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"REVERSE TRANSFER" - THE RETREAD FUNCTION OF COMMUNITY COLLEGES

by
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of the requirements for the degree of
Doctor of Education
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CHAPTER I. REVERSE TRANSFER TO THE COMMUNITY COLLEGE

INTRODUCTION

Since World War II, the spectacular growth of community colleges has projected them into the public eye. In the fall of 1969, more students enrolled as freshmen in two-year colleges than in all four-year collegiate institutions in the United States. (Jennings, 1970)

Community colleges are multi-purpose public two-year institutions of higher education offering a number of "transfer" programs equivalent to the first two years of a four-year baccalaureate program, post-secondary occupational curricula leading directly to the job market, and a wide variety of other educational services and resources to the residents of the surrounding community.

The dramatic surge in their enrollment, produced in part by society's demand for higher education for greater numbers of students and the increased emphasis on technology, caused an expansion in the functions of these colleges. By the middle of the twentieth century, specialized guidance, general-cultural and continuing education, community service, self-improvement courses, semi-professional/career programs, and accessible channels to upper division education comprised the major functions of community colleges.

However, during the last decade, these colleges have experienced another educational phenomenon. Many students who initially entered four-year colleges and universities sought transfer admission to community colleges. The admission of these transfer students

with the subsequent educational experiences offered at the two-year college is sometimes referred to as the "retread function".

Purpose of the Study

The purpose of this study is to examine the academic achievement of "reverse transfer" students and their educational destination (current enrollment) at the community college as possible variables to explain the "retread function" of community colleges.

The concept of the "retread function" of two-year colleges has been examined in previous studies as the "salvaging" of university students with academic deficiencies who subsequently return to the four-year college. (Kintzer, 1966; Meadows and Ingle, 1967; Muck, 1969)

This study attempts to determine if the current "retread function" in Michigan community colleges is a "salvage" function as formerly interpreted, or if a broadened adaptation is justified in including a "second chance" for students without academic deficiencies at the university and for those who do not return to four-year colleges.

In studying student characteristics, "reverse transfer" students were first grouped on the basis of their academic status at the time of their exit from the university: (1) dismissed (2) academic probation (3) clear status, or (4) no action. The "no action" group of students were those who, because no definite exit status was shown on the academic record, could not be included in any of the other three groups.

The academic achievement of these four groups of students was then studied on the basis of their grade point averages in high school, at the university, and in the community college. To determine their educational destination, they were then regrouped into

four categories. They either (1) returned to a four-year university (2) were still enrolled in a transfer program (3) were enrolled in a semi-professional/career program, or (4) left the community college.

Academic achievement and educational destination were then analyzed and compared to determine if there was a relationship between these student characteristics and the "retread function".

This study was made to describe the characteristics of "reverse transfer" students, and to determine their destination at the community college. Destination is the student's current enrollment or non-enrollment in a college or university. It is shown by one of the four categories listed above. These student characteristics are then considered in defining the "retread function" of community colleges.

Concept of the "Retread Function"

An expanded theoretical interpretation of the "retread function" is developed on the basis of the findings in this study. It is much broader and less limited than earlier interpretations. In this new concept, students are seen as seeking more than redemial academic records. They may be seeking less pressure of intense competition, more realistic educational goals, more personal assistance or guidance in selecting educational or occupational objectives, less financial burdens in achieving their goals, or many other adjustments to individual problems.

It is difficult to establish valid reasons why students change colleges, but regardless of the reasons why these "reverse transfer" students enrolled in community colleges, it is evident that this

different type of college is attracting increasingly greater numbers of reverse transfer students. The philosophy and purposes as stated by these colleges may be related in some way to the objectives of this group of students. Community colleges commonly emphasize the breadth of their educational programs, counseling services, and practical knowledge which is applicable to the changing technological society. Any one of these functions may include the service that "reverse transfer" students seek.

If this study reveals that large numbers of "reverse transfer" students enter community colleges without academically deficient records, and that large numbers fail to return to the four-year college after repairing a poor academic record, then the "retread function" must be seen as a broader service provided for students who may be seeking alternative educational goals.

Rationale for the Study

In accepting the responsibility of providing education for all who can profit, community colleges need information about the many sub-groups in their total population. They need to be informed about the characteristics of students in these sub-groups so that they can plan programs which fit social conditions, students' needs, and increasing knowledge. "Reverse transfer" students, one of the sub-groups, can be served more adequately and provided with more essential experiences to clarify their needs and affect positive motivation if their academic achievement and educational destination are known.

Thornton (1966) pointed out that unless a college defines quite clearly the groups in its community whose educational needs it plans

to serve, a community college can hardly escape offering a partial or inappropriate education. Medsker (1960) had already stressed that student characteristics serve as guidelines for policies and procedures in educational institutions. Both men emphasized the diversity of the student body and the variety of educational programs offered by community colleges.

Because of their adaptability and diversity, Michigan community colleges have been taking on an ever increasing portion of the tasks of higher education. It is expected that by 1975, 32.5 percent of all persons in college in this state will be attending a community college. (Michigan Council of Community College Administrators, 1965)

In the fall of 1968, the 27 community colleges in Michigan had a total enrollment of 95,900 students. Of this number, over 3,000 were transfer students who had previously attended another college or university. (Michigan Department of Education, 1969) College personnel appear to know little about the characteristics of this group of students, or to recognize their growth in numbers. In fact, they typically have difficulty even generating data on these students.

"Reverse transfer" students may be products of a "cooling out" process of the state universities. Burton Clark (1960) spoke of the "cooling out" function of higher education and noted that the state universities are likely to perform this function with the "hard response", while the junior college may use the "soft response." The "hard response" refers to the attitude within universities that demands specific academic standards which students must maintain or be dismissed. The "soft response" is to offer students alterna-

tive paths rather than dropping them. The effect of the "soft response" is to "let down hopes gently and unexplosively." Through it, students who are failing or barely passing find their occupational and educational future being redefined. Thus, many who aspire to the managerial and professional occupations will gradually find their niche in the skilled and semi-professional occupations.

"Reverse transfer" students may also be products of a disorganized, contradictory society which demands and expects certain student behavior that is not compatible with the real needs of the student or the society. It is well known that pressure from family, friends, and school officials force many students into a collegiate atmosphere both incompatible with their personal and educational values and not conducive to the completion of realistic educational and occupational goals.

With increasing enrollments and increasing institutional financial problems, there is now a real possibility that partially closed doors to the community colleges may develop. The accommodation of "reverse transfer" students who must be assumed to have the academic ability to complete a college program, but who for various reasons now seek a second college opportunity to achieve their educational and occupational goals, could become a major function of community colleges. The "retread function" is, therefore, examined and interpreted for the purpose of providing a better understanding of "reverse transfer" students, their achievement and educational destination.

REVIEW OF THE LITERATURE

A review of recent literature reveals that little study has been made of "reverse transfer" students. Nothing could be found about why students who initially attend a state university later enroll in two-year colleges. However, Kintzer (1966), Meadows and Ingle (1967), and Muck (1969), studied college students who were academically unsuccessful at specific state colleges but were later "salvaged" at two-year colleges. Their studies were limited to the academic achievement of students who had been dismissed or were on academic probation at the university prior to their admission to the junior college. No studies have dealt with students who return to the community college after establishing a satisfactory academic record at the university.

A number of reports have been made about the increasing mobility and transfer of students among colleges within certain states. (Illinois, 1969; North Carolina, 1968; Massachusetts, 1969) This movement of students includes the "reverse transfer" group. These reports are mainly surveys of the numbers and flow of students among collegiate institutions. They do not consider what happens to students after they transfer.

The literature also provides a great deal of information about the characteristics of college students in general, but very little about "reverse transfer" students. These students, who initially attend four-year colleges as freshmen and then transfer to community colleges, will undoubtedly have characteristics common to university students and other characteristics more comparable to community college students. Thus, studies dealing with two-year college students and their characteristics were reviewed, as were studies which dealt with comparisons of these students with university students.

The findings in this review of literature are divided into three sections. The first section deals with studies made of the "salvage" or "second chance" of "reverse transfer" students with academic deficiencies at state universities. The second and third report findings about the mobility and characteristics of college students. The main reason for discussing the literature on mobility of students and their characteristics is to provide a rationale for concern about this transfer phenomenon, and to provide background for describing and comparing characteristics of groups of "reverse transfer" students with native community college students.

The "Salvage" or "Second Chance" Function

The limited studies made of the salvaging of academically capable students by two-year colleges were made mainly in California, where education is highly structured in a state system of higher education. In this structured system students can only be admitted to the state universities if they have achieved at a specified rate in the high schools or junior colleges. This is a different system than found in most Midwestern or Eastern states, and no studies were found to have been completed which dealt with the "salvage" or "second chance" function in either of these geographical areas.

Kintzer (1966) found evidence of successful salvaging of able students who had initially entered the University of California. He states that the junior colleges run no academic risk in accepting students who are on academic probation or have been dismissed from the university because they are superior students. He found that the cause of failure may be emotional immaturity, inability to adjust to the complexity and impersonality of the large campus, lack of sound

counseling, or a deficiency in a basic skill. However, the "reverse transfer" students in that study may not be comparable to students who fail or are on academic probation at universities in other states where no state structured admissions policies exist. In some states the competition for students has loosened the rigid standards for admission. Therefore, "reverse transfer" students in Michigan may not be the superior students that Kintzer found in his study in California.

Muck (1969) found that students transferring to El Camino College in California while on probationary status because of unsatisfactory grades at a previous institution were highly successful. More than 70 percent of the transfers from four-year colleges removed themselves from probationary status. However, few received an Associate Degree. Age appeared to be unrelated to the degree of success, and there was no relationship between academic success and a waiting period before admission to the two-year college. He concluded that the two-year college provided an important salvage function and recommended that they continue their permissive admissions practices.

The study made of Reverse Articulation in Marietta, Georgia by Meadows and Ingle (1967) resulted in a similar recommendation. Their comparative study of student abilities showed that the transfer students who had been dismissed from other institutions were equal to or higher than natives in aptitude and achievement at the junior college.

All of these studies emphasized academic achievement but gave no indication that the salvage function was other than an opportunity for students to repair a poor academic record so they could return to the university or other four-year college. This study approaches the

"retread function" as broader in scope, and "reverse transfer" students as a group with more diverse academic achievement records. It also views the "retread function" as becoming increasingly important due to the increased mobility of college students.

Increasing Mobility of College Students

Enrollments in higher education have been expanding steadily as a growing proportion of the increasing population has sought to realize the American dream of a college education, but prior to World War II very little attention was given to the transfer student. The incidence of student transfer was small and had little impact on most institutions. By the early 1950's, these conditions were rapidly changing. As the society became increasingly affluent and mobile, the transfer of students from institution to institution became commonplace.

A report from the United States Office of Education (1965, pg. 5) revealed that in 1963 more than seven percent of the total national undergraduate enrollment in all types of collegiate institutions were transfer students. By 1968, a number of state departments of education had initiated studies dealing with this movement of college students. These studies revealed that increasing numbers of students were transferring from four-year to two-year colleges.

In the State of Illinois approximately 34,000 undergraduate transfer students were identified during the school year 1967-68. The total undergraduate credit enrollment in all institutions was 357,000. It can be assumed then that one of every ten undergraduates was a transfer student. The Illinois Council on Articulation reported that twice as many students transferred from a senior institution as

from a junior college. They also reported that public junior colleges were receiving as many transfers as they were sending to other colleges. Eighty percent of these students were enrolled in baccalaureate oriented curricula as compared to 20 percent in semi-professional/career curricula. (Illinois Junior College Board, 1969)

More than 7,000 of the 96,500 undergraduate students in North Carolina were transfers in the fall of 1968. Of these transfers, forty-eight percent moved from junior to senior college, 34 percent from senior to other senior colleges, 12 percent from senior to junior colleges, and the remaining 6 percent moved from junior to other junior colleges. A study of the flow of transfers showed that the community colleges in that state received as many transfers as they sent to other colleges. (North Carolina Board of Higher Education, 1968)

In Massachusetts, of the 193,199 degree credit undergraduates in the fall of 1968, four percent were transfer students. About 20 percent of the total transfer population entered two-year institutions. A study showed that eight percent of the total enrollment in the public two-year colleges were transfer students. Very little is known about these students except that they entered science/arts and business curricula much more frequently than other curricula. This fact might seem to indicate an intent on the part of the students to transfer back to a four-year college. However, the infancy of community colleges in that state could account for the high enrollment in those curricula, because in the early years of their existence most community colleges offer limited educational programs and the most commonly offered curricula are science/arts and business. (Massachusetts Board of Higher Education, 1969)

There were over 15,000 transfer undergraduate students admitted to all institutions of higher education in Michigan in the fall of 1968.

This represented about six percent of the total undergraduate enrollment. Over 80 percent of the transfers were admitted to public colleges. More than 3,000 transfer students were admitted to community colleges. (Michigan Department of Education, 1969)

There is little reason to believe that the increasingly mobile and affluent society will not continue to provide incentives which generate many transfer students among collegiate institutions. The increasing interest in these students among state departments of education will undoubtedly create pressures on community colleges to provide greater assistance to transfer students. In doing so, these colleges will need more information about the characteristics of this sub-group within their student population.

Characteristics of College Students

The magnitude of responsibilities assumed by the community colleges necessitates an evaluation and understanding of the abilities and goals of every distinct group of students within the student body. Such characteristics are valuable as predictors of student success, and for planning future college development.

