average	ADMGPA

A cross-tabulation analysis was performed on the remaining 24 variables to determine the importance of these variables to retention for the sample group. Of the 24 variables that were found to be

significant, 15 had a raw chi-square value of .50 or less for at least one of the groups, making them highly significant to the study. The nine variables that failed to reach this level of significance and hence were not used in developing the student profiles were:

Social reputation of Saginaw Valley State College	SOCREP
Being involved in school activities	INVOL
Convenience of school location	CONVEN
Increase knowledge	KNWLDG
Need tutor service	TUTOR
Test scores	ACT
Improve their study habits	STDYHAB
Plan to graduate from Saginaw Valley State College	GRAD

Table 5.1 shows the raw chi-square level for each of the 24 significant variables and their relationship to the various student groups. The underlined values indicate the 15 variables at the .50 or lower level; these variables were used to develop the student profiles.

Following Table 5.1, the 15 variables found to be highly significant to the study are listed by computer code name and with partial and full explanations. From these variables, the student profiles were developed. In the succeeding discussion, only the computer code names and brief explanations are used.

Table 5.1.--Chi-square levels for the 24 remaining significant variables.

Explanation	Computer Code Name	Males On Campus	Males Off Campus	Females On Campus	Females Off Campus
Gaining independence	INDPNDT	.0613	.6352	.6899	
Showing interest in intramurals	IMS	.0236		.0063	.0895
Help needed with personal problems	PRSPROB	.4904		.2685	
Social reputation of Saginaw Valley State College	SOCREP	.5474			
First choice	FIRSTC	.2657	.3151		
Being involved in school activities	INVOL	.6552		.6435	
New career	NEWCAR	.8469	.1027	.5413	
Leadership skills	LDRSKLS	.2422			
Convenience of school location	CONVEN	.7425	.9077		
Planning to transfer	TRAN	.9717		.0101	.7581
Improve self-confidence	SLFCON	.7453	.3023		
Enrichment of life	NRCHLIF	.6328	.8117	.5440	
Increase earning power	INCRPAY	.1464		.3367	.0866
Concerned about finances	CONCNFN	.7125			.2165
Married students	MARTL		.0062		
Age of students	AGE		.0520		
Counselor's advice to attend Saginaw Valley State College	COUNADV		.4894	.5787	.4516
Ultimate degree as goal	ULTIMAT		.3892		.6230
Increase knowledge	KNWLDG		.5822	.7444	.5327
Need tutor service	TUTOR			.4834	
Interested in artists and concerts	ARCON			.0873	
Test scores	ACT			.6099	.6537
Improve their study habits	STDYHAB			.9582	.6280
Plan to graduate from Saginaw Valley State College	GRAD				.6173

Fifteen Significant Variables

Explanation	Computer Code Name	Variable
Gaining independence	INDPNDT	Those who said gaining independence was a goal
Showing interest in intramurals	IMS	Those interested in intramurals and recreational activities on campus
Help needed with personal problems	PRSPROB	Those who said they would need help with their personal problems
First choice	FIRSTC	Those who said Saginaw Valley State College was their first choice of schools to attend
New career	NEWCAR	Those who came to Saginaw Valley State College looking for a new career
Leadership skills	LDRSKLS	Those who said they wanted to improve their leadership skills
Planning to transfer	TRAN	Those planning to leave Saginaw Valley State College
Improve self-confidence	SLFCON	Those who wished to improve their self-confidence while in school
Increase earning power	INCRPAY	Those who said they came to Saginaw Valley State College to improve their earning power
Concerned about finances	CONCNFN	Those who said they were concconcerned about the finances for their education
Married students	MARTL	Those who were married
Age of the students	AGE	An age breakdown of the sample

Counselor's advice to attend Saginaw Valley State College	COUNADV	Those who came to Saginaw Valley State College on their counselor's advice
Ultimate degree as goal	ULTIMAT	Those who indicated their ultimate degree goal
Interested in artists and concerts	ARCON	Those who were interested in artists' presentations and concerts on campus

Using the data collected, the following three null hypotheses were tested:

Hypothesis 1: No variables for some of the student groups will exist that will be significant for male and female persisters and leavers.

Based on an analysis of the data, this hypothesis was not rejected. However, some variables were found to be significant to particular groups. These variables were used to develop the profiles that are discussed starting on page 107.

Hypothesis 2: No variables for some of the student groups will exist that will be significant for on-campus and off-campus persisters and leavers.

Based on an analysis of the data, this hypothesis was not rejected. However, some variables were found to be significant to particular groups. These variables were used to develop the profiles that are discussed starting on page 107.

Hypothesis 3: No variables for some of the student groups will exist that will be significant for persisters and leavers, in general.

Based on an analysis of the data, this hypothesis was not rejected. However, some variables were found to be significant to

particular groups. These variables were used to develop the profiles that are discussed starting on page 107.