It is generally accepted that the most useful predictors of college success are College Ability Test Scores, high school grade point average, and high school class rank. Considerable literature exists on academic prediction studies (e.g., Lavin, 1969). It is unwise, however, to assume that high school grades are comparable for all sizes and types of secondary schools because American education covers an extremely wide range of opportunities in various types of institutions. The same can be said about the diversity of college ability tests and scoring devices. McConnell and Heist (1962) found that,

using a representative sample of 200 colleges, the score on the American Council on Education Psychological Examination ranged from 37.5 (below the first percentile for college freshmen nationally) to 142.2 (above the 90th percentile and for all college freshmen).

Test scores and high school grades generally cause much anxiety and unhappiness in college admissions. The role they play should be restricted and specific to the college which accepts the students. Taken collectively, however, they do provide a measure for comparison among sub-groups of students. Although these measures of academic ability and achievement have been attacked on the grounds of relativity to specific size and type of high schools and colleges, no substitute measurement is available at the present time, and they remain the major instrument for comparative purposes. College ability test scores for "reverse transfer" students are less important than measures of academic achievement (grade point average) in this study, because the students have already demonstrated academic performance in both the high school and the university. Therefore, the major emphasis will be placed on academic achievement rather than academic potential for this study.

The literature showsthat separate equations for boys and girls are desirable because girls usually excel in grades (both high school and college) but boys achieve higher on scholastic aptitude tests. Furthermore, academic achievement of girls can usually be predicted with more accuracy than can that of boys. (Hoyt, American Testing Research Report, 1966)

Trent and Medsker (1968) found that proportionally more men than women persisted in college for four years, but proportionally more women than men obtained their degree in that time. While one-third

of the women obtained degrees as against slightly less than one-fourth of the men, nearly twice as many men as women remained in college consistently without obtaining a degree within a conventional four-year period (31 percent versus 16 percent, respectively). They also found that students of both sexes who majored in academic subjects (natural science, social science, and the humanities) persisted in college to a greater degree than students who majored in applied subjects such as education, business, and engineering.

Haven's study (1967), of the characteristics of college students who select majors in business and education, however, showed that they tend to be older students. Regular day students in community colleges range in age from 16 to more than 70 years. Medsker (1960, pg.43) found in a study of 10 junior colleges with 13,000 regular day students that 43 percent were 19 years of age or younger, 10 percent were in the 20-22 age bracket, and 47 percent were over 23 years of age.

At Coalinga College in California, 10 percent of the students were over 30 years of age, and 17 percent were between 21 and 30 years of age. (Thornton, 1966, pg.151) Medsker also reported that of the six colleges which reported marital status, 23 percent of the students were married. The influx of veterans and mature students has changed the percentage of married and older students in college today.

Age has been found to be a factor in withdrawal from college. Orange Coast College from its opening in 1948 kept a careful record of withdrawing students. The first report showed that 14 percent of the college population was over 25 years of age, and 27 percent of the dropouts were above the same age. It also concluded that one-third of the drop-outs seemed to be due to some extent to a failure to provide services on the part

of the college. Academic ability scores seemed to be of no value in predicting dropouts. (Thornton, 1966)

College freshmen, in general, enter college with many goals and aspirations, some realistic and some unrealistic. These aspirations are important both developmentally and socially. Allport (1961), Erikson (1964), and Chickering (1969) emphasized the student's need for a purpose. If goals and aspirations of students are consistent with other characteristics, such as academic aptitude and financial resources, their chances of attaining these goals are high. By implication, if a student's aspirations and goals are incongruent with his abilities and resources, we assume that he would face frustration and disappointment, and would "cool out" or "drop out". (Baird, ACT Research Report, 1969, pg.3)

However, vocational aspirations of college students have been shown to rise or lower over a period of time with respect to the amount of higher education they plan to attend. Thistlewaite (1963) found that of 4,000 high ability students attending 140 colleges and universities in 1959, 41 percent of the men and 40 percent of the women changed their educational aspirations during the first two years of college. A number of studies have shown that those students who change their original college curricular or vocational choices differ in interests and aptitudes from those who remain in their original field, and are thus atypical. (Feldman and Newcombe, 1969)

It cannot be stated conclusively that there is a relationship between lack of commitment to specific curricular programs and withdrawal from college. There is some evidence, however, that differences do exist generally between students who withdraw

voluntarily and those who are dismissed. There are also some differences between those who withdraw with passing grades and those with a record of failure. (Rose, 1965; Rose and Elton, 1966; Suczek and Alfert, 1966)

It has also been demonstrated that students who withdraw, whatever their academic status or whatever their length of interrupted study, differ in many ways from students who persist in college. Differences go beyond potential academic ability, achievement, and finances. One factor highly related to persistence in college is academic motivation. This motivation may be manifested in such diverse forms as the quality and quantity of study outside of class, or just plain willingness to persist, or desire to achieve. (Heilbrun, 1962)

A more recent study provides evidence that the student's academic motivation is increased by his return to college after a recess. It reported that students committed to an educational program, either transfer or vocational, were more likely to return to college after withdrawal if they had a clear vocational goal in mind. Those with only vaguely defined or unknown goals were more likely to remain out of the community college classroom. In the same study, a large percentage of the total group (56 percent) indicated that the community college had not offered the desired environment. (Bossen and Burnett, 1970)

One of the advantages often cited for attending a public junior college is that students can find part-time work in the community in which they reside. Students who go to a university often find it difficult to obtain part-time jobs because they must compete for available jobs with a much greater number of students in a limited

geographical area. Havemann and West (1952) found that 71 percent of the college graduates that they studied had worked their way, in whole or in part through college.

Nationwide data are unavailable on the employment patterns of students in community colleges. However, reports from individual colleges do indicate a trend which agrees with the findings of Havemann and West. D'Amica and Raines (1957) found that 57 percent of the entering class at Flint Community College in Michigan were working. Approximately 63 percent of the males and 47 percent of the females had some form of part-time employment. The median number of hours worked was 20.4 per week. Significantly, 65 percent of the students who worked felt that their job did not aid their studies at all; it was simply a source of funds and almost half of the working students said that they would be able to attend college without working.

There have been indications in recent years that fewer students need to work their way through college. More federal, state, and local financial assistance is available to more students than at any earlier period in history. In fact, K. Patricia Cross (1968) states that few students appear deterred from going to college because of cost. Increased costs of education, however, have placed more pressure on students to obtain part-time jobs as a supplement to other financial assistance during college. The demands within our society emphasize material possessions (such as, automobiles) and this seems to contribute to the need for additional income.

Literature demonstrates that student characteristics can be measured both quantitatively and qualitatively. The quanitative data can be obtained from routine sources regularly kept by most

colleges. The qualitative aspects of student characteristics are not so easily obtained, and there are only limited means of obtaining real measures of such student characteristics. This study describes in quantitative measures what "reverse transfer" students are like and does not delve into qualitative description.

SUMMARY

It is often difficult to obtain accurate and complete information on any sub-group within a college population, and the group of "reverse transfer" students used in this study were an extremely difficult group because most community colleges have not recognized these students as a distinct and unique part of their student body. This study attempts to demonstrate the importance of recognizing "reverse transfers" as students with potential for success in college who need both attention and assistance to make satisfactory adjustments in achieving their educational and occupational goals.

In the review of literature, the author attempts to provide the rationale for the study, and to show evidence that students' characteristics are a necessary form of information which colleges need in order to plan adequately for their students' ultimate educational destination. Because "reverse transfer" students have experienced problems which they are obviously attempting to adjust at the community college, their past academic achievement and their persistence in achieving their educational goals must be considered essential elements in their future educational plans.

In helping students evaluate future plans and adjust their educational aspirations, the "retread function" serves as a focal point. It may be more than just offering a "second chance" to students to

enter a college and enroll in courses. To make satisfactory progress toward a future goal, some students may require additional attention and assistance.

Educational efficiency and humanistic concern necessitate that we seek means of insuring students who transfer to community colleges that they will have a second chance to find and make progress toward realistic educational and occupational goals.

CHAPTER II. PROCEDURES USED IN CONDUCTING THE STUDY

The procedures used in the study are discussed in this chapter under the following topics: (1) General Methodology (2) Hypotheses (3) Population Characteristics (4) Collection of Data (5) Method of Analyzing the Data.

GENERAL METHODOLOGY

In this comparative study (the object of which is to identify differences between groups of college students) personal and educational characteristics are used as classification variables between groups of both former university and native community college students. Academic achievement is used as the statistical variable to test the hypotheses.

The study group, composed of all the "reverse transfer" students from five state universities who were admitted to five community colleges during the calendar year 1968, is a purposive sample because it was expressly chosen to mirror a larger group of "reverse transfer" students. It is not a random or representative sampling.

The calendar year was designated because of the variation among colleges in the use of semesters and terms. Community colleges, as well as state universities, may use trimesters, two-semester, three-term, or four-term divisions of the school year. In some colleges the summer session is separate from the regular school year, while in others it is just another semester or term of the regular school year.

State university transfers were used because preliminary investi-

gation showed that the greatest number of four-year transfers who entered community colleges were from public four-year colleges. Further inquiry showed that among public universities the five selected provided a substantial number of the reverse transfers in Michigan, and these five universities represent a broad geographical area. The community colleges used in the study also provide a geographic and demographic representation of Michigan community colleges.

The comparison group is a sample of native students who returned to the community college of their initial enrollment in the fall of 1968. The sample was drawn randomly in proportion to the number of reverse transfers enrolled in each of the five community colleges. A comparison group is necessary to detect effects of the community college experience on the academic achievement and destination of native students.

Both the study and the comparison groups are divided into sub-groups on the basis of the students' destination from or current enrollment at the community college. The sub-groups are students who:

(1) returned to a four-year college

(2) were still enrolled in a transfer program

(3) were still enrolled in a semi-professional/ career program

(4) discontinued a program of higher education and left the community college

The students' destination was determined from an examination of current college enrollment lists and from the students' transcript requests to other institutions. Colleges almost unanimously require a transcript of credits from transfer students before admission is

granted. Therefore, if a student had not made a request to have a transcript sent to another college, and was no longer enrolled in the community college, he was placed in the category of "left college".

The main focus of this thesis is academic achievement and the educational destination of "reverse transfer" students.

The research study examines three areas of academic achievement:

(1) high school grade point average and class rank

(2) university grade point average

(3) community college grade point average

In each hypothesis, academic achievement refers to these measurements. Educational destination is defined and shown in this study as the students' status in the community college, one and a half or two years after admission. He has either returned to a four-year college, is still enrolled at the community college, or has left college. In testing the hypotheses, the origin of the student is his exit status from the university (dismissed, probation, clear, no action) and his destination is his enrollment status at the community college at the time data were collected.

HYPOTHESES

Academic Achievement and Educational Destination of "Reverse Transfer" Students as Compared to Native Community College Students.

The superior academic ability of freshmen entering a four-year college over freshmen entering a two-year college has been demonstrated on national samples. Various tests including the American College Testing Program (Hoyt and Munday, 1966), a rank-in-high-school index

(Seibel, 1965; Trent and Medsker, 1965) and reported high school grades (Asten, Panos, and Creager, 1967) provide such evidence.

Trent and Medsker (1968) found that three-fourths of the four-year college freshmen came from the upper 40 percent of their high school graduating class, whereas only half of the transfer students in two-year colleges were in the upper 40 percent of their high school graduating class. K. Patricial Cross (1968, pg. 17) also found that junior college students bring with them characteristics derived from their backgrounds which condition their interests, values, motivations, and academic achievement. She found that the attitude of parents regarding college attendance has a profound effect upon whether students go to college, what type of college they attend, and even how long they stay. Students who enter four-year colleges were much more likely to receive parental encouragement than those who entered junior college. This evidence leads one to believe that generally native community college freshmen are not equal to four-year college freshmen in academic achievement and educational persistence. The data and their analyses will be used to test the following hypothesis.

Hypothesis 1: Academic achievement and educational destination of "reverse transfer" students is higher than that of native community college students.

Academic Achievement and Educational Destination of "Reverse Transfer" Students by Exit Status from the University.

Variations of policies among universities governing the retention of college students are as great as those in the area of admissions and

evaluation. The most commonly used criteria is the cumulative semester (or term) grade point average. Most institutions require a 2.0 average (on a four point scale) for clear academic standing. However, some employ a sliding scale on class standing or the total number of hours earned by the student.

Variations are also found in the length of time and/or conditions which students are allowed in continuing to re-enroll while on probation. Some colleges use summer session enrollment as a condition for removal of probation and dismissal action. Others employ three or more types of probation; namely, warning, first probation, and final probation before dismissal. Some offer no alternatives.

Deans often differ in the use of discretionary powers for dismissing and reinstating students. Differences among schools and colleges in the levels of standards for retention and the rigidity with which they are applied can be found within most universities.

Because of these differences in retention policies, many students who are on academic probation or have been dismissed may have as much academic potential and persistence as students who remain on clear academic standing but leave the university to enroll in the community college.

Hyrothesis 2: There is no significant difference in academic achievement or educational destination at the community college among the three groups who left the university voluntarily and the group who was dismissed.

Academic Achievement and Educational Persistence of "Reverse Transfer" Students by Destination at the Community College.

Even though the available facts indicate that the average academic

aptitude level of students entering two-year colleges is somewhat below that of those who enter four-year colleges, there is known to be a wide range of abilities among both types of students. Many community college students are superior in ability to many students in four-year institutions. Tillery (1963) found that eighteen percent of the high ability graduates eligible to enter the state university in California actually entered a junior college.

However, it has also been shown that the terminal (occupational-vocational) students are clearly less academically able than the scholastically oriented groups in both junior and senior colleges. (Seashore, 1958; Medsker, 1960) These conclusions, based on college aptitude tests and high school grade point averages, sometimes lead to erroneous assumptions.

It is easy to assume that limited tests of college aptitude are tests of intelligence, but psychologists tell us that intelligence is not a unitary trait; rather it is a unique combination of aptitudes. Not all of these combinations are predominantly either numerical or verbal. There are other significant and identifiable aptitudes that contribute to success in many activities, even though their contribution may seem slight in traditional university learning. (MacLean, 1953)

Universities are comparatively less interested in kinds of intelligence other than abstract and theoretical as expressed in verbal and numerical symbols than are community colleges. Two-year colleges share a limited interest in theoretical and abstract intelligence, but are also interested in other more practical aptitudes. Therefore, some students who are not academically successful in a university may be successful in a different type of college or a different program. But among reverse transfer students, those most likely to return to

the university will be the group with the highest academic achievement.

Based on previous research, one would expect to find differences in the academic achievement of "reverse transfer" students who return to the four-year college or are still enrolled in a transfer program at the community college, and those who had changed to a semi-professional program or had left college. Thus, the third hypothesis.

Hypothesis 3: The academic achievement of "reverse transfer" students who return to four-year colleges or are still enrolled in a transfer program is higher than for those who have changed to a semi-professional program or have left college.

Underlying all three hypotheses is the assumption that there is very little difference in academic achievement and educational destination of "reverse transfer" students at the community college on the basis of their exit status from the university. However, their academic achievement and educational destination will be higher than native community college students, and those with the highest academic achievement will have returned or still plan to return to the four-year college.

The broader "retread function" is then viewed as offering assistance to students so that they can continue a four-year college program, and also as offering alternative goals so that students who do not plan to return to a four-year college can be guided toward completion of a two-year college program.

POPULATION CHARACTERISTICS

The information gathered about groups of students was keypunched on IBM cards, tabulated by computer, and printed out for an overview prior to analysis. Table I shows the number of reverse transfer (459)

and native (245) students from each of the five community colleges used in the study. The community colleges varied in size from an enrollment of 2,800 to 8,000 in the fall of 1968.

TABLE I

DISTRIBUTION OF REVERSE TRANSFER AND NATIVE STUDENTS BY COMMUNITY COLLEGE

Community College (coded)	Number of Students		
	Total	Reverse Transfers	Natives
#1	94	62	32
#2	94	62	32
#3	174	107	67
#4	235	157	78
#5	107	71	36
Total	704	459	245

The exit status of the 459 reverse transfer students from the five universities is shown in Table 2. It can be seen that 44 percent of the total group were dismissed, 20 percent were on academic probation, 22 percent were on clear academic status, and 14 percent were in a "no action" category (their academic record gave no indication of their exit status).

TABLE 2

EXIT STATUS OF REVERSE TRANSFERS FROM FIVE UNIVERSITIES

N 459

University (coded)	Exit Status				
	Dismissed	Probation	Clear	No Action	Total
#1	32	21	13	8	74
#2	48	15	24	4	91
#3	63	19	33	51	166
#4	16	17	11	1	45
#5	39	18	22	4	83
Total Number	198	90	103	68	459
Percentage of Total	44	20	22	14	100

Universities one and four had enrollments of less than 15,000, two and five had enrollments between 15,000 and 25,000; and university three had an enrollment of over 25,000 in the fall of 1968. Of the reverse transfers used in the study, 119 (26 percent) came from the two smallest universities; 166 (36 percent) from the largest university; and the remaining 174 (38 percent) from the two universities in the 15,000-25,000 enrollment range.

COLLECTION OF DATA

The data were taken from the students' permanent records, admission applications, and personal folders. A problem was encountered in assembling information because of the lack of consistency

among colleges in collecting data about students. Desired information could not be obtained on each item from all colleges, but all information was recorded when it was available. For this reason, some of the subsets are larger than others.

Each college uses some degree of computerized record storage, but due to interinstitutional demands and current transformation from one phase of computerization to the next, practically no computer assistance was available for collecting data for this study.

Forms were devised and used for recording information about each student. As his complete file was examined at the community college, information was recorded, and a listing of transfers from each of the universities was compiled. The universities were then visited, and with the permission of the person in charge of admissions or records, the follow-up data were recorded.

Universities use various measures in selecting their enrollees. Test scores are usually one of the measures used. College officials use tests for purposes of selective admissions because they wish to make as certain as possible that students who are admitted are likely to succeed, according to their own institutional criterion of academic success. Therefore, there is little consistency among Michigan universities in the use of college ability testing programs. Some of them use the American College Testing Program (ACT), others use Scholastic Aptitude Tests (SAT), and others rely on National Merit College Qualifying Examinations. A few use School and College Aptitude Tests (SCAT), or even combinations of scoring devices. Thus, test scores are the most difficult item to obtain and use. The type of test and the score was recorded

for each student, when available. Upon review of the data, it was found that more ACT scores could be used for comparative purposes than any other single test score. The remaining diverse test data were not used in this study.

Many attempts have been made to provide dependable and "approved" conversion tables among academic ability and aptitude tests. However, Lindquist (1964) found, as had others, that "equating non-parallel tests" was a contradiction in itself. In nearly all instances, he found that tests are quite differently organized, and only rarely are the subtest scores in one battery anywhere near parallel to any corresponding subtest scores in another battery. In general, the differences in organization prevents any interchangeable use of two tests through equivalency tables. No attempt was made to equate test scores for this study. Therefore, only limited use could be made of the American College Test scores.

High school records were not available for some students. This could have resulted from many causes. Laxity on the part of high school officials in forwarding requested transcripts, insufficient information given when the high school did respond, or lack of communication or follow-up on the part of the university or community college officials are some of the reasons suggested.

One of the common problems encountered in using high school records was the inconsistency in determing overall GPA of graduating seniors, rank in graduating class, and type of program completed. It became necessary to eliminate the consideration of type of high school program when recording data. Thus, the high school grade point average and the class rank do not take into consideration whether the student completed a college preparatory program, a general program,

or a special type of program, such as, commercial, vocational, or other.

The cumulative grade point average (GPA) in high school and class rank were used as indices of academic achievement because they are the main objective criteria used in admissions decisions in addition to College Ability Test socres. This information was taken from official transcripts kept in the college registrars' offices.

Classification variables used in the statistical analyses were taken from the permanent records and applications for admission of the college students. Other supplementary information was recorded from these records as factors of interest to the investigator but not for statistical application to the study. It included: marital status of the student, type of high school, number of years since high school graduation, number of other colleges attended, number of years between exit from the university and entrance to the community college, college curriculum, and college ability test scores. An attempt was made to determine the financial needs of "reverse transfer" students.

However, only one college could provide a reliable measure of how many students needed or received financial assistance. Few contacts appear to be made between the reverse transfer student and the financial aids office. As a result, this item had to be deleted in the final analysis.

METHOD OF ANALYZING THE DATA

A print-out of the data formed the main data bank, while the data deck of cards was used for computation in the analyses. All of the

computations used in the statistical analyses were done at the University of Michigan Computer Center. The deck of IBM cards was used in determing means, standard deviations, and variances.

The analysis of variance technique was used to provide an efficient test of the significance of differences between two or more groups simultaneously. The .05 level of confidence was used to determine if the F ratio of the mean difference was significant. All statistical analyses were made by using high school rank, and grade point averages at the high school, university, and community colleges. The classification variables included age, sex, and size of high school of the students.

Educational destination was determined and analyzed on the basis of the students' status at the community college when the data were collected. If he was enrolled in a transfer program and had above a 2.0 GPA, it was assumed that he still planned to return to a four-year college. If he had changed to a semi-professional program, it was assumed that he did not plan to return to a four-year college.

Thus, there are two groups with intentions of achieving a four-year college education--those who have already returned to a four-year college and those still enrolled in a transfer program. And conversely, there are two groups not planning to continue a four-year college education--those who changed to a two-year program and those who left college.

The percentage of each group of "reverse transfers" by their exit status from the university and their destination at the community college in relation to their academic achievement serve as the basis for the ultimate definition of the "retread function" of

community colleges. Garrett (1962) says that it is often feasible and desirable to find the percentage of a given sample which has certain characteristics difficult or impossible to measure directly.

The "reverse transfers" were not a random sample but a purposive sample. According to Garrett, random sampling formulas can be applied somewhat accurately to purposive samples. Thus, statistical comparisons are made of student characteristics for both the comparison and study group using random sample techniques.

The sample group of native community college students was randomly selected from returning students who had attended the community college the previous semester. Percentage distributions of both the study group and the comparison group are shown for selected student characteristics.

Both groups of college students are samples taken from state supported educational institutions. For that reason, conclusions drawn will be limited to reverse transfer students from public state universities and will not be applicable to transfer students from private four-year colleges or from either public or private two-year colleges.

CHAPTER III. ANALYSIS OF DATA

The data collected for this thesis serve a dual purpose. Personal and educational characteristics are used to describe the reverse transfer students and to compare them with native community college students. Secondly, the academic achievement and educational destination of students are used as variables to find differences among groups of reverse transfer students who were either dismissed or left the university voluntarily. The relationships found among student groups based on these characteristics and their destination at the community college are then studied to determine what the "retread function" is.

Findings obtained about student characteristics both in the study group (reverse transfers from the university) and the comparison group (native community college students) can be divided into four sections: (1) personal and educational characteristics at time of admission to the community college; (2) academic achievement prior to admission to college; (3) academic achievement at the community college, and (4) educational destination at the community college.

The data and their analyses are shown in each of these sections.

STUDENT CHARACTERISTICS

Personal and Educational Characteristics at Time of Admission to the Community College.

Personal characteristics are used as classification variables in examining the academic achievement of reverse transfer students and native community college students prior to and during enrollment at the community college.

They are also used to describe similarities and differences among groups of reverse transfer students on the basis of their exit status from the university. A description of personal and educational characteristics of both the study group and the comparison group is shown before the statistical analyses are made.

The percentage of reverse transfer and native community college students by sex, age, and marital status is shown in Table 3.

TABLE 3

PERCENTAGE OF REVERSE TRANSFER AND NATIVE COMMUNITY COLLEGE STUDENTS BY SEX, AGE, AND MARITAL STATUS

Group	Sex		Age			Marital Status	
	Male	Female	17-21	22-25	Over 25	Married	Single
Reverse Transfers	57	43	72	14	14	20	80
Natives	68	32	72	12	16	20	80

As shown in the above table, the main difference between the two groups of students in these three characteristics is in percentage of males and females (68 percent of the natives and 57 percent of the reverse transfers are males). In American colleges, men students generally outnumber women students. In the fall of 1964, total opening enrollment of degree-credit students in all institutions of higher education was 62 percent men and 38 percent women. The same ratio was found in junior colleges. (Thornton, 1966, pg. 150) Thus, a disproportionate percentage of "reverse transfers" enrolled in community colleges are women.

In 1960, half of the men who graduated from high school attended

college compared with about one-third of the women. (Trent and Medsker, 1968) And, the percentage of women who transfer to four-year colleges to complete a college program after attending a junior college is considerably less than for men. (Knoell and Medsker, 1964. pg. 22) "Reverse transfer" students who returned to a four-year college in this study were 70 percent male and only 30 percent female.

Most of the major studies tell little about the age destribution of college students, since thay have been concerned almost solely with recent high school graduates. However, a study made in Florida showed that only half of the student body in two-year colleges were under 20 years of age, 20 percent were between the ages of 20 and 22, 14 percent were between 23 and 30, while 16 percent were over 30 years of age. (Florida State Department of Education, 1962)

Medsker found in 1960 when he studied students in ten junior colleges that 43 percent were 19 years of age or younger and ten percent were between the age of 20-25. However, the transfer study by Knoell and Medsker (1964, pg. 22) reportrd that only eight percent of the students in community colleges lagged more than five years behind their classmates who moved through high school and college without a break. The break usually occurred between high school and junior college or during junior college. The men tended to drop out to fulfill their military requirement while the women tended to drop out after marriage and/or completion of minimum requirements for obtaining some type of teaching certificate.

There is very little difference between the ages of the reverse transfer students and native students in this study. However, the age of both groups of students are somewhat younger than those in Medsker's study. Table 3 shows that 15 percent are over 25, 72 percent of both groups are

21 years of age or younger, and about 13 percent are between 22-25 years of age. When the age of the "reverse transfer" group is studied on the basis of their exit status from the university, the group on "clear status" is found to be an older group with a larger percentage of married students. As seen in Table 4, this group is 61 percent female and is the group that is different from the other three groups. About one-fourth are over 25 years of age and one-third are married. Thus, older married "reverse transfer" students show higher achievement at state universities than younger single students.

TABLE 4

AGE, SEX, AND MARITAL STATUS OF REVERSE TRANSFER STUDENTS BY EXIT STATUS FROM THE UNIVERSITY (PERCENTAGE)

Group	Sex		Age			Marital Status	
	Male	Female	17-21	22-25	over 25	Married	Single
Dismissed	65	35	71	20	9	15	85
Probation	64	36	75	13	12	19	81
Clear	36	61	69	7	24	34	66
No Action	57	43	78	7	15	19	81
Total Number	262	197	332	63	64	94	365

Before further discussion of the personal and educational characteristics of these students, it might be well to recall that of the total group of 459 "reverse transfer" students, 44 percent (198) were dismissed from the university, 20 percent (90) were on academic probation, 22 percent (102) were on clear status, and 14 percent (69) were in a "no action" category.

Students in the fourth category (no action) were those with

less than a 2.0 cumulative average (on a 4.0 scale) at the university who had not been placed on academic probation or dismissed. they are, therefore, similar to the group on probation in low achievement, but like those on clear status because they had left the university voluntarily with no official declaration of academic deficiency. For that reason, they are treated as a separate group.