Variables Significant to Profile Development

Variables Significant for Males on Campus Who Stayed in School

1. Of the males on campus who stayed in school, 70.8% said they were interested in taking part in intramural sports and recreational activities (Table 4.5).

2. Sixty percent of the males on campus who said that independence, self-reliance, and adaptability were goals for them while in college stayed in school (Table 4.2).

3. Almost 90% of the on-campus males who said that increasing the chances for a raise and/or promotion was a goal for them while in college stayed in school (Table 4.17).

4. Of the on-campus males who stayed in school, 87.5% said that increasing their leadership skills was a goal for them while in college (Table 4.48).

5. Of the males on campus who stayed in school, 49.2% said Saginaw Valley State College was their first choice of schools to attend (Table 4.30).

6. Eighty percent of the males on campus who stayed in school said they would not need assistance with personal problems during the school year (Table 4.26).

Variables Significant for
Males on Campus Who Left School

1. Of the males on campus who left school, 33.3% said they were not interested in taking part in intramural sports and recreational activities (Table 4.5).

2. Of the males on campus who left school, 66.7% did not respond to the variable dealing with independence, self-reliance, and adaptability as a college goal (Table 4.2).

3. Eighty percent of the males on campus who left school did not respond to the variable dealing with an increase in pay or job promotion as a goal while they were in college (Table 4.17).

4. Of the males on campus who left school, 73.3% did not respond to the variable dealing with improving leadership skills as a goal while they were in college (Table 4.48).

5. Of the males on campus who left school, 66.7% said Saginaw Valley State College was not their first choice of schools to attend (Table 4.30).

6. Of the males on campus who left school, 66.7% said they would not need assistance with personal problems during the school year (Table 4.26).

Variables Significant for Males
Off Campus Who Stayed in School

1. All of the males off campus said they were not married; 90% of these students stayed in school (Table 4.49).

2. Seventy-seven percent of the males off campus who stayed in school were 21 years of age or younger (Table 4.40).

3. Of the males off campus who stayed in school, 94.6% said that to prepare for a new career was a goal for them while they were in college (Table 4.10).

4. Of the males off campus who stayed in school, 52.7% said that to increase self-confidence was a goal for them while in college (Table 4.35).

5. Of the males off campus who stayed in school, 66.2% said that Saginaw Valley State College was their first choice of schools to attend (Table 4.31).

6. Of the males off campus who stayed in school, 64.9% said bachelor's and master's degrees were their ultimate degree plan (Table 4.42).

7. Of the males off campus who stayed in school, 81.1% did not respond to the variable dealing with counselor's advice to attend Saginaw Valley State College (Table 4.23).

Variables Significant for Males Off Campus Who Left School

1. All of the married males off campus left school (Table 4.49).

2. Seventy percent of the males off campus who left school were between 18 and 22 years of age (Table 4.40).

3. Eighty percent of the males off campus who left school did not respond to the variable dealing with a new career (Table 4.10).

4. Seventy percent of the males off campus who left school said that to increase self-confidence was a goal for them while in college (Table 4.35).

5. Fifty percent of the males off campus who left school said that Saginaw Valley State College was their first choice of schools to attend (Table 4.31).

6. Forty percent of the males off campus who left school said the bachelor's and master's degree were their ultimate degree plans (Table 4.42).

7. Ninety percent of the males off campus who left school did not respond to the variable dealing with counselor's advice to attend Saginaw Valley State College (Table 4.23).

Variables Significant For Females On Campus Who Stayed in School

1. Of the females on campus who stayed in school, 58.7% said they were interested in taking part in intramural and recreational activities (Table 4.6).

2. Of the females on campus who stayed in school, 36.2% said it was not likely they would transfer from Saginaw Valley State College (Table 4.12).

3. Of the females on campus who stayed in school, 37.5% said they were interested in activities such as artist series, concerts, or special events (Table 4.50).

4. Of the females on campus who stayed in school, 88.8% said they would not need help with personal problems during the school year (Table 4.27).

5. Of the females on campus who stayed in school, 73.7% did not respond to the variable dealing with an increase in pay or a job promotion (Table 4.18).

Variables Significant for Females on Campus Who Left School

1. Fifty percent of the females on campus who left school said they were not interested in taking part in intramural and recreational activities (Table 4.6).

2. Of the females on campus who left school, 35.7% said it was likely they would transfer from Saginaw Valley State College (Table 4.12).

3. Of the females on campus who left school, 42.9% said they were not interested in activities such as artist series, concerts, or special events (Table 4.50).

4. Of the females on campus who left school, 78.6% said they would not need help with personal problems during the school year (Table 4.27).

5. Of the females on campus who left school, 86.7% did not respond to the variable dealing with increase in pay and/or a job promotion (Table 4.18).

Variables Significant for Females
Off Campus Who Stayed in School

1. Of the females off campus who stayed in school, 41.1% said they were not interested in taking part in intramurals (Table 4.7).

2. Ninety-five percent of the females off campus who stayed in school said an increase in pay and/or a promotion was a goal for attending Saginaw Valley State College (Table 4.19).

3. Of the females off campus who stayed in school, 41.1% said they were somewhat concerned about having adequate finances for educational expenses (Table 4.39).

4. Of the females off campus who stayed in school, 75.7% did not respond to the variable dealing with counselor's advice about their attending Saginaw Valley State College (Table 4.25).

Variables Significant for Females
Off Campus Who Left School

1. Forty percent of the females off campus who left school said they were not interested in taking part in intramurals (Table 4.7).

2. Of the females off campus who left school, 86.7% did not respond to the variable dealing with an increase in pay and/or a promotion (Table 4.19).

3. Sixty percent of the females off campus who left school said they were very concerned about having adequate finances for educational expenses (Table 4.39).

4. Of the females off campus who left school, 66.7% did not respond to the variable dealing with counselor's advice about their attending Saginaw Valley State College (Table 4.25).

Conclusions: Development of Student Profiles

After reviewing the effects of direct method discriminant analysis, stepwise analysis, and cross-tabulation analysis on all the significant variables, profiles for the eight student groups of interest in this study were developed. Those profiles are discussed in the following pages. It should be noted that the student profiles developed in this study are generalizable only to the sample members who completed the Entering Student Questionnaire in fall 1981. Profiles for other entering classes should be based on their unique responses to the questionnaire.

Profiles for Males on Campus

Table 5.2 shows the result of development of student profiles for Group 1, males on campus who stayed in school, and Group 2, males on campus who left school. These profiles were developed from information supplied by the sample group.

Group 1. Profile of male students on campus who stayed in school. These students showed an interest in intramural activities, were attempting to find independence, were interested in their financial futures, wished to develop their leadership skills, said Saginaw Valley State College was their first choice of schools,

and said they would need help with their personal problems during the school year.

Table 5.2.--Variables significant to retention for males on campus.

Explanation	Variable	Raw Chi-Square
Showing interest in intramurals	IMS	.0236
Gaining independence	INDPNDT	.0613
Increase earning power	INCRPAY	.1464
Leadership skills	LDRSKLS	.2422
First choice	FIRSTC	.2657
Help needed with personal problems	PRSPROB	.4904

Group 2. Profile of male students on campus who left school. These students showed no interest in intramural activities and were not concerned with the variables dealing with their seeking independence, their financial futures, or improvement of their leadership skills. These students also stated they would not seek help with personal problems and that Saginaw Valley State College was not their first choice of schools to attend.

Conclusion. Based on the profiles for Groups 1 and 2, it was clear that, for retention purposes, close attention should be given to male students on campus who say they are not interested in intramurals, who indicate they will not seek help with personal problems, and

who are not concerned with the variables dealing with independence, increases in pay, or improvement of leadership skills.

Profiles for Males Off Campus

Table 5.3 shows the result of development of student profiles for Group 3, males off campus who stayed in school, and Group 4, males off campus who left school. These profiles were developed from information supplied by the sample group on the questionnaire.

Table 5.3.--Variables significant to retention for males off campus.

Explanation	Variable	Raw Chi-Square
Married students	MARTL	.0062
Age of students	AGE	.0520
New career	NEWCAR	.1027
Improve self-confidence	SLFCON	.3023
First choice	FIRSTC	.3151
Ultimate degree as goal	ULTIMAT	.3892
Counselor's advice to attend Saginaw Valley State College	COUNADV	.4894

Group 3. Profile of male students off campus who stayed in school. These students were between the ages of 18 and 22 years, were interested in a new career, were seeking to improve their self-confidence, said Saginaw Valley State College was their first choice of

schools, had an ultimate degree goal, and attended Saginaw Valley State College on their high school counselor's advice.

Group 4. Profile of male students off campus who left school. These students were married, expressed an interest in improving their self-confidence, and were not concerned with the variables dealing with seeking a new career or their high school counselor's advice to attend Saginaw Valley State College.

Conclusion. Based on the profiles for Groups 3 and 4, it was clear that, for retention purposes, careful attention should be given to males off campus who are married, wish to increase their self-confidence, and do not respond to the variables dealing with seeking a new career or counselor's advice to attend Saginaw Valley State College.

Profiles for Females on Campus

Table 5.4 shows the result of development of student profiles for Group 5, females on campus who stayed in school, and Group 6, females on campus who left school. These profiles were developed from information supplied by the sample group on the Entering Student Questionnaire.