As can be seen in Table 4, the groups dismissed and on probation are very much alike in all three characteristics shown. The "no action" group is like those dismissed and on probation in marital status but is composed of more females and older students like the clear status group.

In summary, reverse transfer students dismissed or on probation are almost two-thirds male, over 80 percent are single, and over 70 percent are under 21 years of age. The group on clear status are about one-third male, two-thirds are single, and almost one-fourth are over 25 years of age.

The "clear status" group includes both older men and women who may have delayed college because of marriage, and some older men who may have taken time away from educational pursuits to fulfill their military service requirement. Knoell and Medsker (1964, pg. 134) suggest that marriage tends to delay the educational progress of some students because of the necessity to obtain gainful employment, while lack of motivation to continue education immediately after marriage may explain why some women delay their education. Maturity and strong desire to succeed may explain the higher academic achievement of many of the older married students.

In this study, major importance is not placed on academic potential for college because measures are available which show what the actual college achievement is. However, as a comparative device to show differences among groups of students, college ability test scores are used as descriptive characteristics of student groups.

Test scores are also reduced in importance because of the variety of testing devices used by colleges and the resulting small percentage having scores from the same test battery. In selecting the American College Test scores, it must be noted that only 271 or 59 percent of the reverse transfers and 156 or 63 percent of the natives had ACT test scores available. However, more students had taken this college ability test than any other test.

The major portion of the test consists of four parts (English, mathematics, social studies, and natural sciences) designed to measure the abilities that students need for successful achievement at college. ACT uses a scale of 1 (low) to 36 (high) as standard scores converted from raw scores. The approximate median score of unselected national samples of first-semester high school seniors is 16, while the approximate median score of first semester college bound high school seniors is 20. (American College Testing Program, 1969)

Table 5 shows the percentage distribution of ACT scores for both the comparison group (native community college students) and the study group by exit status from the university.

TABLE 5

PERCENTAGE DISTRIBUTION OF ACT STANDARD SCORES FOR NATIVE COMMUNITY COLLEGE STUDENTS AND REVERSE TRANSFER STUDENTS BY EXIT STATUS FROM THE UNIVERSITY
N=427

Group	Test Scores		
	1-20	21-28	29-36
Native Students	77	21	2
Total Reverse Transfers	63	35	2
Dismissed	65	34	1
Probation	87	11	2
Clear	48	50	2
No Action	51	46	3

Table 5 shows that a majority of the total group of reverse transfer students score at the median (20) or lower than first semester college bound high school seniors. It also shows that reverse transfer students on the average have higher ACT scores than native students. Within the "reverse transfer" group, the group on clear status have the highest scores of any group, while those on probation have the lowest scores.

An analysis of variance test was conducted which showed that the difference in test scores was significant among groups of reverse reverse transfer students by their exit status from the university, and even more significant between the total group of reverse transfers and the native community college students. However, as shown in Table 6, there is no significant difference by sex.

TABLE 6

ANALYSIS OF VARIANCE FOR ACT STANDARD SCORES BETWEEN NATIVE COMMUNITY COLLEGE STUDENTS AND REVERSE TRANSFER STUDENTS BY EXIT STATUS AND BY SEX

Source of Variation	F Ratio
Between Natives and Transfer Students	27.3751*
Between Sexes	1.8038
Between Reverse Transfer Groups By Exit Status	5.2582*
Between Sexes	0.1235

* F is singificant at .05 level of confidence

An F ratio of 27.3751 with one degree of freedom between native students and "reverse transfer" students is more highly significant than the F ratio of 5.2582 with three degrees of freedom among the four groups of reverse transfer students. Both are significant at the .05 level of confidence. However, the F ratio between sexes in both the total group of reverse transfer and native students is not significant nor is it significant between the four groups of reverse transfer students. Table 7 illustrates the differences in ACT scores among the groups of students by sex. It also shows that "reverse transfer" students on clear status or those in the "no action" group have significantly higher ACT scores than students who were dismissed or on probation at the university.

TABLE 7

MEAN ACT SCORES BY SEX OF NATIVE COMMUNITY COLLEGE STUDENTS AND REVERSE TRANSFER STUDENTS BY EXIT STATUS FROM THE UNIVERSITY

Group	Sex		
	Male	Female	Total
Native Students	18	17	17
Reverse Transfers-Total Group	20	20	20
Dismissed	19	18	19
Probation	18	19	18
Clear	21	21	21
No Action	21	20	20

It is clearly evident that there is practically no difference between the ACT scores of males and females in the groups shown in the table above. The greatest difference is found between the group on clear status and the native students.

A study of factors relating to the educational progress of reverse transfer students prior to their attendance at the community college, shows that 90 percent of the total reverse transfer group had never attended another college (other than the university included in the study), and over 60 percent had had no recess from college but had enrolled at both the university and the community college within a span of two years.

Table 8 shows the percentage of students in each group who had attended another college. Two facts emerge, 1) the clear status

group has the highest percentage of students who had attended one or two other colleges, 2) only two percent of any group had attended more than two other colleges.

TABLE 8

PERCENTAGE OF REVERSE TRANSFER STUDENTS WHO HAD ATTENDED OTHER COLLEGES

Group	No other college	1-2 Other Colleges	Over 2 Other Colleges
Dismissed	91	9	0
Probation	97	3	0
Clear	85	15	0
No Action	94	4	2

While approximately 60 percent of each group had moved directly from the university to the community college, about one-fourth had had a recess of one or more years, and 15-20 percent had recessed more than two years. Table 9 shows the number of years between exit from the university and entrance to the community college for each group of reverse transfers.

It will be seen that there is little difference (5-8 percent) among the four groups of students in the number who had had no recess from college, had recessed one or two years, or had recessed more than two years.

TABLE 9

NUMBER OF YEARS BETWEEN EXIT FROM THE UNIVERSITY AND ATTENDANCE AT THE COMMUNITY COLLEGE FOR REVERSE TRANSFER STUDENTS BY EXIT FROM THE UNIVERSITY (Percentage)

Group	Number of Years		
	None	1-2 Years	More Than Two Years
Dismissed	59	27	14
Probation	57	24	19
Clear	60	22	19
No Action	65	20	15

About two-thirds of each group had graduated from high school less than three years prior to the study, with the two groups showing the largest percentage to have graduated within that period of time being the "no action" group and the native community college students. However, one-fourth of the "clear status" group had graduated more than five years earlier.

The native students used in this study had not attended another college, but the data in Table 10 show that 30 percent of them had graduated from high school three or more years prior to the time of the study. This indicates that they had either taken a recess from formal education or had taken only a few courses each semester at the community college.

TABLE 10

NUMBER OF YEARS SINCE HIGH SCHOOL GRADUATION FOR REVERSE TRANSFER STUDENTS BY EXIT STATUS FROM THE UNIVERSITY, AND FOR NATIVE COMMUNITY COLLEGE STUDENTS

(Percentage)

Group	Years Since Graduation		
	1-2	3-5	More Than 5
Dismissed	65	20	15
Probation	65	15	20
Clear	59	15	26
No Action	71	15	14
Natives	70	16	14

The data shown in Tables 9 and 10 indicate that two-thirds of the reverse transfers move directly from high school to the university and then to the community college within a two-year span of time. The other third is older students who graduated from high school at least three years prior to admission to the community college, of which approximately one-fifth had graduated from high school more than five years earlier with a recess from college of more than two years.

Recalling that community colleges offer basically freshmen and sophomore college level courses, the preceding facts become significant. Reverse transfer students have shown the potential academic ability to complete a four-year college program, but five years after high school graduation, about one-fifth of them are still enrolled in college freshmen and sophomore level courses.

Almost one-half of the students dismissed from the university or in the "no action" group had earned less than 20 credit hours. This does not mean, however, that they had only attempted 20 hours or less because the credit hours for courses failed are not shown in the total hours. Table 11 shows that of the groups on clear status and probation about one-third had earned less than 20 hours of credit. It also shows that 15-22 percent of all the reverse transfers had earned over 39 credit hours.

TABLE 11

GRADE POINT AVERAGES AND CREDIT HOURS EARNED OF REVERSE TRANSFERS (BY EXIT STATUS) AT THE UNIVERSITY
(By Percentage)

Group	University GPA			University Credit Hours			
	0-1.9	2.0-2.9	3.0-3.9	0-19	20-29	30-39	Over 39
Dismissed	98	2	0	48	22	15	15
Probation	96	4	0	38	34	11	17
Clear	14	68	18	36	25	17	22
No Action	100	0	0	48	18	12	22
Total Number	367	74	18	200	113	65	81

To determine if there was a correlation between credit hours earned and grade point average at the university, a correlation matrix was drawn which showed a .27 correlation. The mean grade point of the total group was 1.73 with a standard deviation of.55. There appears to be a low correlation between the two factors. And, at least four-fifths of the total group of reverse transfers had not completed required hours to be classified as upper-classmen.

Most community colleges consider students who have earned over 25 hours to be sophomores at their institution. Therefore, it can be seen that among the total reverse transfer group, almost as large a group would still be classified freshmen as sophomores.

In looking at the program choice of reverse transfer students at both the university and the community college (as shown in Table 12), one notes that by far the largest percentage of students were enrolled in liberal arts and science, education, or business. In fact, 87 percent of the total group had been enrolled in these three programs at the university and 83 percent were still enrolled in the same three curricula at the community college. Seventy-seven percent of the natives were also enrolled in these three curricula, which are basically transfer programs from which students continue on to a four-year college program.

Trent and Medsker (1968) found that junior college students were less likely than their classmates in four-year colleges to select liberal arts and science majors, unless in preparation for teaching. The percentage of enrollment in these two curricula at the community college shows very little difference between "reverse transfers" and natives, and even less difference among the reverse transfers by exit status from the university. It can be seen that sixty percent of the native students were enrolled in liberal arts and science or education, as were 66 percent of the total group of reverse transfers. Within the latter group, 66 percent of those dismissed, 68 percent of those on probation, 65 percent in clear status, and 63 percent of those in the "no action" group were enrolled in these two curricula. These data present serious implications for counselors, because over half of the students do not enter or re-enter four-year colleges.

TABLE 12

PERCENT ENROLLMENT OF REVERSE TRANSFER AND NATIVE STUDENTS BY CURRICULUM

Group	Curriculum				
	Liberal Arts and Science	Education	Business	Engineering	Other
UNIVERSITY					
Dismissed	43	23	20	6	8
Probation	53	22	16	4	5
Clear	41	29	15	2	13
No Action	33	27	14	2	24
Total-Reverse Transfers	45	24	18	2	11
COMMUNITY COLLEGE				Semi-Prof.*	
Dismissed	39	27	19	11	4
Probation	40	24	18	17	1
Clear	36	29	13	21	1
No Action	30	33	16	17	4
Total-Reverse Transfers	36	30	17	14	3
Natives	39	21	17	22	1

*It will be noted that the percentage shown in this column is for semi-professional programs and not engineering. This includes all the programs designed for two-year completion at the community college.

The curricular choices of students indicate that most "reverse transfer" students intend to continue a four-year college program. It must be noted, however, that over half (55 percent) had left the community college at the time the data were collected, and only 19 percent had actually re-entered a four-year college. (Page 92)

Table 12 shows the small difference between the percentage of "reverse transfers" and native students who enroll in transfer programs. It shows that only 17 percent of the reverse transfers and 23 percent of the natives enroll in other than transfer programs.

These findings agree substantially with earlier studies which showed that two-thirds of the community college students plan to transfer to a four-year college, but only about one-third actually transfer. (Knoell and Medsker, 1964)

However, Astin, et. al., found in 1967 that one-fourth of the students who transferred from two-year to four-year colleges had not committed themselves to majors at the time they completed work in the junior college. They also found that two years after transfer, 32 percent were in liberal arts, 18 percent were in business administration, 14 percent were in engineering, and 17 percent were in education.

The percentage of students enrolled in an engineering curricula at the community college is not shown in Table 12 because even though some two-year colleges offer pre-engineering, no students in this study were enrolled in that curriculum. In Table 12, the semi-professional programs include all technical curricula, secretarial, nursing, and all other programs designed as less than a four-year program.

There was no great change in curriculum when students transferred to the community college, but 42 percent changed after transfer. Table 12 shows that 4 percent changed from transfer to semi-professional programs.

TABLE 13

NUMBER OF PROGRAM CHANGES AT COMMUNITY COLLEGES OF TRANSFER STUDENTS BY EXIT STATUS FROM THE UNIVERSITY

Group	Total Changes		1 Change	2 Changes	More than 2 Changes
	Total Students	Percent	Number	Number	Number	Number
Dismissed	198	38	75	64	5	6
Probation	90	34	31	25	4	2
Clear	102	41	43	36	5	2
No Action	69	62	43	33	6	4
Total	459	42	192	158	20	14

It can be readily seen that the "no action" group had the highest percentage of curriculum change, with the clear status group having the next highest rate of change. Both of these groups left the university voluntarily. Perhaps they recognized a need for change in either their educational goal or level of aspiration. However, the change appears to be within the transfer programs designed for a four-year college education.

All five of the community colleges offer no less than 20 two-year programs which prepare students to enter the job market upon completion of the requirements. These programs are designed to include general education as well as specialty courses. Thus, courses taken at the university commonly satisfy some of the requirements. And yet, very few of the reverse tranfers changed to semi-professional programs.

Each college also provides a placement office which has direct

contact with local businesses and industries who not only assist in planning courses of study appropriate to current employment needs (through local Advisory Committees) but also readily accept students who have completed the course requirements directly into their employment.

The two-year programs include a wide and diverse range of opportunities. Curricula shown in community college catalogs include; accounting, business management, retailing and marketing management, commercial art, nursing, secretarial, data processing, supervising and coordination of data processing, law enforcement, and many technologies such as, drafting and design, electronics, chemical and mechanical, and industrial engineering technology.