Group 5. Profile of female students on campus who stayed in school. These students were interested in intramurals, expressed no interested in transferring from Saginaw Valley State College, were interested in artists and concerts on campus, said that they would need help with personal problems during the year, and were looking for job security.

Table 5.4.--Variables significant to retention for females on campus.

Explanation	Variable	Raw Chi-Square
Showing interest in intramurals	IMS	.0063
Planning to transfer	TRAN	.0101
Interested in artists and concerts	ARCON	.0873
Help needed with personal problems	PRSPROB	.2685
Increase earning power	INCRPAY	.3367

Group 6. Profile of female students on campus who left school. These students showed no interest in intramurals, expressed an early desire to transfer from Saginaw Valley State College, said they would not seek help with personal problems during the school year, and were not concerned with variables dealing with an interest in artists and concerts or increasing their earning power.

Conclusion. Based on the profiles for Groups 5 and 6, it was clear that, for retention purposes, close attention should be given to females on campus who say they are not interested in intramurals, they are very likely to transfer from Saginaw Valley State College, and they will not need help with personal problems or do not respond to the variable dealing with an increase in pay and/or a job promotion.

Profile for Females Off Campus

Table 5.5 shows the result of development of student profiles for Group 7, females off campus who stayed in school, and Group 8,

females off campus who left school. These profiles were developed from information supplied by the sample group on the questionnaire.

Table 5.5.--Variables significant to retention for females off campus.

Explanation	Variable	Raw Chi-Square
Showing interest in intramurals	IMS	.0895
Increase earning power	INCRPAY	.0866
Concerned about finances	CONCNFN	.2165
Counselor's advice to attend Saginaw Valley State College	COUNADV	.4516

Group 7. Profile of female students off campus who stayed in school. These students were interested in intramurals, desired financial security, were concerned about financing their education, and were not concerned with whether or not they attended Saginaw Valley on their high school counselor's advice.

Group 8. Profile of female students off campus who left school. These students had no interest in intramurals, were concerned about financing their college education, and had no concern about increasing their earning power or whether they took their counselor's advice to attend Saginaw Valley State College.

Conclusion. Based on the profiles for Groups 7 and 8, it was clear that, for retention purposes, careful attention should be given to females off campus who are not interested in intramurals, are

concerned about finances for school, and do not respond to variables dealing with increasing pay and/or counselor's advice about attending Saginaw Valley State College.

General Conclusion

After reviewing the research, the investigator feels that a good college fit is important to retaining students. Several of the significant variables indicated that student interaction with campus activities was related to retention.

The bonding among students, peers, the faculty, and the college can take place only through interaction of these groups. The evidence for retention for those students who replied in a positive manner to those variables dealing with school activities was apparent.

Recommendations and Suggestions

After examining the profiles of the students who left school, the following conclusions were drawn and suggestions made to aid in the retention of future students.

Males on Campus

1. The lack of participation in on-campus intramurals (IMS) was linked to school leaving. Saginaw Valley State College should look more closely at intramural programs with a view toward expanding such activities. Perhaps a survey of similar college intramural programs would be helpful.

2. Males on campus who do not respond to the variable dealing with gaining independence (INDPNDT) as a goal could be exposed to a self-awareness counseling program that would help them identify their personal needs.

3. Males on campus who do not respond to the variable dealing with an increase in pay or job promotion (INCRPAY) could be given counseling contact with the Economics Department at Saginaw Valley State College to familiarize them with potential earnings in their chosen field.

4. Males on campus who do not respond to the variable dealing with improving leadership skills (LDRSKLS) could be involved in some manner with student-activities groups on campus to make them aware of their leadership needs and capabilities.

5. Males on campus who indicate Saginaw Valley is not their first choice (FIRSTC) of schools could be counseled about the benefits of staying at Saginaw Valley State College. It should be emphasized that the school can meet their needs.

6. Males on campus who say they will not need assistance with personal problems (PRSPROB) during the year could be contacted individually for counseling early in the school year. Perhaps some peer-group counseling might be in order.

Males Off Campus

1. Married (MARTL) males off campus could receive individual counseling to determine their personal needs, in order to keep them in school.

2. Although age (AGE) was a significant variable, and because the majority of students in the sample were between 18 and 22 years of age, recommendations for students in that age group will be made under all of the significant variables.

3. Males off campus who do not respond to the variables dealing with a new career (NEWCAR) could receive counseling on career opportunities that exist in their major interest areas to help give them better insight into their career plans.

4. Males off campus who wish to increase their self-confidence (SLFCON) could be grouped and counseled by special-interest groups on campus. Such groups could include both faculty and students and should be in areas of interest to these students.

5. Males off campus who indicate Saginaw Valley State College was not their first choice of schools (FIRSTC) could be counseled on the benefits of staying at Saginaw Valley. It should be emphasized that the school can meet their needs.

6. Males off campus who state their goal is a bachelor's or master's degree (ULTIMAT) could be counseled on just what will be needed to complete these degrees and what benefits await them upon completion of the degrees.

7. Males off campus who do not respond to the variable dealing with counselor's advice (COUNADV) as a reason for attending Saginaw Valley State College could be grouped and given a complete orientation to the school. This could be done very early in their first semester at Saginaw Valley.

Females on Campus

1. The lack of participation in on-campus intramurals (IMS) was linked to school leaving. Administrators at Saginaw Valley State College should examine such programs more closely with thoughts of expanding intramural activities. Perhaps a survey of similar college intramural programs would be helpful.

2. Females on campus who say it is very likely they will transfer from Saginaw Valley State College (TRAN) could be contacted and their reasons for planning to leave school examined. Emphasis could be placed on Saginaw Valley's ability to meet their needs.

3. Females on campus who say they are not interested in artists and concerts (ARCON) could be interviewed to determine any special interests they have and would like to see sponsored by the college.

4. Females on campus who say they will not need assistance with personal problems (PRSPROB) during the year could be contacted individually for counseling early in the school year. Perhaps some peer-group counseling might be in order for these students.

5. Females on campus who do not respond to the variable dealing with an increase in pay or job promotion (INCRPAY) could have some counseling contact with the Economics Department at Saginaw Valley State College to familiarize them with potential earnings in their chosen field.

Females Off Campus

1. The lack of participation in on-campus intramurals (IMS) was linked to school leaving. Saginaw Valley administrators should look more closely at intramural programs with thoughts of expanding such offerings.

2. Females off campus who did not respond to the variable dealing with an increase in pay or job promotion (INCRPAY) could have some counseling contact with the Economics Department at Saginaw Valley State College to familiarize them with potential earnings in their chosen field.

3. Females off campus who say they are concerned about having adequate funds for their educational needs (CONCNFN) could receive financial counseling to relieve their anxiety about money matters. They could be referred to the Financial Aid Office.

4. Females off campus who do not respond to the variable dealing with counselor's advice (COUNADV) as a reason for attending Saginaw Valley State College could be grouped and given a complete orientation to the college. This could be done very early in their first semester at school.

Implications for Further Research

Because certain groups of students were omitted from this study, it is recommended that Saginaw Valley State College conduct identical studies with these groups. It is important that the following groups be examined individually: part-time students, transfer students, and handicapped students.

Part-Time Students

Part-time students may be affected in special ways where retention is concerned. It is recommended that a section of the Entering Student Questionnaire be developed specifically for the part-time student. The following information variables could deal directly with the part-time student: number of hours enrolled, housing, short-range goals, long-range goals, employment, age, curriculum, and sex. Part-time students could also fill out the entire Entering Student Questionnaire so that total data could be collected and comparisons made between part- and full-time students.

Transfer Students

Transfer students may be affected in special ways where retention is concerned. Hence it is recommended that a section of the Entering Student Questionnaire be developed specifically for the transfer student. This section could include the following information variables dealing directly with the transfer student: type of previous school--public, private, university, college, two-year, four-year, specialized; credits transferred; transferring GPA; age; sex; and housing. Transfer students could also complete the entire Entering Student Questionnaire so that total data could be collected and comparisons made.

Handicapped Students

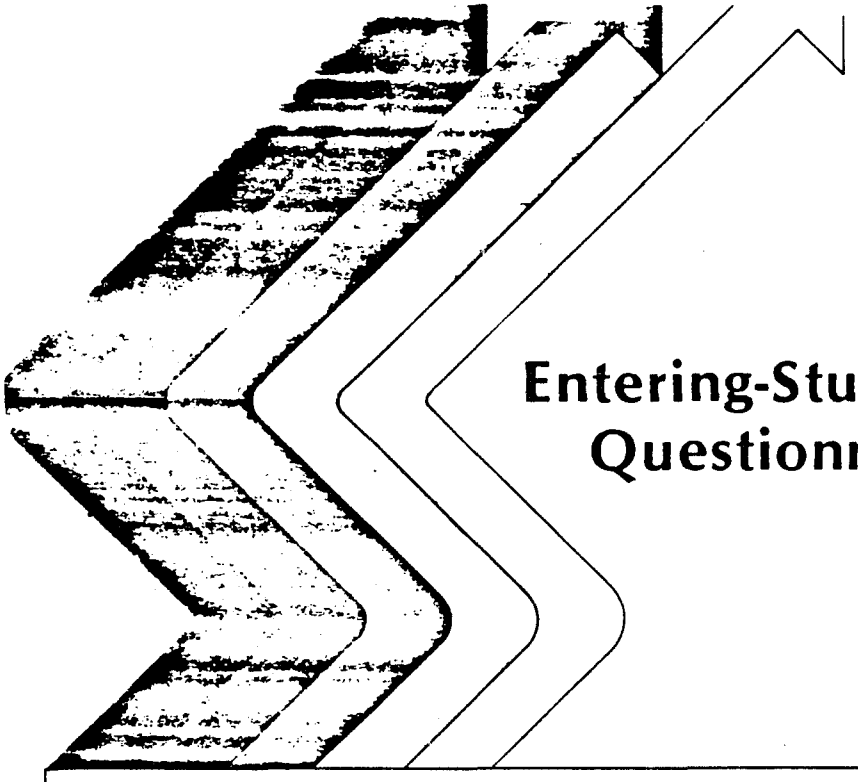
Handicapped students may be affected in special ways in regard to retention. They may leave school for reasons other than those given