The question now arises that if these two-year programs are available, why do a large percentage of students continue in programs designed for four-year college completion and then not complete them? This question cannot be answered in this study, but it is obvious that in changing programs most "reverse transfer" students do not change their level of aspiration from four-year to two-year college graduation and subsequently earlier employment.

In summary, the educational characteristics of reverse transfer students at time of admission to the community college show two-thirds of them moving directly from high school to the university and then to the community college with no recess. Of the one-third who had graduated from high school more than two years earlier, less than ten percent had attended another college.

There is little difference between native students and reverse transfers in number of years since high school graduation. Between one-fifth and one-sixth of each group had graduated more than five years prior to the study. And, there is little difference among groups of

students in curricular choice at the community college. Over 80 percent of each group enrolled in business, education, or science/arts. The next section of this chapter analyzes the high school academic achievement of each of the groups of students by exit status from the university prior to their admission to the community college.

Academic Achievement Prior to Admission To College

Previous research has shown that students who are accepted by universities are a more homogenous group with respect to academic ability and achievement in high school than are students who enter community colleges. It has also shown that girls have higher grade point averages than boys in high school, but boys score higher on College Ability Tests. This is true irrespective of the size or type of high school or college.

Upon examination, the size and type of high school of the reverse transfer students and the native community college students in this study are found to be very much alike. Table 14 shows the percentage of both groups who graduated from public and private high schools, and the percentage who were members of graduating classes of 0-99, 100-399, and over 400 students.

It can be seen in the following table that there is very little difference in the percentage of native students and reverse transfer students who graduated from the various sized high schools.

TABLE 14

PERCENTAGE DISTRIBUTION OF NATIVE AND REVERSE TRANSFER STUDENTS BY SIZE AND TYPE OF HIGH SCHOOL

	Number	Public	Private (non sectarian)	Private (church related)	0-99	100-399	Over 400
Natives	241	90	2	8	18	44	38
Reverse Transfers	443	90	1	9	15	45	40
Dismissed					13	47	40
Probation					16	41	43
Clear					25	46	29
No Action					21	41	38

Note: Four of the natives and 16 of the reverse transfer students had no high school records on file at the college.

It can be seen that 90 percent of both groups attended public high schools, and that over 80 percent graduated from high schools with more than 100 students in the graduating class. This undoubtedly reflects the proportion of large public high schools in Michigan.

These findings compare very closely with the findings of previous studies. Knoell and Medsker (1964) found that ninety-one percent of the junior college transfer students included in their national study graduated from public high schools, while only six percent graduated from sectarian schools, and two percent from private non-sectarian schools. Of the 91 percent, 52 percent were members of graduating classes of over 200 students, 27 percent from classes of fewer than 100 students, and 17 percent from classes with over 500 students.

When the size of the high school graduating class of reverse transfers is viewed by their exit from the university, some variation is found. A larger percentage of the students who left the university on clear status graduated from smaller sized high schools than did any other group. It will be noted in Table 14 that almost as many "clear status" students graduated with classes of 0-99 as with high school classes of over 400 students. However, the total reverse transfer group varies only slightly from the natives in size and type of high school.

It is obvious that academic deficiencies are not the reason that the clear status group leave the university. One does not know why reverse transfers leave the four-year colleges to attend a community college. However, before studying the academic achievement of the four groups of reverse transfer students by their exit status from the university, a more thorough analysis is shown for the total group of reverse transfers and further comparison is made with the native community college students.

In Table 15 it can be seen that 29 percent of the natives had less than a 2.0 grade point average in high school, whereas only 14 percent of the reverse transfers averaged less than a 2.0. The difference between the two groups with better than a 3.0 is only slight (18 percent of the natives and 17 percent of the reverse transfers). However, high school records were available for only 215 (88 percent) of the natives, and 326 (71 percent) of the reverse transfers.

TABLE 15

PERCENTAGE DISTRIBUTION OF NATIVE AND "REVERSE TRANSFER" STUDENTS BY HIGH SCHOOL GRADE POINT AVERAGE AND CLASS RANK

Group	High School GPA			Class Rank		
	1.0-1.9	2.0-2.9	3.0-3.9	Top Third	Middle Third	Bottom Third
Natives	29	53	18	19	46	35
Reverse Transfers	14	69	17	40	40	20

Percentagewise, reverse transfer students as a total group had higher grade point averages and ranked higher in their high school graduating classes than did the native community college students. Table 15 shows that 86 percent of the reverse transfers had a 2.0 or better in high school and 40 percent were in the top third of their graduating class; as compared to 71 percent of the natives with a 2.0 or better and only 19 percent who were in the top third of their graduating class.

These findings show both groups to be composed heavily of students in the middle range of high school academic achievement. However, a larger percentage of students were in the lower level of achievement in the native group than in the reverse transfer group.

Research has shown that the high school record provides about equal valid estimate of academic potential for college success as college ability tests. (ACT, 1969) It also shows that the average two-year college student enters with a high school cumulative grade of C+ or 2.33 while the average university freshman has a B- or 2.77

cumulative in high school. (ACT, 1969)

In comparing the mean high school grade point of students in this study with previous findings, one discovers that the natives have the same high school cumulative grade average (2.34) that research has shown for two-year college freshmen. The "reverse transfers", however, have a slightly lower mean high school grade point (2.55) than the average university freshman (2.77).

Table 16 shows the mean grade point and class rank in high school for both the study group and the comparison group by sex. It shows that the females have higher grade points and rank higher in high school than the males.

TABLE 16

MEAN HIGH SCHOOL GRADE POINTS AND CLASS RANK OF REVERSE TRANSFER AND NATIVE COMMUNITY COLLEGE STUDENTS BY SEX

Group	Mean G.P.A.			Mean Class Rank		
	Total	Male	Female	Total	Male	Female
Reverse Transfers	2.55	2.38	2.71	57	50	63
Natives	2.34	2.20	2.48	46	40	51

Class rank was recorded for each student by decile. Thus, the mean class rank for the total reverse transfer group is found in the fifth decile at precisely the 57 point. The mean class rank for the total group of native students is in the sixth decile from the top of the class at the 46 point. In interpreting class rank, the higher the number shown, the closer the group is to the top of the class.

The results of an analysis of variance test of high school grade

point and class rank between "reverse transfers" and native students show significant differences. The number of cases shown in each of the following tests vary according to available data from high school records of students on file at the colleges.

The F ratio between high school grade point of reverse transfers and natives by sex is shown in Table 17.

TABLE 17

ANALYSIS OF VARIANCE IN HIGH SCHOOL GRADE POINT BETWEEN REVERSE TRANSFERS AND NATIVES BY SEX
N=555

Source of variation	F Ratio
Between Groups	17.8087*
Between Sexes	38.6416*

* F Ratio is significant at .05 level of confidence

The F ratio of 17.8087 in high school grade point between the two groups is significant at the .05 level of confidence, as is the F Ratio of 38.6416 between the sexes.

In Table 18, the F ratio of 20.8391 in high school grade point between the two groups is significant at the same level, but the F Ratio of 0.1747 by age is not significant. The age grouping includes those students between 17-21, between 22-25, and those over 25.

TABLE 18

ANALYSIS OF VARIANCE IN HIGH SCHOOL
GRADE POINT BETWEEN REVERSE TRANSFERS
AND NATIVES BY AGE
N=532

Source of Variation	F Ratio
Between Groups	20.8391*
By Age	0.1747

* F Ratio is significant at .05 level of confidence

The F Ratios of 30.2941 and 34.8171 in class rank, as shown in Table 19, between the reverse transfers and native students and between the sexes are both significant at the .05 level of confidence.

TABLE 19

ANALYSIS OF VARIANCE IN HIGH SCHOOL
CLASS RANK BETWEEN REVERSE TRANSFERS
AND NATIVES BY SEX
N=527

Source of Variation	F Ratio
Between Groups	30.2941*
Between Sexes	34.8171*

The conclusions that can be drawn from these three tests are: the difference in high school grade point and class rank between

reverse transfer students and native community college students is significant, there is a significant difference in grade point average and class rank between the sexes, but there is no significant difference in grade point average between the two groups by age.

Table 20 illustrates the actual mean grade point in high school of the two groups by age.

TABLE 20

MEAN HIGH SCHOOL GRADE POINT OF

REVERSE TRANSFERS AND NATIVES

BY AGE

Group	Age			
	17-21	22-25	Over 25	Total
Reverse Transfers	2.5	3.1	2.7	2.6
Natives	2.3	1.9	2.3	2.3

Seventy-two percent of both the reverse transfers and native students are between 17-21 years of age. Fourteen percent of the reverse transfers, and 12 percent of the natives are between 22-25 years of age, while students over 25 years of age account for 14 percent of the reverse transfers and 16 percent of the natives.

For this reason, even though the native students between 22-25 years of age have a 1.9 mean grade point it does not change the mean of the total native group. In the reverse transfer group, however, the older age groups do raise the total mean grade point.

When the reverse transfers are divided into four groups by exit status from the university, the high school achievement record becomes one of contrast. Table 21 shows that the groups on "clear status" and "no action" have better high school records than the groups who were dismissed or were on probation. In fact, the group classified as "no action" (less than a 2.0 at the university) had a higher GPA in high school than did the group on clear status.

Another difference to be noted is the high school class rank between students dismissed and those on probation at the university. Table 21 shows that 39 percent of the dismissed group were in the top third of their high school graduating class, while only 20 percent of those on probation were in the top third. Fifty and fifty-eight percent respectively of the clear and no action group were in the top third.

TABLE 21

HIGH SCHOOL GRADE POINT AVERAGE AND CLASS RANK OF REVERSE TRANSFERS BY EXIT STATUS FROM THE UNIVERSITY

(By Percentage)

Group	High School GPA			High School Rank		
	0-1.9	2.0-2.9	3.0-3.9	Top Third	Middle Third	Bottom Third
Dismissed	17	73	10	39	40	21
Probation	23	69	8	20	52	28
Clear	6	67	27	50	30	10
No Action	1	57	39	58	30	12

The academic achievement as shown by grade point average in high school and the university will take on more significance when it is discussed in relation to their academic achievement at the community college which will be shown in the next section of this chapter.

To determine if a difference in high school academic achievement among the four groups of reverse transfers was significant, an analysis of variance test was conducted for both high school grade point and class rank by sex and by age.

TABLE 22

ANALYSIS OF VARIANCE IN HIGH SCHOOL GRADE POINT BY SEX AMONG GROUPS OF REVERSE TRANSFER STUDENTS BY EXIT STATUS FROM THE UNIVERSITY

Source of Variation	F Ratio
Reverse Transfers	8.2230*
By Sex	19. 6865*

* F Ratio is significant at the .05 level

Data in Table 22 indicate that for high school grade point among the four groups of reverse transfers, an F ratio of 8.2238 was obtained with three degrees of freedom, which is significant at the .05 level of confidence. Also, the F ratio of 19.6865 shows a significant difference in the academic achievement by sex.

To show the actual difference among grade points of the various groups by sex, the means and standard deviations are shown in Table 23. The lack of variation in the standard deviations shows that the means are quite descriptive of the academic achievement of each group. It can be noted that females consistently have higher grade point averages than males, and that the groups on clear status and "no action" have higher grade points in high school than do the groups on probation or who were dismissed.

TABLE 23

MEAN HIGH SCHOOL GRADE POINT AND STANDARD DEVIATIONS FOR REVERSE TRANSFER STUDENTS BY EXIT STATUS FROM THE UNIVERSITY

Group	Sex				Total	
	Male		Female			
	Mean GPA	S.D.	Mean GPA	S.D.	Mean GPA	S.D.
Dismissed	2.3	.49	2.5	.44	2.4	.47
Probation	2.3	.48	2.6	.47	2.5	.48
Clear	2.5	.51	2.9	.50	2.7	.50
No Action	2.7	.47	2.9	.49	2.8	.48
Total	2.5	.49	2.7	.48	2.6	.48

To summarize the academic achievement in high school of the native community college students and "reverse transfers", it must be stated that there is a significant difference between the mean grade point, class rank, and college ability test scores of the two groups.

Even though both groups are in the middle range of academic achievement at high school, the "reverse transfers" achieve higher mean grade points than the native community college students (2.6 and 2.3 respectively).

Within the reverse transfer group, the students on "clear status" and in the "no action" group at the university have significantly higher mean grade points in high school (2.7 and 2.8 respectively) than the groups on probation or dismissed (2.5 and 2.4 respectively). The clear status group continue to achieve satisfactory grades at the university but the other three groups do not.

The mean university grade point for the clear status group is 2.6 (on a 4 point scale) while the "no action" group has a mean grade point of 1.7. None of the latter group has over a 2.0 at the university. The probationary and dismissed groups from the university have mean grade points of 1.6 and 1.4 respectively.

Therefore, the "clear status" group is a different group academically from the other three groups at the time of admission to the community college. They have shown successful academic achievement at both high school and the four-year college.

The findings in this section lead one to an examination of the academic achievement of each of these groups of students at the community college. The next section examines and compares the community college mean grade points for the four groups of reverse transfers.

Academic Achievement at the Community College.

Before analyzing and comparing the academic achievement of the four groups of reverse transfers and the native students at the community college, it is worthwhile to view their mean grade points and standard deviations in relation to the same measures at the high school and university. Thus, Table 24 is presented to show such a comparison.

It will be noted in the following table that the only group having a mean grade point above the mean of the total group at both the university and the community college is the group on clear status. And, although the three groups having below a 2.0 at the university had the same grade point at the community college, they were not much below the mean for the total group. The similarity in standard deviations further substantiate the small variation in their academic achievement at both colleges.

TABLE 24

MEAN COMMUNITY COLLEGE, UNIVERSITY, AND HIGH SCHOOL GRADE POINTS AND STANDARD DEVIATIONS FOR REVERSE TRANSFER STUDENTS BY EXIT STATUS FROM THE UNIVERSITY AND FOR NATIVE COMMUNITY COLLEGE STUDENTS

Group		Comm. College GPA		Univ. GPA		High School GPA	
	Total Number	Mean	S.D.	Mean	S.D.	Mean	S.D.
Dismissed	198	2.5	.51	1.4	.38	2.4	.47
Probation	90	2.5	.56	1.6	.32	2.5	.48
Clear	102	3.1	.46	2.6	.53	2.7	.50
No Action	69	2.5	.55	1.7	.29	2.8	.48
Total	459	2.6	.53	1.8	.38	2.6	.48
Natives	245	2.4	.62			2.3	.36

It can be seen in Table 24 that there is no difference in the community college mean grade point (2.5) among three groups of the "reverse transfer" students--dismissed, probation, and "no action". The group achieving higher grades than any other in the community college is the group on clear status with a 3.1 mean grade point.

Although this group had the highest mean grade point at the university and the community college, their gain in grade points from one college to the other was less than for any of the other groups. The three groups who were in academic difficulty at the university show gains of from .8 to 1.1 grade points at the community college, while the clear status group show a gain of only .5 point.

The mean grade point of the total group of reverse transfers is exactly the same at the community college as it was in high school. The native group shows only .1 point difference. It might be assumed that community college students would, therefore, maintain a grade point average equivalent to their cumulative high school grade point.

However, the "no action" group provides an interesting comparison in academic achievement as students progress through high school and college. Their mean high school grade point (2.8) was the highest of the four groups of reverse transfers, their university mean grade point was 1.7, and yet their community college mean grade point was the same as that of the groups who were dismissed or on probation at the university (2.5).

It can be seen in comparing mean grade points of the four groups of reverse transfer students that there is no consistent pattern in high school, university, and community college academic achievement. Each group must be seen as a unique group with problems that vary, and with needs for special assistance to continue on their educational path to their ultimate goal.

Each group of reverse transfer students achieves higher grade points at the community college than do the native students. However, an analysis of variance test shows an F ratio of 1.8281 which is not significant at the .05 degree level, and therefore it must be concluded that as a total group reverse transfers do not achieve significantly higher grades than natives at the community college.

When a statistical analysis is made of the community college academic achievement among the four groups of reverse transfers, no significant difference is found. Table 25 shows an F ratio of 3.3241 which is not significant at the .05 level of confidence. However, it has already been shown that the group on clear status has a higher mean

grade point at the community college than any of the other three groups.

TABLE 25

ANALYSIS OF VARIANCE OF COMMUNITY COLLEGE MEAN GRADE POINTS AMONG FOUR GROUPS OF REVERSE TRANSFERS AND BETWEEN TOTAL REVERSE TRANSFER GROUP AND NATIVE COMMUNITY COLLEGE STUDENTS BY SEX

Source of Variation	F Ratio
Among 4 Groups of Reverse Transfers	3.3241
By Sex	7.8912*
Between Reverse Transfers and Natives	1.8281
By Sex	11.0129*

*F Ratio is significant at the .05 level of confidence

The F Ratios in Table 25 show that the only significant difference in grade points is between the sexes. Females have higher grade points at the community college both in the "reverse transfer" group and the native group. Table 26 is presented to illustrate the difference in mean grade point between the groups by sex and by age.

TABLE 26

MEAN COMMUNITY COLLEGE GRADE POINT BY SEX AND AGE FOR REVERSE TRANSFER STUDENTS BY EXIT STATUS FROM THE UNIVERSITY AND FOR NATIVE COMMUNITY COLLEGE STUDENTS

Group	Sex			Age		
	Total	Male	Female	17-21	22-25	Over 25
Dismissed	2.5	2.4	2.6	2.1	2.5	2.6
Probation	2.5	2.2	2.8	2.2	2.2	2.7
Clear	3.1	2.7	3.5	2.6	2.7	3.2
No Action	2.5	2.4	2.6	2.3	2.7	3.2
Total	2.6	2.4	2.9	2.4	2.5	2.9
Natives	2.4	2.1	2.5	2.3	2.1	2.9

It is quite evident that older students have higher community college grade points than younger students. The difference varies from .4 to .6 points between the group in the 17-21 age category and in both the older groups. However, a statistical analysis shows no significant difference in community college grade point between reverse transfer and native students. Neither the F ratio of 1.3279 among the four groups by age, nor the F ratio of 1.5463 among the three age groups as shown in Table 27 are significant at the .05 level.

TABLE 27

ANALYSIS OF VARIANCE OF COMMUNITY COLLEGE MEAN GRADE POINT AMONG GROUPS OF REVERSE TRANSFERS BY AGE AND SIZE OF HIGH SCHOOL

Source of Variation	F Ratio
Among 4 Groups of Reverse Transfers	1.3279
By Age	1.5463
Among 4 Groups of Reverse Transfers	2.2194
By Size of High School	1.6558

The above table shows that there is no significant difference among the four groups of reverse transfers in community college grade point by age or by size of high school from which they graduated.

Thus, it has been shown that regardless of the academic achievement of the four groups of reverse transfers prior to admission to the community college, there is no significant difference in their mean grade point at the community college.

To determine if there is a relationship between the mean grade point and the number of hours earned at the community college for each group, it is necessary to examine how many hours each group had earned. Table 28 shows the percentage of each group who had been credited with 20-29 hours, 30-39 hours, and over 39 hours. The same table shows the percentage of each group who had less than a 2.0 grade average, between 3.0-3.9, and a four-point average.

TABLE 28

GRADE POINTS AND CREDIT HOURS EARNED AT THE COMMUNITY COLLEGE FOR NATIVE STUDENTS AND REVERSE TRANSFER STUDENTS BY EXIT STATUS FROM THE UNIVERSITY (PERCENTAGE OF EACH GROUP)

Group	Grade Point Average				Credit Hours Earned			
	0-1.9	2.0-2.9	3.0-3.9	4.0	0-19	20-29	30-39	Over 39
Dismissed	15	57	25	3	41	24	17	18
Probation	22	44	31	3	38	26	14	22
Clear	6	46	41	7	29	28	15	28
No Action	22	47	31	0	46	26	19	9
Natives	35	46	18	1	27	31	31	11

In the above table, it can be seen that one-third of the native students had less than a 2.0 at the community college. Whereas,about one-fifth of the reverse transfers who had experienced academic difficulty at the university had less than a 2.0. Only 6 percent of the group on clear status from the university have less than a 2.0 while

41 percent have over a 3.0. Less than a third of each of the other groups had over a 3.0 grade point average at the community college.

Two-thirds of the natives had earned between 20-40 credit hours at the community college whereas less than half of each of the reverse transfer groups had earned a comparable number of credit hours. A larger percentage of each of the transfer groups had earned over 39 credit hours than had the natives, and also a larger percentage of each group had earned less than 29 credit hours than had the natives.

This information means little until a correlational analysis is made between mean grade point and credit hours earned at the community college for the various groups. The correlation matrix shows a .16 relationship, which is not significant in considering the academic achievement of reverse transfer students at the community college. These two factors are less highly related than are the university hours earned and the university mean grade points which showed a correlation of .27. Neither correlation is high enough to significantly affect the analysis of academic achievement of reverse transfer students.

In summarizing the academic achievement of reverse transfer students at the community college, it can be stated that over four-fifths of the total group have satisfactory academic records (over a 2.0 grade point average). The mean grade point of the total group is 2.6 with a standard deviation of .53. Even though there is no significant difference among the four groups in their academic achievement, the clear status group does have a higher mean grade point.

Reverse transfer students have a higher mean grade point than native students (although it is not significantly higher), but females in both groups do have significantly higher grade point averages than males.

There is little correlation between the number of credit hours earned and the mean grade points of each group. Nor is there any significant difference in the academic achievement of the various groups by age or size of high school.

The differences in the educational destination of these groups of reverse transfer college students are shown in the next section of this chapter.

Educational Persistence and Destination at the Community College

The reverse transfer students used in this study enrolled in the community college during the calendar year, 1968. The data shown in this section which pertain to their destination is based on the students' status at the community college in the spring of 1970.

To identify the students who had actually returned to a four-year college, all requests for transcripts of credit made by students were reviewed and a follow-up study was made. Of the 459 reverse transfer students, 87 (19 percent) had been readmitted to state universities in Michigan. Only 12 students had requested transcripts to out-of-state colleges or other Michigan colleges where follow-up was not feasible. Therefore, they were included in the group who had left the community college.

Of the 118 students still enrolled in the community colleges, 87 (19 percent) were enrolled in transfer programs and 31 (7 percent) were enrolled in semi-professional two-year programs. Two hundred fifty-four (55 percent) of the total group had left college without completing a program.

Table 29 shows that a much larger percentage of the reverse transfer students who return to a four-year college are male (70 percent) than are female (30 percent). This is also true of the students in the group who are still enrolled in a transfer program (62 percent are male and 38 percent are female). Because only 57 percent of the total group of reverse transfers were male, it appears that there is greater persistence on the part of males to continue a four-year college program.

TABLE 29

SEX, AGE, AND MARITAL STATUS OF REVERSE TRANSFER STUDENTS BY DESTINATION AT THE COMMUNITY COLLEGE

(By Percentage)

Group	Sex		Age			Marital Status	
	Male	Female	17-21	22-25	Over 25	Single	Married
Returned to a Four-year college	70	30	81	14	5	84	16
Still Enrolled in a Transfer Program	62	38	70	9	21	71	29
Still Enrolled in a Semi-Professional Program	51	49	74	10	16	71	29
Left College*	54	46	70	15	15	84	16
Total	57	43	72	14	14	80	20

*Less than two percent had sent transcripts to out-of-state colleges or in-state private colleges where follow-up was not feasible so they are included in this group.

However, this is not true of native community college students as shown in Table 30, where 67 percent of those who entered a four-year college were males and 59 percent of those still enrolled in a transfer program were males. Earlier findings showed that 68 percent of the

TABLE 30

SEX, AGE, AND MARITAL STATUS OF NATIVE COMMUNITY COLLEGE STUDENTS BY DESTINATION AT THE COMMUNITY COLLEGE

(By Percentage)

Group	Sex			Age			Marital Status	
	Total	Male	Female	17-21	22-25	Over 25	Single	Married
Transferred to a Four-year college	17	67	33	84	2	14	90	10
Still Enrolled in a Transfer Program	16	59	41	67	2	31	67	33
Still Enrolled in a Semi-Professional Program	9	38	62	72	4	24	75	25
Left College	58	70	30	79	11	10	75	25
Total	100	68	32	72	12	16	80	20

total group of native students were males. (Table 3, pg. 35) Therefore, even though two-thirds of the native group are males, no greater percentage of them continue on a four-year program than do the females.

Of the 31 reverse transfers who had changed to a semi-professional program, almost equal percentages were male and female. In the native group, only one-third of the students in semi-professional programs were males. There appears to be a disproportionate percentage of native community college females in semi-professional programs. This may be due to a heavy enrollment in secretarial, nursing, and data processing, or it may result from the fact that many of the male students in semi-professional programs are either part-time or evening students and so they would not be shown in this study.

Also, it is quite common for many of the male students in semi-professional curricula to discontinue college in order to accept employment without completing the entire program at the community college. However, in looking at the curricular enrollment of both groups (reverse transfers and natives) who had left the community college one finds that 80 percent were enrolled in transfer programs. (Table 12, pg. 48) Therefore, if every student enrolled in a semi-professional program who left the community college had accepted employment in a semi-professional area, it would still be a very small percentage of the total group.

Almost half of the reverse transfers who left the community college were females, and 84 percent of those who left were single. (Table 29, pg. 73) It is possible that some of this group discontinued their education to become housewives and mothers, and it is possible that some will return at a later date to complete a college program.

Tables 29 and 30 also show that a large percentage of the single and younger students (under 22 years of age) had entered a four-year

college, and that large percentages of older and married students were still enrolled in community college programs. This is especially true of the "over 25" age group, which in terms of numbers is a small part of the total group. But, it is quite evident that the reverse transfer students who return to a four-year college are mainly young (under 21 years) single men.

The most outstanding fact shown in the previous two tables is that an extremely large percentage (55-58) of each group had left college and an extremely small percentage (7-9) had changed to semi-professional two-year programs. This is an indication that both reverse transfer students and native community college students intend to either complete a four-year college program or leave college. One does not know how many return at a later date to continue their educational program, however.

Serious concern must be felt about the fact that even though all of the reverse transfer students who were selected by the state universities as students with academic potential to complete a four-year college program, over half do not even complete a two-year program leading to employment. All of the two-year semi-professional programs in two-year colleges are designed to provide marketable skills needed in many business, industrial, and service areas. Many of them lead to jobs where salaries are comparable to or above beginning salaries for many four-year college graduates. This situation leads to many questions about the "retread function" in community colleges. What is its purpose? What are community colleges doing for the students who they accept as possible "retreads"? Or, are the community colleges even recognizing "retread" as one of their functions?

Before discussing the tests of the hypotheses and the "retread function", however, the academic achievement and educational destination of reverse transfer students need further analysis.

In studying the destination of reverse transfer students, one might wonder how many of the students who left the community college without continuing on a college program had been dismissed from the university. Or, if larger percentages of those without academic difficulties at the university had returned to a four-year college, or were still enrolled in a transfer program at the community college.