by nonhandicapped students. The Entering Student Questionnaire includes information questions formulated for the handicapped student. That information should be used in studying handicapped students.

APPENDICES

APPENDIX A

ENTERING STUDENT QUESTIONNAIRE



Entering-Student Questionnaire

PERSONAL IDENTIFICATION SECTION

Do not complete this section unless you are asked to do so *Please print*

LAST NAME _____ 1-12

FIRST NAME _____ 13-20

MIDDLE INITIAL _____ 21

ANY OTHER NAME WHICH MAY APPEAR ON YOUR SCHOOL OR COLLEGE RECORDS _____

STUDENT IDENTIFICATION NUMBER _____ 22-30

TELEPHONE NUMBER ____ - _____

PARENT'S MAILING ADDRESS
NUMBER AND STREET _____ 31-55

_____ 56-70

STATE _____ 71-72

ZIP CODE - _____ 73-77

National Center for Higher Education Management Systems
The College Board

INSTRUCTIONS:

Specific directions are given for completing many of the questions in this questionnaire. Where no directions are given, please circle the number or letter of the most appropriate response, such as in the sample question below.

Sample:

4. Are you currently married?
   0 Yes
   (1) No

If you are not currently married, you would circle the number 1

1. What is your sex?
78 0 Female
   1 Male

2. How do you describe yourself? *Circle one*
79 0 American Indian or Alaskan Native
   1 Asian, Pacific Islander, or Filipino
   2 Black or Afro-American
   3 Hispanic, Chicano, or Spanish-speaking American
   4 White or Caucasian
   5 Other _____

3. How old are you?
80 0 Under 18
   1 18 to 22 years
   2 23 to 25 years
   3 26 to 30 years
   4 31 to 40 years
   5 41 to 50 years
   6 51 to 60 years
   7 61 years or more

4. Are you currently married?
81 0 Yes
   1 No

5. Do you feel that you have a permanent handicap? *Circle* **all** *that apply.*
82 0 No
83 1 Yes, restricted mobility
84 2 Yes, restricted hearing
85 3 Yes, restricted vision
86 4 Yes, but I prefer not to record it on this form
87 5 Other _____

6. a Have you previously enrolled in any post-secondary educational institution? *If you have enrolled in more than one, please circle the most recent.*
88 0 No, I have not been previously enrolled
   1 Yes, at this institution
   2 Yes, at a public two-year college
   3 Yes, at a public four-year college or university
   4 Yes, at a private college or university
   5 Yes, at a vocational/technical school, hospital school of nursing, trade school, or business school
   6 Other _____

b If you have attended another college, please write in the name of the one you most recently attended

_____

7. The following statements reflect the goals of many college students. *Please circle the letters of* **all** *those goals that are important to you.*

Academic Goals

89 A To increase my knowledge and understanding in an academic field
90 B To obtain a certificate or degree
91 C To complete courses necessary to transfer to another educational institution
92 D Other _____

Career-Preparation Goals

93 E To discover my career interests
94 F To formulate long-term career plans and or goals
95 G To prepare for a new career
96 H Other _____

Job- or Career-Improvement Goals

97 I To improve my knowledge, technical skills and or competencies required for my job or career
98 J To increase my chances for a raise and or promotion
99 K Other _____

Social- and Cultural-Participation Goals

100 L To become actively involved in student life and campus activities
101 M To increase my participation in cultural and social events
102 N To meet people
103 O Other _____

Personal-Development and Enrichment Goals

104 P To increase my self-confidence
105 Q To improve my leadership skills
106 R To improve my ability to get along with others
107 S To learn skills that will enrich my daily life or make me a more complete person
108 T To develop my ability to be independent, self-reliant, and adaptable
109 U Other _____

8. From the list of goals in question 7, please select the three that are most important to you and enter their codes below. For example, if your most important goal is "To obtain a certificate or degree," enter the letter B in the first box.

Most Important	Second Most Important	Third Most Important
110	111	112

9. What degree are you **currently** working toward at our college, **and** what is the highest degree you **ultimately** plan to earn? *Circle a number in each column.*

	Current	Ultimate	
	0	0	Not seeking a certificate or degree
	1	1	Certificate
	2	2	Associate degree
113	3	3	Bachelor's degree
	4	4	Master's degree
	5	5	Specialist degree (e.g., Ed.S.)
	6	6	Professional degree (e.g., medicine, law, theology)
	7	7	Doctoral degree (e.g., Ph.D., Ed.D., D.B.A.)

114

10. a. Please write in your intended major or area of study at our college

_____

b. Now look at **List A: Majors and Areas of Study** and enter in the boxes below the code number of the category in which your major or area of study falls.

115-118

11. What is your intended enrollment status?

119
- 0 Primarily for credit — full-time (12 or more hours each term enrolled)
- 1 Primarily for credit — part-time (less than 12 hours each term enrolled)
- 2 Primarily **not** for credit

12. What will your primary employment or occupation status be during your first term at our college? *Circle the most appropriate response.*

120
- 0 Employed more than half time
- 1 Employed half time or less
- 2 Homemaker, not employed outside of the home
- 3 Not employed but would like to work
- 4 Not employed and do not care to work while attending college

13. The decision to attend a particular college is usually influenced by a variety of factors. *Please circle* **all** *of the factors that influenced your choice to attend our college.*

- 121 A Academic reputation of our college
- 122 B Course offerings
- 123 C Former student's advice
- 124 D Teacher's or friend's advice
- 125 E Counselor's advice
- 126 F Employer's suggestion
- 127 G Will help me retain my current employment
- 128 H Costs
- 129 I Availability of financial aid
- 130 J Institution's social reputation
- 131 K Close to home
- 132 L Wanted a change in scenery or location
- 133 M Range and availability of student services
- 134 N I can identify with fellow students
- 135 O Inconvenient to go elsewhere
- 136 P Other _____

14. How did you learn about our college? *Please circle* **all** *items that apply.*

- 137 0 From people at my high school
- 138 1 From relatives, friends, or acquaintances
- 139 2 From a representative of this college
- 140 3 From a college placement service or some other education-information service
- 141 4 From a college catalog
- 142 5 From material I received in the mail
- 143 6 From material I read in a newspaper or magazine
- 144 7 From a radio or TV advertisement
- 145 8 From an information display at an education fair, shopping center, county fair, or similar location
- 146 9 Other _____

15. a. Was our college your first choice?

147
- 0 Yes
- 1 No

b. If no, what kind of college was your first choice?

148
- 0 A public two-year college
- 1 A public four-year college or university
- 2 A private college or university
- 3 A vocational/technical school, hospital school of nursing, trade school, or business school
- 4 Other _____

What was the name of the college that was your first choice?

_____

16. Do you plan to apply for financial aid at our college?

149
- 0 Yes, I have already applied
- 1 Yes, I plan to apply
- 2 No, I do not think I will ever apply

Circle one.

150
- 0 Weekday mornings
- 1 Weekday afternoons
- 2 Weekday evenings
- 3 Anytime during the week
- 4 Anytime during the weekend
- 5 No preference

151
- 0 Yes
- 1 No, I will complete my program this term
- 2 No, but I plan to return at some future date
- 3 No, I plan to transfer to another college
- 4 No, I have no plans for additional education at this time
- 5 I do not yet know my plans for next term

ADDITIONAL QUESTIONS SECTION

Additional questions may have been added to this printed form by your college. If you have been asked to answer additional questions, please use the boxes below to record your responses.

☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
19	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**
152	153	154	155	156	157	158	159	160	161	162	163	164	165	166

Please use the space below for any comments you have about our college, this questionnaire, or anything else you care to share with us.

Programs usually requiring four or more years of study

0100	Agriculture and Natural Resources
0200	Architecture and Environmental Design
0300	Area Studies (includes Asian Studies, Black Studies, etc.)
0400	Biological and Life Sciences
0500	Business and Management
0600	Communications
0700	Computer and Information Sciences
0800	Education
0900	Engineering
1000	Fine and Applied Arts (includes Art, Dance, Drama, Music, etc.)
1100	Foreign Languages
1200	Health Professions
1300	Home Economics (includes Clothing and Textiles, Institutional Housekeeping, and Food Service Management, etc.)
1400	Law
1500	Letters (includes Creative Writing, Literature, Philosophy, Speech, etc.)
1600	Library Science
1700	Mathematics
1800	Military Sciences
1900	Physical Sciences (includes Chemistry, Physics, Earth Sciences, etc.)
2000	Psychology
2100	Public Affairs and Social Services
2200	Social Sciences (includes Anthropology, Economics, History, Political Science, Sociology, etc.)
2300	Theology and Religion
4900	Interdisciplinary Studies
6000	Other
7000	Undecided but probably program of four or more years