Table 31 shows the percentage of each of the four groups on the basis of their exit status from the university who had returned to a four-year college, were still enrolled in the community college, or had left college.

TABLE 31

DESTINATION OF NATIVE STUDENTS AND REVERSE TRANSFERS BY EXIT STATUS FROM THE UNIVERSITY

(By Percentage)

Destination	Natives	Reverse Transfers by Exit Status				
		Dismissed	Probation	Clear	No Action	Total
Returned to a Four-Year College	17	23	12	18	17	19
Still Enrolled in a Transfer Program	16	14	23	25	17	19
Still Enrolled in a Semi-Professional Program	9	6	8	7	7	7
Left College	58	57	57	50	59	55

It can be seen in the above table that 23 percent of the students who had been dismissed from the university had already returned to a four-year college. This is not only the largest percentage of any group to return but also the greatest number (45). In fact, it is half of the total number of reverse transfers who had returned to a four-year college.

However, if one looks at the combined percentage of those who were still enrolled in a transfer program and those who had returned to a four-year college, there is very little difference among the four groups. About one-third of each group evidently plan to continue on a four- year college progfam, with the exception of the "clear status" group who show a higher percentage (43 percent).

It might be assumed that most of the students who had left the community college had experienced further academic difficulties at the community college. And, it might be assumed that those who had returned to the four-year college had achieved higher grade point averages than the other groups. However, when one looks at the mean grade points and standard deviations of the various groups, this is not the case.

Table 32 shows that the mean grade point of the group in semi-professional programs is higher than for any other group in both high school and community college. However, it must be noted that this is a much smaller group in number than any of the other groups. And, it must be remembered that high school grade point averages were not available for almost 30 percent of the students, and of those tested the difference varied from only 2.7 to 2.6.

TABLE 32

MEANS AND STANDARD DEVIATIONS OF HIGH SCHOOL, UNIVERSITY, AND COMMUNITY COLLEGE GRADE POINTS FOR REVERSE TRANSFER STUDENTS BY DESTINATION AT THE COMMUNITY COLLEGE

Group		High School		University		Comm. College	
	Total Number	Mean GPA	SD	Mean GPA	SD	Mean GPA	SD
Returned to a Four-Year College	87	2.57	.45	1.81	.45	2.73	.46
Still Enrolled in Transfer Program	87	2.58	.56	1.68	.59	2.68	.71
Semi-Professional Program	31	2.60	.50	1.78	.62	2.79	.62
Left College	254	2.54	.55	1.72	.56	2.52	1.52
Total	459	2.6	.48	1.80	.38	2.61	.53

The group with the second highest grade point average at the community college is the group who had returned to the four-year college. Their mean grade point was 2.73 as compared to 2.79 for those in the semi-professional programs. The group with the lowest community college grade point average was the group who had left college. Their mean grade point was 2.52 with a standard deviation of 1.52. This indicates a much wider variation in academic achievement than for any other group.

An analysis of variance test showed that there was no significant difference in community college grade points among the four groups on the basis of their destination at the community college, however.

The F ratio of 1.9711 by exit status from the university and the F ratio of 1.4300 by destination at the community college are not significant at the .05 level of confidence.

TABLE 33

ANALYSIS OF VARIANCE IN COMMUNITY COLLEGE GRADE POINT AMONG REVERSE TRANSFER STUDENTS BY DESTINATION AT THE COMMUNITY COLLEGE

Source of Variation	F Ratio
Exit Status from University	1.9711
Destination at Comm. College	1.4300

The findings in this study thus far have shown that over three-fourths of the reverse transfer students left the university with aca-

demic deficiencies (less than a 2.0 grade point average). About one-third of the total group had either returned to a four-year college or were still enrolled in a transfer program, while over one-half had left college without completing a college program. The mean grade point of the total group at the community college was 2.6. Of those who had returned or planned to return to a four-year college was 2.7; of those who had left the community was 2.5.

The mean grade point of each group of reverse transfer students at the community college on the basis of their exit status from the university and their destination at the community college is presented in Table 34.

TABLE 34

MEAN COMMUNITY COLLEGE GRADE POINT OF REVERSE TRANSFER STUDENTS BY EXIT STATUS FROM THE UNIVERSITY AND DESTINATION AT THE COMMUNITY COLLEGE

Exit Status			Returned to Four-Year College		Enrolled in Transfer Program		Enrolled in Semi-Pro. Program		Left Coll.	
	Total Number	Total GPA	No.	GPA	No.	GPA	No.	GPA	No.	GPA
Dismissed	198	2.5	46	2.7	28	2.4	12	2.7	112	2.4
Probation	90	2.4	11	2.7	21	2.4	7	2.6	51	2.3
Clear	102	3.0	18	2.9	26	3.2	7	3.3	51	2.8
No Action	69	2.7	12	2.5	12	2.7	5	2.8	40	2.9
Total	459	2.6	87	2.7	87	2.7	31	2.8	254	2.5

It can be seen that there is very little difference in community college mean grade point among the reverse transfer groups on the basis of their destination at the community college, even though there is greater variation within the groups on the basis of their exit status from the university.

Among the groups of students who returned to a four-year college, the greatest variation is only .4 point, which is found between the "no action" and the "clear status" group. The dismissed and the probationary groups have almost the same grade point average in each classification based on destination at the community college, and they have consistently lower mean grade points than the two groups on "clear status" and "no action".

The two groups (probation and dismissed) who left the community college without completing a program show some indication of having academic problems. Their mean grade points of 2.4 and 2.3 with standard deviations of .90 and .85 show that about one-fifth of the total group of reverse transfers could have had less than a 2.0 grade average at the community college. These students undoubtedly could not have returned to the four-year college because of their academic status, but it is quite probable that they could have completed a two-year college program.

The evidence in Table 34 makes it quite clear that regardless of what the prior academic achievement of reverse transfer students had been, and regardless of their destination, they are academically successful while enrolled in the community college.

The one-third of the reverse transfer students who left the university with academic deficiencies and then repaired their academic

records so they could return to the four-year college are representative of the "salvaged" students described in earlier studies. (Kintzer, Meadows and Ingle, and Muck)

The fifty percent or more who left the community college without completing a college program are the students which this study is concerned about. They are the students who need a "second chance" that includes more than the opportunity to improve their academic records.

Of the 254 students who left college, four-fifths had been in academic difficulty at the university. Forty-two percent had been dismissed from the university, 20 percent were on academic probation, 20 percent were on "clear status", and 18 percent were in the "no action" group. The percentage of each group who left college was almost identical with the percentage which made up the total reverse transfer group. Therefore, one can conclude that there is no relationship between the students' exit status from the university and their discontinuance of a college program.

Also, the personal characteristics of the students who left college (as shown in Table 35 by percentage) are almost the same as the percentage of the total group of reverse transfer students.

TABLE 35

PERSONAL CHARACTERISTICS OF
REVERSE TRANSFER STUDENTS WHO
LEFT THE COMMUNITY COLLEGE
WITHOUT COMPLETING A PROGRAM
(BY PERCENTAGE)

Group	Sex		Marital Status		Age		
	Male	Female	Married	Single	17-21	22-25	Over 25
Dismissed	60	40	17	83	68	21	11
Probation	60	40	17	83	74	17	9
Clear	43	57	33	67	69	7	24
No Action	54	46	30	70	76	12	12
Total	51	49	20	80	74	16	10
Natives	69	31	21	79	74	13	13

The marital status of the students who left college (80 percent single and 20 percent married) is exactly the same as the total group of reverse transfers. The percentage of males and females is almost the same between the two groups. Fifty-one percent of the group who left college are males as compared with 57 percent of the total group.

In age distribution, there is also very little difference, 72 percent of the total group were less than 22 years of age while 74 percent of those who left college were in that age category. Fourteen percent of the total reverse transfer group were between 22-25 years of age and the same percentage were over 25, while in the group who left college, 16 percent were between 22-25 years of age, and 10 percent

were over 25 years of age. This shows that a slightly smaller percentage of older students leave college. However, one can conclude that the personal characteristics of the group of students who leave college are basically the same as the total group of reverse transfer students.

In comparing the personal characteristics of the groups of students who left college on the basis of their exit status from the university, one finds the greatest difference to be between the group on "clear status" and "dismissed". The dismissed group were 60 percent male, 83 percent single, and 68 percent were under 22 years of age. The "clear status" group were 57 percent females, one-third were married, and two-thirds were under 22 years of age.

The personal characteristics of the group on probation were almost exactly the same percentage as the dismissed group. The "no action" group were 57 percent male, 70 percent single, and 76 percent were under 22 years of age. There is no consistent pattern in age, sex, or marital status among the four groups of reverse transfer students who did not complete a college program.

The academic achievement of the four groups while enrolled at the community college is not significantly different, either. Table 36 shows the mean grade points and standard deviations of the four groups who left college by their exit status from the university.

TABLE 36

MEANS AND STANDARD DEVIATIONS OF GROUPS OF REVERSE TRANSFERS WHO LEFT COLLEGE (BY EXIT STATUS FROM THE UNIVERSITY)

Group by Exit Status from the University	Community College Grade Points	
	Mean	Standard Deviation
Dismissed	2.36	.90
Probation	2.27	.85
Clear	2.76	.77
No Action	2.88	.32

An analysis of variance test of the community college grade points of these four groups who left college shows an F ratio of 1.4741 which is not significant at the .05 level of confidence. Therefore, one can conclude that there are no significant differences in community college grade points among the groups of reverse transfers who leave college without completing a college program.

In summary, one can conclude that there is no relationship between the exit status from the university of the "reverse transfer" students and their academic achievement or educational destination at the community college.

Findings have been shown in the first four sections of this chapter which verify or disprove the three hypotheses relating to personal and educational characteristics of "reverse transfer" students. A discussion of each hypothesis is presented in the final section of the chapter.

DISCUSSION OF THE HYPOTHESES

The need for an expanded interpretation of the "retread function" was based on some tentative assumptions about reverse transfer students who entered community colleges after a period of attendance at state universities. It was assumed that because the "reverse transfers" had been admitted to four-year colleges, they would have higher academic potential than native community college students and thus would show higher academic achievement and greater educational persistence at the community college.

It was also assumed that state university students who transferred to community colleges would have the motivation and academic ability to do successful college work. Therefore, regardless of whether they had academic difficulties or faced other insurmountable problems causing them to leave the university, there would be no significant difference in their academic achievement or educational destination at the community college.

Furthermore, it was assumed that even though the academic achievement and educational destination of groups of reverse transfer students by exit status from the university would not be significantly different, the students who returned or planned to return to the university or other four-year college would have higher academic achievement at the community college than the students who changed to a semi-professional program or left college.

These three assumptions are the basis for the three hypotheses to be discussed in this section.

Hypothesis 1. The main purpose for using native community college students as a comparison group in this study was to determine the effects

of the community college on their educational persistence and destination. It is essential to know what happens to students who begin their college education in the two-year institutions in order to properly assess the influence of the community college on the educational persistence and destination of the students in the study group. In other words, to know what percentage of the native students transfer to a four-year college, what percentage are enrolled in semi-professional programs, and what percentage leave college without completing a college program provides a basis for comparison of the influence of the community college on the destination of "reverse transfer" students.

Previous studies have shown that the academic ability and achievement of freshmen entering four-year colleges is higher than that for freshmen entering two-year colleges, and that they are more motivated to persist in college by their parents. (Cross, 1968, pg. 17) Thus, the writer hypothesized that reverse transfer students would show higher academic achievement and greater educational persistence than native community college students.

But in testing hypothesis one, no significant difference was found in academic achievement and educational destination at the community college between native students and reverse transfer students. The F ratio of 1.8281 between the mean grade points of native students and reverse transfers is not significant at the

.05 level of confidence, and the percentage of each group who enter a four-year college or are still enrolled in a transfer program is nearly the same. Thirty-eight percent of the "reverse transfers" and 35 percent of the natives are continuing on a four-year program, while 55 percent of the "reverse transfer" and 58 percent of the natives have left college.

Based on these findings, hypothesis one must be rejected, and it can be stated with confidence that there is no significant difference in the academic achievement and educational persistence between the "reverse transfers" and natives at the community college.

Hypothesis 2. The "reverse transfer" students were then studied on the basis of their exit status from the university, and the second hypothesis was tested. It stated that there is no significant difference in academic achievement or educational destination at the community college among the groups of transfer students who left the university voluntarily or were dismissed.

The three groups who left the university voluntarily include 90 students who were on probation, 69 who had less than a 2.0 and were referred to as the "no action" group, and 102 who had higher than a 2.0 and were on clear status. The dismissed group included 198 students who had less than a 2.0 at the university.

The mean high school grade point of each of the four groups was shown to be: dismissed--2.4, probation--2.5, clear status--2.7, and the "no action" group--2.8. An analysis of variance test showed an F ratio of 8.2230 (Table 11) among the four groups which is significant at the .05 level of confidence. It is not highly significant, but it must be stated that the groups who left the university voluntarily had higher academic records in high school than the dismissed group.

However, in analyzing the community college grade points of the four groups, an F ratio of 3.3241 (Table 25) was found which is not significant at the .05 level. Three of the groups had a mean grade point of 2.5, and the clear status group had a 3.1. Therefore, it must be concluded that even though the academic achievement in high school shows significant differences among the four groups, there is no significant difference in community college grade point between the group dismissed and those who left the university voluntarily.

Furthermore, very little difference was found in the educational persistence and destination among the four groups. Assuming that students who are still enrolled in transfer programs will return to a four-year college, about one-third of each group persist in a four-year college program. The "clear status" group does show a slightly greater persistence--43 percent indicate intentions to complete a four-year college program.

If one does not assume that those in transfer programs will return to a four-year college, then the dismissed group shows the greatest persistence--23 percent had already returned to a senior institution as compared with 12, 18, and 17 percent respectively of those on probation, clear status, and "no action". However, a larger percent of each of these three groups were still enrolled in transfer programs than were those in the dismissed group.

Over half (50-59 percent) of each group left college without completing a college program, and about 7 percent (6-8) of each group changed to a semi-professional program.

On the basis of these findings, hypothesis two must be accepted, and it can be stated that there is no significant difference in academic achievement or educational persistence and destination at the community

college among the groups of reverse transfer students who left the university voluntarily or were dismissed.

Hypothesis 3. The next question to be answered is, "What is the academic achievement of "reverse transfer" students on the basis of their destination at the community college?" Do the students who return to a four-year college have better academic records than those who change to two-year programs or leave college? In answering these questions, hypothesis three was tested. It states that "reverse transfer" students who returned to four-year colleges or were still enrolled in transfer programs do have higher mean grade points at the community college than those who change to semi-professional programs or leave college.

The community college mean grade point, as shown in Table 32, varies from 2.52 for those who left college to 2.79 for those in a semi-professional program. However, an analysis of variance test shows an F ratio of 1.4300 among the four groups which is not significant at the .05 degree level. Hypothesis three must be rejected on the basis of this finding, and it must be concluded that the academic achievement at the community college is not significantly different among the groups who return to the four-year college, are still enrolled in a transfer program, are enrolled in a semi-professional program, or have left college.

In summarizing the findings used to test the hypotheses, it can be stated that there are no significant differences in academic achievement and educational destination between native community college students and "reverse transfer" students, between groups of reverse transfers on the basis of their exit from the university, nor between groups on the basis of their destination at the community college. However, the "reverse transfer" students have higher academic potential than native community college students. They also show a determination

to continue their education after either failure or probation at the university. Community colleges must be concerned about the "salvaging" or "second chance" for these academically successful students.

Table 37 presents a summary of the academic achievement and educational destination of both the native students and reverse transfer students (by exit status from the university) at the community college.

TABLE 37

ACADEMIC ACHIEVEMENT AND EDUCATIONAL DESTINATION OF NATIVE COMMUNITY COLLEGE STUDENTS AND REVERSE TRANSFER TRANSFER STUDENTS AT THE COMMUNITY COLLEGE

	Natives	Reverse Transfers				
		Total	Dismissed	Probation	Clear	No Action
Academic Achievement						
Mean H.S. GPA	2.3	2.6	2.4	2.5	2.7	2.8
Mean College GPA	2.4	2.6	2.5	2.5	3.1	2.5
Educational Destination						
Percent Returned to four-year college	17	19	23	12	18	17
Percent Enrolled in Transfer Program	16	19	14	23	25	17
Percent Enrolled in Semi-Prof. Program	9	7	6	8	7	7
Percent Left College	58	55	57	57	50	59

LIMITATIONS OF THE STUDY

The study was limited to data taken from students' personal folders and academic records. Many questions about reverse transfer students remain unanswered because sufficient information could not be obtained from the colleges about their students.

Measures used to assess the educational achievement and destination of students lack the desired precision, but the methods used to compare groups were the best available at the present time. Course grades and grade point averages are based on subjective judgments, and also on various systems of measurement which lead to this lack of precision.

The results of the study must be limited to generalizations about public institutions of higher education, and conclusions made about "reverse transfer" students cannot go beyond those in state universities and community colleges.

There are some exceptions to be made in the use of educational destination of students. Students classified as "left college" may be on temporary leave and ultimately may continue their college education. Conditions such as military service, marriage, or lack of finances can cause delays in the completion of an educational goal. Thus, a longitudinal study might show a higher degree of educational persistence on the part of "reverse transfers".

The most serious limitation of the study is that in using all the available records on college students, it is impossible to clearly define the "retread function" of community colleges. Even if students

had been asked directly, it probably would not have been possible to state accurately why more students are not "salvaged" by the community college. Many of them do not know or cannot verbalize their needs and problems. Therefore, a discussion of the "retread function" in the Epilogue is based on information obtained without direct contact with students involved in this study.

CHAPTER IV. SUMMARY AND CONCLUSIONS

Community colleges have been criticized for their lack of information and attention to sub-groups within their college population. (Thornton, 1966; Medsker, 1960) They have also been charged with providing less than the necessary student personnel services which they claim is one of their major functions. (Raines, 1965; McConnell, 1965) The writer's concern about one sub-group, the "reverse transfer" students, led to this study. Information obtained about characteristics of these students falls in the realm of student personnel services and is the major emphasis of the study.

The primary purpose of the study is to assess the academic achievement and educational destination of students who transfer from universities to community colleges. It had been hoped that as a result of this assessment, the objectives of the "retread function" of two-year colleges could be more clearly defined.

In assessing academic achievement, grade point averages are used even though they are constantly under attack as less than sufficient to describe students' achievement. They are still the best measure available today for analyzing and comparing student groups academically.

Educational destination of "reverse transfer" students was determined by their enrollment status at the time the data were collected. Four classifications resulted: returned to a four-year college, still enrolled in a transfer program, enrolled in a two-year semi-professional program, or left the community college they were enrolled in.

The "reverse transfer" students were studied as a total group, and as four separate groups on the basis of their exit status from the uni-

versity; dismissed, probation, clear status, or "no action." An analysis was made of the academic achievement and educational destination of each group at the community college. These and other characteristics of the "reverse transfers" were also examined and compared with a random sample of native community college students.

The purpose for using the comparison group was to determine the effect of the community college on the academic achievement and educational destination of both "reverse transfers" and students who began their college education at the community college.

An analysis of variance test was used to find significant differences in the academic achievement of various groups of students. The analysis of educational destination of the students was made by percentage.

Data on student characteristics not used in the statistical analysis of the hypothesis added substance to the comparison of groups of students. Age, sex, and size of high school graduating class were variables used in studying the relationship between academic achievement and educational destination of students. Classification variables not used in testing the hypotheses included marital status, type of high school, number of colleges attended, college curriculum, and college ability test scores.

Comparison of "reverse transfer" and native community college students.

One of the major findings showed that although "reverse transfer" students are very much like native community college students in academic achievement and educational destination at the community college, there is a significant difference in their high school mean grade point and college ability test scores. Bothe groups rank heavily in the middle range of academic potential for college admissions, but the "reverse transfer" students show significantly higher academic achievement in high school than native community college students.

There is no significant difference in mean grade point at the community college between the "reverse transfer" and native community college students by age or size of high school, although older students do tend to have higher grade points.

There is a significant difference within both groups in mean grade point by sex. Females in both groups have higher grade points than males both in high school and the community college.

The difference in educational destination of both groups at the community college is also significant between the sexes. A larger percentage of the "reverse transfer" students who return to a four-year college are male than female. Further, more of the "reverse transfer" males continue their four-year college program than do males of the native group.

There is no significant difference by age or size of high school in the educational destination at the community college between "reverse transfer" and native students. About one-third of the native students transfer and one-third of the "reverse transfers" return to a four-year college. About one-half of both groups had left the community college they were enrolled in, while less than ten percent of each group were still enrolled in semi-professional two-year programs.

"Reverse transfers" and native community college students are very similar in other characteristics. Ninety percent of both groups graduate from public high schools, and the majority with classes of over 100 students. Eighty percent are not married; seventy-two percent are under 22 years of age, and the remaining twenty-eight percent are almost evenly divided between the age groups of 22-25 and over 25 years of age.

Both "reverse transfer" and native community college students are enrolled mainly in transfer programs. More than three-fourths of each group are enrolled in business, education, and liberal arts and science; but less than one-third actually transfer to a four-year college.

Comparison of the four groups of "reverse transfers"

Among the four groups of "reverse transfers" based on their exit status from the university, students who were dismissed or on academic probation at the university have mean community college grade points not significantly different from those who were on "clear status" or in the "no action" group.

Nor is there a significant difference in the educational destination (enrollment status) at the community college among the four groups based on their exit status from the university. About one-third of each group (dismissed, probation, clear status, and "no action") had returned to a four-year college or were still enrolled in a transfer program, less than one-tenth were enrolled in semi-professional two-year programs, and over half had left the community college without completing a college program.

The group of "reverse transfer" students who had returned to a four-year college did not have significantly higher mean community college grade points than the groups who had changed to semi-professional programs or left the community college. Neither did they have significantly higher university or high school mean grade points.

However, the group of "reverse transfer" students who left the university on "clear status" are different from the groups who were dismissed, on probation,or in the "no action" group in certain characteristics. They were two-thirds females, one-third were married, and one-fourth were over 25 years of age as compared to the dismissed and

probationary groups who were two-thirds male, one-fifth married, and two-thirds under 21 years of age. The "no action" group was almost evenly divided by sex, about four-fifths were single, and eighty percent were under 21 years of age.

Ninety percent of the "reverse transfers" had not attended another college (other than the university and community college used in the study), and two-thirds had moved directly from the university to the community college without a recess. Of the third who had recessed between colleges, one out of three had been away from college more than two years and had graduated from high school at least five years prior to the study. This group had higher grade points at the community college, and a larger percentage were still enrolled in a transfer program at the community college.

The study shows that community colleges provide a "second chance" for students who need to repair an academic record, and also provide programmatic alternatives so students can change educational goals. However, even though a large percentage (over 80 percent) of the "reverse transfer" students do achieve satisfactory academic records at the community college, only a small percentage (14 percent) change educational goals from four-year to two-year college programs.

Potential academic ability and success or failure at the university have little effect on what happens to "reverse transfer" students at the community college. Less than one-third are "salvaged" for four-year college programs, and over half have left college.

Thus, the "retread function" of community colleges can be viewed as a "second chance" for "reverse transfer" students from state universities, but can hardly be seen as a successful "salvage" function.

IMPLICATIONS OF THE FINDINGS

The findings in this study do not add a great deal to the definition of the "retread function". More questions are raised than are answered. Since the data showed that the academic achievement and educational destination of "reverse transfer" students and native community college students are not significantly different, even though the "reverse transfers" have higher academic potential as shown by high school grades and college ability test scores, why are no greater percentage of them "salvaged" by the community colleges?

The fact that over three-fourths of the "reverse transfer" and native students remain enrolled in transfer programs, but less than one-third actually transfer to a four-year college may indicate that students are selecting unrealistic goals. Considering the many semi-professional two-year college programs offered by community colleges, why do not a larger percentage of the students change to these programs rather than leave college? This may indicate the need for greater information about these alternate programs, or greater need of the students for assistance in selecting career goals.

It is entirely possible that student personnel services are not functioning properly to provide these students with the assistance that they need. It is also possible that external factors, such as lack of finances, lack of motivation, or uncertainty about educational goals affect students' success and educational destination. But, until more is known about these factors, it is impossible to understand why a "second chance" results in such a high percentage of loss of academically successful students.

There are strong implications that much more research is needed to determine how "reverse transfer" students can be "salvaged". Research about student motivation, goal selection, and educational aspirations of students might provide evidence upon which college personnel could base new programs of assistance to students. If research could determine what the problems of these students are, a larger percentage of them might be "salvaged."

The sex variable showed that females of both groups have higher academic records than males but show less persistence in transferring to a four-year college which may mean that they need greater encouragement and motivation, or that they leave on a temporary basis and will return at a later time to continue their education. Follow-up studies which determine why students leave the community college and the university might give some insight into means of "salvaging" a larger percentage of the female students.

Even though the group of "reverse transfer" students who left the university on clear academic status showed few academic problems at the high school or the community college, no greater percentage were "salvaged" than in the dismissed or probationary groups. This suggests that community colleges are not devising effective means of obtaining or using information about groups of students within their college population as a basis for providing services or assistance to students.

The question can be raised about whether community colleges are even recognizing the "retread function" they are performing. If they are admitting students who transfer from a state university, should they not be concerned about services or assistance to these students?

EPILOGUE

At this point, the writer would like to suggest some theoretical and practical considerations that emerge as a result of the study.

The study indicates that not much is being done at the community colleges to "salvage" the "reverse transfer" students. The "retread function" may need to be interpreted as a challenge to the counselors in the students personnel services of community colleges. It appears as if it is not so much that counseling has failed these students as it is that counselors have not addressed themselves to the problems of these students.

Group and peer counseling might have positive effects in helping students achieve educational success. Grouping students into interest groups or other categorical groups and then providing counselors or qualified students to help them evaluate their educational progress, define some of their problems, and make decisions about future educational goals might open doors to alternative programs.

If instruments of research are developed to measure students' motivation and educational aspirations, as well as their academic potential, it might also be possible to use various techniques in assisting students to achieve educational goals.

Consciously organized information sessions about two-year semi-professional college programs might also bring to students' attention the educational alternatives that they need. Students without academic problems at the community college may be seeking a shorter period of education leading to employment, or they may lack the necessary resources to return to a four-year college program.

Community colleges might also take the leadership in developing interinstitutional programs with the universities and high schools. Arrangements might be made with four-year colleges so that students having academic difficulties could be given the option to transfer to a two-year college in lieu of dismissal.

And, to ease sociological pressures on high school graduates to enroll in universities before ascertaining their real potential in college, community-wide programs might be developed which made all interested members of the community aware of the programs available at the community college. Community efforts could be enlisted to develop a better understanding of the role of semi-professional personnel in the technological development of today's world. By this means, students as well as their parents might come to realize the importance of semi-professional programs so essential in modern technology.

However, no department or division within a college or university can assume the responsibility for student development alone. It would take the understanding and support of the personnel in all student services, the faculty, the college administrators, and the community at large to plan programs which would "salvage" more of the "reverse transfer" students and make the "retread function" a viable and necessary part of the total college operation.

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