Programs usually requiring less than four years of study

5000	Business and Commerce Technologies (includes Accounting, Banking, Commercial Art, Hotel and Restaurant Management, etc.)
5005	Secretarial Technologies (includes Office Supervising and Management, Stenographic and Typing Technology, etc.)
5006	Personal Service Technologies (includes Stewardess Training, Cosmetologist, etc.)
5100	Data Processing Technologies (includes Computer Programming, Keypunching, etc.)
5200	Health Services and Paramedical Technologies (includes Dental and Medical Assistant Technology, LPN, Occupational and Physical Therapy Technology, etc.)
5300	Mechanical and Engineering Technologies (includes Aeronautical and Automotive Technology, Welding, Electronics, Architectural Drafting, etc.)
5317	Construction and Building Technologies (includes Carpentry, Plumbing, Sheet Metal, Heating, etc.)
5400	Natural Science Technologies (includes Agriculture Technology, Environmental Health Technology, Forestry and Wildlife Technology, etc.)
5404	Food Services Technologies (includes Food Service Supervising, Institutional Food Preparation, etc.)
5500	Public Service Technologies (includes Law Enforcement Technology, Teacher Aide Training, Fire Control Technology, Public Administration Technology, etc.)
5506	Recreation and Social Work Related Technologies
8000	Other
9000	Undecided but probably less than four year program

ENTERING-STUDENT QUESTIONNAIRE

Please record the number of your response to each item in the boxes on page 4 of the Entering-Student Questionnaire.

19. How sure are you about your choice of a major?

1. Not sure
2. Somewhat sure
3. Very sure

20. Please indicate your expected fall housing status.

1. College residence hall
2. Living at home with parent(s)
3. Other off campus (apartment, house, room, etc.)

21. To what extent are you concerned about having adequate finances for your educational expenses?

1. Not a concern
2. Some concern
3. Major concern

This section presents several issues with which you may need assistance during this next year. In boxes 22-26 on page 4, please enter a "1" for YES if you want such help. If you feel it is unlikely you will need assistance, enter a "2" for NO.

I need help with:	YES	NO
22. Deciding my educational and career plans	1	2
23. Improving my study habits	1	2
24. Getting acquainted and involved at SVSC	1	2
25. Resolving a personal problem	1	2
26. Tutoring assistance in one or more academic subject areas. [If yes, please write the subject area(s) on the back of the questionnaire]	1	2

How likely do you think it might be that you will: (Please enter your responses in boxes 27-30)

	Very Likely	Somewhat Likely	Not At All Likely
27. Change your major field of study?	1	2	3
28. Graduate from SVSC?	1	2	3
29. Transfer to another college?	1	2	3
30. Drop out of SVSC temporarily and return at a later time (not including transferring)?	1	2	3

Below are questions pertaining to activities in which you may be interested. Please enter your responses in boxes 31-33.

	YES	NO
31. Student Government, clubs, organizations	1	2
32. Artist series, concerts, special events	1	2
33. Intramural sports and recreation	1	2

Thank you for your assistance. When you have finished, please return your completed questionnaire in the manner specified.

APPENDIX B

DISCRIMINANT ANALYSIS FORMULA TO PREDICT STAYERS AND LEAVERS

DISCRIMINANT ANALYSIS FORMULA TO PREDICT STAYERS AND LEAVERS

Although not a direct objective of the research, discriminant analysis provides a formula that when used in analysis could act as a predictor for the stayers and leavers in this study. Once the profiles were developed, the formula was used to predict stayers and leavers based on their individual responses to the Entering Student Questionnaire. The formula is as follows:

Y = Weighted number x Significant variable

Y represents the individual student and each significant variable to the student group to be multiplied by its weighted number.

Once the formula was applied and run through discriminant analysis, each member of the sample group was given a weighted number that was either positive or negative. Those that were positive and fell below the significant level of +.05 were more apt to stay in school, whereas those that were negative and below the significant level of -.05 were more apt to leave school.

The following formula was applied to males on campus, Groups 1 and 2:

Student = -.10831 IMS, +.07024 INDPNDT, -.09135 INCRPAY,
+.05042 LDRSKLS, -.20125 FIRSTC, +.05240 PRSPROB

The following formula was applied to males off campus, Groups 3 and 4:

Student = +.07980 MARTL, -.05571 AGE, -.07010 NEWCAR, -.09615 SLFCON
-.20125 FIRSTC, -.07676 ULTIMAT, -.09911 COUNADV

The following formula was applied to females on campus, Groups 5 and 6:

Student = -.10835 IMS, -.18802 TRAN, +.11437 ARCON,
+.5340 PRSPROB, +.09135 INCRPAY

The following formula was applied to females off campus, Groups 7 and 8:

Student = +.05517 AGE, +.09135 INCRPAY, -.06984 CONCNFN,
+.08811 COUNADV

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